

I ❤️ ORIGAMI おりがみはうす ガレージブックシリーズ 9



神谷哲史作品集

Works of Satoshi KAMIYA
1995–2003

神谷哲史・著

山口 真・編 立石浩一・訳

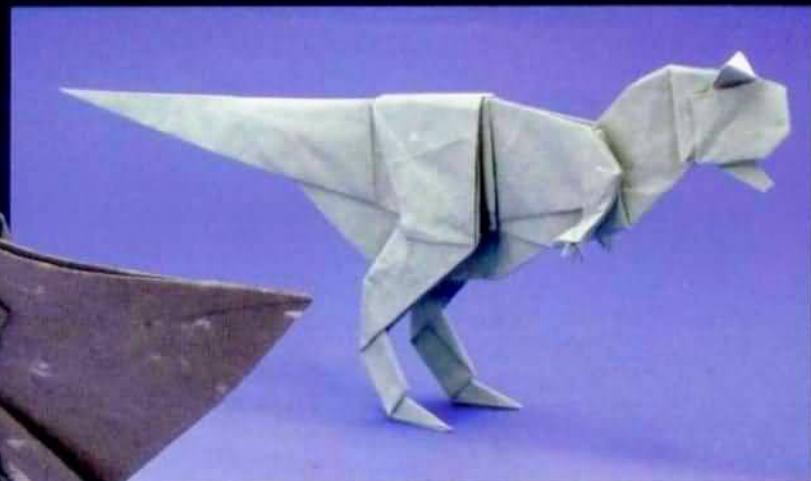


おりがみはうす

I ❤ ORIGAMI



トビエイ／Eagle Ray P.18



カルノタウルス／Carnotaurus P.10

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神谷哲史・著 山口 真・編 立石浩一・訳

Model Design & Diagrams by Satoshi Kamiya
Editor : Makoto Yamaguchi Translator : Koichi Tateishi



トビエイ／Eagle Ray P.18

白鳥離水／Splash! (Swan) P.23

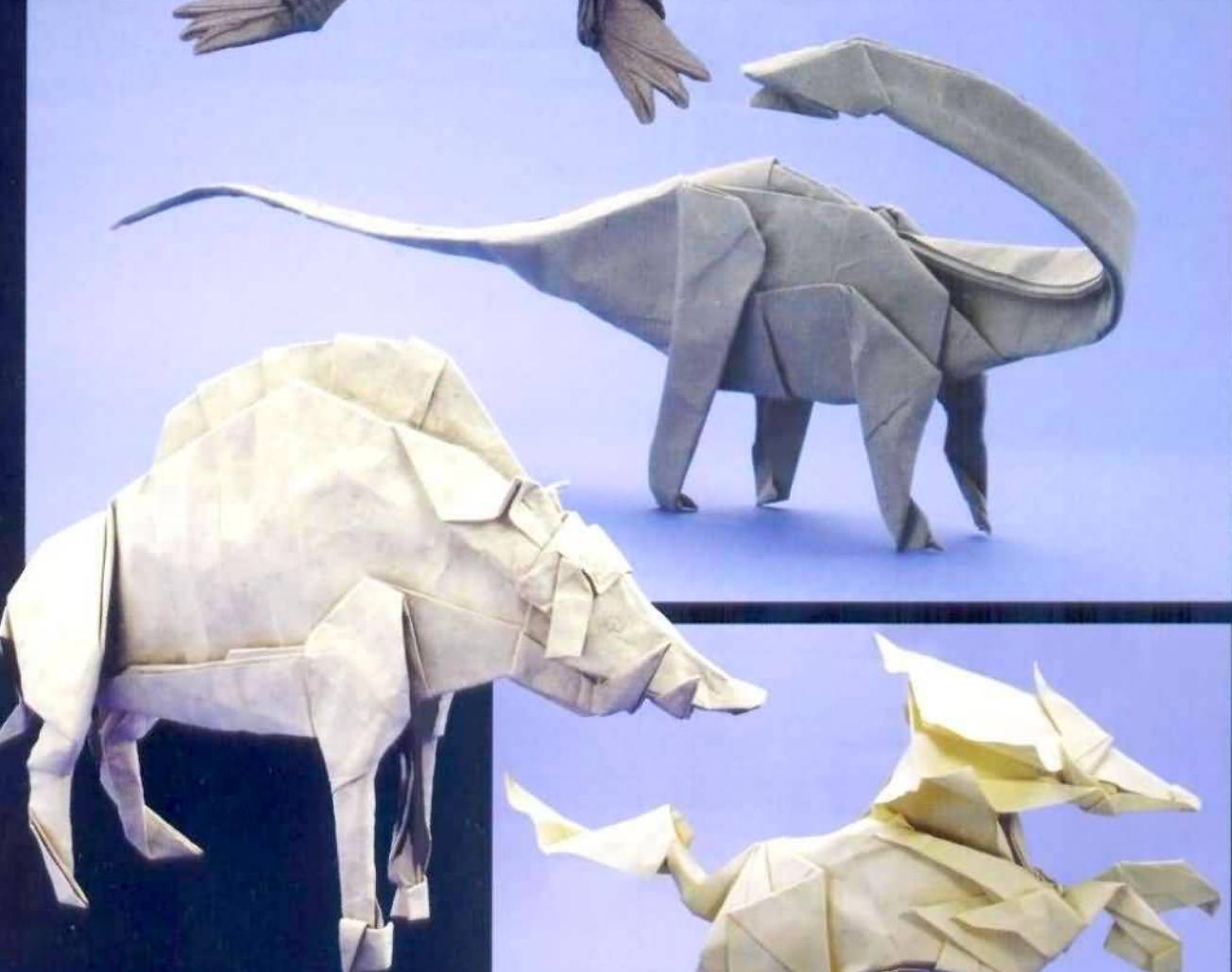


天馬／Pegasus P.28

1995-1996

ディバインドラゴン (バハムート) /
Divine Dragon (Bahamut) P.50

バロサウルス / Barosaurus P.108



猪神 / Inoshishigami (The Divine Boar) P.95



麒麟 / Kirin P.72

Works of Satoshi KAMIYA —

シロナガスクジラ／Blue Whale P.142



ティラノサウルス／Tyrannosaurus P.84



ユニコーン／Unicorn P.118

エンシェントドラゴン(2002)／Ancient Dragon P.193



黄色い鳥／The Yellow Bird P.136

1997-2001



スミロドン／Smilodon P.150

ウィザード／Wizard P.180



コエロフィシス／Coelophysis P.161

シャチ／Orca P.170



マンモス／Mammuthus primigenius P.217



まえがき

この本には、私が創作を始めたころから現在までの作品のなかで、折り図化された19点が収録されています。これらをまとめて振り返ってみると、どの作品にもそのときの創作方法、考え方などが表れていて、時間とともに創作方法が変わっていることを実感します。今回、作品の順番が創作年順になっていますので、神谷作品の作風の変化を感じていただければと思います。

ところで、この本では折り図という手段で作品の作り方を解説していますが、実は創作をする段階では折り図を描く動機がまったくありません。私の場合、自分の作品をたくさんの人人に折ってほしいと思うわけでもないし、折り図を描いて作品が完成というわけでもありません。そもそも自分が作りたい形を作るのが創作の目的なので、それを他の人が折るかどうかは私にとってあまり重要ではないようです。

ではなぜこの本が存在するかというと、私はどうも折り図を折り紙少年（当時の自分を含む）にむけて描いているようです。折り紙少年だったころの自分が見たら絶対に折り図がほしいと思ったはず、これが折り図を描く原動力となっています。

また、私はたくさんの先達の作家の方たちから多くの影響を受けていますが、その大部分は折り図を通して学んだことです。もし この人たちが折り図を描いていなかったら、本書に掲載されている作品は生まれてこなかったでしょう。同じように、もしかしたら私が折り図を描くことによって誰かが何かを得ることができるかもしれません。そうやって少しずつですが、いつか自分が得た以上のものを折り紙界に返すことができればと思っています。

最後に、この本ができるまでにお世話になった方々、きついスケジュールのなか翻訳をしていただいた立石浩一さん、校正でご協力をいただいた小松英夫さん、多くの作例で使用した紙と一緒に作っていただいたOrigamido Studioのマイケル・ラフォースさん、制作全般でお世話になつたおひがみはうすの松浦英子さん、そしてこの本の制作を決断していただいた山口真さんに心より感謝いたします。

神谷 哲史

Foreword

This book contains nineteen diagrammed models of mine whose creation dates range over the whole period of my creation. As the models are arranged in chronological order, the book in a sense shows the history of my creation.

Basically, drawing diagrams is not my prime concern. I am not a kind of person such that I would like my models to be folded by many people, and, as my goal is creation itself, I basically have no motivation for diagramming.

Then, why did I make this book? I am writing this book for kids around the world of origami. Kids, which I was one of, certainly would like to fold those models like I create. To do this, they need diagrams. That's why. I myself did fold various diagrammed models which my predecessors created, and I have learned a lot from them. I would like to give something to the people around the world of origami more than I got from them. I could not have done what I have done without them.

Finally, I would like to express my gratitude to the following people: Koichi Tateishi, who made this bilingual book possible by translating my Japanese during his tightly scheduled days, Hideo Komatsu, who kindly proofread the diagrams, Michael LaFosse of the Origamido Studio, who made the sheets from which I folded many models in this book, Eiko Matsuura of Origami House, who helped my editing this book, and, finally, Makoto Yamaguchi, who made everything possible for me.

Satoshi Kamiya

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Divine Dragon

神谷哲史作品集

Works of Satoshi KAMIYA

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18 トビエイ／Eagle Ray

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150 スミロドン／Smilodon

161 シャチ／Orca

170 コエロフィシス／Coelophysis

179 ウィザード／Wizard

193 エンシェントドラゴン／Ancient Dragon

217 マンモス／Mammuthus primigenius

折り図記号と基本の技法

Symbols and Basic Techniques

「神谷哲史作品集」は、難しい折り紙作品の折り方の本です。折り方(折り図)には折り紙の専門用語や特殊技法がでてきます。それらは、初めて見る方には難しく感じられることも多いでしょう。

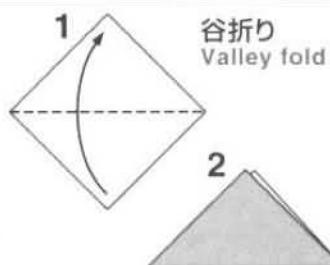
ここでは、それらの基本を示しました。折り進めるうちに、分からぬ用語や折り方に出会ったら、まずこのページを見直してみてください。「基本」ですから、必ずしも同一ではありませんが、解決の糸口はきっと見つかるはずです。

In *Works of Satoshi Kamiya*, you will see in the diagrams many technical terms and folding techniques which are not familiar to you. This page shows you the very basic terms of origami. Always refer to this page when you are in trouble. As the page only describes only the basics, you may not find the exact term you are looking for, but the basics here certainly will help you solving the problem.

折り線の種類 Types of crease lines

谷折り線
Valley fold

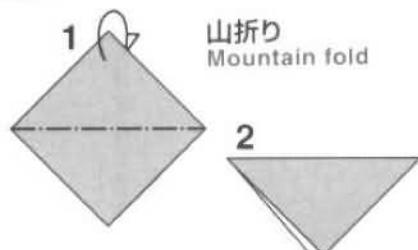
手前で折る
Fold paper forwards



谷折り
Valley fold

山折り線
Mountain fold

後ろへ折る
Fold paper backwards

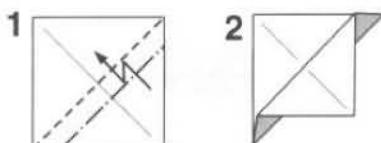


山折り
Mountain fold

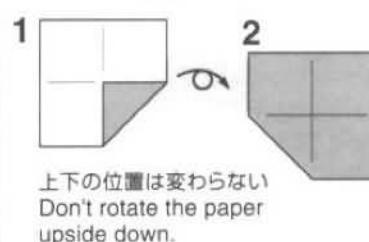
いろいろな記号 Symbols

段折り Pleat fold

横から見ると段になっているように見える
Pleats are formed when you look from the side.



裏返す Turn paper over

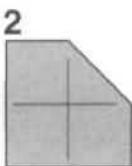
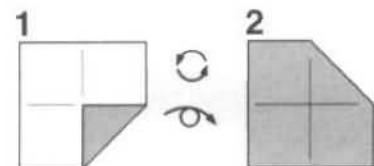


上下の位置は変わらない
Don't rotate the paper upside down.

上下が変化する場合は

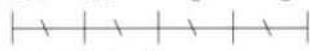
回転記号を併用する

When turning over vertically, the rotation symbol is also used.



等分記号 Division

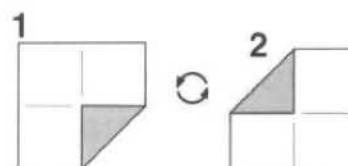
長さの等分 Dividing the length



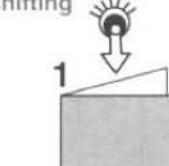
角度の等分
Dividing the angle



紙の向きを変える Rotation

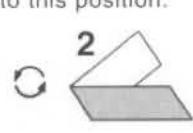


視点が変わる
The view point shifting



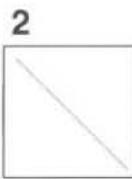
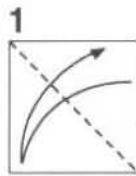
視点が大きく変わる場合

この記号の位置から見る
The view point shifts to this position.

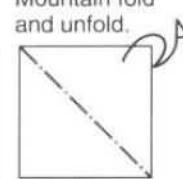


折り筋をつける
Making a crease line

一度折ってから戻して折り筋をつける
Fold and mark a crease line, then unfold.



山折りにつける場合もある
Mountain fold and unfold.

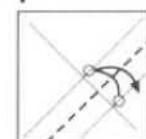


特殊な折り筋のつけ方
Various types of crease lines.

折り筋と折り筋を合わせて折り筋をつける
Fold line to line and unfold.



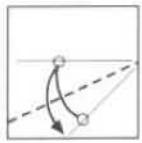
1



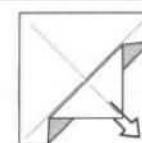
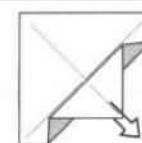
2



斜めにつける場合もある
Crease lines sometimes divide the angle into two.



○の山折り線を折り筋に合わせて折って戻す
Pleat aligning the crease line to another crease line and unfold.



次の図を拡大
A magnified view



隠れた線・形
A hidden line / layer



引き出す
差し込む
Pull out
Insert a flap



ひろげる
Open up



注意するところ
Marked points
(reference points)



同じ場所を示す
These points are on top of each other.



押す・つぶす
Push paper in



直角
Right angle



折り方の技法 Basic Folding Skills

<p>中わり折り Inside reverse fold</p> <p>内側を割るように折ってカドを出す Push the corner inside as the middle layer.</p>	<p>カドを内側に折る Inside reverse fold (Fold the corner in)</p> <p>折ったカドが内側にかくられる The folded corner will be hidden inside.</p>
<p>かぶせ折り Outside reverse fold</p> <p>両側の紙を裏返すようにしてかぶせる Wrap the corner around the layers.</p> <p>一度かるくひろげて折りながら戻す Open slightly and fold outside.</p>	<p>つまみ折り Rabbit ear fold</p> <p>カドをつまむようにしながら折りたたむ Pinch the corner and flatten it on one side.</p>
<p>内側をひろげてつぶすように折る Squash fold</p> <p>角度が違ったり部分的に折る場合もある Many types of total / partial squashing are possible.</p>	<p>これは「花弁折り」とも呼ばれる This type of squashing is called the petal fold.</p>
<p>沈め折り Sink</p> <p>沈めるように折った部分が内側にかくられる Sink a layer/corner and hide it inside.</p> <p>紙のヒダが閉じた(closed)かたちになっている The layers are locked.</p> <p>この重なりを開かない Do not open the layers of the corner.</p> <p>Closed sink クローズド・シンク</p> <p>途中の図 ついている折り筋で押し込むように折る Sink in action. Push in with layers overlapped onto each other.</p> <p>紙のヒダが開いた(open)かたちになっている The layers can be reopened.</p> <p>沈め折りする部分に折り筋をつける Mark the crease line to use for sink.</p>	<p>沈めるように段折り Sink in and out</p> <p>■の部分を沈めるように段折り Some times sink requires the pleat-like structure by sinking in and out.</p> <p>一度ひろげて図のように折り筋をつけなおす Push in with layers overlapped onto each other.</p> <p>■のまわりの山折りを先に折ると良い In such cases, open the corner once, and make crease lines as they should be. Start from the mountain folds around the gray area.</p>
<p>Open sink オープン・シンク</p> <p>■の部分を沈めるように折る Push in the corner.</p> <p>途中の図1 一度ひろげて■のまわりの折り筋を山折りにつけなおす Sink in action. The layers of the corner are reopened.</p> <p>途中の図2 ついている折り筋で■の部分を沈めながら折りたたむ Sink still in action. After opening the corner lightly, push in without overlapping layers.</p>	<p>それぞれカドのところからつまむようにして折りたたむ Pinch the corners and flatten.</p>

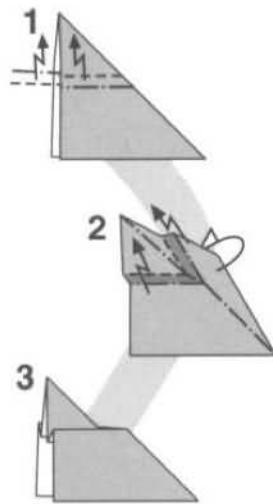
特殊な段折り Pleating and Crimping Layers

両側で段折り

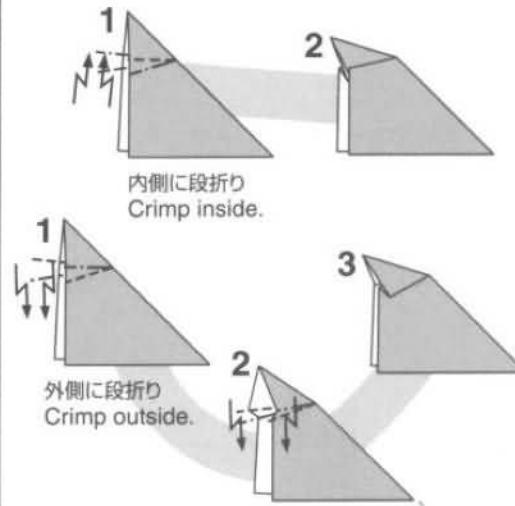
Pleating and crimping on both sides.



両側で同時に段折りする
Pleat on both sides at the same time.



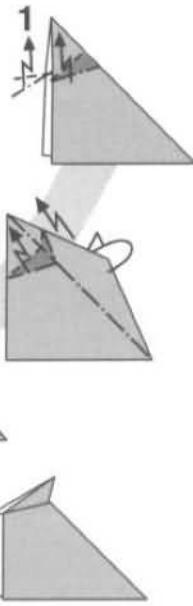
斜めに折る場合もある
Crimp on both sides at the same time.



内側に押し込むように両側で段折り

Crimp and sink.

■の部分を
内側に押し込む
ようにしながら
たたむ
Open the layer,
sink the grayed
part, and crimp.



●折り紙初心者の方へ

- 本書の作品の多くは、最初の段階で折り筋をたくさんつけます。とても大切な作業ですので、つけ間違いのないよう、よく折り図を見て進んでください。
- 折り筋は正確にはっきりとつけてください。カドや○で示したところは、間違いやすい部分ですから特に注意しましょう。
- 紙の裏と表、向きは大事です。1工程折るたびに紙を図と同じ向きに並べ、正確に折れているかどうか確認していくと間違いを防ぐことができます。
- 一見複雑な折り方があっても、折り線には「山」と「谷」しかありません。あわてず1つ1つ折り紙と図を見比べて、まずは図の通りに折り筋をつけてみてください。また、少し先の図を見て、折った後の形をイメージしながら折るのも良いでしょう。
- 難しい作品ばかりですから、一度の挑戦では上手に折れない場合もあります。初めて折る場合は、まず練習(試作)のつもりで折りましょう。練習には市販の折り紙用紙が適しています。
- 作品は何度も折るうちに、きれいに折れるようになっていきます。難しい折り紙には、何よりも根気が大事です。
- 何度も紙を折り畳みますから、途中で紙がぼろぼろになり形が分からなくなることもあります。そんな場合は思い切って最初から折り直しましょう。また少しの破れなら、セロハンテープで裏から貼り合わせ、そのまま折り進めても良いでしょう。

●「必要サイズ」について

- 本書では、折りが細かすぎて小さな紙で折ることができない作品があります。そのため、基準となる「必要サイズ」を付記しました。
- これはあくまで目安です。「必要サイズ」よりも小さな紙で折ることも可能ですが、最初は避けて、できればより大きめの紙で折ることをお勧めします。
- 中には、折り紙用紙として市販されていない大きさもあります。その場合はなるべく薄くて丈夫な紙(例えば一番薄い上質紙など)を探し、正方形に切って使ってください。

To Origami Beginners and Novices:

The models in this book requires that you make many crease lines before assembling. The process of creasing is very important for the completion of the folding of the model, so do as precisely as possible, always with the next diagram as your reference.

Crease precisely. Don't crease from/through the wrong corners or circled reference points.

Take special care on the side and orientation of the sheet. When you have done one step, carefully check your folded model with the diagram orienting them towards the same direction.

Keep in mind that folding processes in origami only consist of mountain and valley folds. Your best reference is always the next diagram.

It is the fact of life that the models in this book are difficult, so don't expect that you can fold them beautifully in your first try. Use regular origami paper for practice.

Be patient. You can make it in the end.

Sometimes the paper will be ragged and torn into pieces. If this happens, take another sheet of paper and start from the beginning. If the raggedness is not so disastrous, you may be able to tape the back of the sheet and continue your folding.

The Necessary Size of the Sheet:

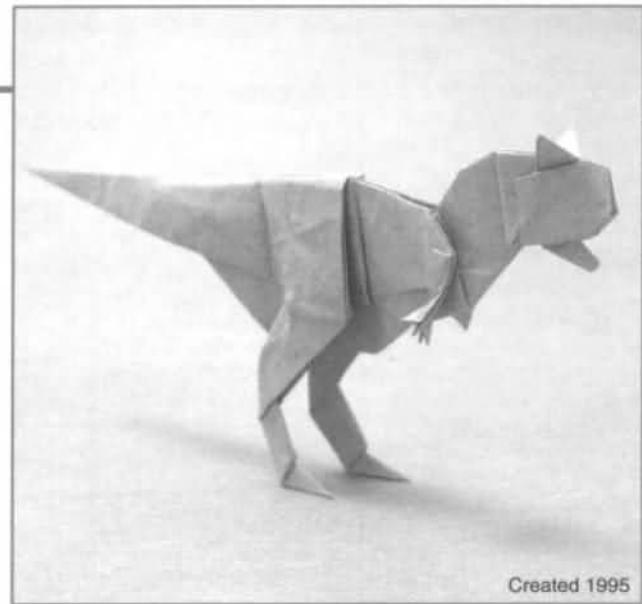
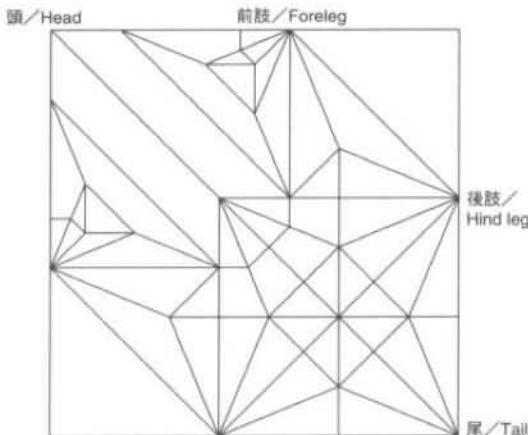
The recommended size of the sheet of paper with which you fold is written in the text. This is because the models sometimes need very skillful foldings.

However, this is only RECOMMENDED. We suggest you start with a larger sheet, but you can always be a challenger!

Regular origami sheets may not have the recommended sizes. If so, take thin and strong paper and cut it into a square.

カルノタウルス

Carnotaurus



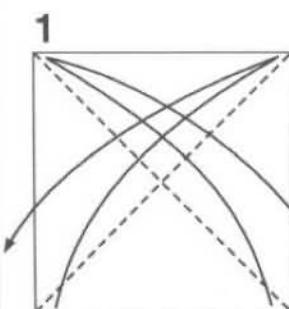
Created 1995

適 当に作った形が何かに見えた時点で創作として成立してしまうのは、良くも悪くも折り紙の特性だと思います。創作を始めた頃は、いろいろな形ができることが自体がおもしろかったものです。ただ多くの場合、「できた」形以上のものを創り出すためには、その中から優れた形を選び出すという作業が必要になってきます。そんなことに気がついたのが、このカルノタウルスを創った時期でした。それ以前の「できた」ものではなく「創った」と自信を持って言える最初の作品のひとつで、私の創作歴のなかで大きな転機となったように思います。

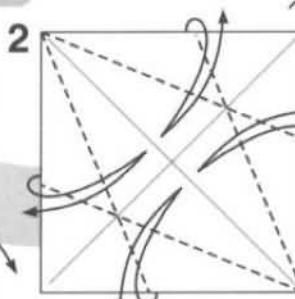
この作品には気に入っている部分がいくつかありますが、そのひとつが頭部のツノです。ツノを紙の内部から出すことにより、紙の辺から折り出したカドではできない厚み、重量感のようなものを表現することができました。またこの恐竜の特徴である非常に短い前肢ですが、この「短さ」を表現しようとした場合、22.5度のカドでは尖りすぎてしまいます。その先端を沈めることにより、丸みのあるカドの指ができました。

どちらも試行錯誤しながらの結果ですが、これだという答えを見つけたときは本当に嬉しいものです。また、そのように時間をかけているだけあって完成度はかなり高く、10年近く経った今でもこれ以上のものを作るのは難しいと感じています。

必要サイズ/ Recommended Size of Sheet : 25×25cm



三角に折り筋をつける
White side up. Fold diagonals and unfold.

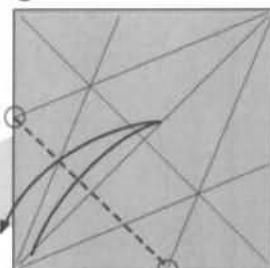


縁を折り筋に合わせて
折り筋をつける
Fold edges to the
diagonals and unfold.

The oldest model in this book, this model is the first model I can say I "created" intentionally. In the initial state of my creation, the model just "came" to me by folding in various random ways. I found that, with this model, to "create" a model, I would have to choose the best shapes and parts from a chaos.

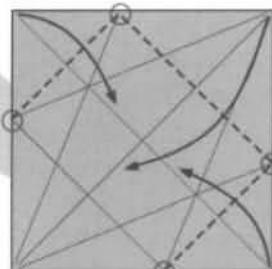
One favorite feature of this model is modeling of the horn. It is folded from the middle of the sheet, which gives it necessary thickness. Its short forelegs could not be folded from a usual 22.5° structure, because the output becomes too long and sharp. The solution was folding of fingers by sinking the tip. Of course, this was the result of trials and errors, but I am confident of its output. I feel that it is hard to design a model more well-designed than it.

3

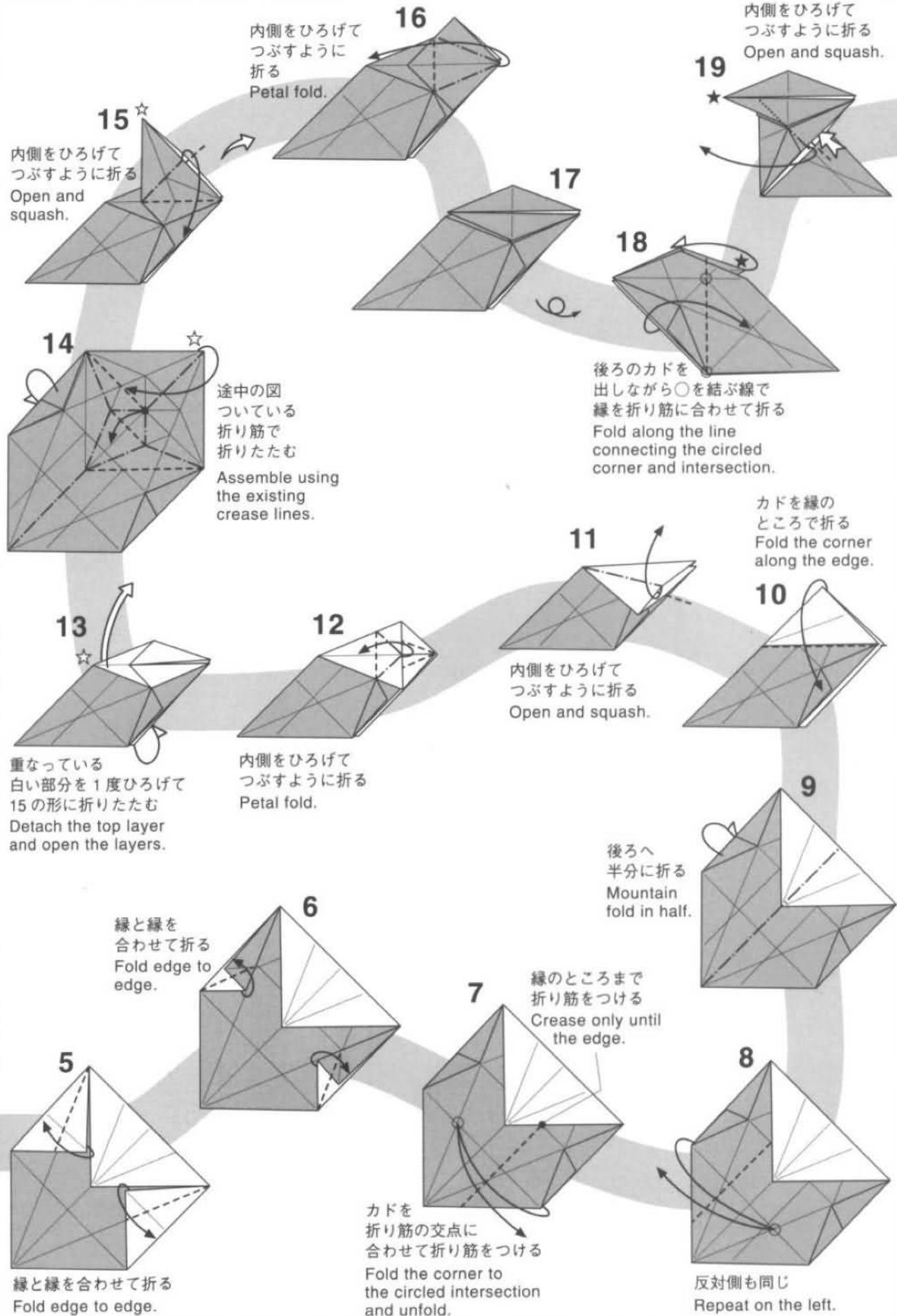


○を結ぶ線で折り筋をつける
Fold a line connecting the circled points and unfold.

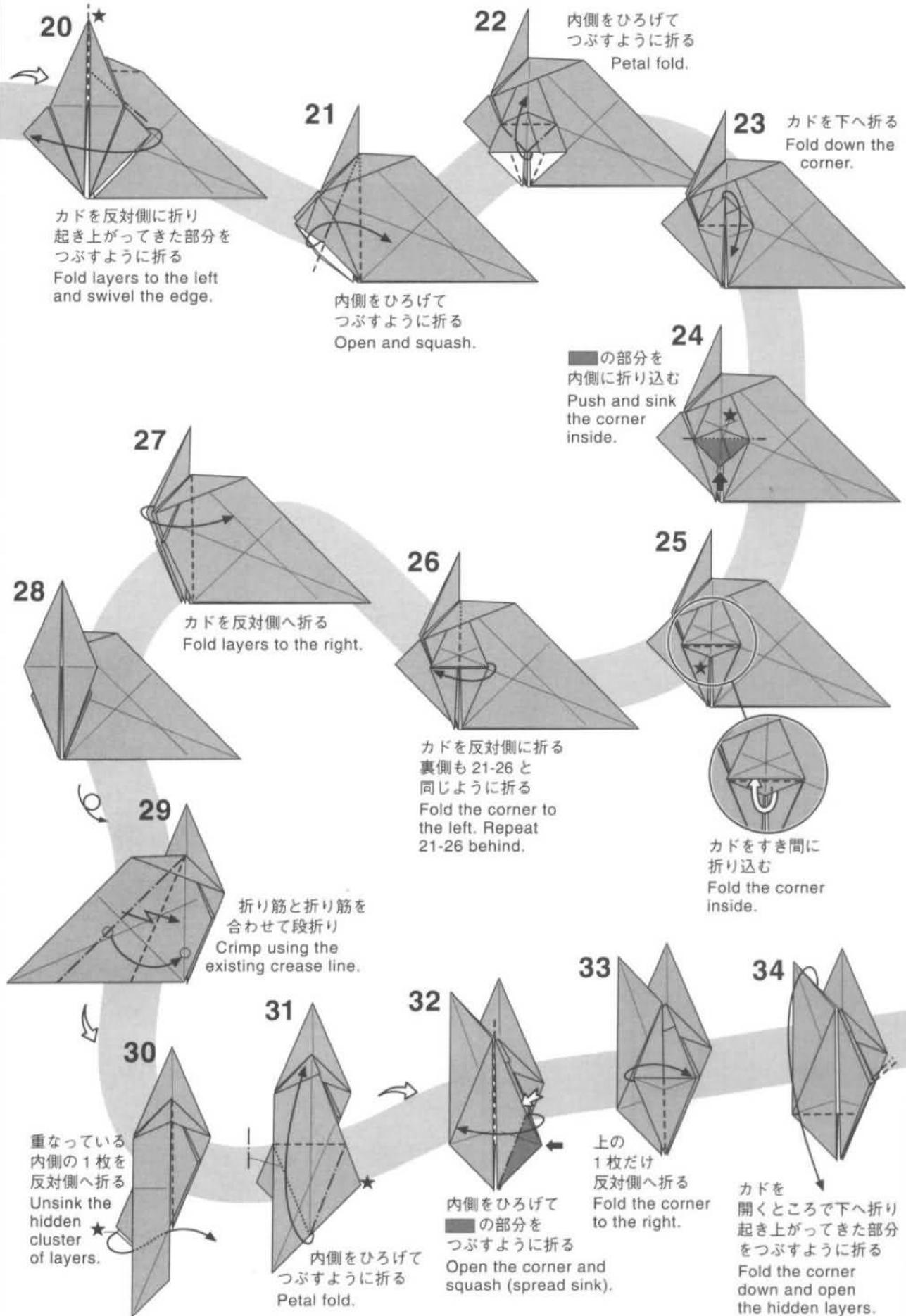
4

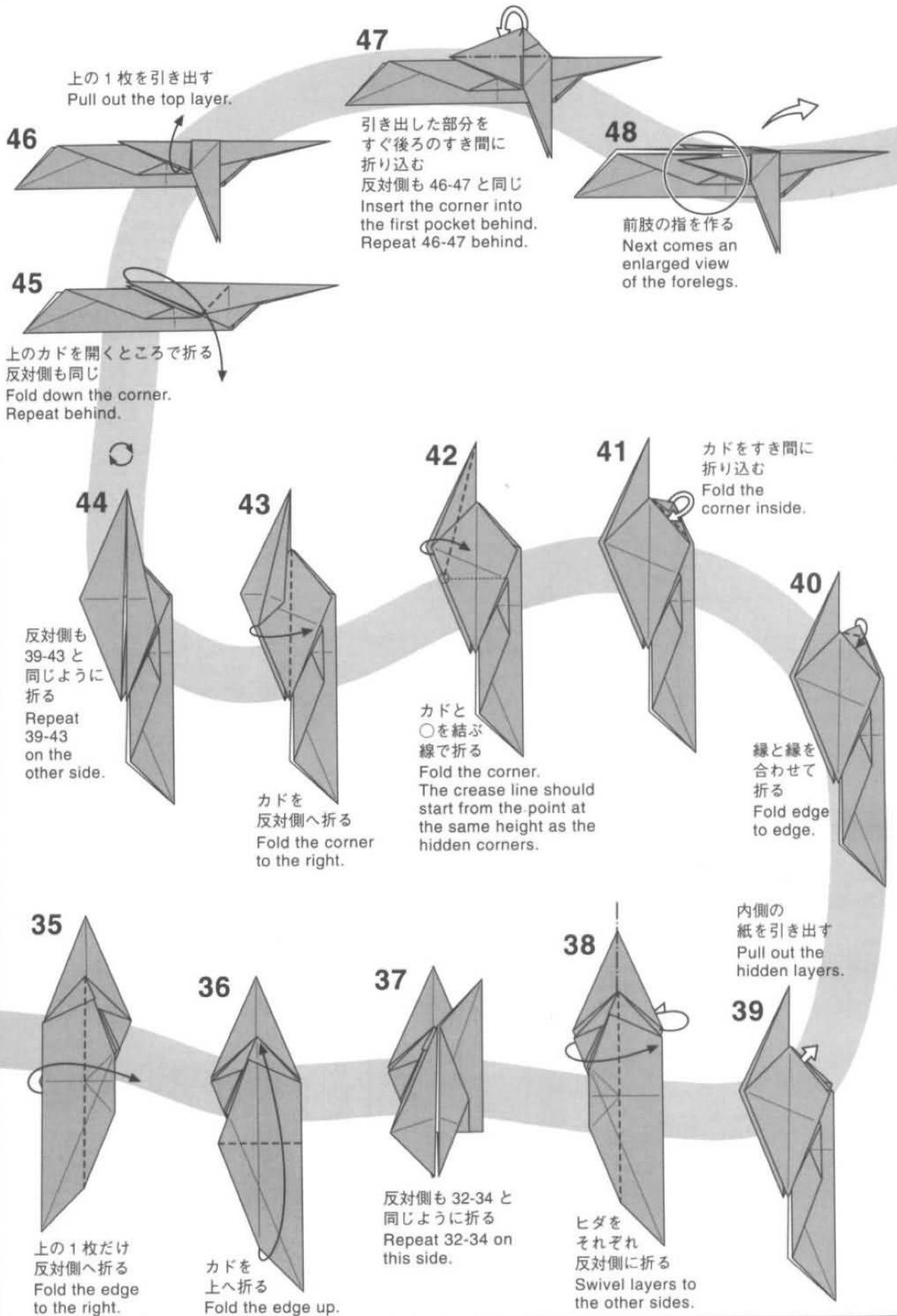


○を結ぶ線でカドを3か所折る
Repeat on the other three sides but do not unfold.

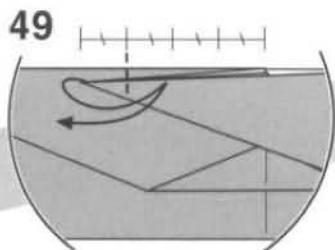


カルノタウルス

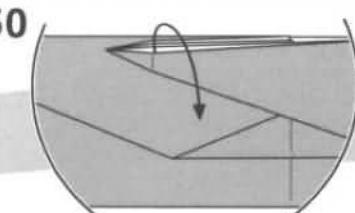




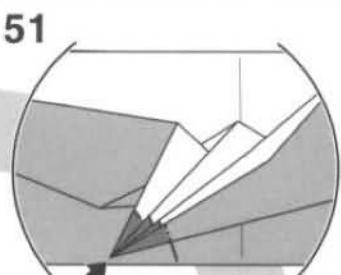
カルノタウルス



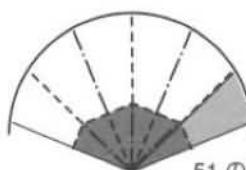
1/4 のところで
折り筋をつける
Fold at the quarter
of the length.
Unfold.



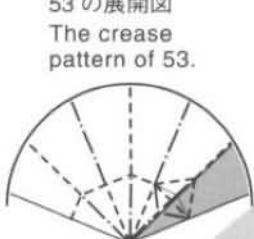
カドをかるくひろげる
Open the tip.



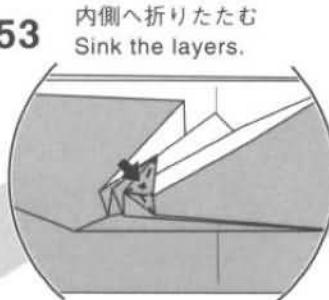
つけた折り筋で
カドの先を沈める
ように折る
Open sink the corner
using the crease line
made in 49.



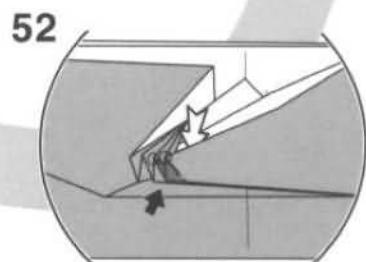
51 の展開図
The crease
pattern of 51.



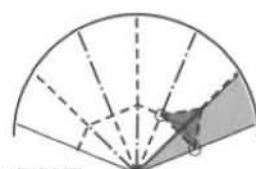
53 の展開図
The crease
pattern of 53.



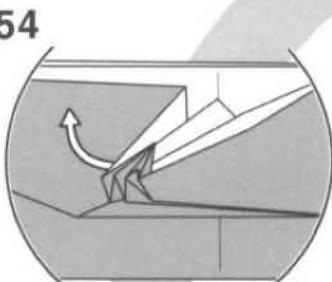
ひろげた部分を
内側へ折りたたむ
Sink the layers.



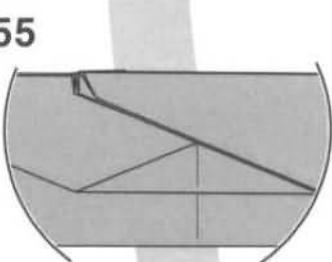
○のカドを結ぶ線で
下のカドをひろげる
Open the bottom corner
using the top corner as
a reference point.



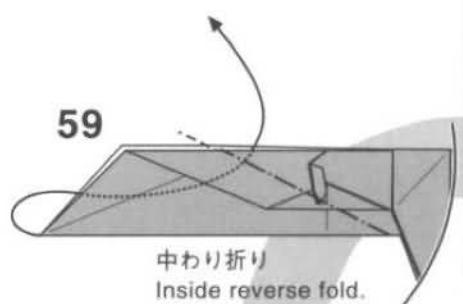
52 の展開図
The crease
pattern of 52.



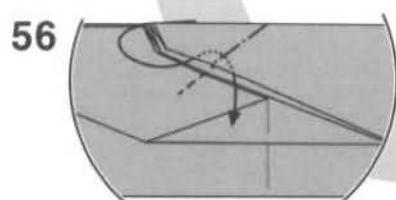
平らに戻す
Flatten the model.



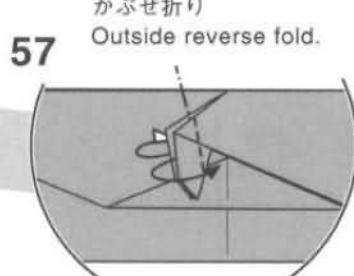
残りの 2 か所も
52-53 と同じ
ように折る
Repeat 52-53
on the other
two corners.



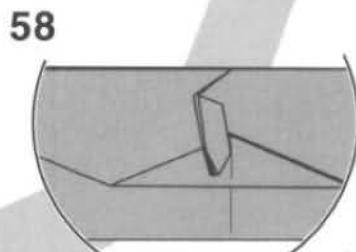
中わり折り
Inside reverse fold.



中わり折り
Inside reverse fold.

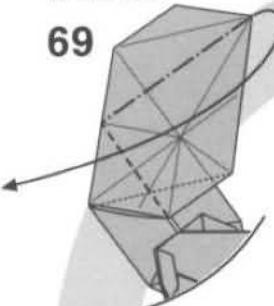


かぶせ折り
Outside reverse fold.



反対側も 49-57 と
同じように折る
次の図は小さくなる
Repeat 49-57 behind.
The next view will be
zoomed out.

山折り線をつまんで
カドを反対側へ折る
Fold the corner in
half and swivel it
to the left.



68 ★

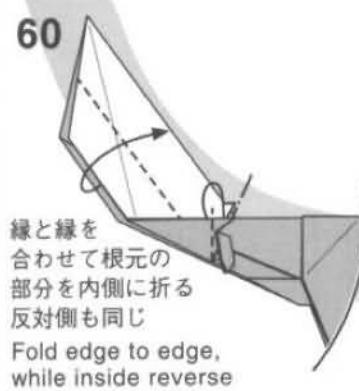
上の1枚を
裏返すように折る
Unwrap the
top layer.



67 ★

つけた
折り筋を使って
内側をひろげて
つぶすように折る
Open the layers
and squash in part
as shown.

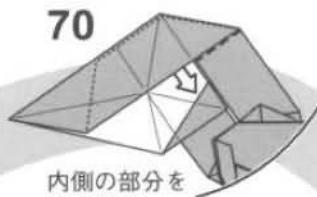
60



縁と縁を
合わせて根元の
部分を内側に折る
反対側も同じ
Fold edge to edge,
while inside reverse
folding on the bottom.
Repeat behind.

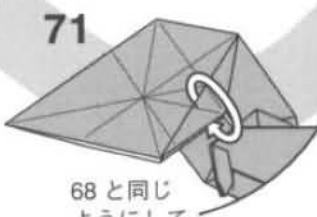
70

内側の部分を
引き出す
Pull out the
hidden layers.



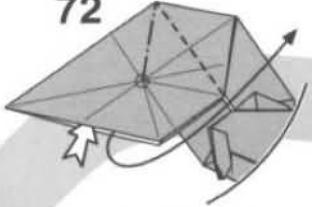
71

68と同じ
ようにして
上の1枚を裏返すように
折る
Unwrap the top layer.



72

内側をひろげて
○のところまで
つぶすように折る
Open and squash
the top portion
(up to the circled
intersection).



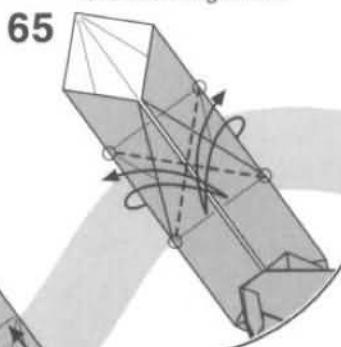
66

○のところで
折り筋をつける
Crease through
the intersection.



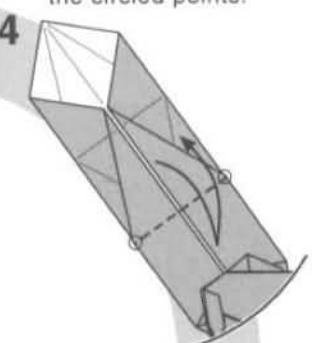
65

○を結ぶ線で
折り筋をつける
Crease diagonals.



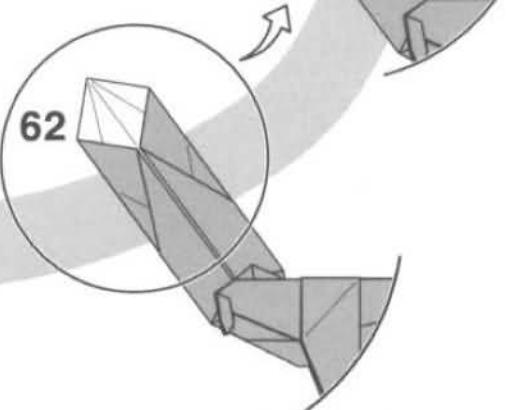
64

○を結ぶ線で
折り筋をつける
Make a crease
line connecting
the circled points.



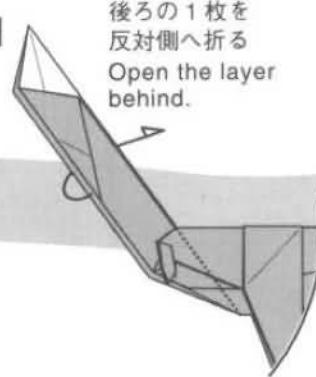
63

○を結ぶ線で
折り筋をつける
Make a crease
line connecting
the circled points.



61

後ろの1枚を
反対側へ折る
Open the layer
behind.

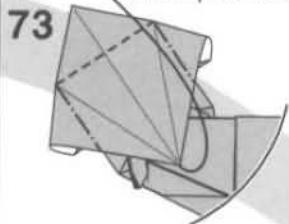


62

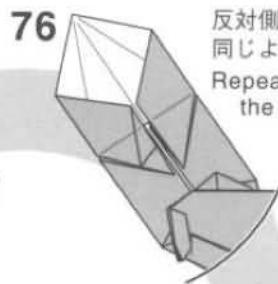
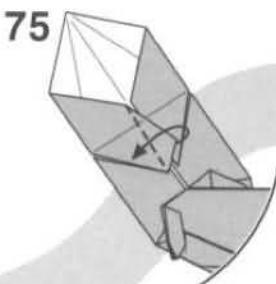
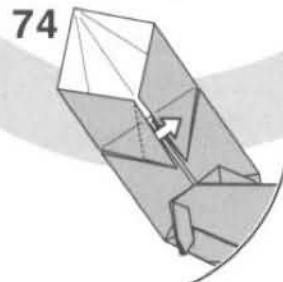


カルノタウルス

ついている折り筋で
内側をひろげて
つぶすように折る
Fold up the corner,
like a petal fold.



内側の部分を
引き出す
Pull out the
hidden layer.



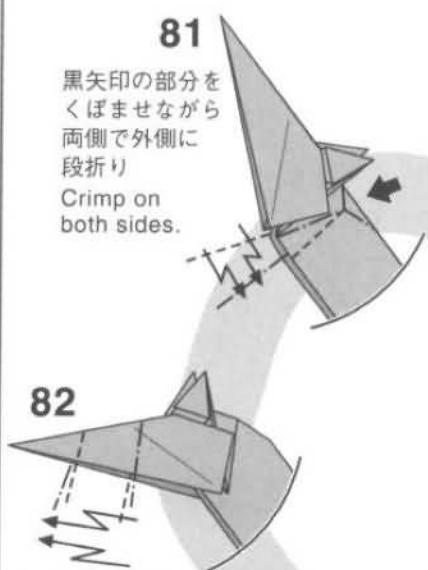
カドを反対側へ折る
Fold the corner to
the left.



カドを
つまむように折る
Pull down the top
layer and sharpen
the top corner, like
a petal fold.

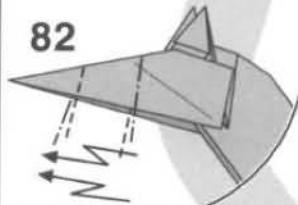
81

黒矢印の部分を
くぼませながら
両側で外側に
段折り
Crimp on
both sides.



80

カドを
後ろへ折る
反対側も同じ
Fold the corner behind.
Repeat behind.



79

カドを
上へずらす
ように折る
反対側も同じ
Swivel the corner inside.
Repeat behind.

78

後ろへ半分に
折る
Fold in half.

両側で内側に段折り
Pleat.

83

カドを
内側に折る
Inside
reverse fold.

84

カドを少し
後ろへ折る
反対側も同じ
Mountain fold the
tip inside.
Repeat behind.

85

86

87

後肢のカドに
図のような
折り筋をつける
Make crease
lines.

97 ▲

ひろげた
ヒダをのばす
ように前の方で
段折り
Crimp inside.

96

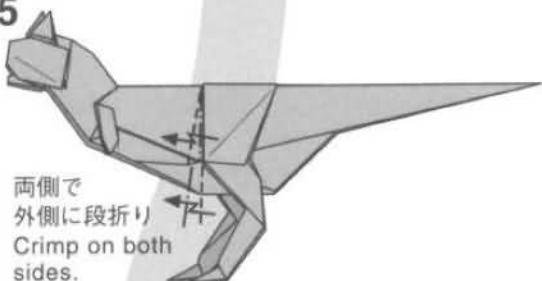


中心のヒダだけ
ひろげる
Spread the
middle layer.

98 ▽

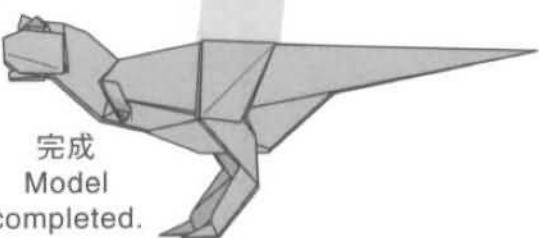
ツノと
前肢を折る
反対側も同じ
Shape the forelegs
and horns.

95



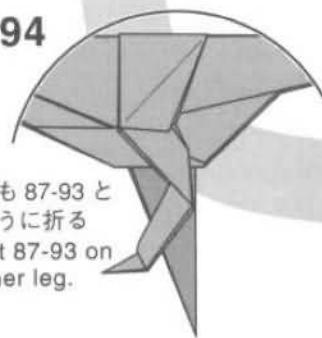
両側で
外側に段折り
Crimp on both
sides.

99



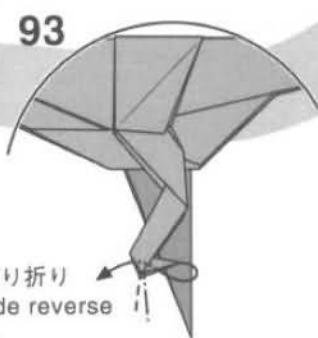
完成
Model
completed.

94



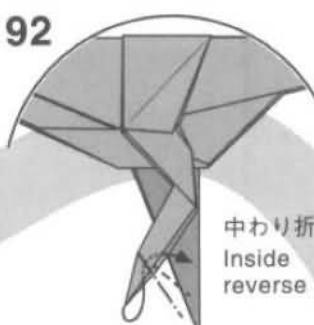
反対側も 87-93 と
同じように折る
Repeat 87-93 on
the other leg.

93



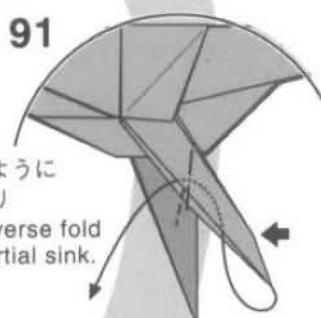
中わり折り
Inside reverse
fold.

92



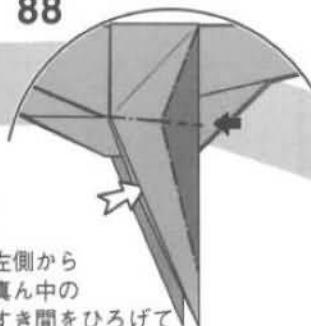
中わり折り
Inside
reverse fold.

91



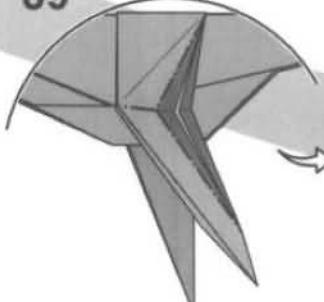
カドを
押し込むように
中わり折り
Inside reverse fold
with a partial sink.

88

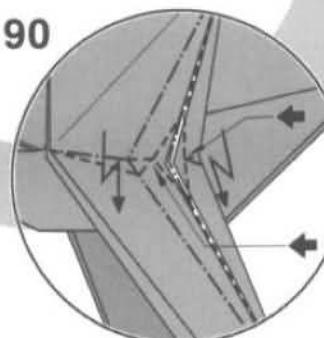


左側から
真ん中の
すき間をひろげて
■の部分をつぶす
Open layers from
the left and push
in the right edge.

89



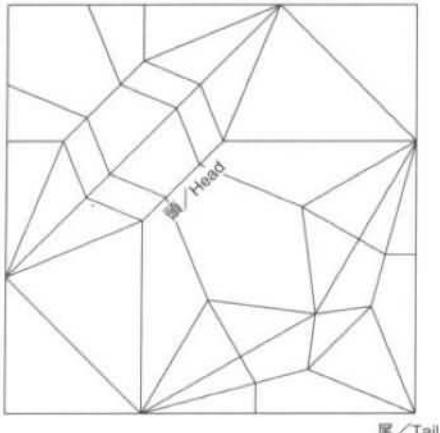
90



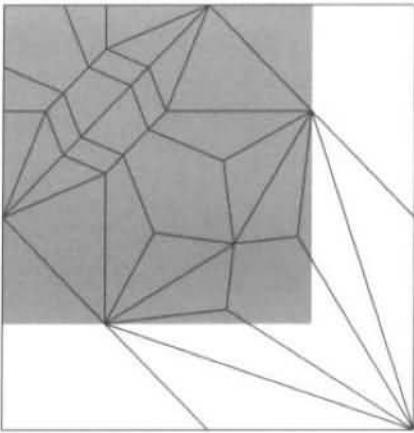
中心の部分を
つぶしながら
両側で斜めに
段折り
Crimp and sink
the right edge.

トビエイ

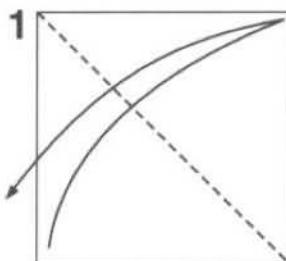
Eagle Ray



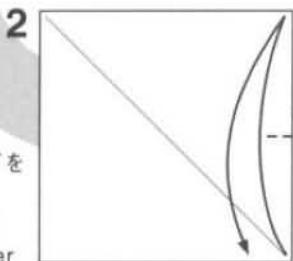
尾の長いバージョン Long-tailed version



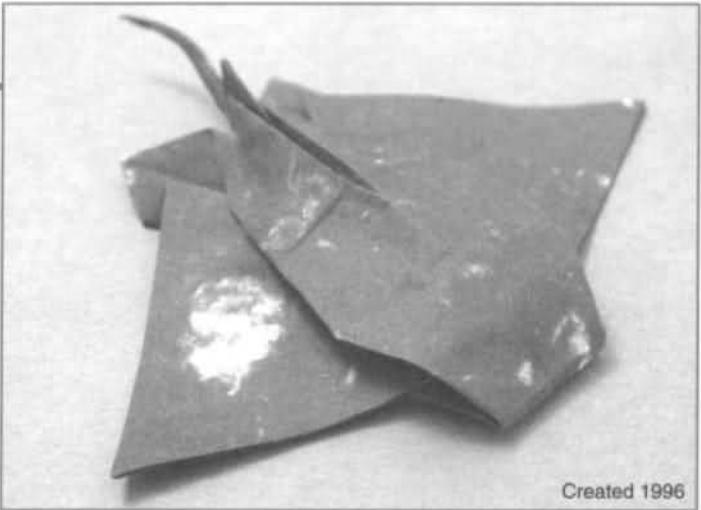
必要サイズ / Recommended
Size of Sheet : 15×15cm



三角に折り筋をつける
Fold diagonally and unfold.



カドとカドを合わせて印をつける
Fold corner to corner but only mark the edge.



Created 1996

この作品、実は表よりも裏から見た形の方が気に入っています。というのも、水族館の大水槽で、ガラスに張りついで口やエラの部分を見せながら泳ぐエイを眺めていたのが、これを作るきっかけになったからです。逆に表からの形にはあまりなじみがないのですが…。

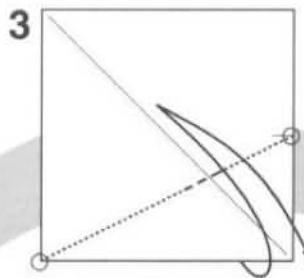
特徴的なのは頭部の構造で、展開図をたたんだ段階で形がすでに完成形に近い状態になっています。こういった部分はいろいろな作品に含まれますが、なかなかここまできれいにゆくことは少なく、とても気に入っています。また、カドを広げてつぶすようにして一気にまとめあげる手順も特徴的で、もしこの部分がなかったら折り図化していなかっただかも知れません。

今回の折り図からは、尾の短いものができますが、尾の長いバージョン(P.1 カラー写真参照)も存在します。作り方は難しいわけではなく、単純に体の部分の比率を小さくしただけです。展開図を載せますので、興味のある方はぜひ挑戦してみてください。

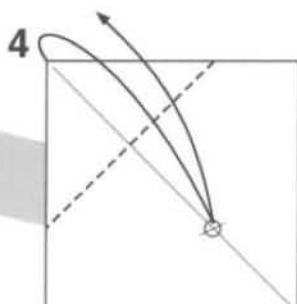
I prefer the bottom view of this model to the top view. This is only natural, because the motivation of creating this model was the view of a ray from the bottom in an aquarium.

The structure of the head is my favorite, with the crease pattern directly leading to the completed form. Also, a process of squashing and assembling the structure at once is so well done that I would not have drawn diagrams if I had not found it.

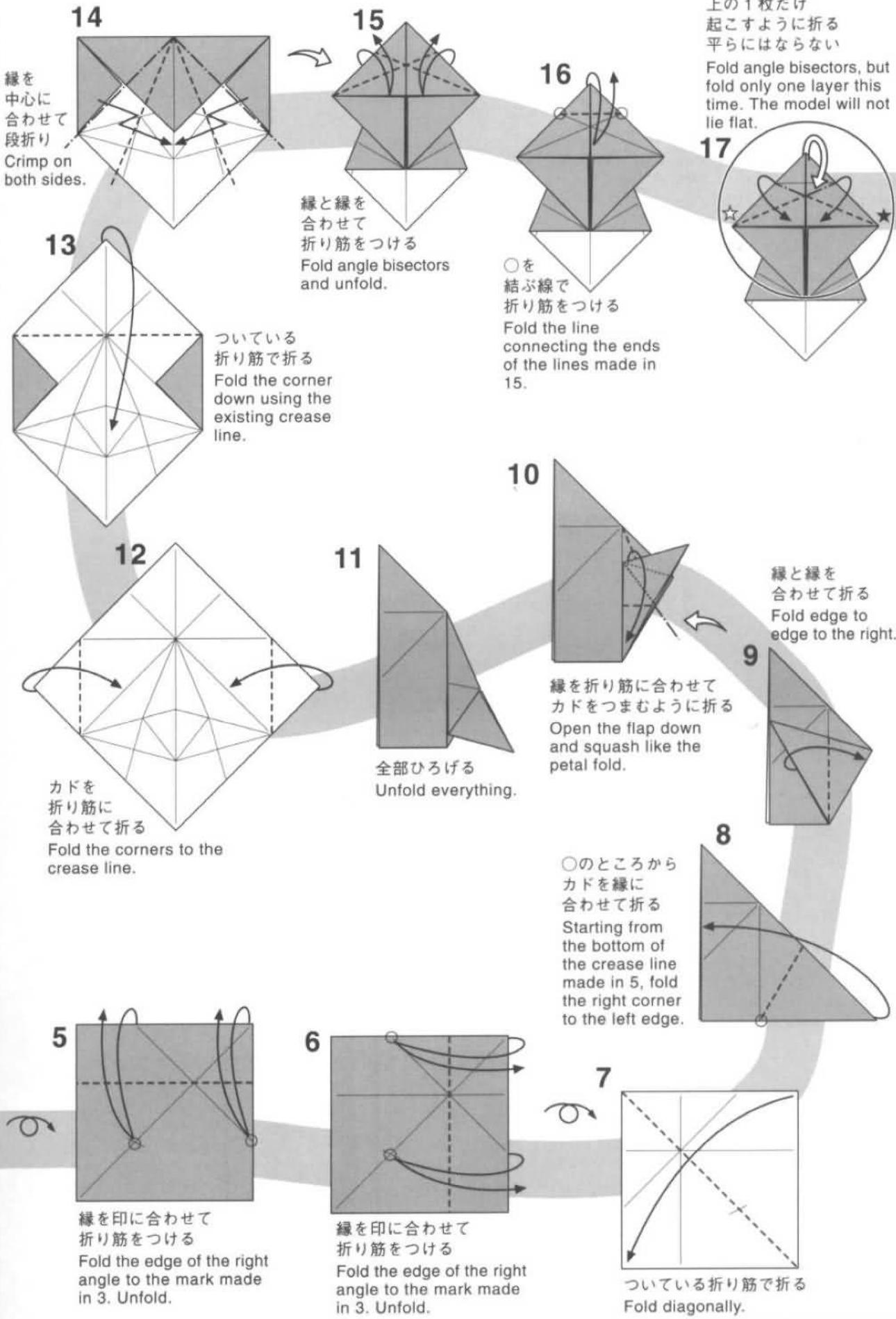
The long-tailed version also exists. This can be simply folded by reducing the ratio of the body in the crease pattern.



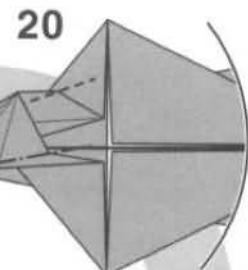
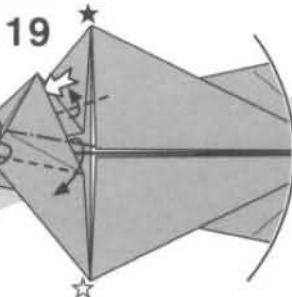
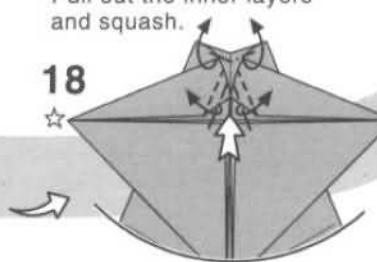
○を結ぶ線で折り筋の部分に印をつける
Mark the intersection of the diagonal and the line connecting the mark made in 2 and the other corner.



カドをつけた印に合わせて折り筋をつける
Fold the top left corner to the mark made in 3.



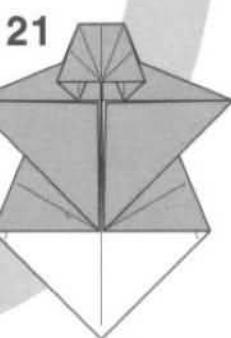
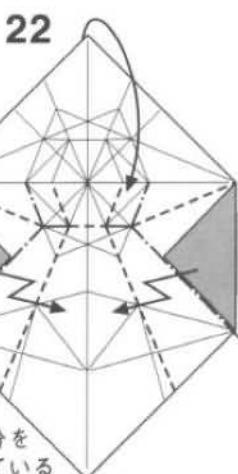
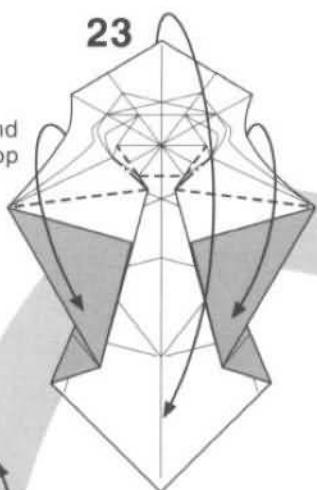
ついている折り筋を使って
起き上がった部分をひろげて
つぶすように折りたたむ
Pull out the inner layers
and squash.



横から見た図
The side view.

途中の図
Squashing....

途中の図
Fold down and
squash the top
portion.

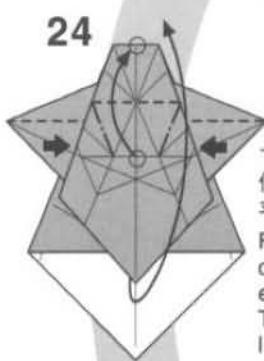


13 の形に戻す
Squashed. Unfold to 13.

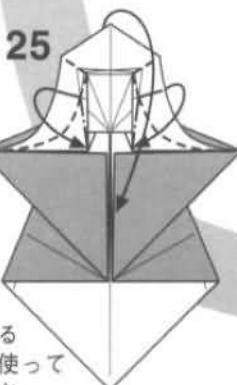
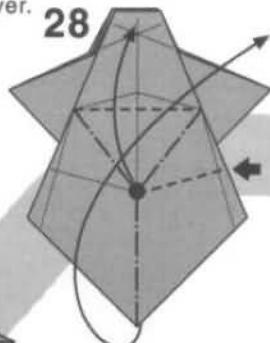
下半分を
ついている
折り筋で段折りするように
折りたたむ
平らにはならない
Sink/Pleat in and out using
the existing crease lines.
The model will not lie flat.

ついている折り筋を
使ってカドを上へ折る
平らにはならない
Fold up and push sides
of the top layer using the
existing crease lines.
The model will not
lie flat.

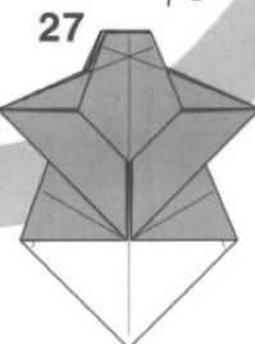
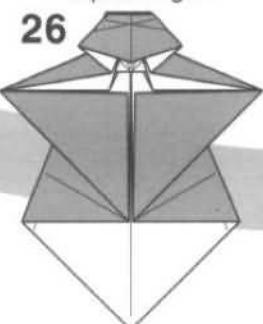
ついている折り筋で
中心線をつまむようにして
折りたたむ
Make a kind of rabbit-ear
fold and flatten the top
layer.



ついている折り筋を
使ってカドを上へ折る
平らにはならない
Fold up and push sides
of the top layer using the
existing crease lines.
The model will not
lie flat.



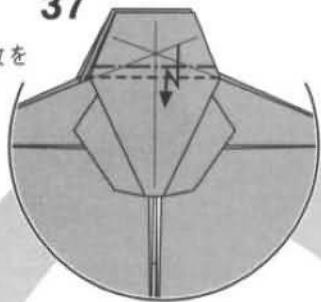
途中の図
Squashing....



ついている
折り筋を使って
折りたたむ
Squash and fold
down using the existing
crease lines.

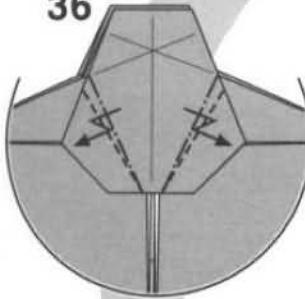
37

上の1枚を
段折り
Pleat.



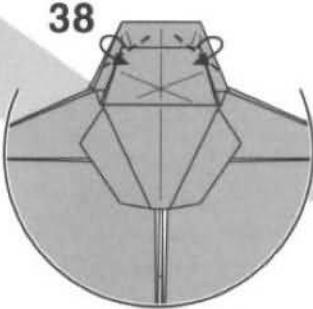
36

斜めに段折り
Crimp on
both sides.



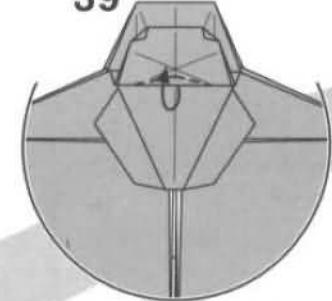
38

カドを少し折る
Fold the corners.



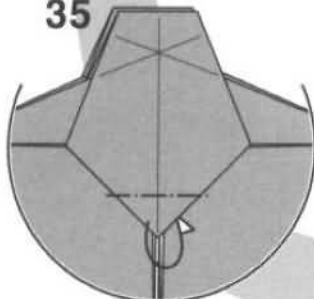
39

中わり折りするように
縁をつまんで起こす
Inside reverse fold
the top layer
halfway, so that the
edge stands.

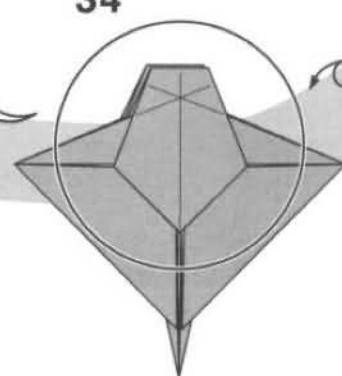


35

カドを後ろへ折る
Fold the corner
behind.

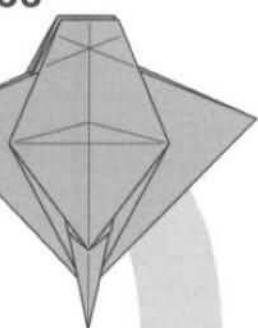


34



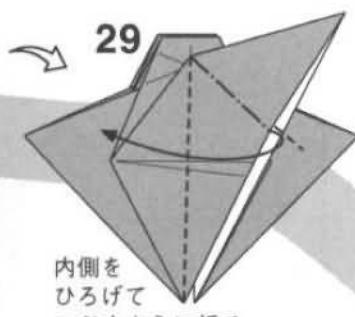
33

カドを下へ折る
Fold the corner
down.



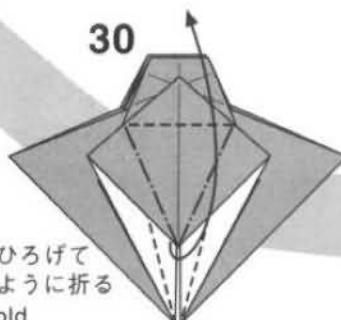
32

内側を
ひろげて
つぶすように
折る
Open and squash.



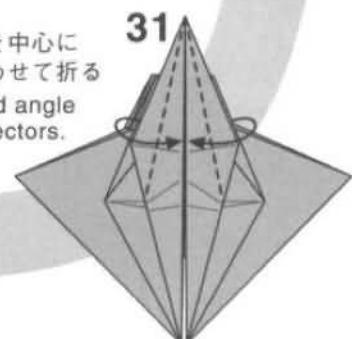
30

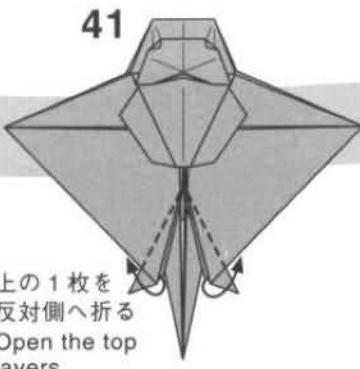
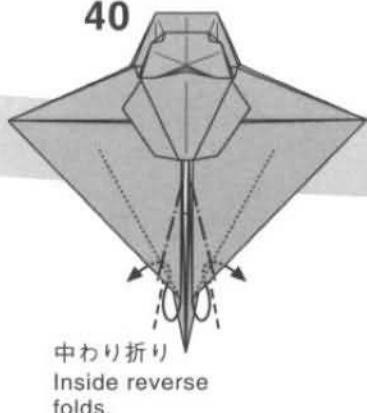
内側をひろげて
つぶすように
折る
Petal fold.



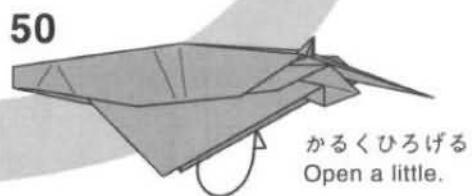
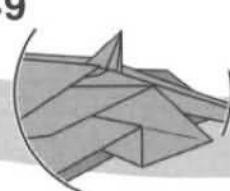
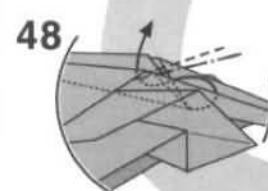
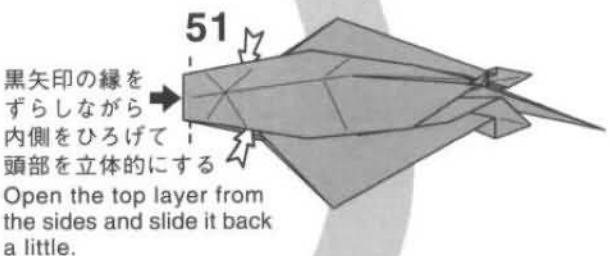
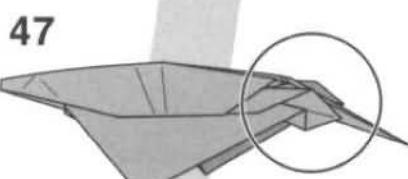
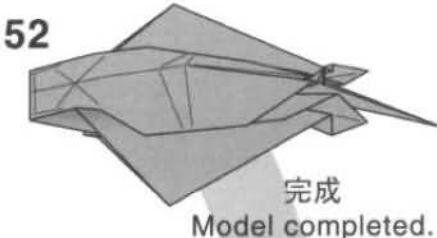
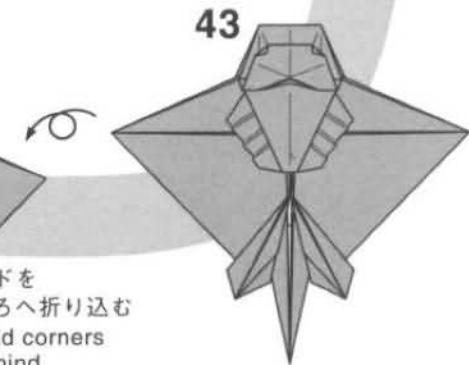
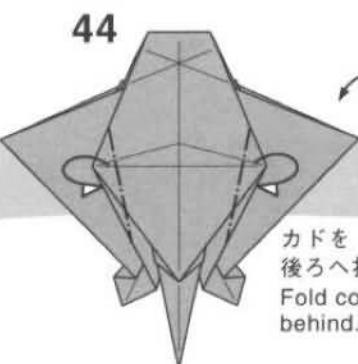
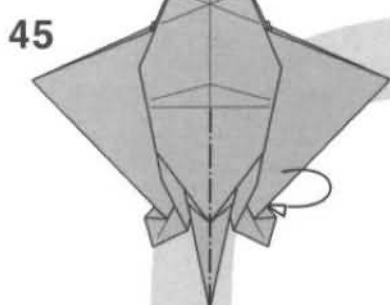
31

縁を中心
に合わせて
折る
Fold angle
bisectors.



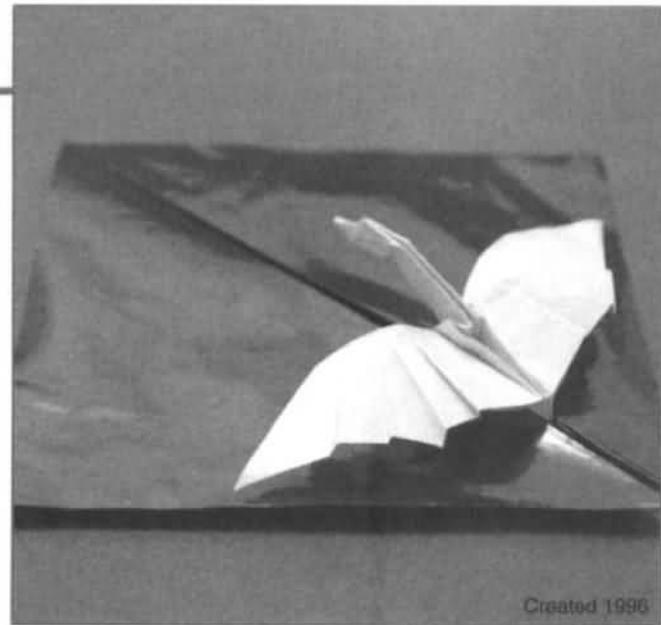
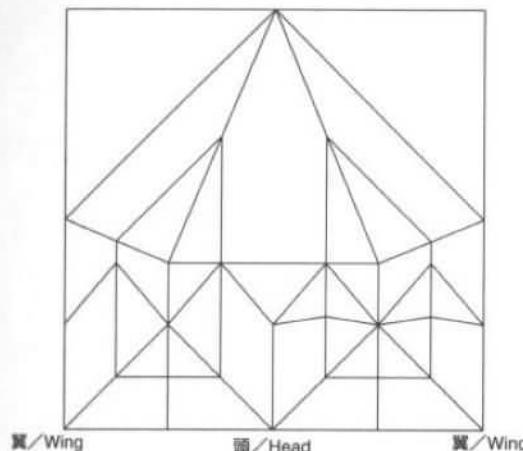


尾の部分を
かるく半分に折る
Fold in half on
the back of the tail,
halfway.



白鳥離水

Splash! (Swan)



Created 1996

折り紙には、完成形以外に構造・造形・題材などの段階で、いろいろなアイディアがあります。私の場合、このアイディアが創作をするまでの出発点になることが多く、作品によっては完成形以上に重要です。中でもこの作品はかなり極端で、紙の半分で鳥を、残り半分で水面を折るというアイディアが全てです。

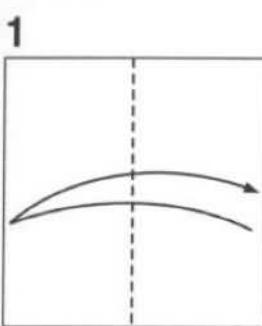
生物などの題材では、複雑な外見に埋もれてあまり目立たないことが多いのですが、私の作品は、展開図などで構造や手法だけを見た場合、アイディア重視の傾向が感じられます。これはどうやら私が設計的な面から創作に入ったのが原因のようです。また、ユニットや幾何立体では特にこの傾向が強いのですが、生物などの題材に比べて形状がシンプルな場合が多いため、アイディアが形に出やすいのが一因ではないかと思います。

この作品を「正方形のベース」と「そこから出ている蛇腹」と考えてみると、実にいろんな改造をして遊ぶことができます。例えば蛇腹の部分で人の形を、正方形の部分で折り鶴を作つて「巨大鶴を折る人」。人の部分をさらに改造してスキー板をはかせ、正方形の部分を変えることでジャンプ、モーグルなどスキーの競技を折る、などです。実に一発芸的なアイディアですが、こういうばかばかしいことも折り紙では意外と大切ではないかと思います。

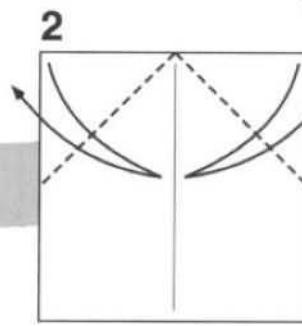
When I design a model, I usually start from rough ideas on the structure, modeling, or the target. This sometimes is more important than the final shape of the model. This model is another example with such ideas at the beginning. I just wanted to fold a bird with a half of a square, and the water surface with another half. With living creatures, the complexity of the model hides such ideas, but when you see crease patterns and their structures, the ideas show themselves clearly.

This model is based on pleats protruding from a square, so you can remodel it into various shapes, such as "a man folding a huge crane" with a man folded from pleats and a crane from a square. Playing with the basic ideas like this is very important in designing and folding.

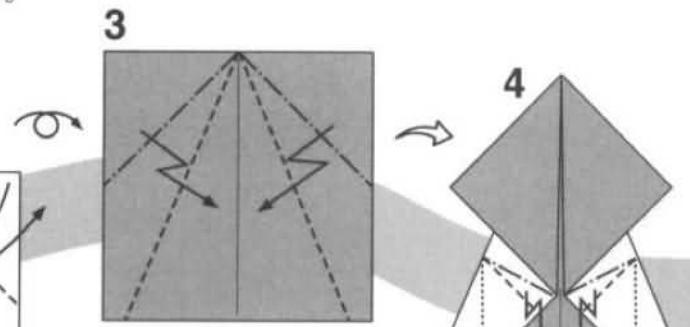
必要サイズ / Recommended Size of Sheet : 15×15cm



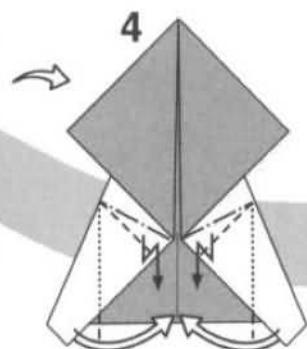
半分に折り筋をつける
White side up.
Fold edge to edge.



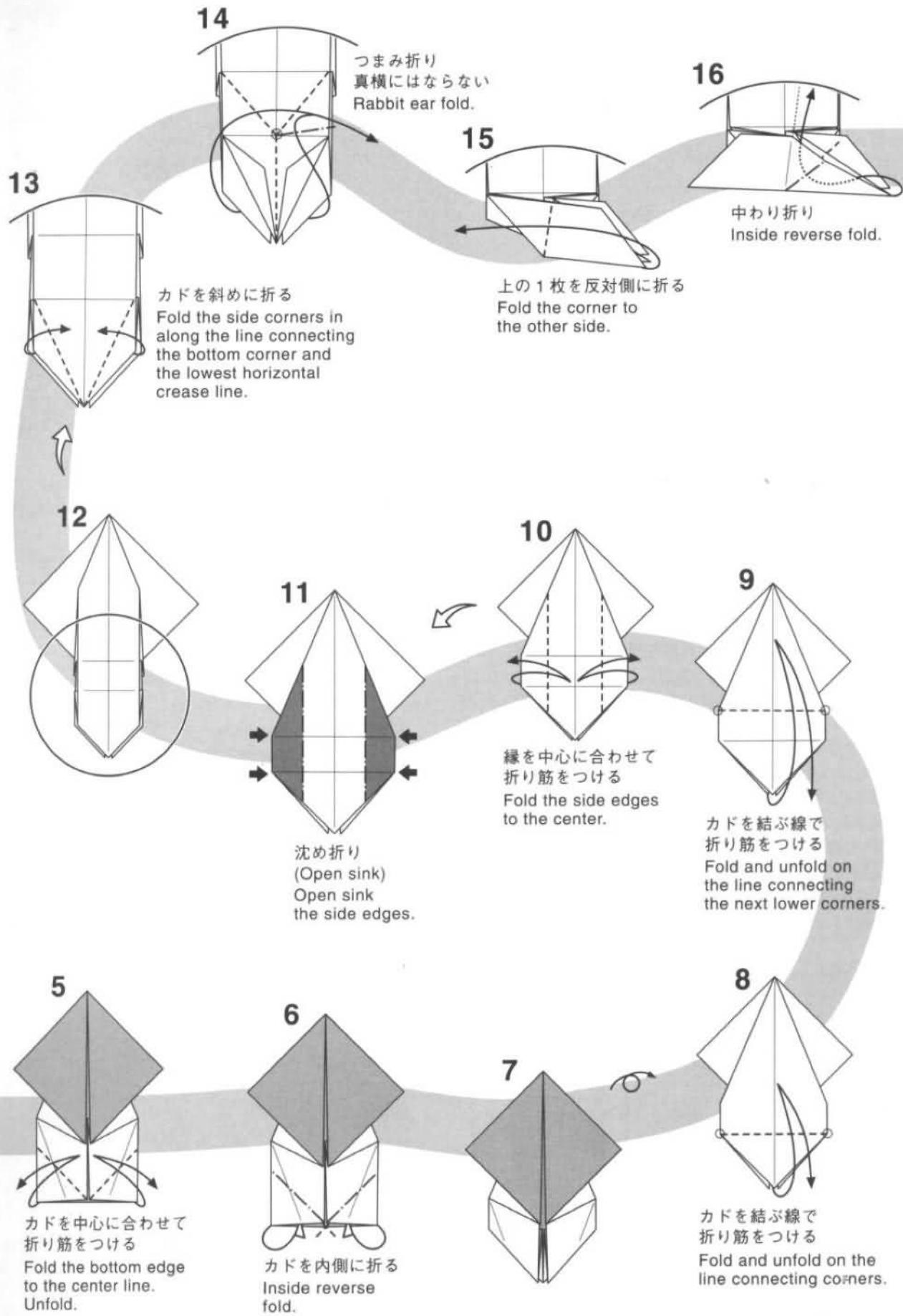
縁を中心にして
折り筋をつける
Fold the top edge to
the center line. Unfold.



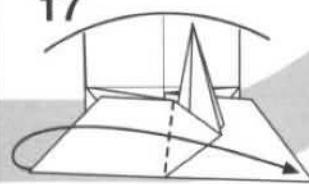
折り筋を中心にして
斜めに段折り
Crimp aligning the
crease lines made in
2 with the center line.



縁を中心にして
カドをつまむように折る
Crimp aligning the
white edges to the
center.

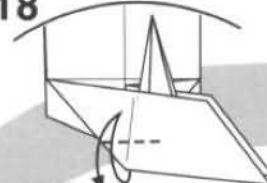


17



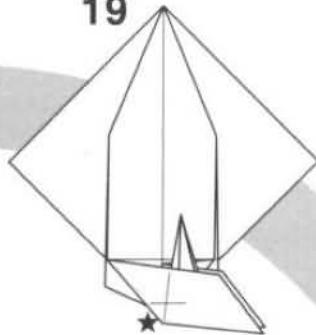
カドを反対側に折る
Fold back the corner moved in 15.

18

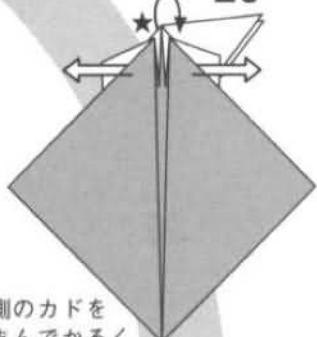


図のくらいの位置で
しっかりと折り筋を
つける
Make a firm
crease line.

19

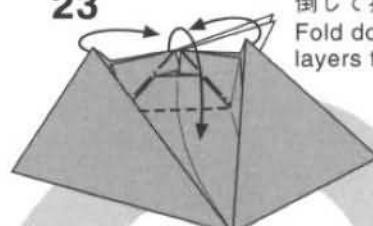


20



両側のカドを
つまんでかるく
ひろげて上の部分を起こす
Open and separate the top
corners from each other and
let the layers behind stand.

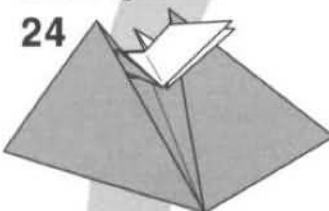
23



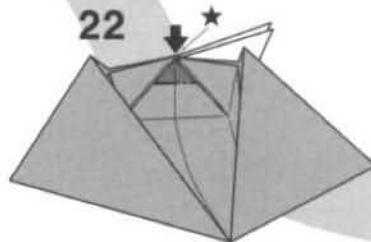
起こした部分を手前に
倒して折りたたむ
Fold down the raised
layers to the front.

途中の図
Close the
corners again.

24

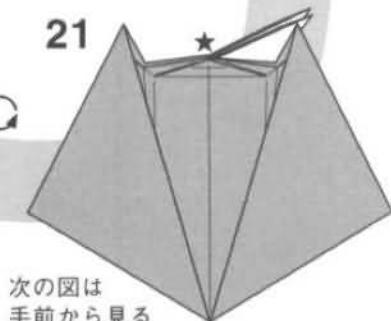


22



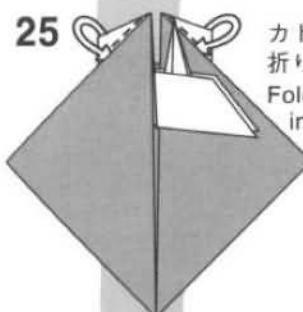
18 でつけた折り筋で
中心のカドを沈め折り
Sink using the crease
line made in 18.

21



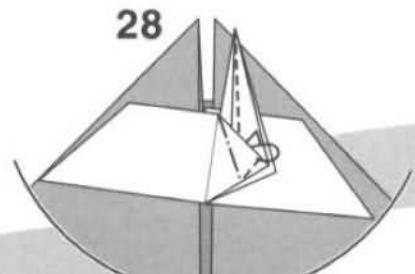
次の図は
手前から見る
The next view
will be from this
side.

25



カドをすき間に
折り込む
Fold the corners
inside.

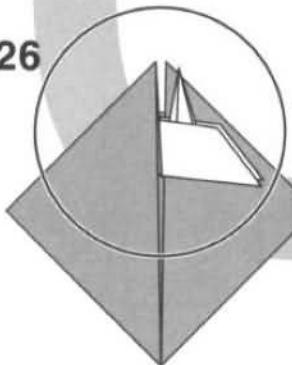
28



カドを細くするよう
に縁を内側に折り込む
反対側も同じ

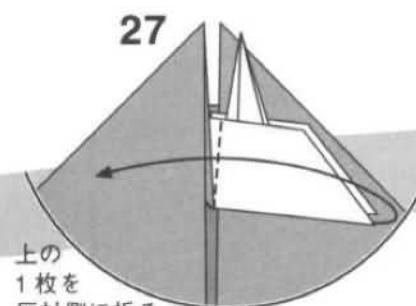
Inside reverse fold so the
neck will be more slender.
Repeat behind.

26

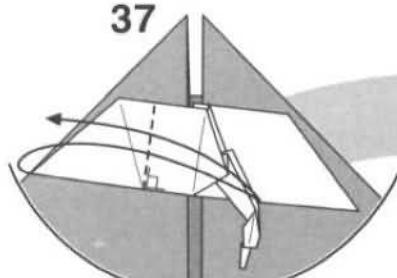


上の
1枚を
反対側に折る
Fold the top corner
to the other side.

27

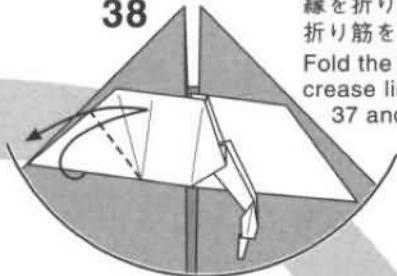


37



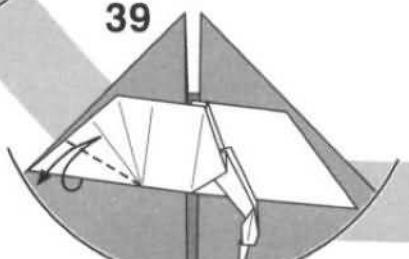
縁に対して垂直に
折り筋をつける
Fold at a right
angle and unfold.

38



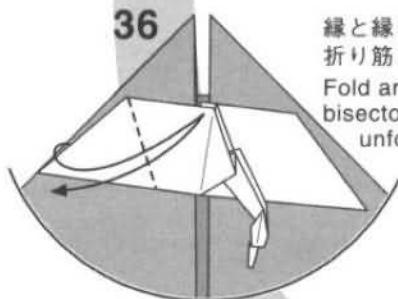
縁を折り筋に合わせて
折り筋をつける
Fold the edge to the
crease line made in
37 and unfold.

39



縁を折り筋に合わせて
折り筋をつける
Fold the edge to the
crease line made in
38 and unfold.

36



縁と縁を合わせて
折り筋をつける
Fold an angle
bisector and
unfold.

35



34



カドを
内側に折る
Fold the tip in.

33



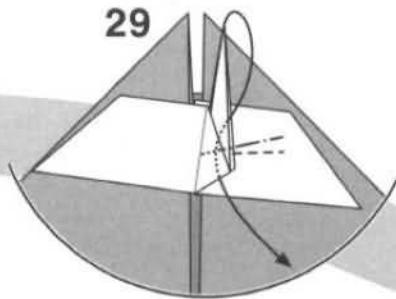
両側で内側に
段折り
Crimp inside on
both sides.

32



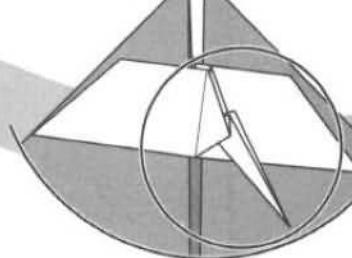
内側の紙を
引き出す
Pull out the
hidden layers.

29



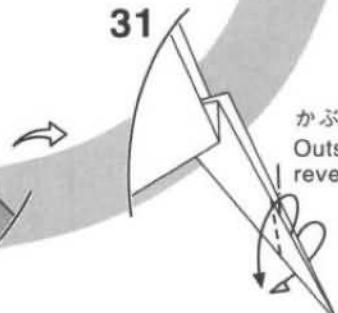
中わり折り
Inside reverse fold.

30



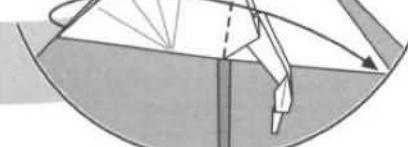
かぶせ折り
Outside
reverse fold.

31



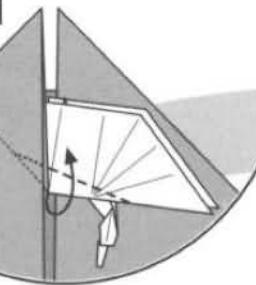
翼のつけ根のカドを斜めに折る
Fold the inner corner up.

40

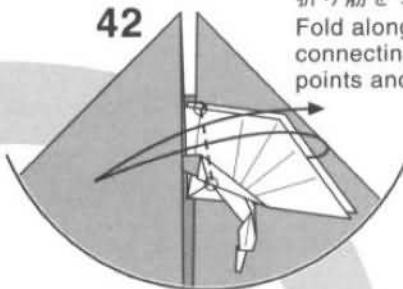


カドを反対側に折る
Fold the layer back to the right.

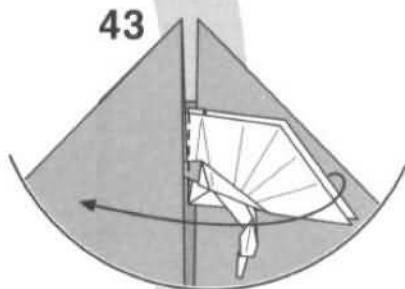
41



42



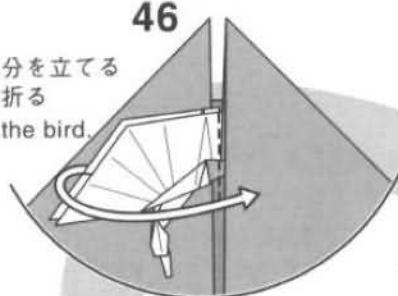
43



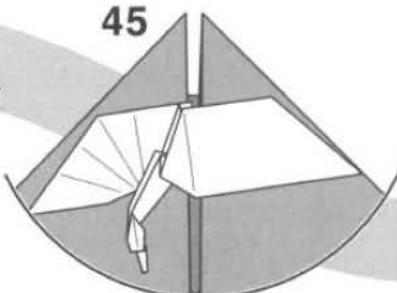
鳥の部分を反対側に折る
Move the bird to the other side.

44

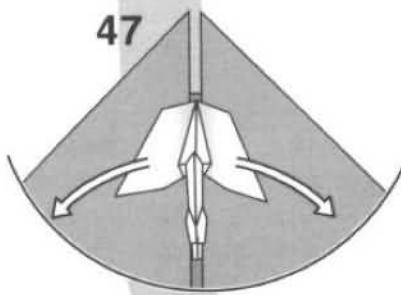
鳥の部分を立てる
Raise the bird.



45

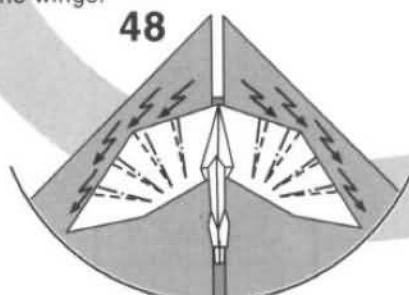


47



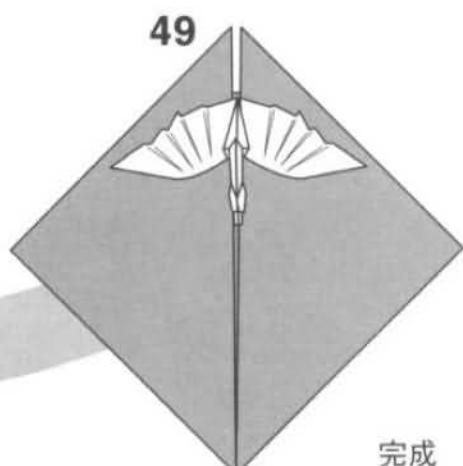
翼をひろげる
Open the wings.

48



翼を段折りして形を整える
Crimp the wings.

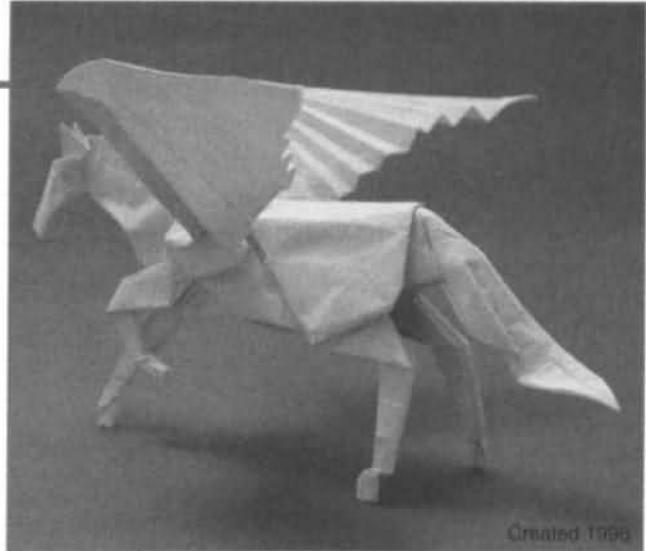
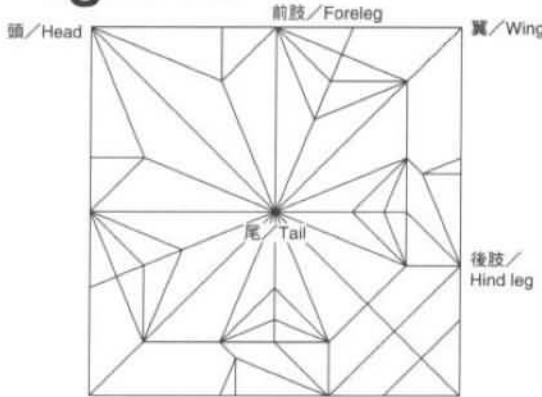
49



完成
Model completed.

天馬

Pegasus



Created 1996

た くさんの展開図を見ていると、だんだんいろいろなことが分か
るようになってきますが、その中のひとつに「カド配置」が
あります。これがまた実に奥が深いのです。慣れてくると、カドを折
り出すのに大体どのくらいの大きさの紙が必要か、というのがな
んとなく分かるようになりますが、それでも効率とエレガントさを両
立させるのは結構難しいものです。設計的な創作方法で作られた
作品の、構造から完成形まで大きな影響を与える要素なので、
私の場合はカド配置ができるだけ早い段階で決めるようにしてい
ます。また、私はこのような作業をかなり感覚的にやっているので
すが、目黒俊幸氏や川畑文昭氏、ロバート・J・ラング氏らはこれ
を理論的に整理、発表されています。

この作品のカド配置の基本はいわゆる「4鶴¹⁾」と同じもので、
「鶴ドラゴン²⁾」と並んで翼を持つ空想動物によく使われています。
この配置の問題点は、前肢から翼の間が、翼から後肢の間と同じ間隔になってしまって、そのままでは翼が体の中央から出で
てしまいます。また紙の辺から出すカドを順番に使っていった場合、
中央部のカドが残ってしまうのも問題のひとつです。この中央の
カドをうまく使うのは結構難しく、内側にかくしてしまって使われない
場合が多いようです。私も麒麟ではこの中央のカドを持て余して
いますが…。この天馬では尾を用紙の中央に配置し、余った
カドをつぶして後肢の位置をずらすことでこれらの問題に対処し
ています。こういったことができるのがカド配置の面白さでしょう。

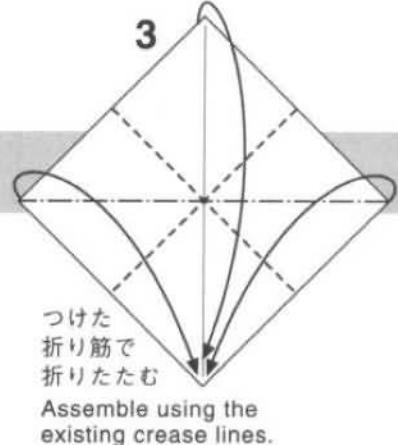
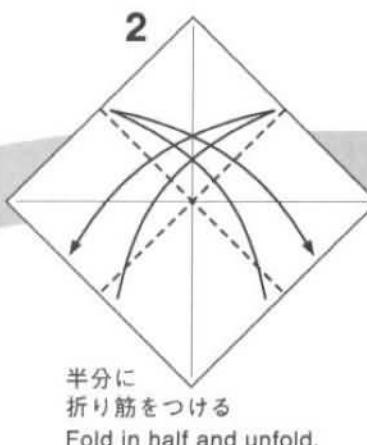
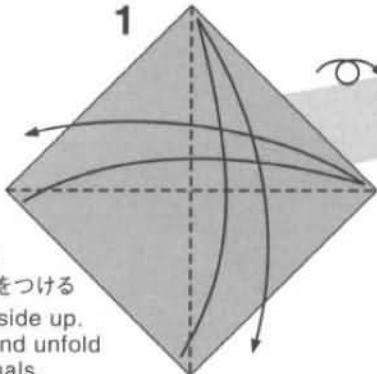
1) 4鶴: 正方形を4分割して、それぞれに鶴の基本形の構造を埋め込んだもの。

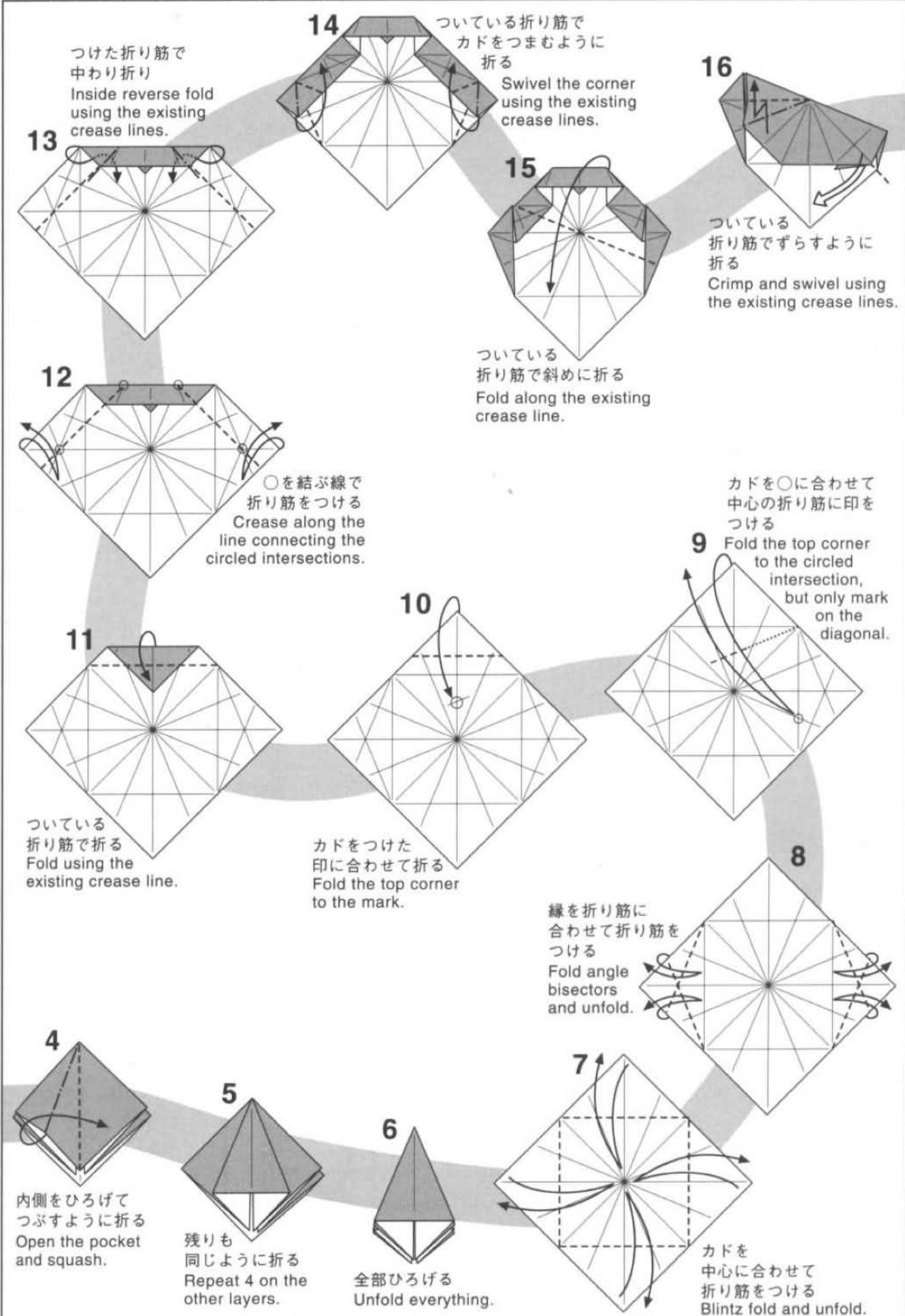
2) 鶴ドラゴン: エンシェントラゴン (P.193) を参照。

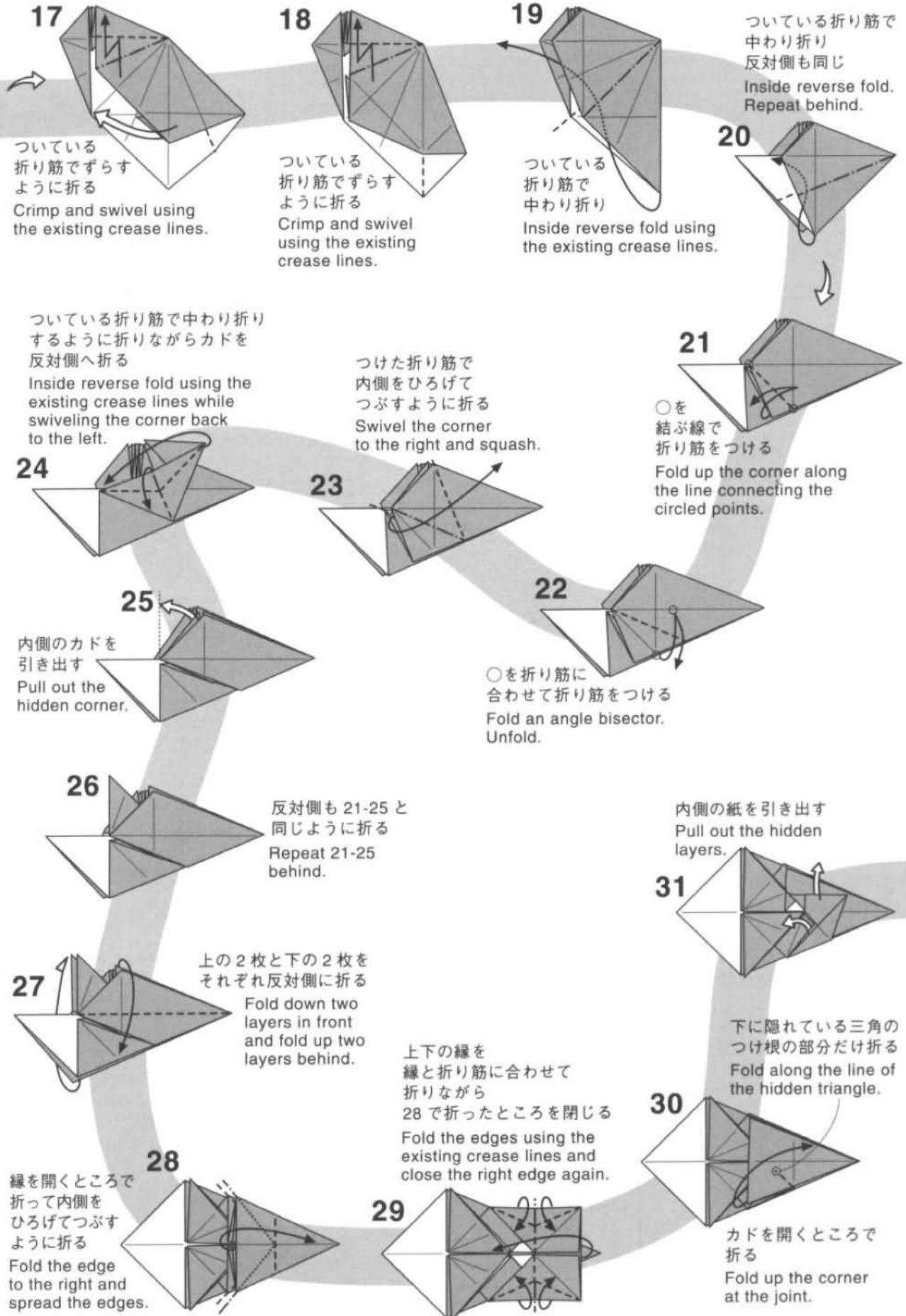
When you are accustomed to crease patterns, you become able to easily see the distribution of flaps necessary for the model. It is easy to grasp the approximate size of a sheet necessary for folding, not speaking of the effectiveness and elegance of the output model, which is another problem. I always decide on the basic crease patterns in the early stage of my creation, just intuitively. Meguro, Kawahata, Lang and others give us theoretical bases for this.

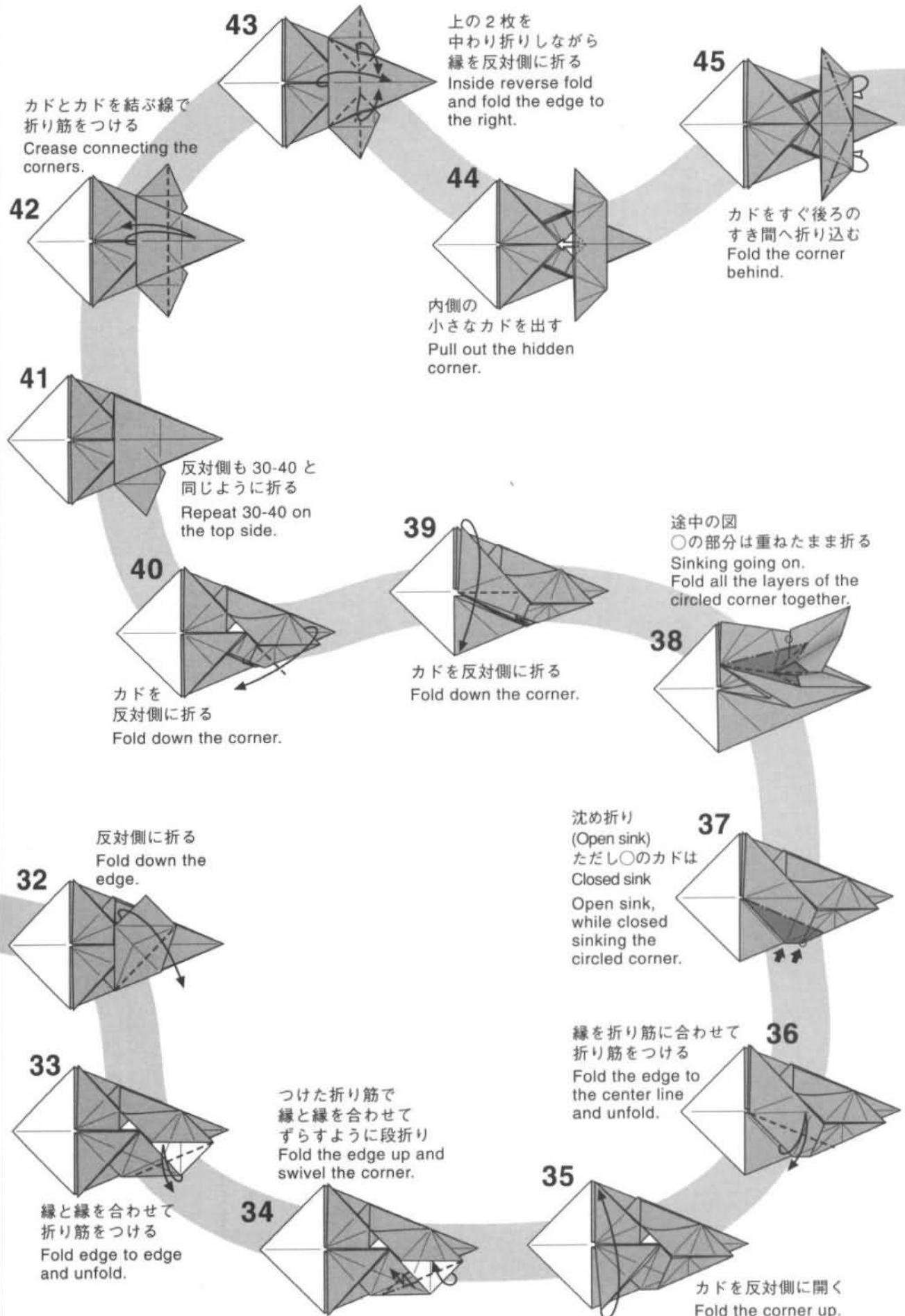
The basic structure of this model is four bird bases incorporated in a single sheet of square, which frequently is used with models with wings. The problem with this structure is that the equidistance of forelegs, wings and hind legs, which gives wings folded from the exact middle point of the model. Another problem is the existence of an unusable central flap. Usually, this flap is so hard to use effectively but to hide, like in my Kirin. However, in this model, I gave solutions to these problems by setting the tail flap in the middle of the sheet without using the excess flap, and by shifting the positioning of hind legs. This is another interesting feature of this method of designing a model.

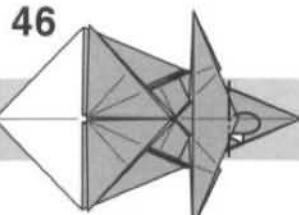
必要サイズ/ Recommended
Size of Sheet : 25×25cm



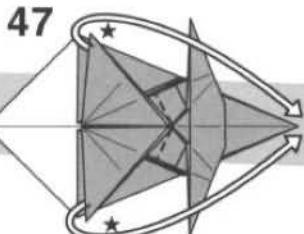




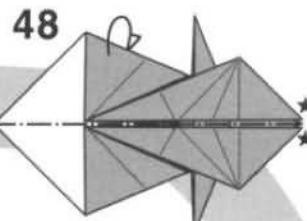




カドを少し
後ろへ折る
Fold the corner
behind.



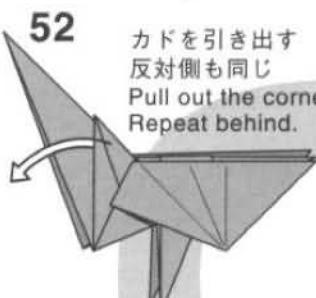
カドとカドを
合わせるように折る
Fold corner to
corner.



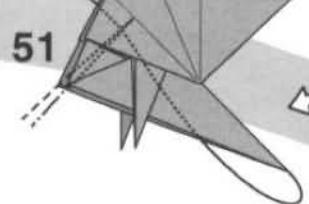
後ろへ半分に
折る
Mountain fold
in half.



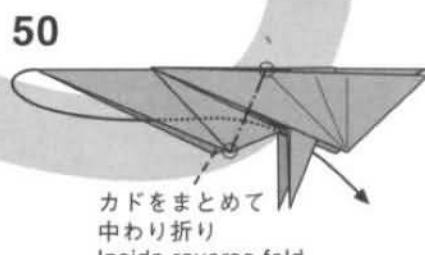
縁と縁を合わせて
カドをつまむように折る
反対側も同じ
Inside reverse fold.
Repeat behind.



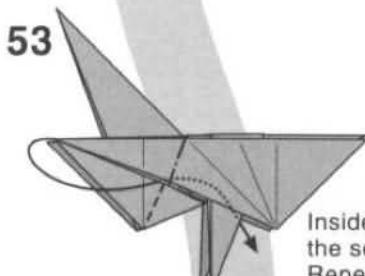
カドを引き出す
反対側も同じ
Pull out the corner.
Repeat behind.



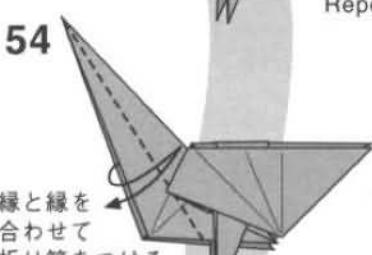
内側のカドもまとめて
中わり折り
Inside reverse fold.



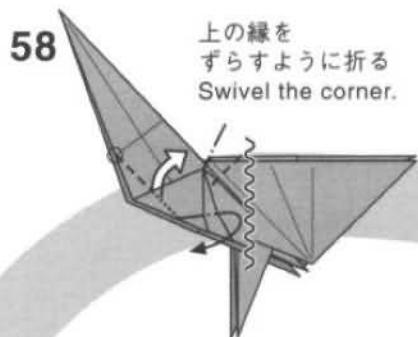
カドをまとめて
中わり折り
Inside reverse fold.



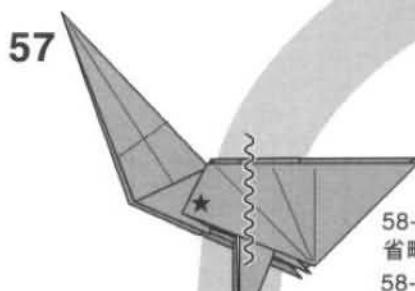
上から2つめの
すき間で中わり折り
反対側も同じ
Inside reverse fold between
the second and third layers.
Repeat behind.



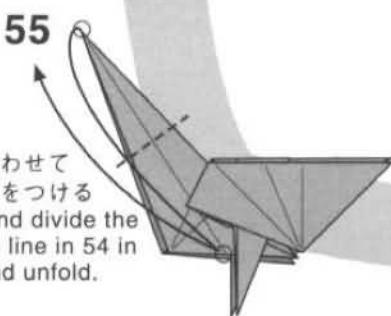
縁と縁を
合わせて
折り筋をつける
反対側も同じ
Fold edge to edge and unfold.
Repeat behind.



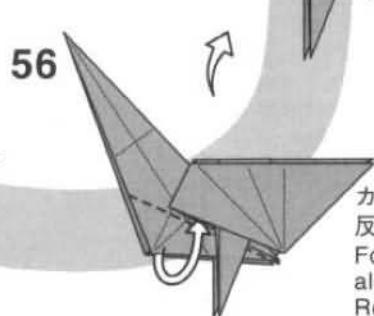
上の縁を
ずらすように折る
Swivel the corner.



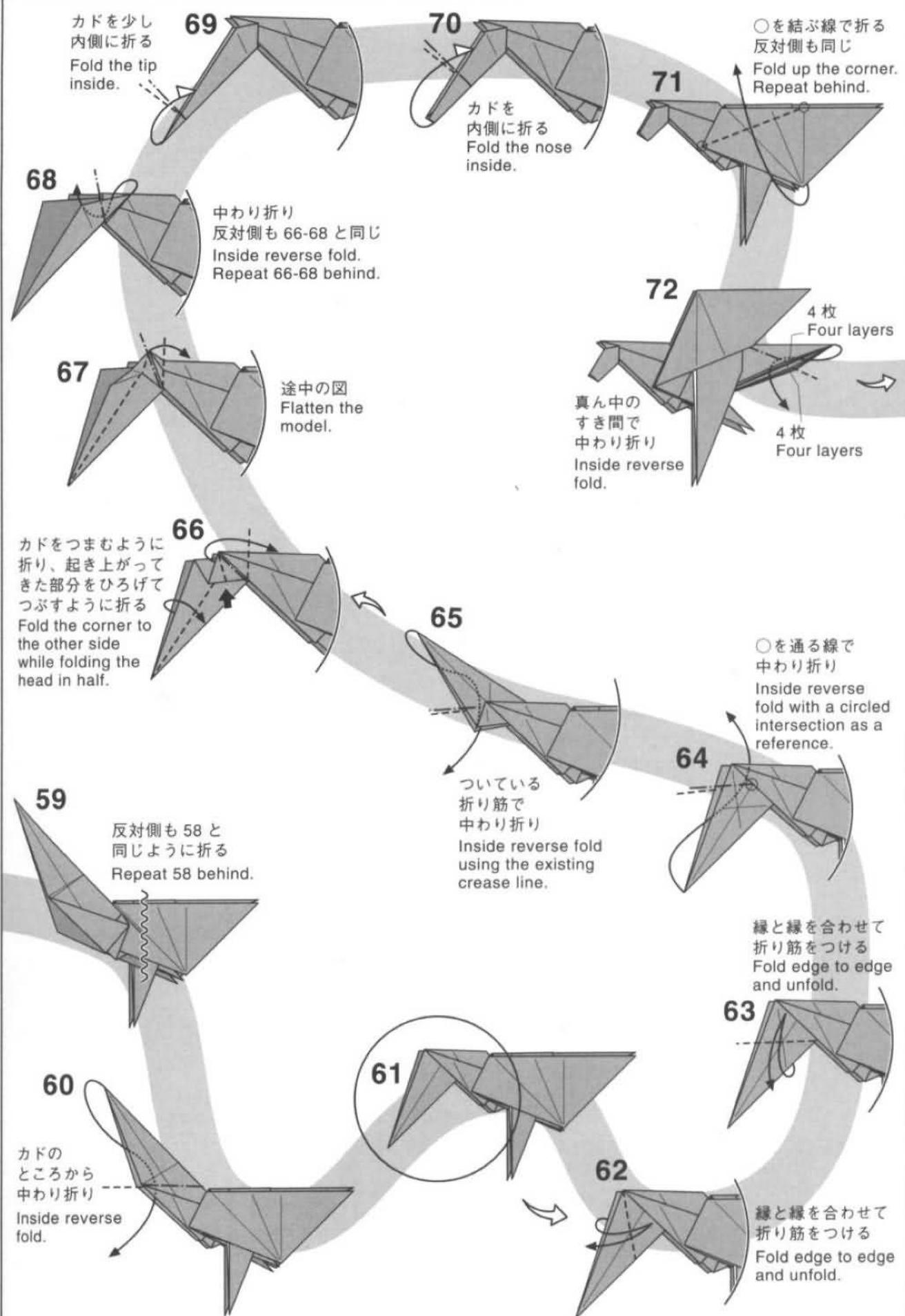
58-59 は★の重なりを
省略して内側を見る
58-59 show the
inside view.



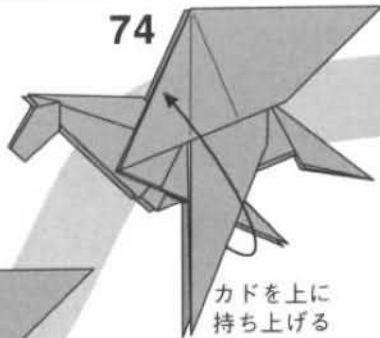
○を合わせて
折り筋をつける
Fold and divide the
crease line in 54 in
half and unfold.



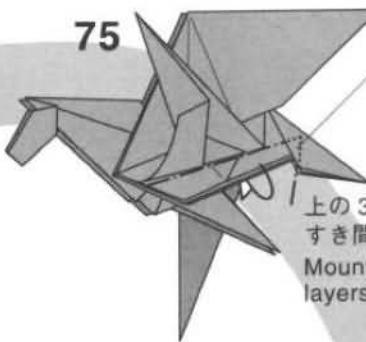
縁と縁を合わせて
カドを内側に折り込む
反対側も同じ
Fold the corner inside
along the edge.
Repeat behind.



74

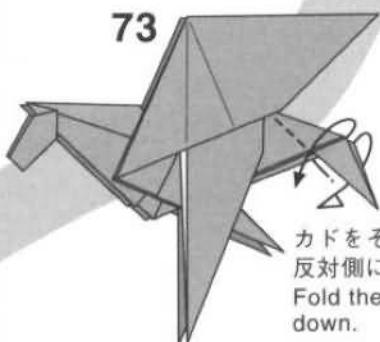


75



尾のつけ根の部分は引き寄せるように折る
Swivel the edge behind the tail.

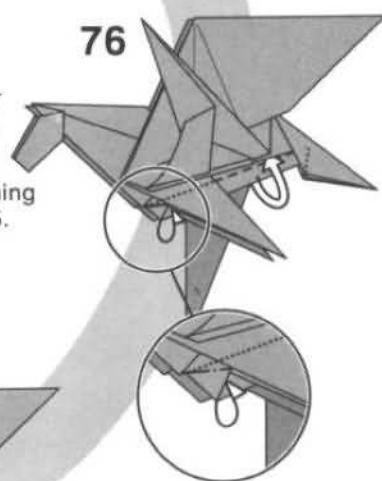
73



カドをそれぞれ反対側に折る
Fold the corner down.

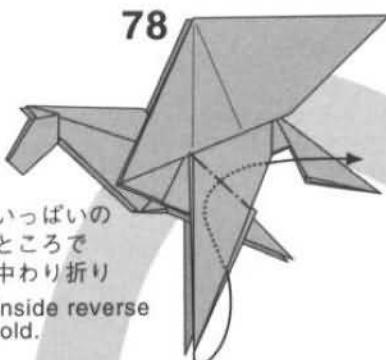
カドを上に持ち上げる
Lift the corner.

76



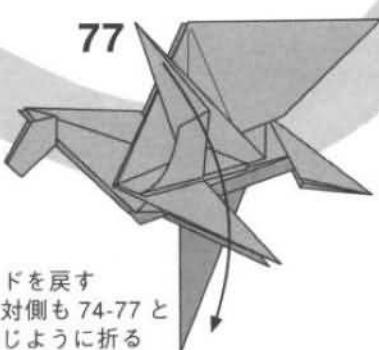
75と同じようにして残りの1枚を手前のすき間に折り込む
Fold the one remaining layer inside as in 75.

78



いっぱいのところで中わり折り
Inside reverse fold.

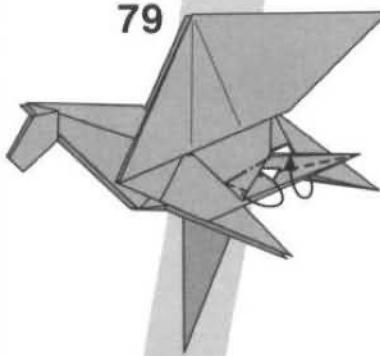
77



カドを戻す
反対側も74-77と同じように折る
Put the corner back down.
Repeat 74-77 behind.

端の部分は中わり折りするように折る
Inside reverse fold at the end.

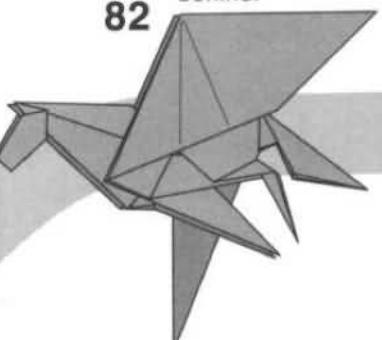
79



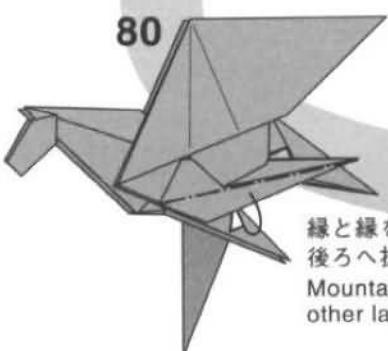
縁と縁を合わせて内側に折る
Inside reverse fold and make the leg thin.

反対側も78-81と同じように折る
Repeat 78-81 behind.

82

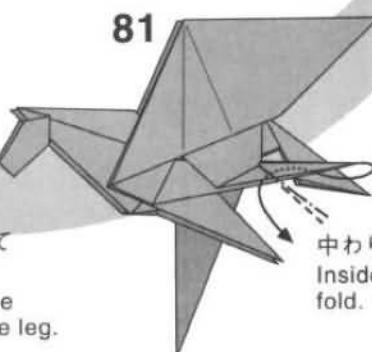


80



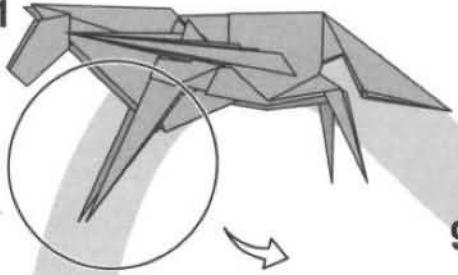
縁と縁を合わせて後ろへ折る
Mountain fold the other layer of the leg.

81



中わり折り
Inside reverse fold.

91



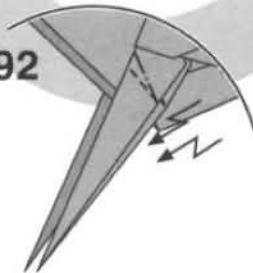
足のつけ根の部分を
押し込むように
両側で段折り
Crimp on both sides.

90

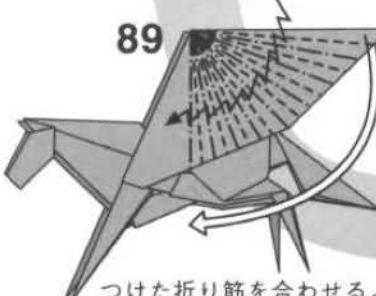


カドをつまむように
折る
反対側も同じ
Rabbit ear.
Repeat behind.

92

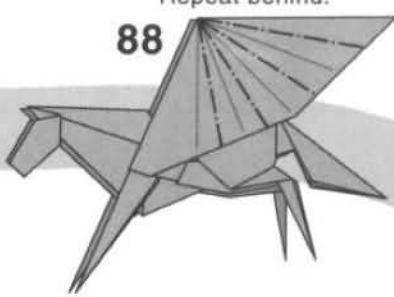


89



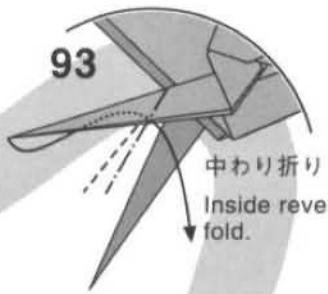
つけた折り筋を合わせるように
さらに半分の角度で後ろへ段折り
反対側も同じ
Crimp at the angle bisectors.
Repeat behind.

88



つけた折り筋の
さらに半分の角度で
山折りの折り筋をつける
反対側も同じ
Crease at the angle
bisectors.
Repeat behind.

93



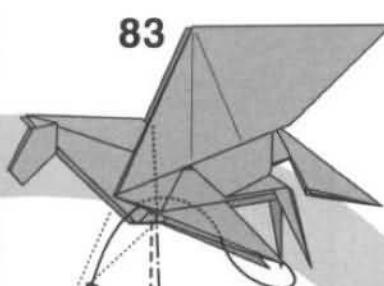
中わり折り
Inside reverse
fold.

94



ひづめになる
部分をかぶせ折り
Outside reverse
fold.

83

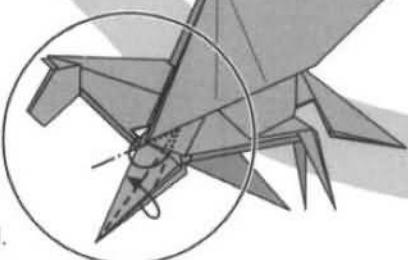


中わり折り
Inside reverse fold.

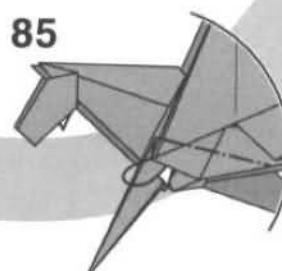
上から2枚の縁をカドを
細くするように内側に折る
残りの1枚は同じように
して反対側へ折る

Fold two layers on the top
to make the leg slender.
Fold the third layer behind.

84

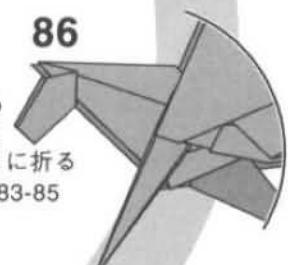


85

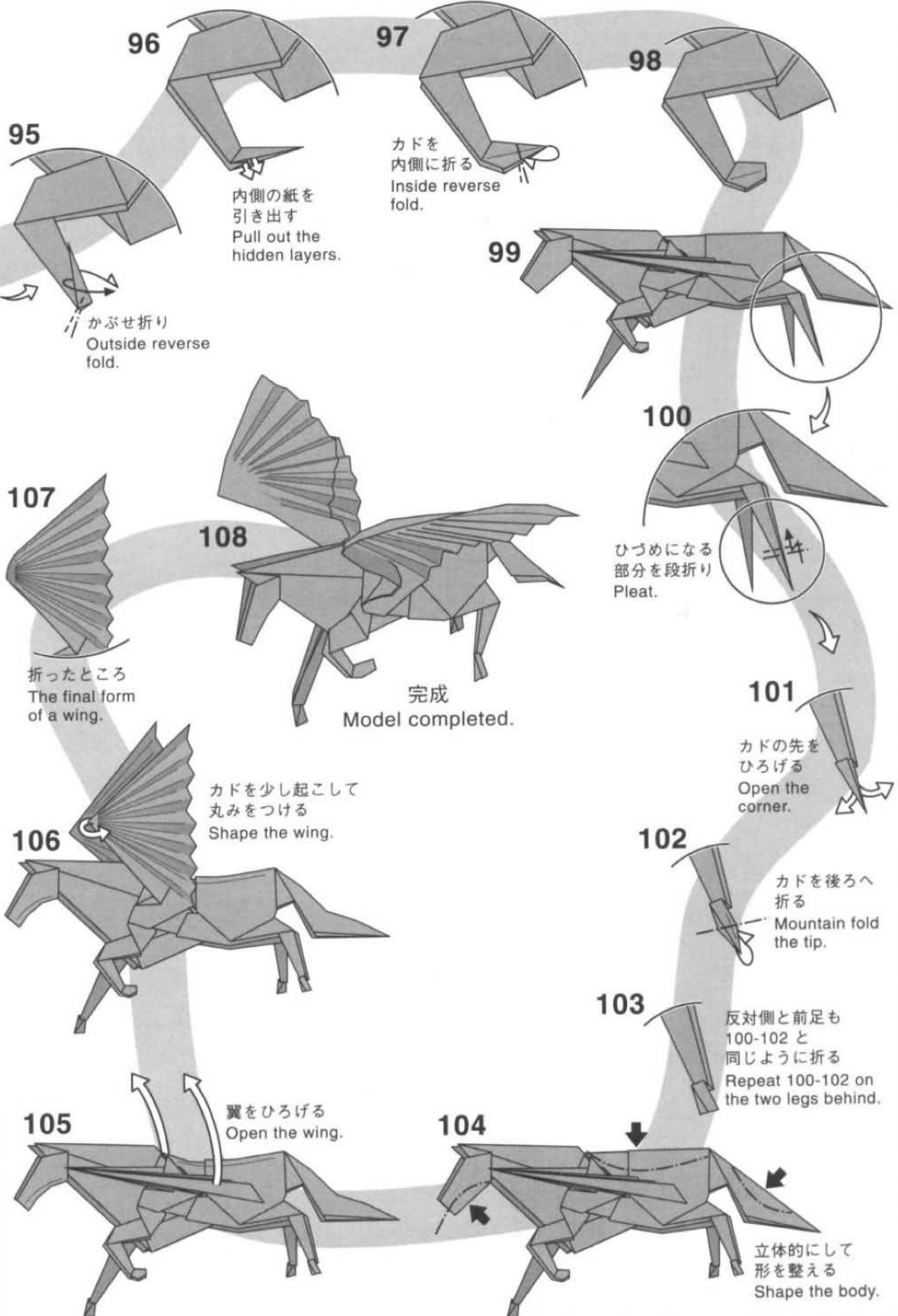


カドを内側に
折り込む
Fold the layer
inside.

86

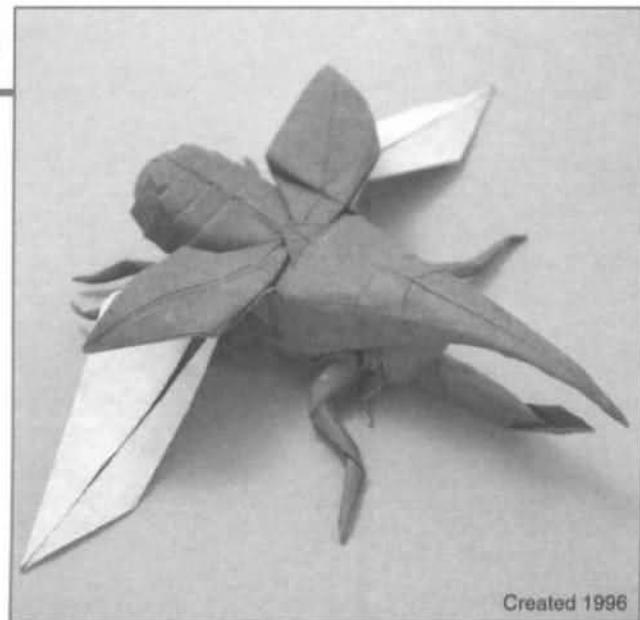
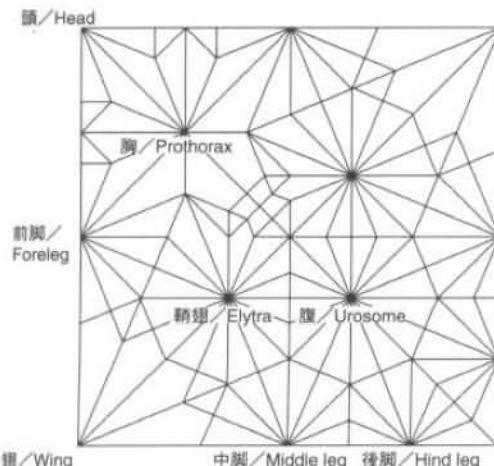


反対側も
83-85と
同じように折る
Repeat 83-85
behind.



ヘラクレスオオカブト

Hercules Beetle



Created 1996

私が折紙探偵団¹に入ったのがちょうど「昆虫戦争²」当時で、その衝撃は当時の私にはとても大きなものでした。私も例にもれず、この時期カブトムシはもちろん、コーカサスオオカブト、カミキリムシ、ゴキブリなどいくつもの飛ぶ昆虫を作りましたが、ほとんどのものが一発芸的な要素の強いものでした。その中でこの作品は、構造的、造形的にまともな形をしている貴重な作品です。

基礎となる構造はディバインドラゴンと共に、この時期の作品に多く使っています。用紙の内部から4つのカドを出せるこの構造は、自由度がかなり高く、特に多くのカドを必要とする題材にはとても使いやすいのです。本作品ではこれに蛙の基本形の部分を組み合わせています。

デザインで気に入っているのは、立体的な前胸からツノの部分です。折り紙の制約上、立体的な形を完全に作るのはとても難しいことです。もちろん、全方向からの鑑賞が可能な形が理想的なのですが、なかなかそういうわけにもいかず、ある方向から見たときの形を優先させる場合が多くなります。大型の甲虫では、一般的には真上から見た図鑑的なイメージが強いのですが、ヘラクレスオオカブトに関して言えば横から見た形のほうが強い印象を持っているようで、この作品ではそうした部分が強く出ているような気がします。

This model is one of outputs of the "Flying Insect War" which broke out about when I joined Origami Tanteidan, perhaps the only one which satisfied me to some degree.

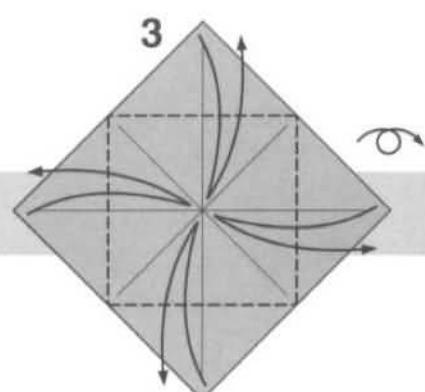
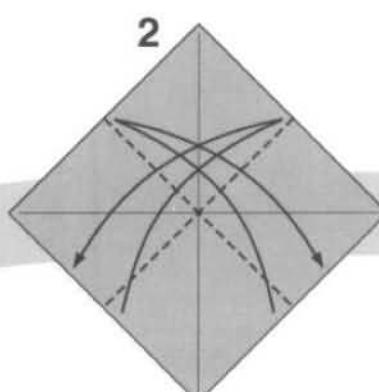
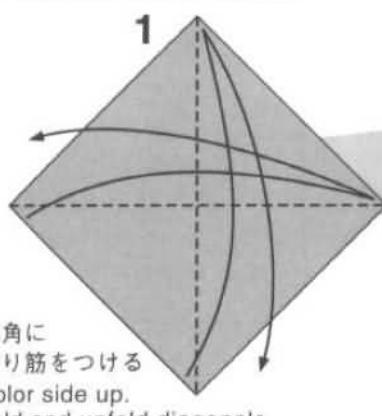
The model shares its basic structure with my Divine Dragon and other productions in this period. With four additional flaps which can be folded from the middle of the sheet, the designing out of this structure has freedom of modeling of flaps and it is convenient when one wants to create a model with many flaps necessary. This model combines such a structure with the frog base.

The final touch of this model is suited for being viewed from its sides. When one creates a three-dimensional model, it is usual that he focuses on a view from one direction. I did this because we usually see Hercules beetles with a side view in picture books and such things.

1※ 折紙探偵団:現在の日本折紙学会。1998年までは「折紙探偵団」という名称だった。

2※ 昆虫戦争:1993~94年ごろ、一部の創作家の間で飛翔する昆虫の姿を競作することがブームとなった。

必要サイズ/Recommended Size of Sheet: 35×35cm

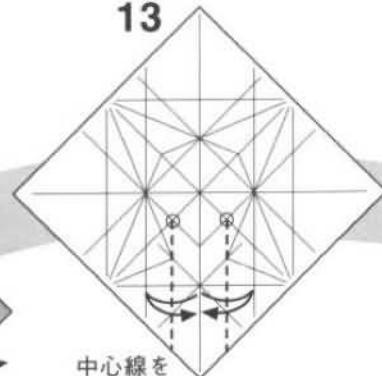


三角に
折り筋をつける
Color side up.
Fold and unfold diagonals.

半分に折り筋をつける
Fold in half and unfold.

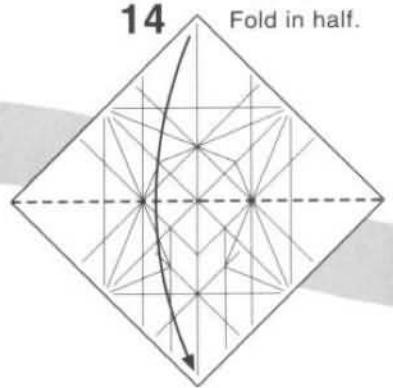
カドを中心に合わせて
折り筋をつける
Blintz fold and unfold.

13



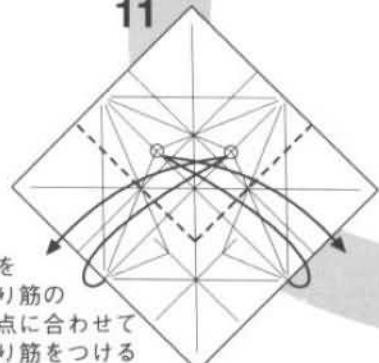
中心線を
折り筋に合わせて
折り筋をつける
場所を間違えないように注意
Fold and unfold aligning
the existing crease lines.
Note the reference points.

14



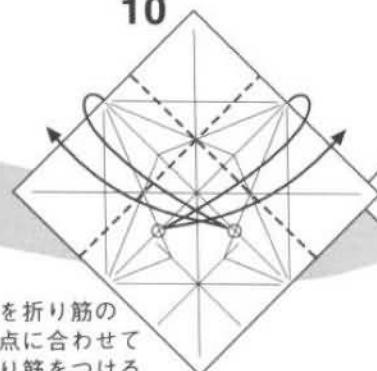
三角に折る
Fold in half.

11



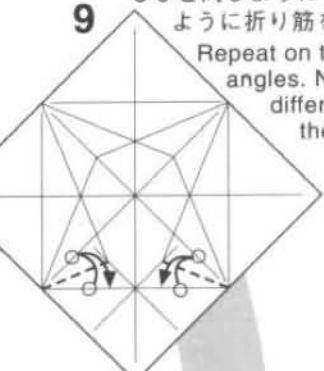
縁を
折り筋の
交点に合わせて
折り筋をつける
Fold the edges
to the circled
intersection and
unfold.

10



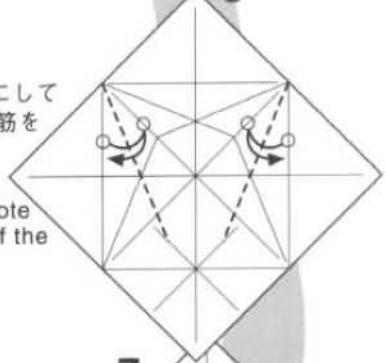
縁を折り筋の
交点に合わせて
折り筋をつける
Fold the edges to the
circled intersection and
unfold.

9



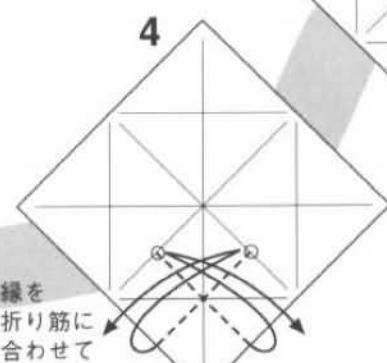
5-6と同じようにして図の
ように折り筋をつける
Repeat on the other
angles. Note the
difference of the
length to fold.

8



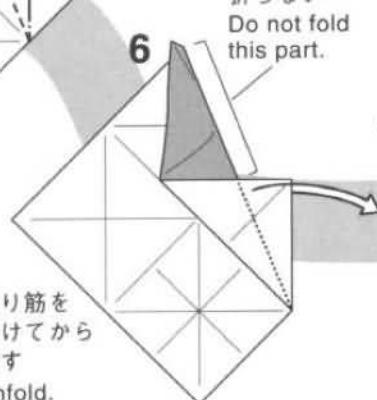
5-6と同じようにして
図のように折り筋を
つける
Repeat on the
other angles. Note
the difference of the
length to fold.

4



縁を
折り筋に
合わせて
折り筋をつける
Fold the edges to the
crease lines and unfold.

6

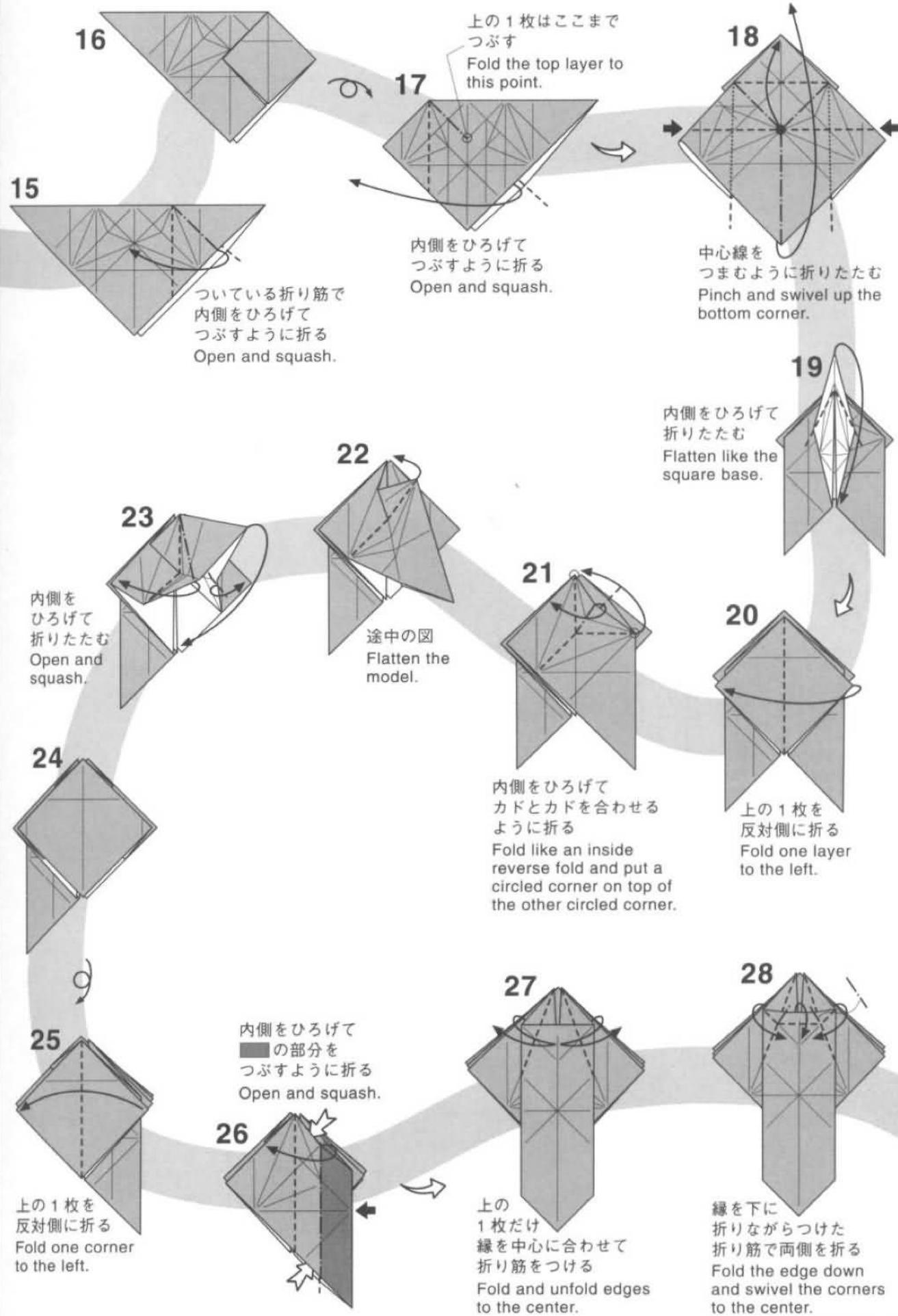


折り筋を
つけてから
戻す
Unfold.

7

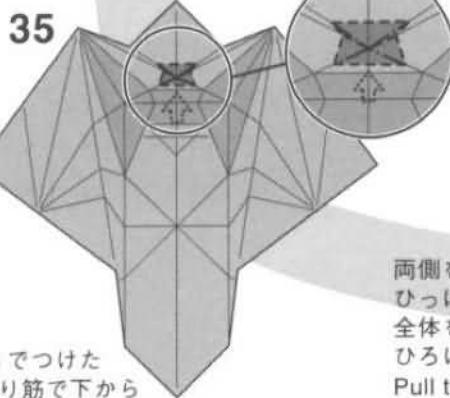
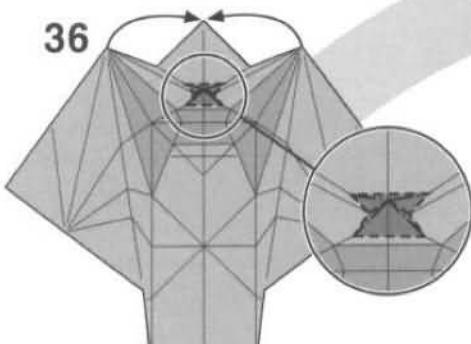


5-6と同じ
ようにして
図のように折り筋をつける
折り筋をつける場所を
間違えないように注意
Repeat on the other angles.

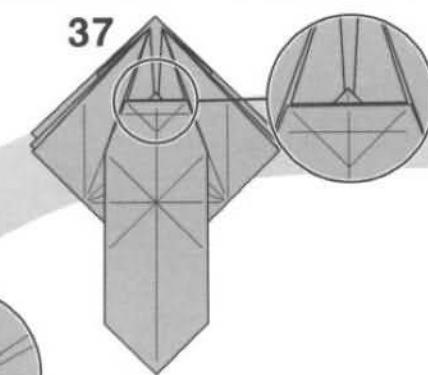


ヘラクレスオオカブト

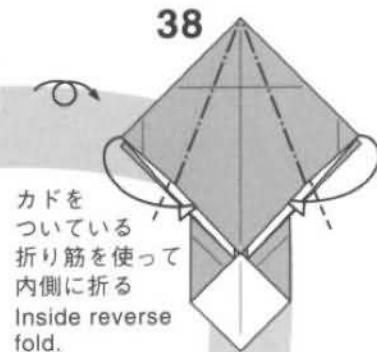
途中の図
Flatten the model.



33 でつけた
折り筋で下から
押し出すように折る
Push out the corner
with crease lines made
in 33.

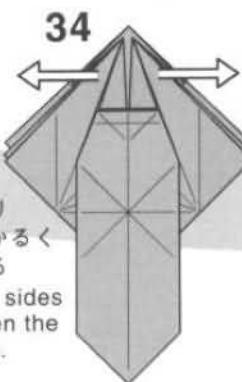


37



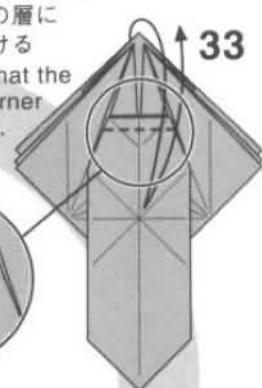
38

カドを
ついている
折り筋を使って
内側に折る
Inside reverse
fold.



34

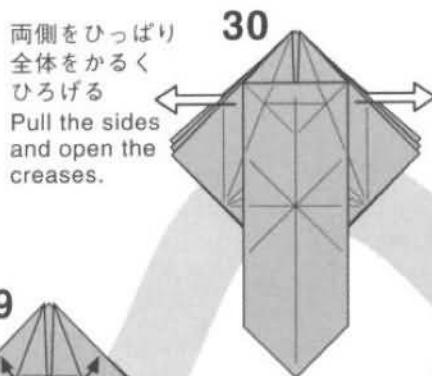
37 でカドが少し出る
ように全ての層に
折り筋をつける
Crease so that the
tip of the corner
shows in 37.



33

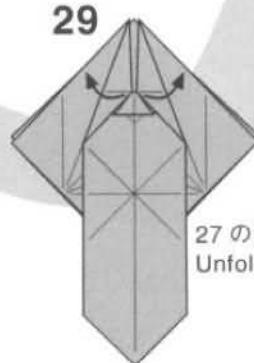
両側を
ひっぱり
全体をかるく
ひろげる
Pull the sides
and open the
creases.

半分より少し
上の位置で折る
Slightly higher than
the middle point.



30

両側をひっぱり
全体をかるく
ひろげる
Pull the sides
and open the
creases.

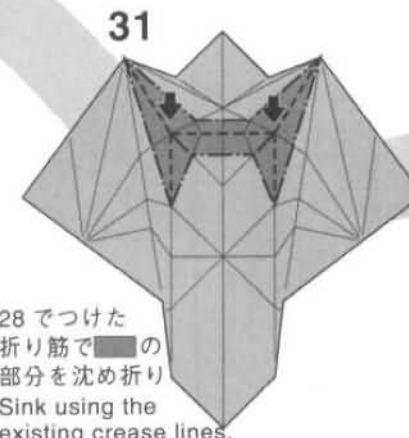


29

27 の形に戻す
Unfold to 27.

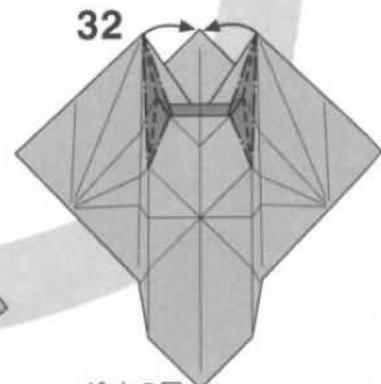
31

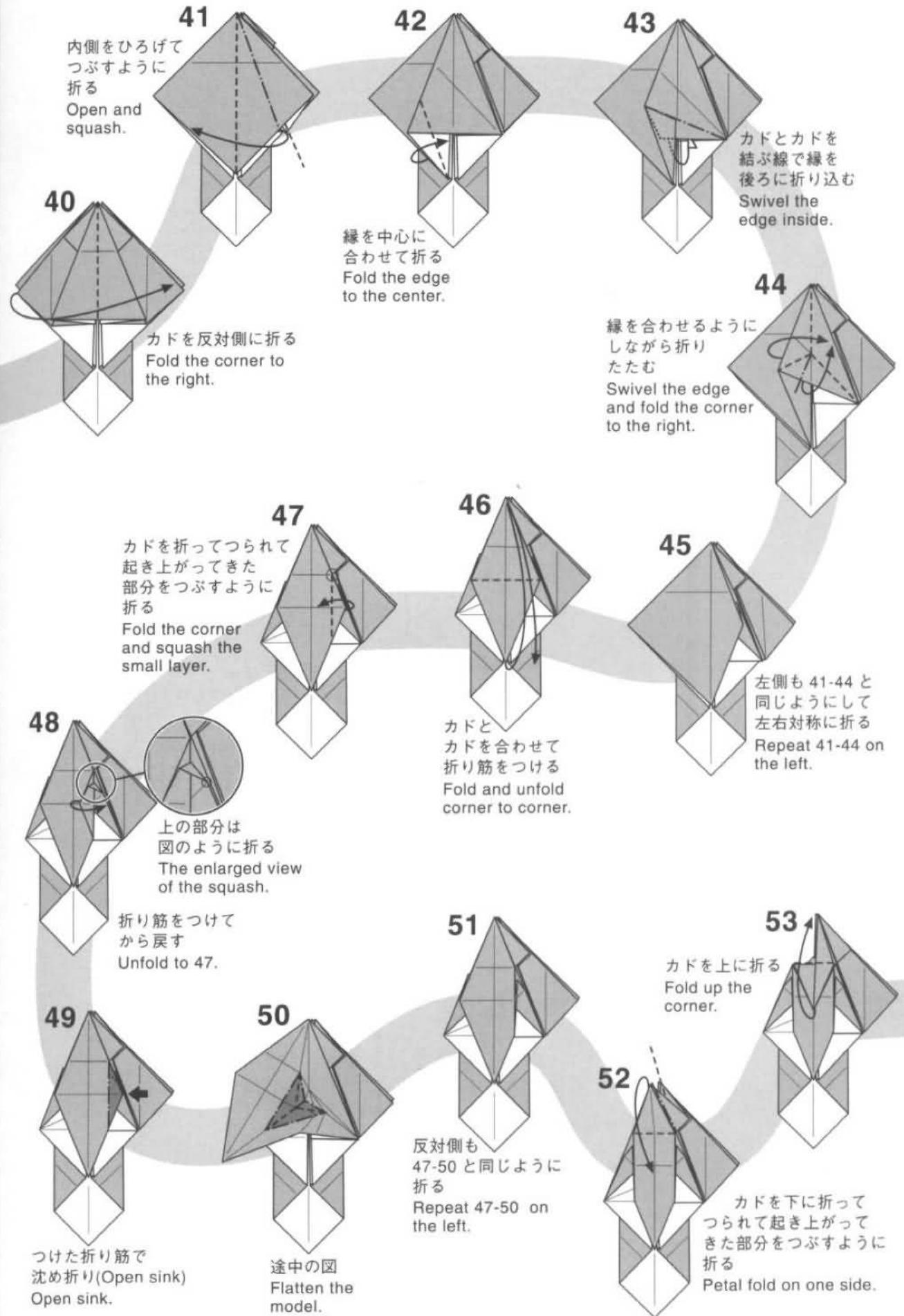
28 でつけた
折り筋で■の
部分を沈め折り
Sink using the
existing crease lines.

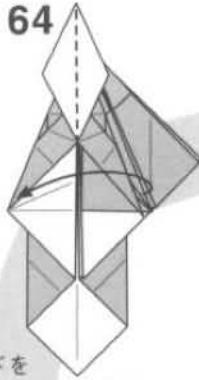


32

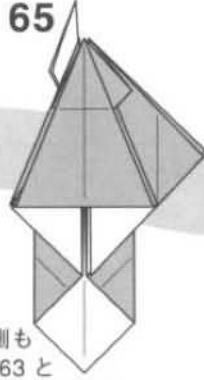
途中の図
Flatten the model.



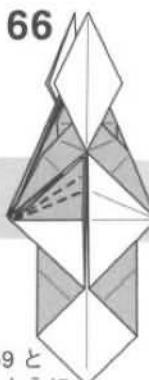




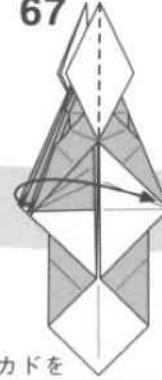
カドを
2つ反対側に折る
Fold two layers
to the left.



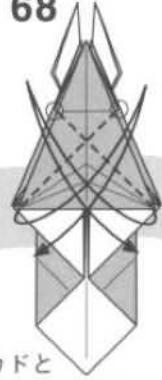
右側も
40-63と
同じように
折る
Repeat 40-63 on
the right.



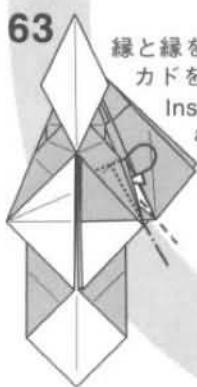
58-59と
同じように
折り筋をつける
Crease the next
layer like 58-59.



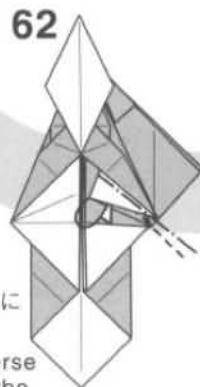
カドを
2つ反対側に折る
全体が左右対称に
なる
Fold two layers
to the right.



カドと
○を結ぶ線で
折り筋をつける
Fold the corners
up along the line
connecting them
to the circled
points.

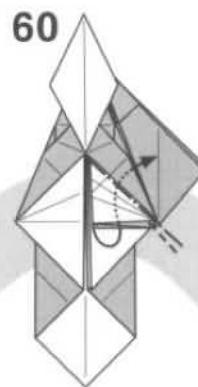
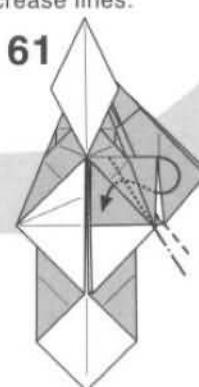


縁と縁を合わせるように
カドを内側に折る
Inside reverse fold
along the edge.

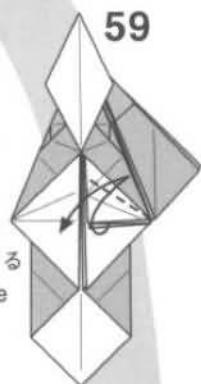


ついている
折り筋で
カドを内側に
折る
Inside reverse
fold using the
existing crease lines.

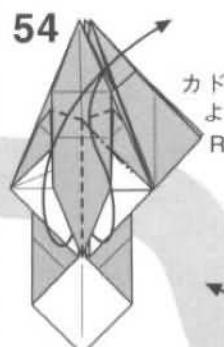
ついている折り筋で
中わり折り
Inside reverse fold
using the existing
crease lines.



ついている
折り筋で
中わり折り
Inside reverse
fold using the
existing crease
lines.



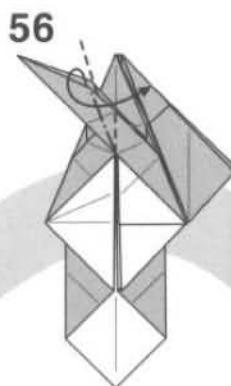
手前のカドの
縁と縁を
合わせて
半分の角度の
折り筋をつける
Fold an angle
bisector and
unfold.



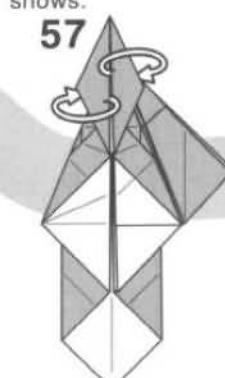
カドをつまむ
ように折る
Rabbit ear.



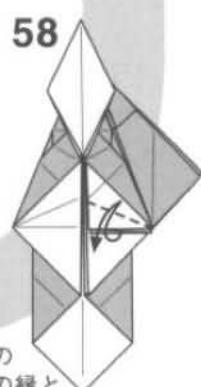
カドを
反対側に折る
Fold the flap
to the other
side.



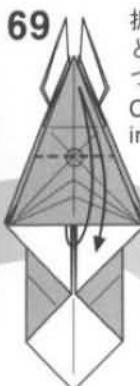
内側をひろげて
つぶすように折る
Open and squash.



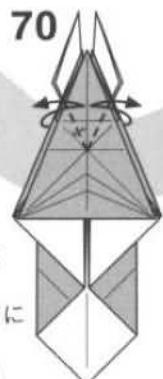
紙をひっくり返して
裏が出るように折る
Reverse the paper
wrapping the corners
so the white side
shows.



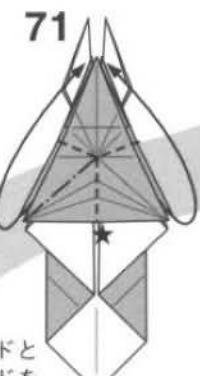
手前の
カドの縁と
縁を合わせて折り筋を
つける
Fold edge to edge and
unfold.



折り筋の交点の
ところで折り筋を
つける
Crease at the
intersection.



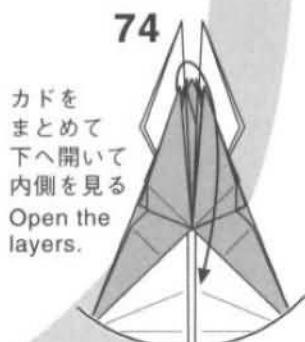
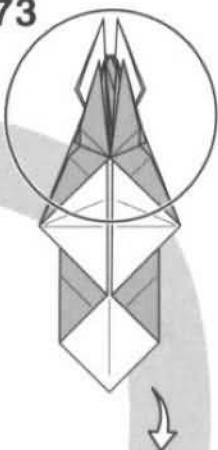
折り筋を中心には
わせて白い
カドより上の層に
半分の角度の
折り筋をつける
Fold angle bisectors.



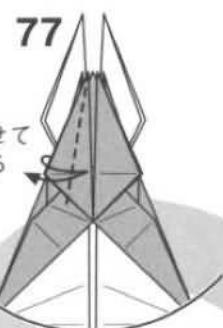
カドと
カドを
合わせて中心線を
つまむように折る
Fold corner to corner
on both sides.



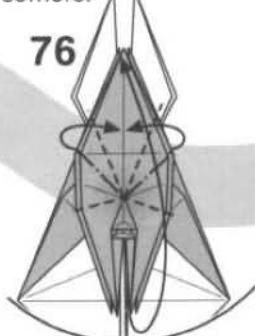
60-63 と
同じように折る
Inside reverse
fold four times.



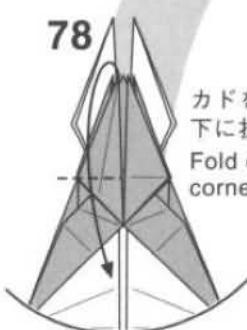
カドを
まとめて
下へ開いて
内側を見る
Open the
layers.



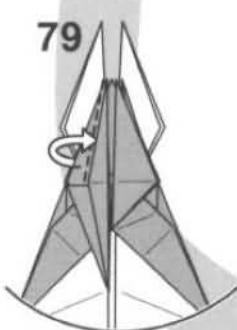
山折り線を中心には
わせて折りたたむ
Crimp and swivel the
corners.



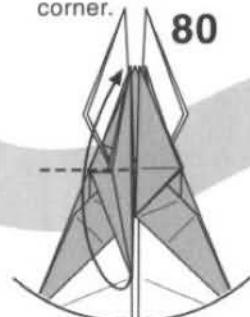
2つのカドを
それぞれひろげて
つぶすように折る
Open the corners
and squash.



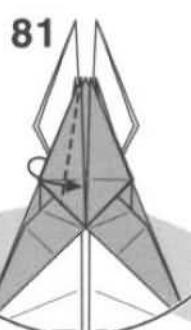
カドを1つだけ
下に折る
Fold down the
corner.



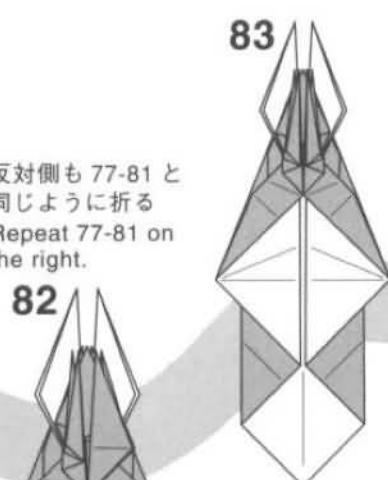
カドを上に折る
Fold up the
corner.



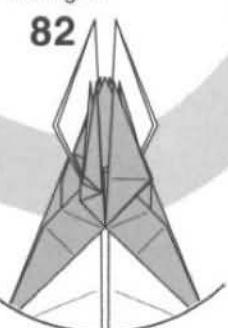
縁をすぐ上の
すき間に折り込む
Fold the edge
into the pocket
immediately above.

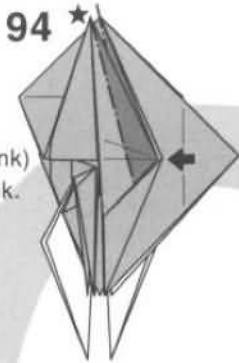


ついている
折り筋で縁を折る
Fold the edge
using the existing
crease line.

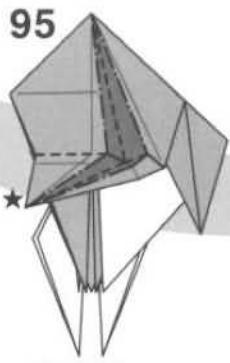


反対側も 77-81 と
同じように折る
Repeat 77-81 on
the right.

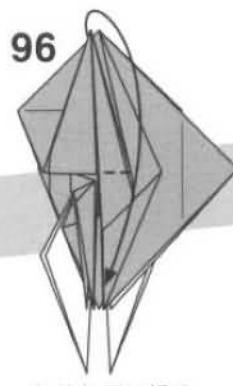




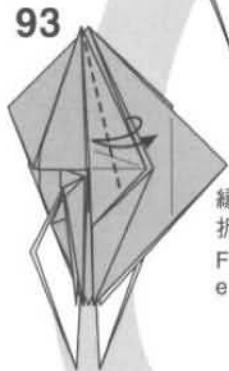
沈め折り
(Open sink)
Open sink.



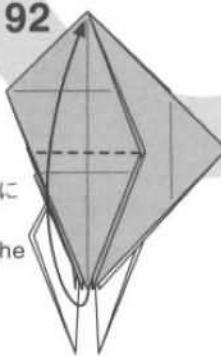
途中の図
Flatten the
model.



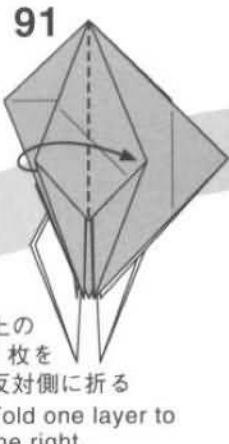
カドを下に折る
Fold down the
corner.



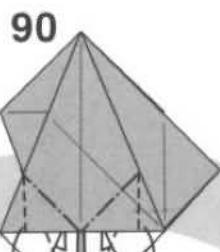
縁を中心^に合わせて
折り筋をつける
Fold edge to
edge.



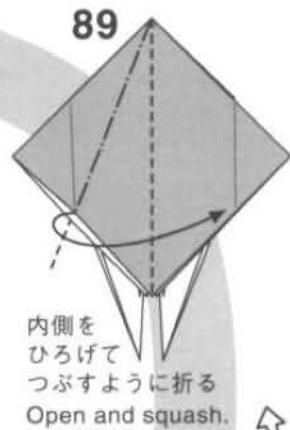
カドを上に
折る
Fold up the
corner.



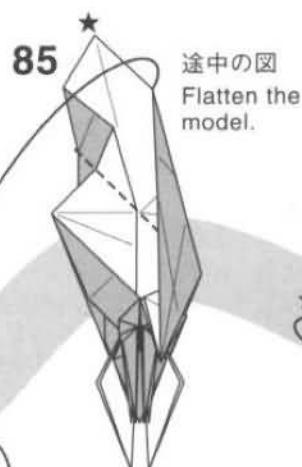
上の
1枚を
反対側に折る
Fold one layer to
the right.



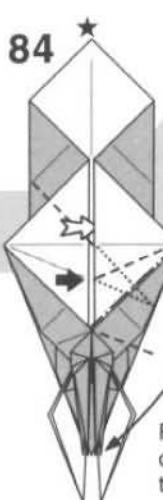
縁と縁を
合わせて内側に折る
Inside reverse fold.



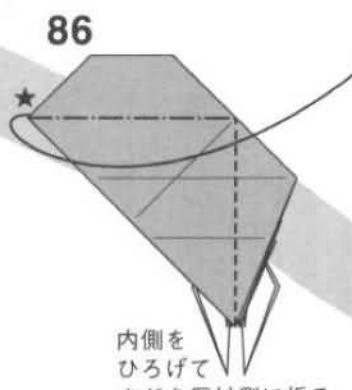
内側を
ひろげて
つぶすように折る
Open and squash.



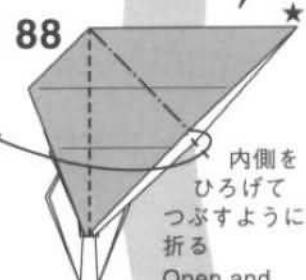
途中の図
Flatten the
model.



内側をひろげて
カドをつまみながら
下のカドに合わせて
折りたたむ
Fold down corner to
corner, squashing
the layer above.



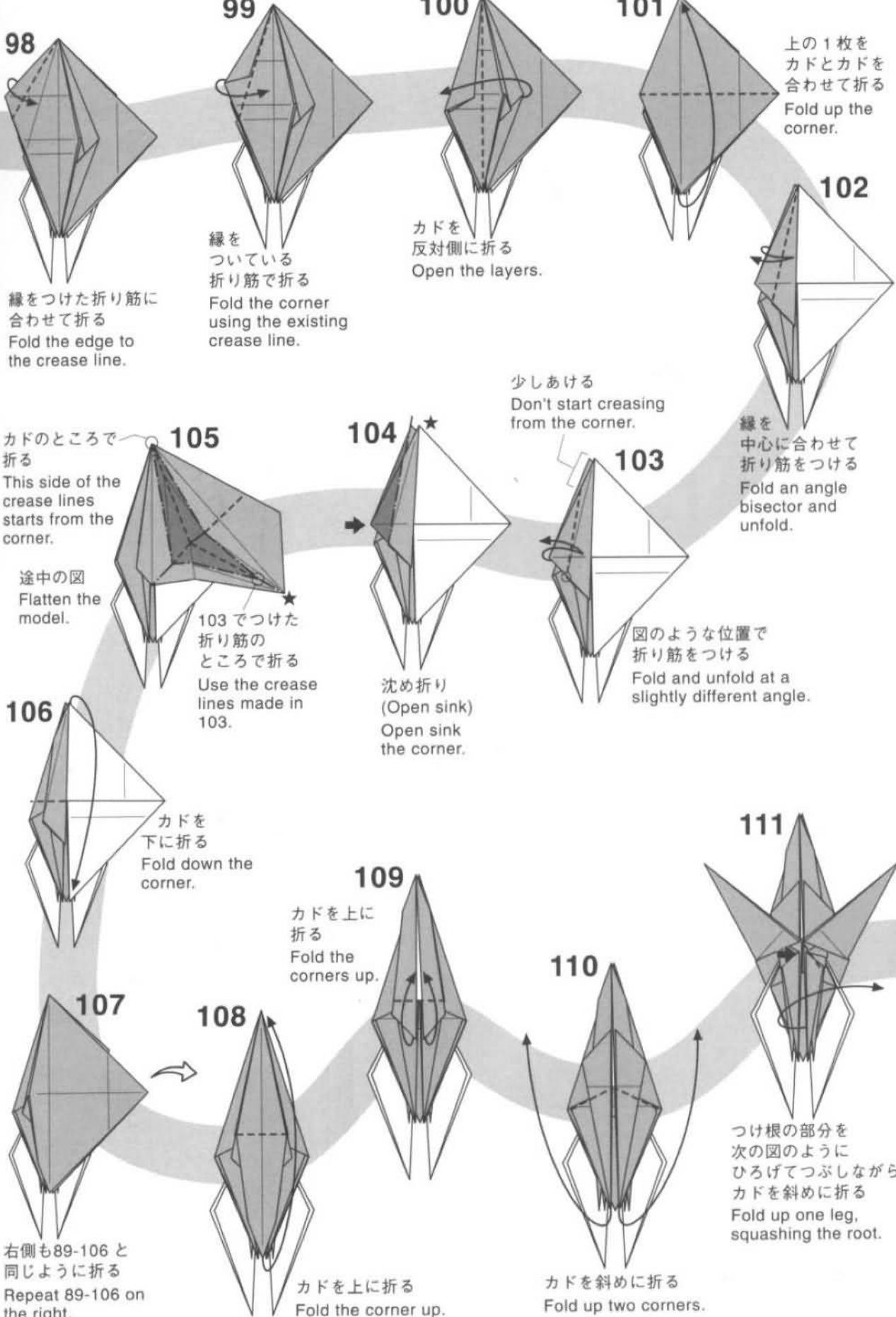
内側を
ひろげて
カドを反対側に折る
平らにはならない
Swivel the corner.
The model will not
lie flat.

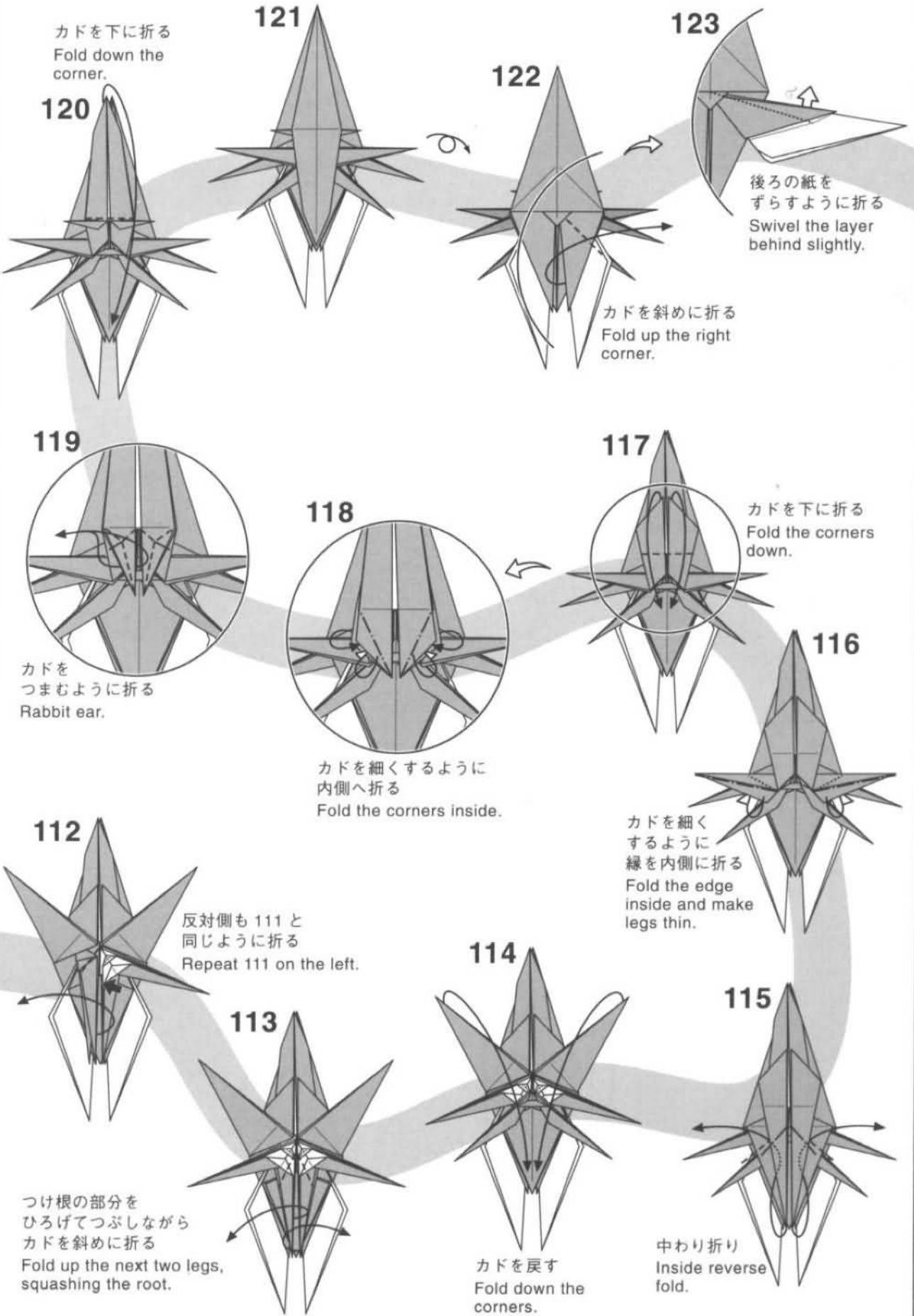


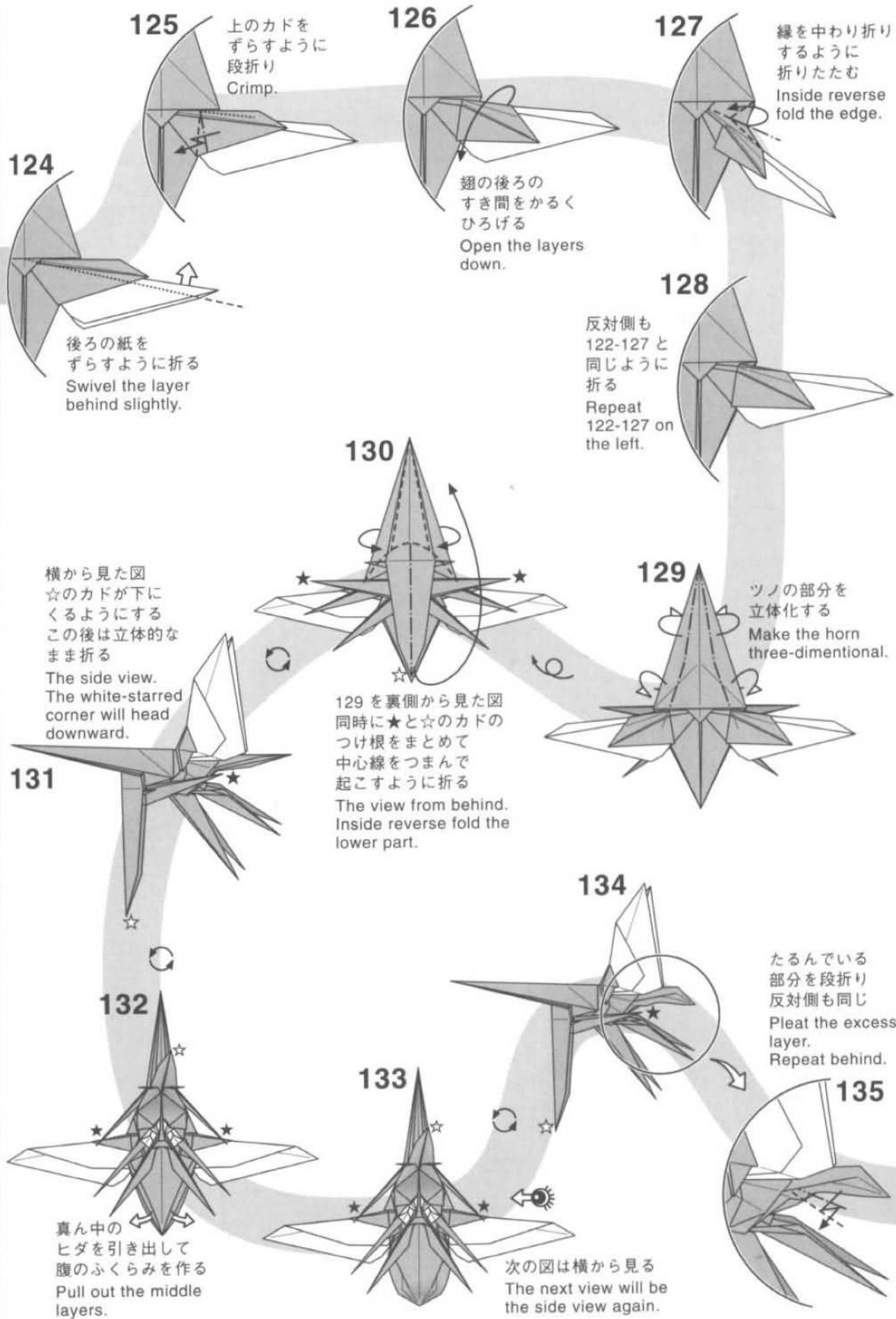
内側を
ひろげて
つぶすように
折る
Open and squash.



左側も
84-85と
同じように
折る
Repeat 84-85
on the left.







144

中わり折り
Inside reverse fold.

143

中わり折り
Inside reverse fold.

142

中わり折り
Inside reverse fold.

141

140を下から
見た図
The bottom
view.

140

前脚と触角の
カドをまとめて
水平になるように
折る

Fold the corner
backwards.

次の図は
下から見る
The bottom
view.

139

次の図は
横から見る
Back to the
side view.

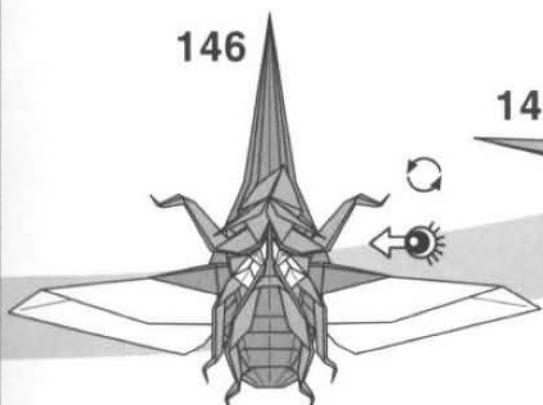
136

次の図は
上から見る
The top view will
come next.

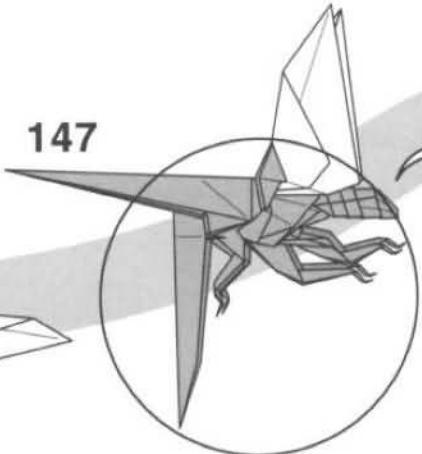
138

カドを少し後ろへ折る
Fold the tip behind.

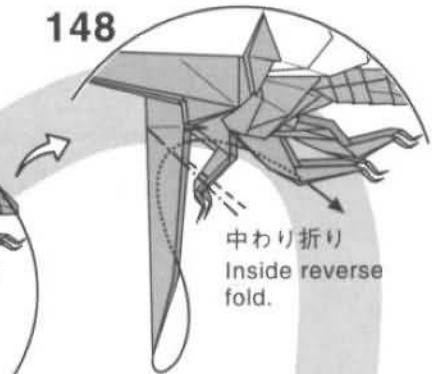
146



147

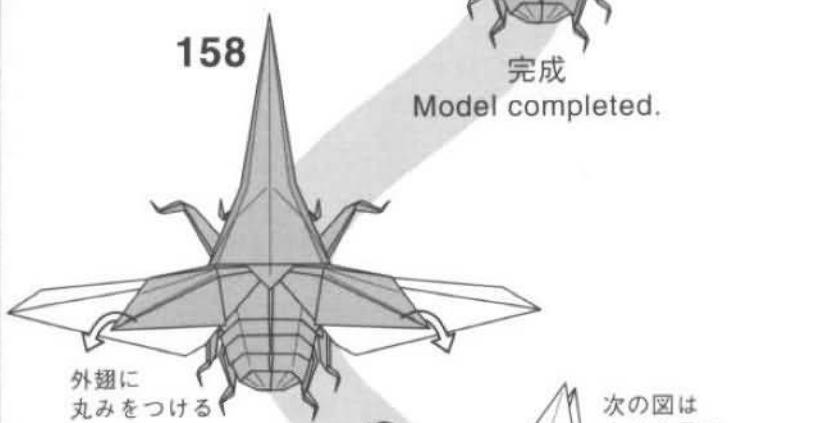


148



次の図は横から見る
Back to the side view.

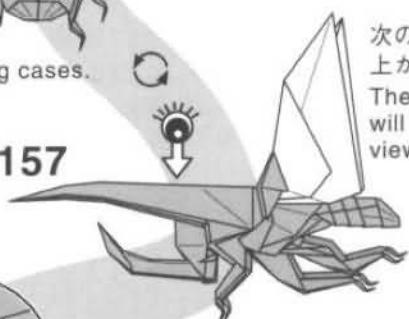
158



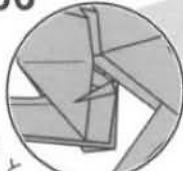
完成
Model completed.

次の図は上から見る
The next view will be the top view.

157



156



反対側も
154-155と
同じように折る
Repeat 154-155
behind.

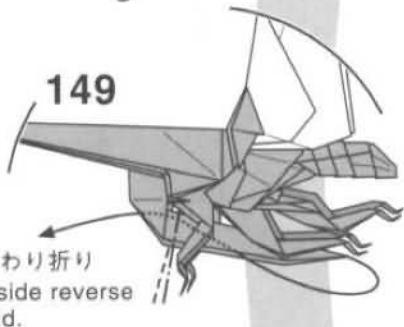
155



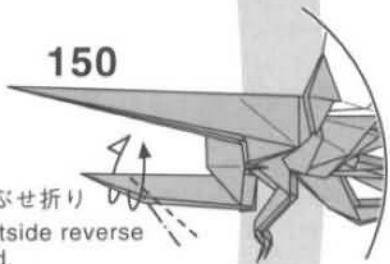
154



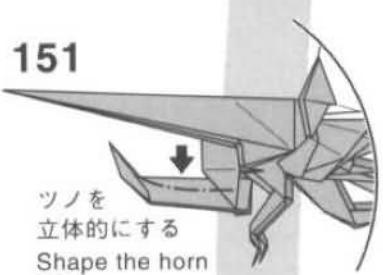
149



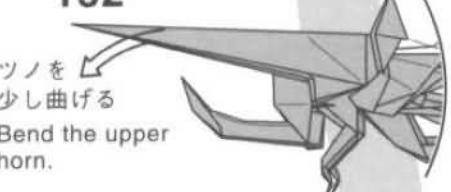
150



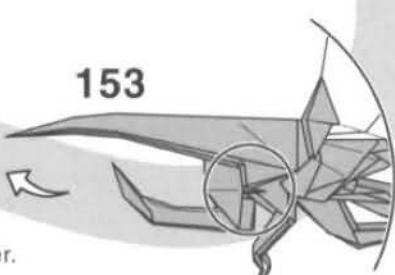
151



152

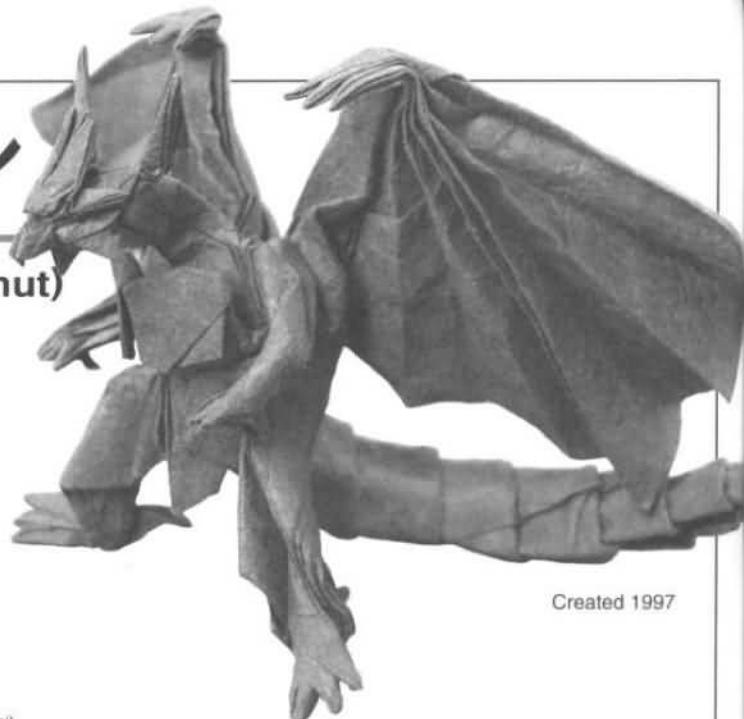
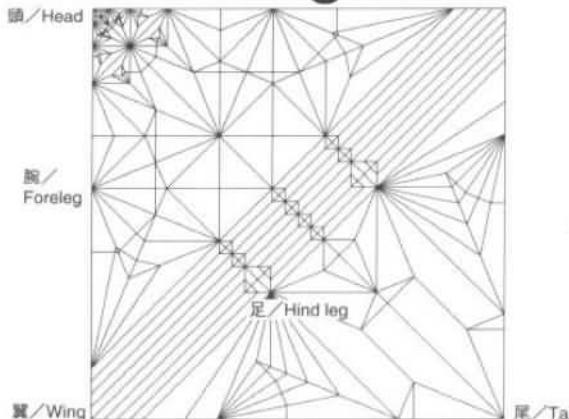


153



ディバインドラゴン (バハムート)

Divine Dragon (Bahamut)



Created 1997

この作品のモデルとなった「バハムート」は、創作を始めた頃からいつかは作りたいと考えていた題材です。

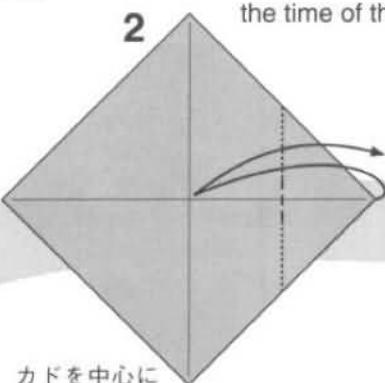
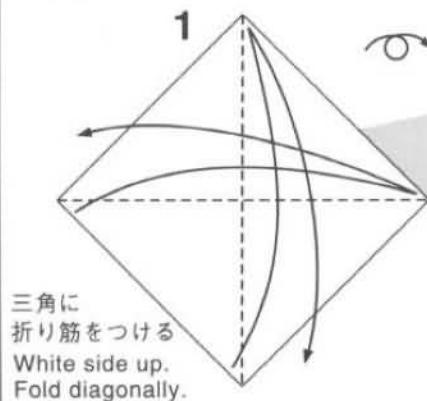
最初は蛇腹を基本構造にして作ろうとしましたが、体の部分がどうもうまくいかないので、気分を一新して頭部のツノを辺に沿って配置するところから始めてみました。ここで、妙な親近感に気がつき、どうもこのバランスには見覚えがあると考えてみたら、蛙の基本形にたどりつきました。そして正方形のカドに組み込んで試作してみると、今までの苦労が嘘のようにあっさりと頭部ができてしまったのです。この「見覚えがある」という感覚はなかなか便利で、比の折り出しや構造の簡略化などで特に役立ちます。

頭部が22.5度系の構造になったので、体の方も合わせて22.5度にします。翼と尾をできるかぎり大きく出したいため、腕もしくは足を紙の内部から出した方がよさそうです。そこで、トナカイ(『折紙偵団コンベンション折り図集vol.4』に収録)やヘラクレスオオカブトに使った内部からのカドを持つ構造を採用することにしました。

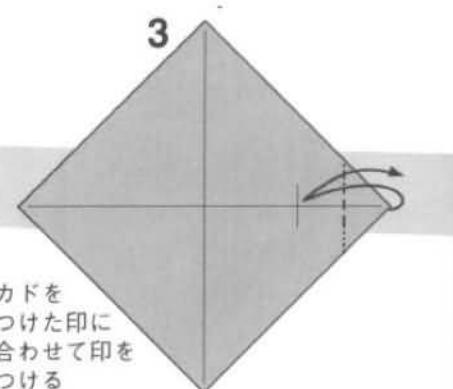
この段階の問題は、翼のカドが小さすぎること、そして足に指がないことです。そこで展開図を見てみると、足と翼のカドがどちらも対角線上にあることが分かります。この場合は対角線に沿ってヒダを追加すれば、両方へ同時にボリュームを与えることができます。

紙の周囲や内部にヒダなどを追加する手法は複雑な作品でよく使われますが、私の場合、ちゃんと使いこなせるようになってきたのは大体この時期からではないかと思います。

必要サイズ/Recommended Size of Sheet : 50×50cm



カドを中心にはわせて印をつける
Fold the right corner to the center, but only mark the intersection.



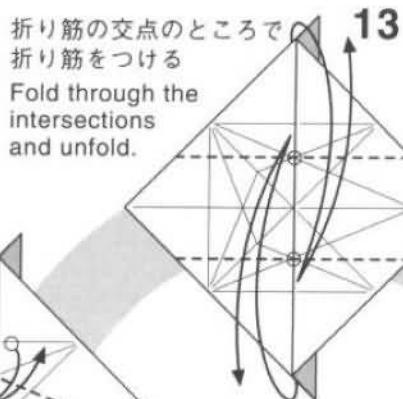
カドをつけた印に合わせて印をつける
Fold the right corner to the mark, but only mark the intersection again.

The target of this model, Bahamut, had been the one I had always wanted to create.

I first tried with a pleated structure, but with an unsatisfactory shaping of the body. So, I tried to distribute the horns along the edge of the sheet, and this fit me. It was a good old frog base. The head was unexpectedly completed by incorporating the frog base into the corner of a square. Such a discovery often is very convenient when one wants to simplify the structure with well-known ratios.

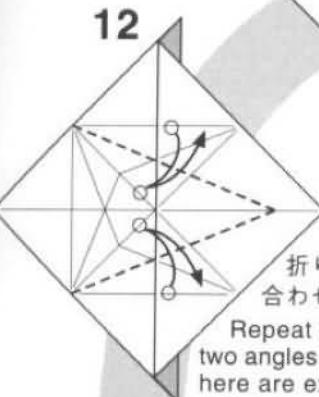
With the head based on the 22.5° structure, the body should be, too. To fold out as large flaps as possible for wings and the tail, the forelegs and/or the hind legs should be folded out of the middle of the sheet. So, I decided on adopting the basic structure of my Hercules Beetle, and Reindeer in Origami Tanteidan Convention Book Vol. 4.

The model still lacks the enough width and length for the wings, and the hind legs are still toeless. So, I should have added the pleats along diagonals, which often is used for complex models. I finally could use such a structure effectively about the time of the creation of this model.



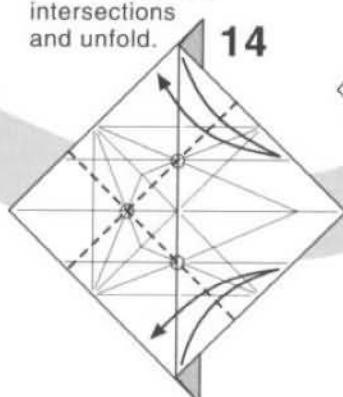
折り筋の交点のところで
折り筋をつける

Fold through the
intersections
and unfold.

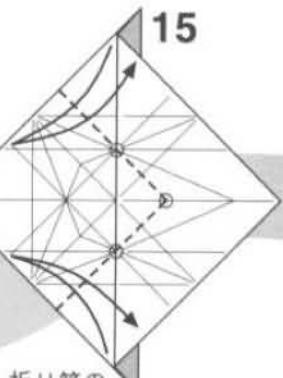


12

折り筋と折り筋を
合わせて折り筋をつける
Repeat 9 on the remaining
two angles, but the crease lines
here are extended.

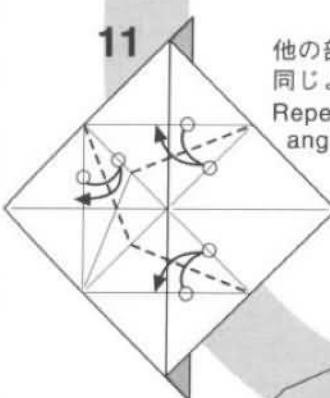


14



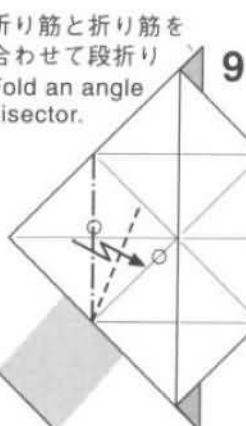
15

折り筋の
交点のところで
折り筋をつける
Fold through the
intersections and
unfold.



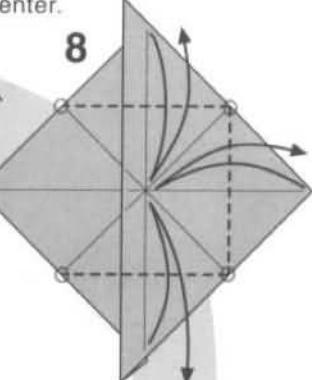
11

他の部分も
同じように折る
Repeat 9 on other
angles as shown.



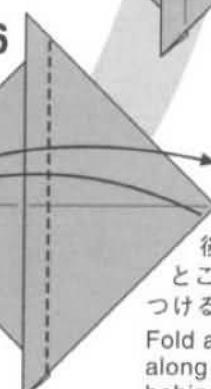
9

○を結ぶ線で折り筋をつける
Fold the corners to the
center.



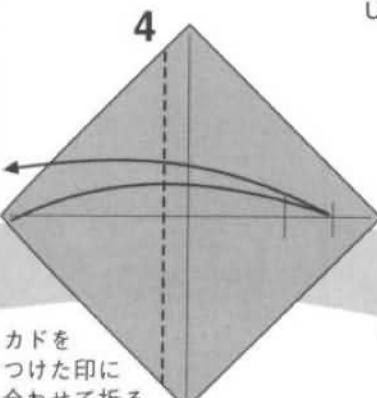
7

縁と縁を合わせて
折り筋をつける
Fold edge to
edge and unfold.



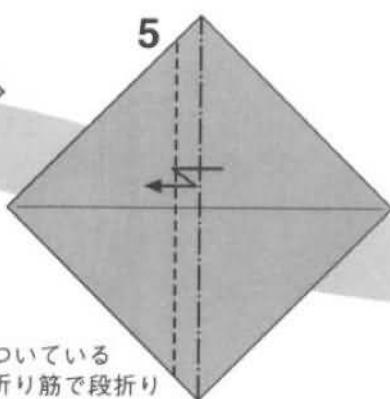
6

後ろの縁の
ところで折り筋を
つける
Fold and unfold
along the edge
behind.



4

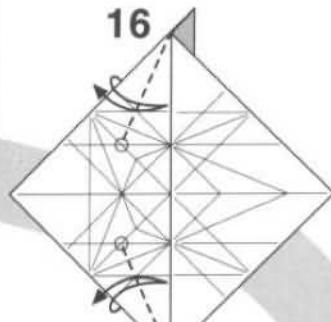
カドをつけた印に
合わせて折る
Fold the left corner to
the mark made in 3.



5

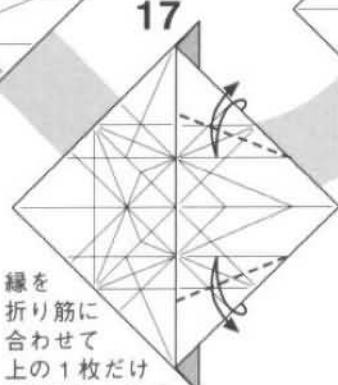
ついている
折り筋で段折り
Pleat using the existing
crease lines.

16



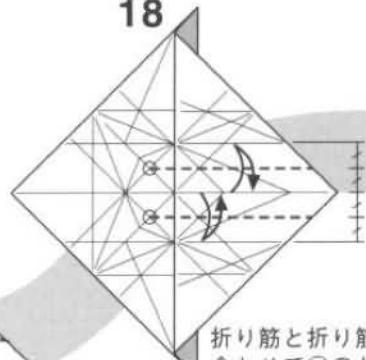
縁と縁を
合わせて
折り筋をつける
Fold angle
bisectors and
unfold.

17



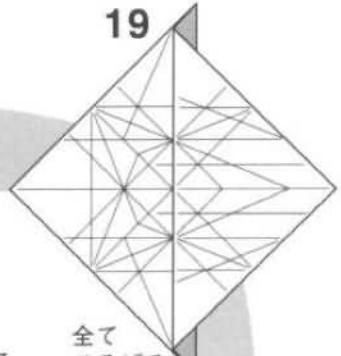
縁を
折り筋に
合わせて
上の1枚だけ
折り筋をつける
Fold angle bisectors and
unfold.

18



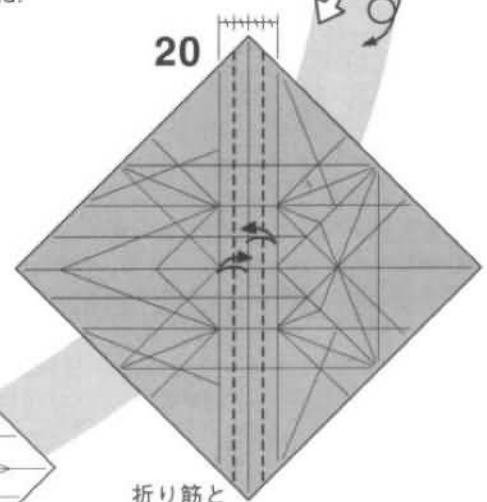
折り筋と折り筋を
合わせて○のところ
まで折り筋をつける
Fold aligning the
crease lines and
unfold.

19



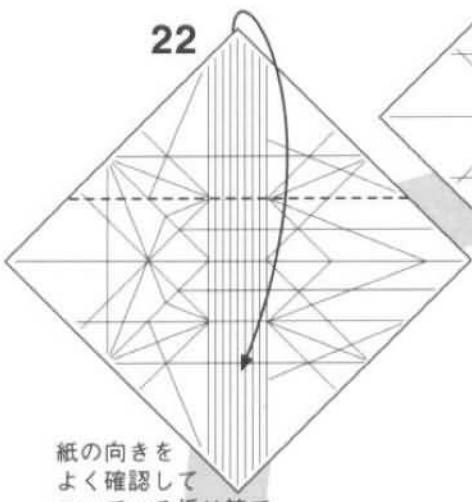
全て
ひろげる
Unfold everything.

20



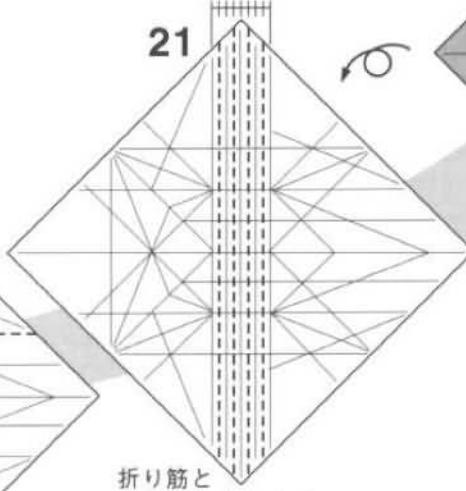
折り筋と
折り筋を合わせて
折り筋をつける
Color side up. Fold
and align the crease
lines and unfold.

22



紙の向きを
よく確認して
ついている折り筋で
カドを下に折る
Fold down the corner.

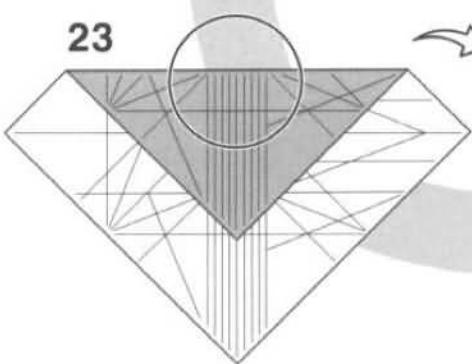
21



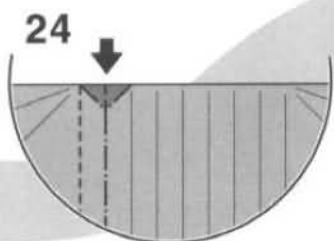
折り筋と
折り筋を合わせて
8等分の折り筋をつける
Fold and align the
crease lines and unfold.

手前の部分を左へ
奥の部分は右へ折って
平らにする
Lay the near and far
layers to different
directions.

23

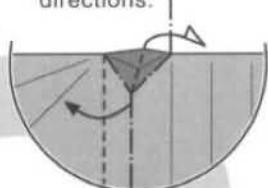


24

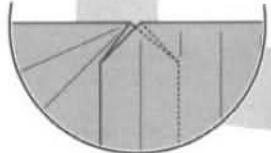


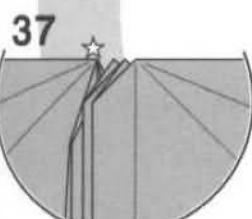
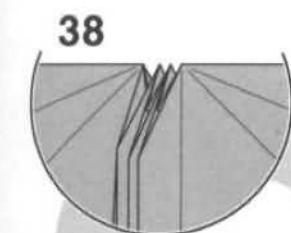
中央をつぶしながら
両側にひだを作るよう
に折る
Pleat while squashing
the top portion.

25

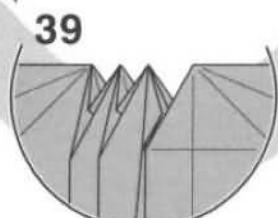


26

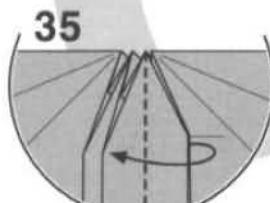
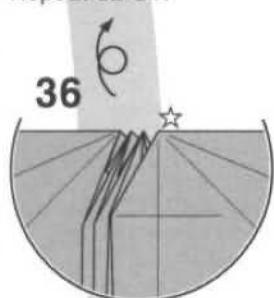
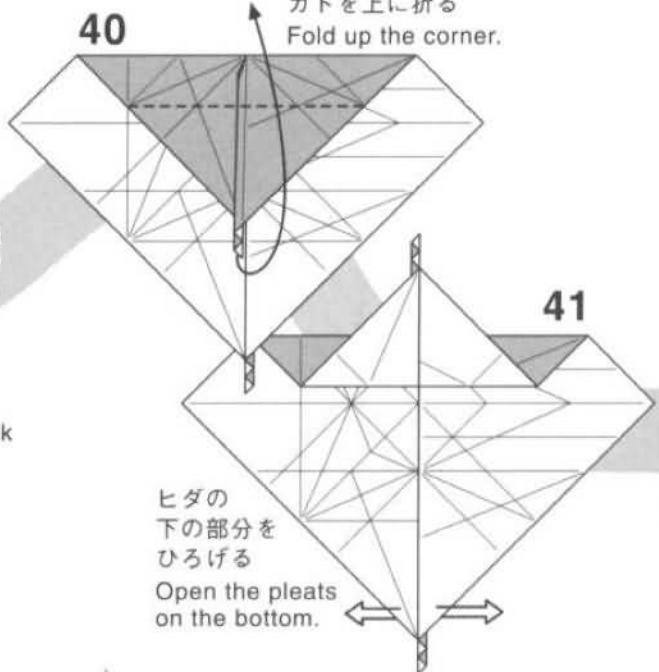




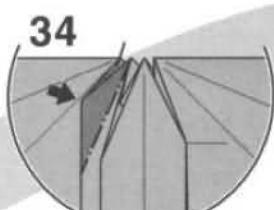
32-34と同じように折る
Repeat 32-34.



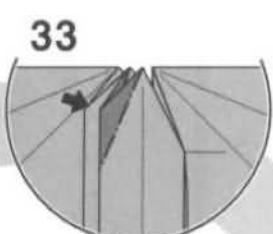
図のような形になる
The result should look like this.



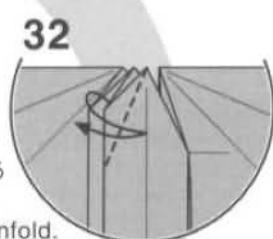
縁を反対側に折る
Fold the layer to the left.



次のカドも32-33と同じように沈め折り
Repeat 32-33 on the next corner.

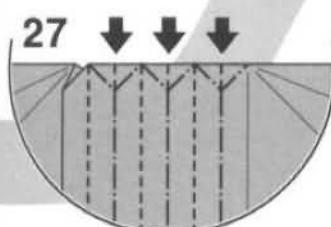
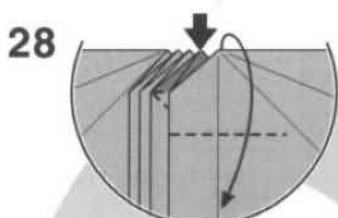


沈め折り
(Open sink)
Open sink the corner.

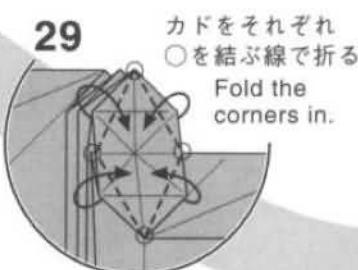


縁を折り筋に合わせて
折り筋をつける
Fold an angle bisector and unfold.

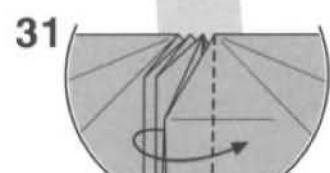
■のカドをつぶしながら
上の1枚をのばすように折る
Spread sink the second top corner.



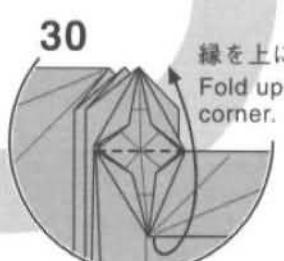
他の3か所も
24-25と同じように折る
Repeat 24-25 three times.



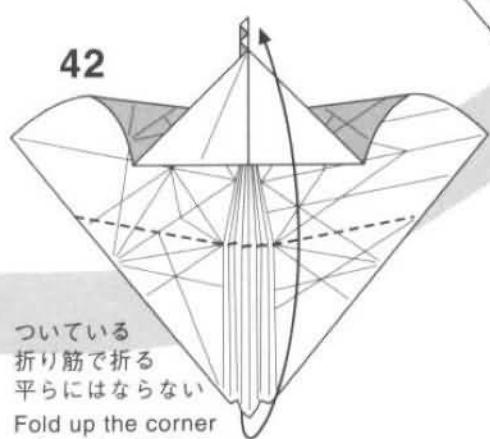
カドをそれぞれ
○を結ぶ線で折る
Fold the corners in.



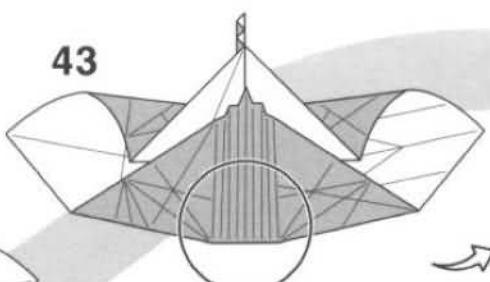
縁を反対側に折る
Fold the top layer to the right.



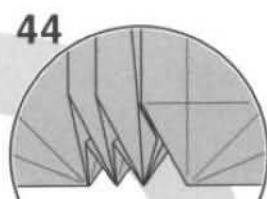
縁を上に折る
Fold up the corner.



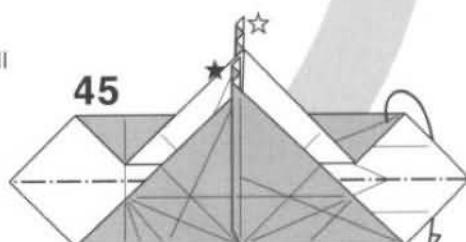
ついている
折り筋で折る
平らにはならない
Fold up the corner
using the existing
crease line. The model
will not lie flat.



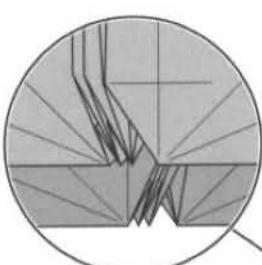
24-37と同じようにして
上下対称に折る
Repeat 24-37 on the
bottom. The model will
now lie flat.



図のような形になる
The result should look
like this.

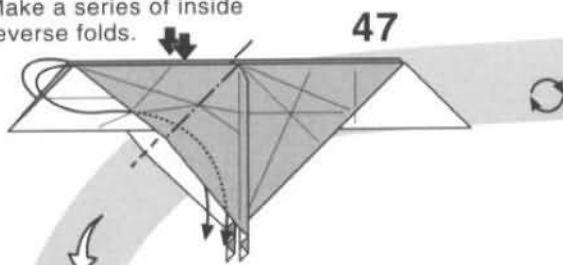


縁を後ろへ折る
Mountain fold horizontally.

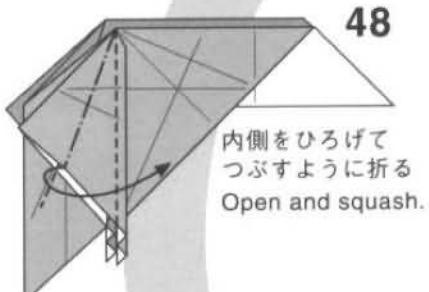


46

この部分が足の指になる
表裏対称になっていることを確認
This part will be toes.
Make sure that the layers
of the near and far parts
are symmetrically aligned.



47

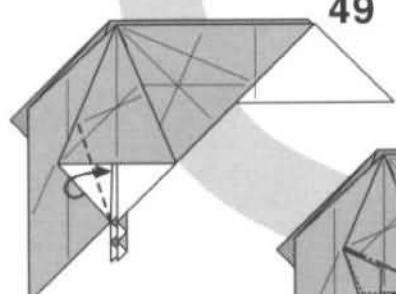
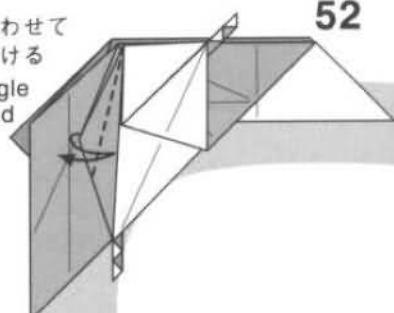


48

内側をひろげて
つぶすように折る
Open and squash.

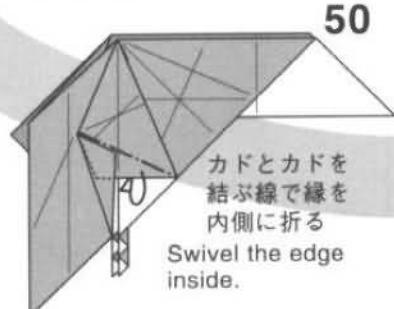
縁と縁を合わせて
折り筋をつける
Fold an angle
bisector and
unfold.

52



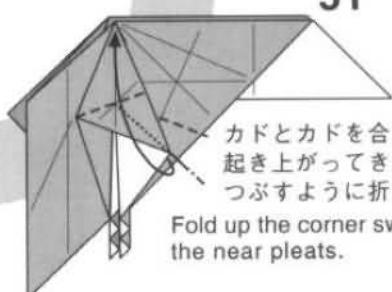
49

縁と縁を
合わせて折る
Fold edge to edge.



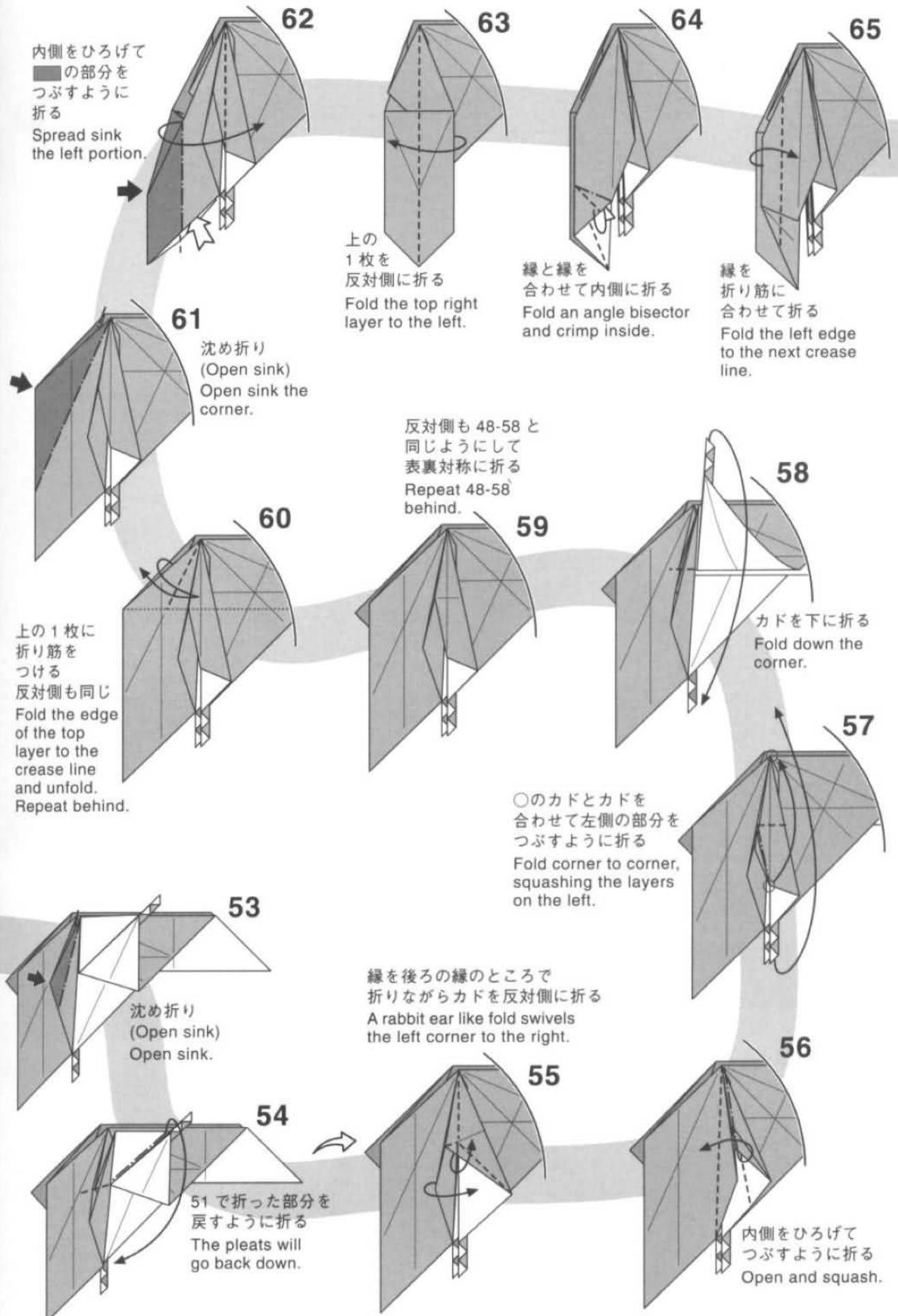
50

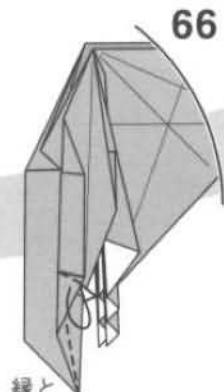
カドとカドを
結ぶ線で縁を
内側に折る
Swivel the edge
inside.



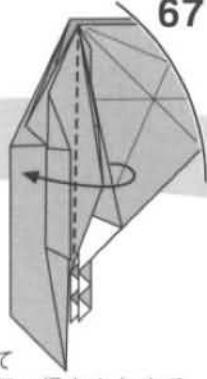
51

カドとカドを合わせて
起き上がってきた部分を
つぶすように折る
Fold up the corner swiveling
the near pleats.

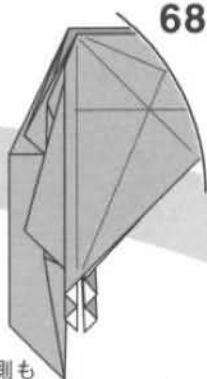




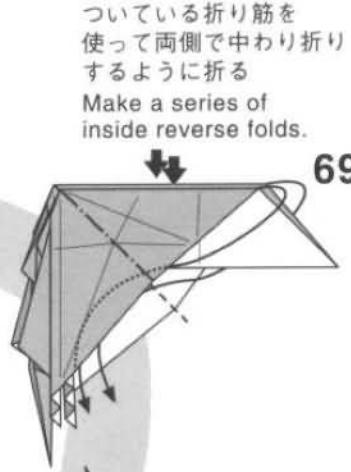
縁と
縁を合わせて
内側に折る
Fold an angle
bisector and
crimp inside.



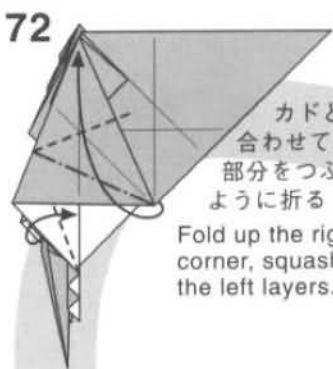
隠れて
いる細い縁をまとめて
反対側へ折る
Fold the short layers
on the right to the left.



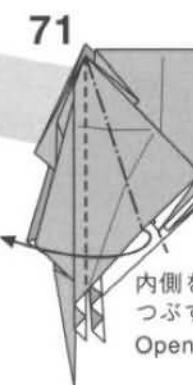
反対側も
64-67と同じように折る
Repeat 64-67 behind.



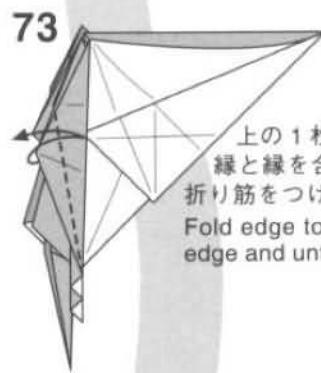
ついている折り筋を
使って両側で中わり折り
するように折る
Make a series of
inside reverse folds.



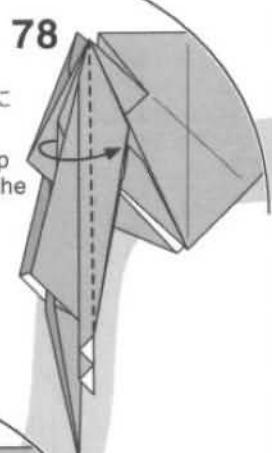
カドとカドを
合わせて左側の
部分をつぶす
ように折る
Fold up the right
corner, squashing
the left layers.



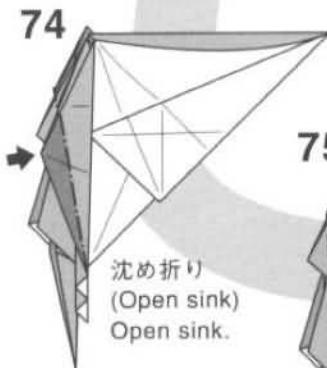
内側をひろげて
つぶすように折る
Open and squash.



上の1枚だけ
縁と縁を合わせて
折り筋をつける
Fold edge to
edge and unfold.



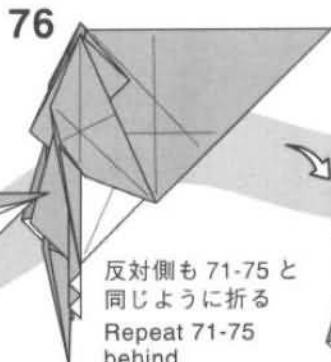
縁を反対側に
折る
Fold a group
of layers to the
right.



沈め折り
(Open sink)
Open sink.



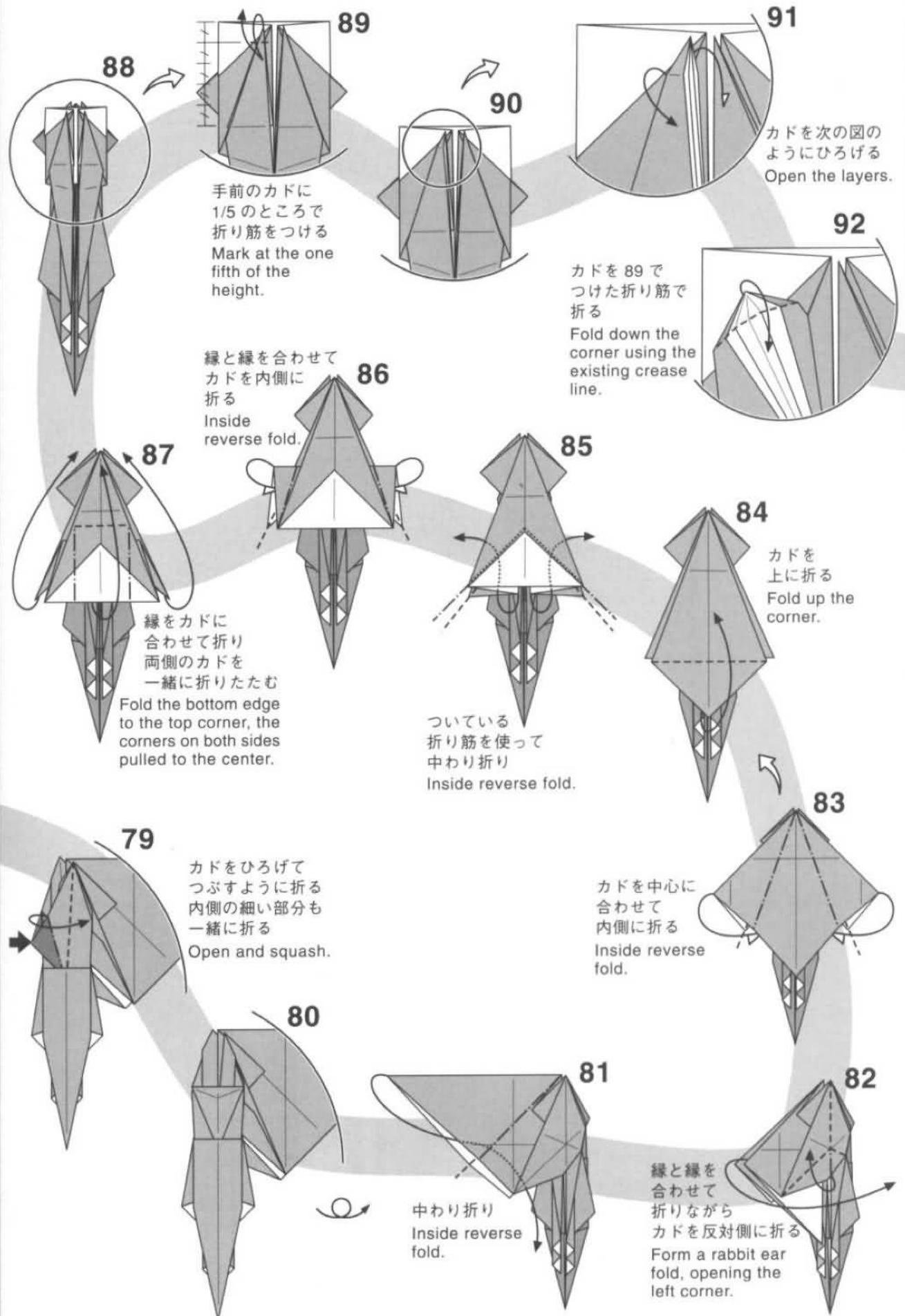
カドを下に折る
Fold down the
top layer.



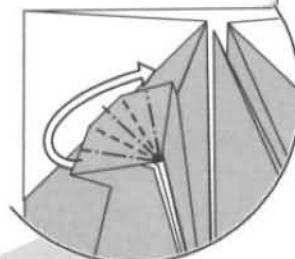
反対側も 71-75 同じように折る
Repeat 71-75
behind.



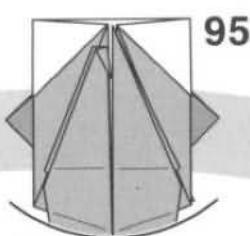
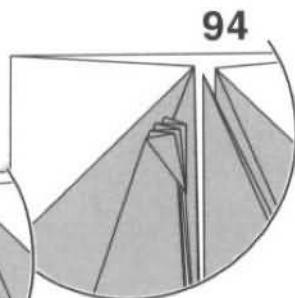
つまむようにしながら
縁を反対側に折る
Rabbit ear the top
right corner, swiveling
the left layer.



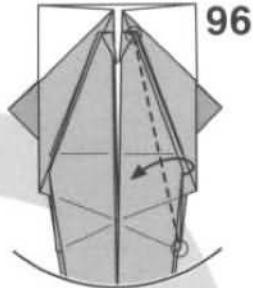
ディバインドラゴン(ハムート)



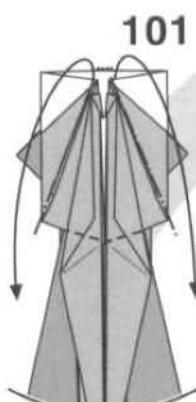
ついている折り筋で
段折りするように
折りたたむ
Assemble the
pleats as shown.



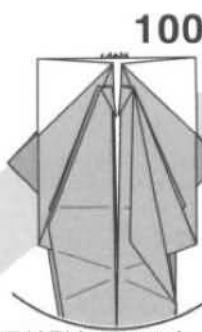
反対側のカドも
89-93と同じように
折る
Repeat 89-93
on the right.



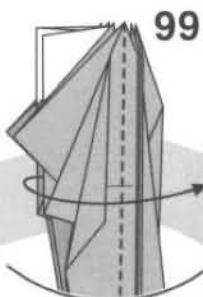
上のカドのところから
斜めに折る
Fold the corner in. The
crease line starts from the
top corner of the top layer.



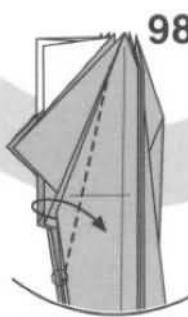
カドを下に折り
次の図の形にひろげる
Fold down the corners
and spread the layers.



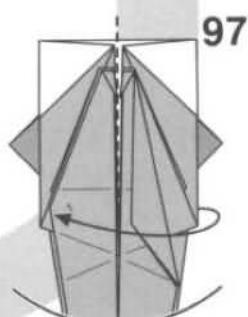
反対側も 96-99 と
同じように折る
Repeat 96-99 on the left.



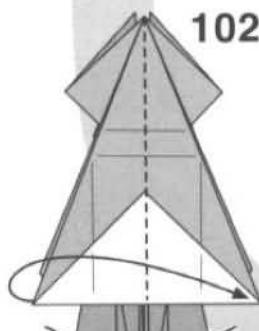
97で折った
ところを戻す
Back to 97,
keeping the
crease in 98.



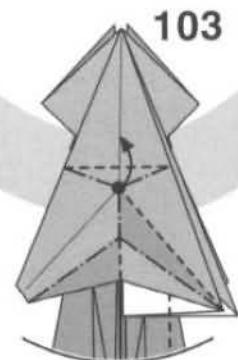
カドを 96 と同じ
ところで斜めに折る
Fold the corner in.



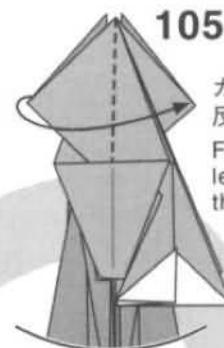
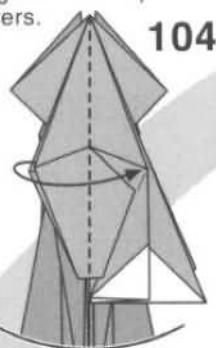
縁を反対側に折る
Fold the top layers
to the left.



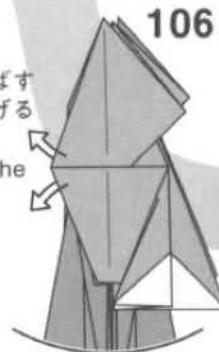
カドを 1 枚
反対側へ折る
平らにはならない
Fold the top left
corner to the right.



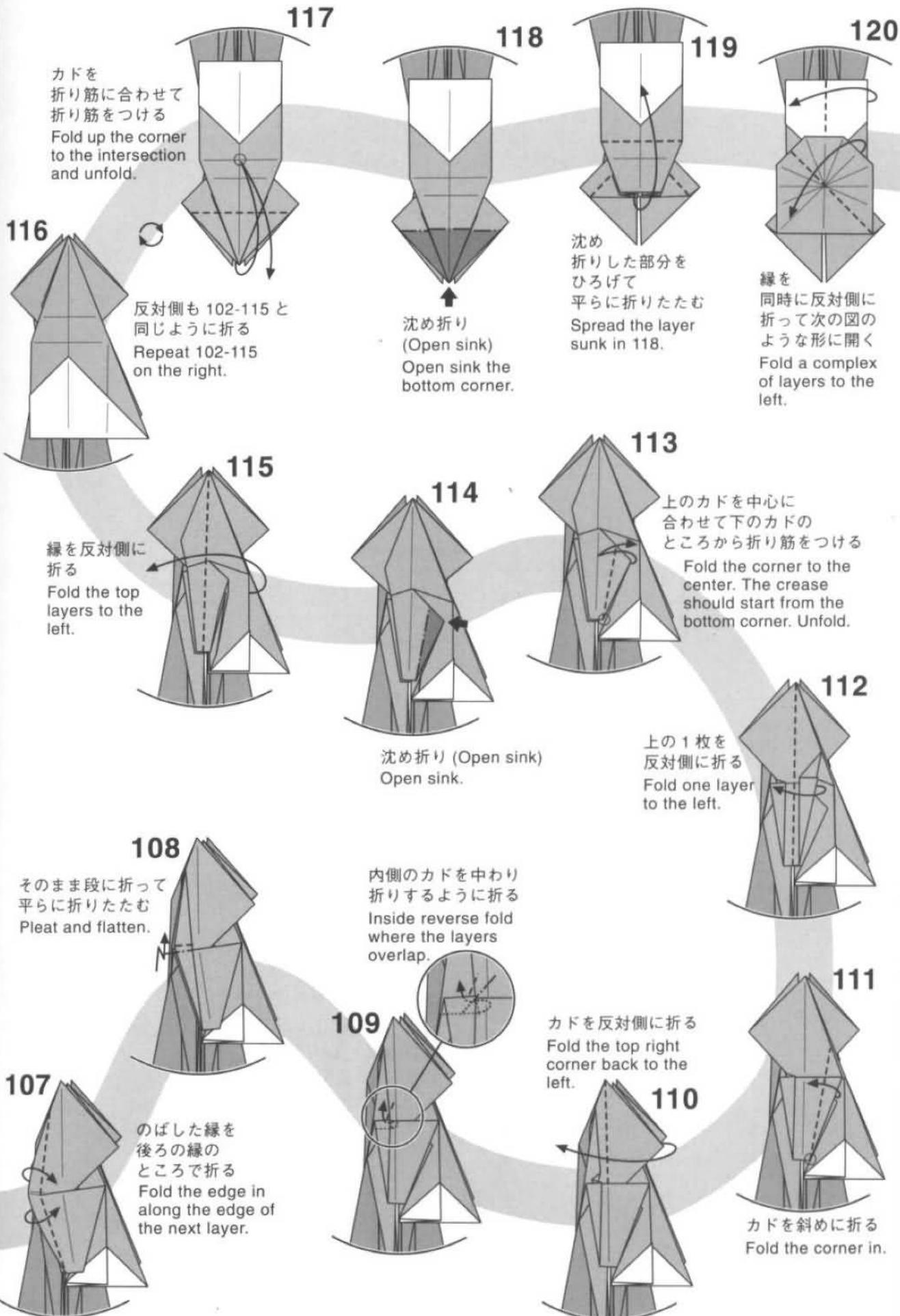
ついている折り筋を使って
中央に小さなカドを
作るように折りたたむ
Petal fold inside, while inside
reversing on the edge.



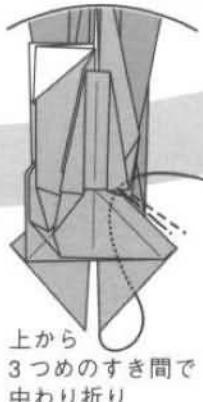
カドを
反対側に折る
Fold the top
left corner to
the right.



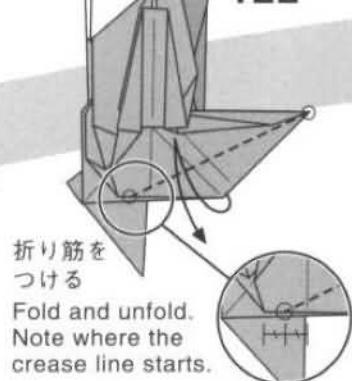
左の縁をのばす
ようにひろげる
Pull out the
clusters of the
left edge.



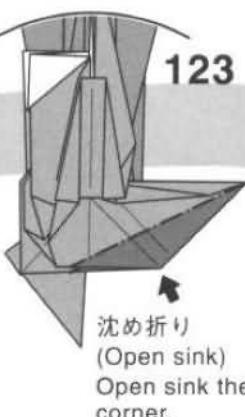
121



122



123

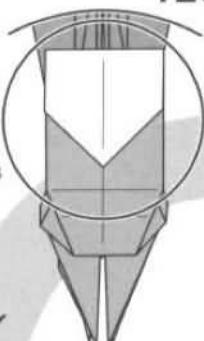


124

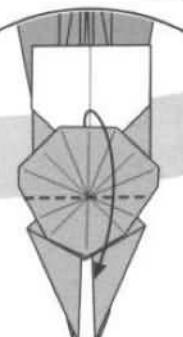


次の図は手前の部分だけを見る
The next view shows the circled part only.

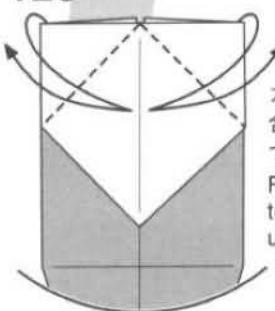
128



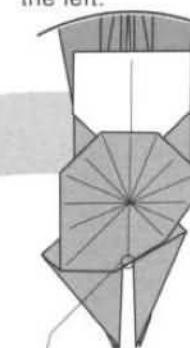
127



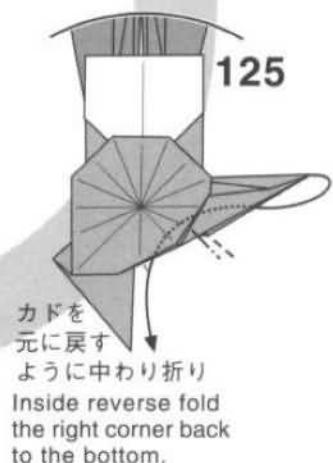
129



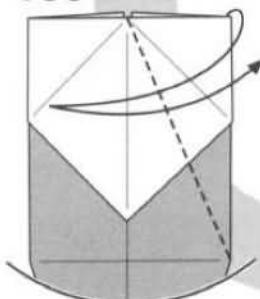
縁を下に折る
Fold the edge down.



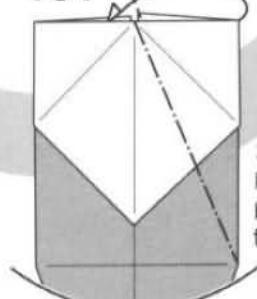
126



130

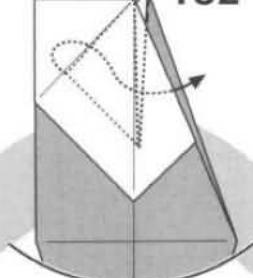


131

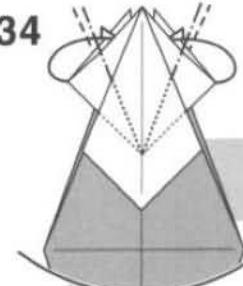


内側のカドを
中わり折り
Inside reverse fold.

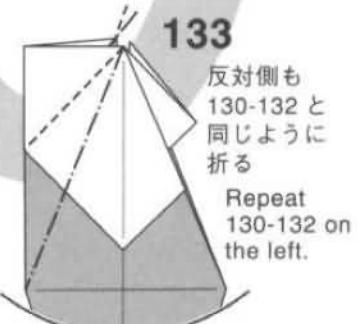
132



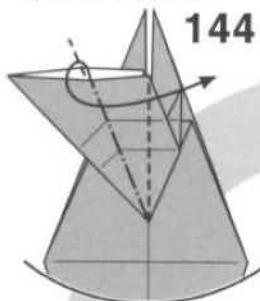
134



133



内側をひろげて
つぶすように折る
Open and squash.

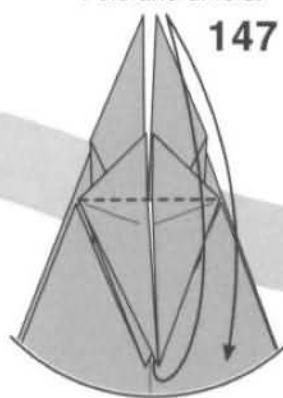
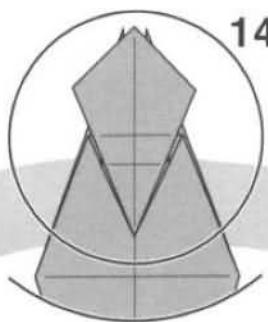


144

145

146

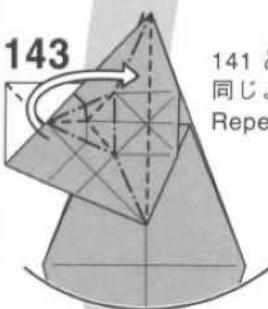
折り筋をつける
Fold and unfold.



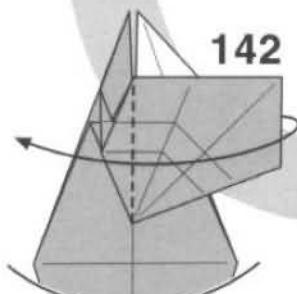
147

内側をひろげて
つぶすように折る
Petal fold.

143
141と
同じように折る
Repeat 141.

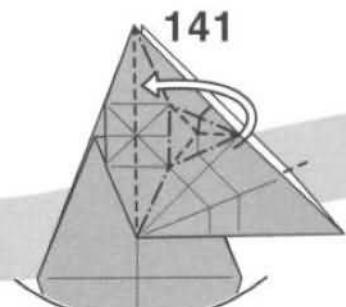


142



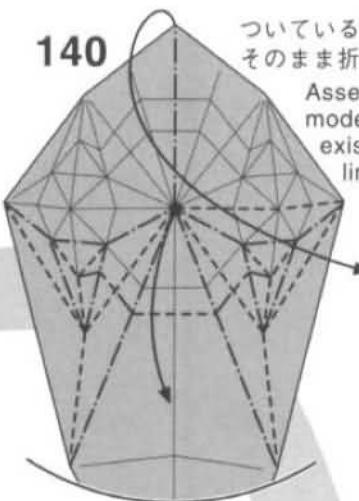
反対側に折る
Fold the top right
layer to the left.

141



ついている折り筋の山谷を
逆につけ直して折りたたむ
Assemble the model using
the existing crease lines.
Note that the directions of
folding differ.

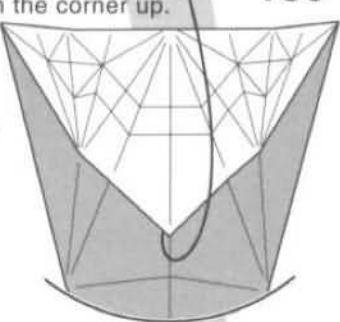
140



ついている折り筋で
そのまま折りたたむ
Assemble the
model using the
existing crease
lines.

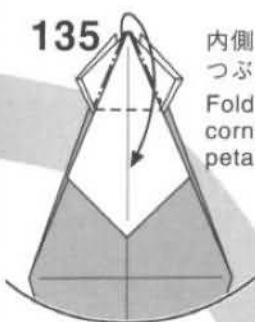
カドをひろげる
Open the corner up.

139



135

内側をひろげて
つぶすように折る
Fold down the top
corner, forming a
petal fold.

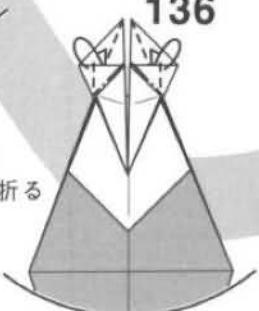


■の部分をつぶしながら
カドを下に引きのばすように
折る

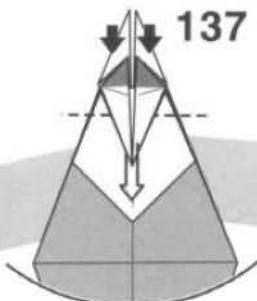
Pull down the corner, spread
sinking the corners above.

136

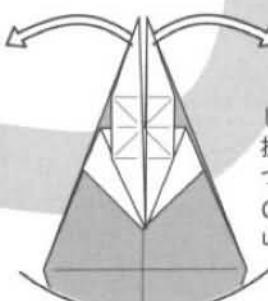
カドを細く
するように
縁を内側に折る
Rabbit ear
inside.



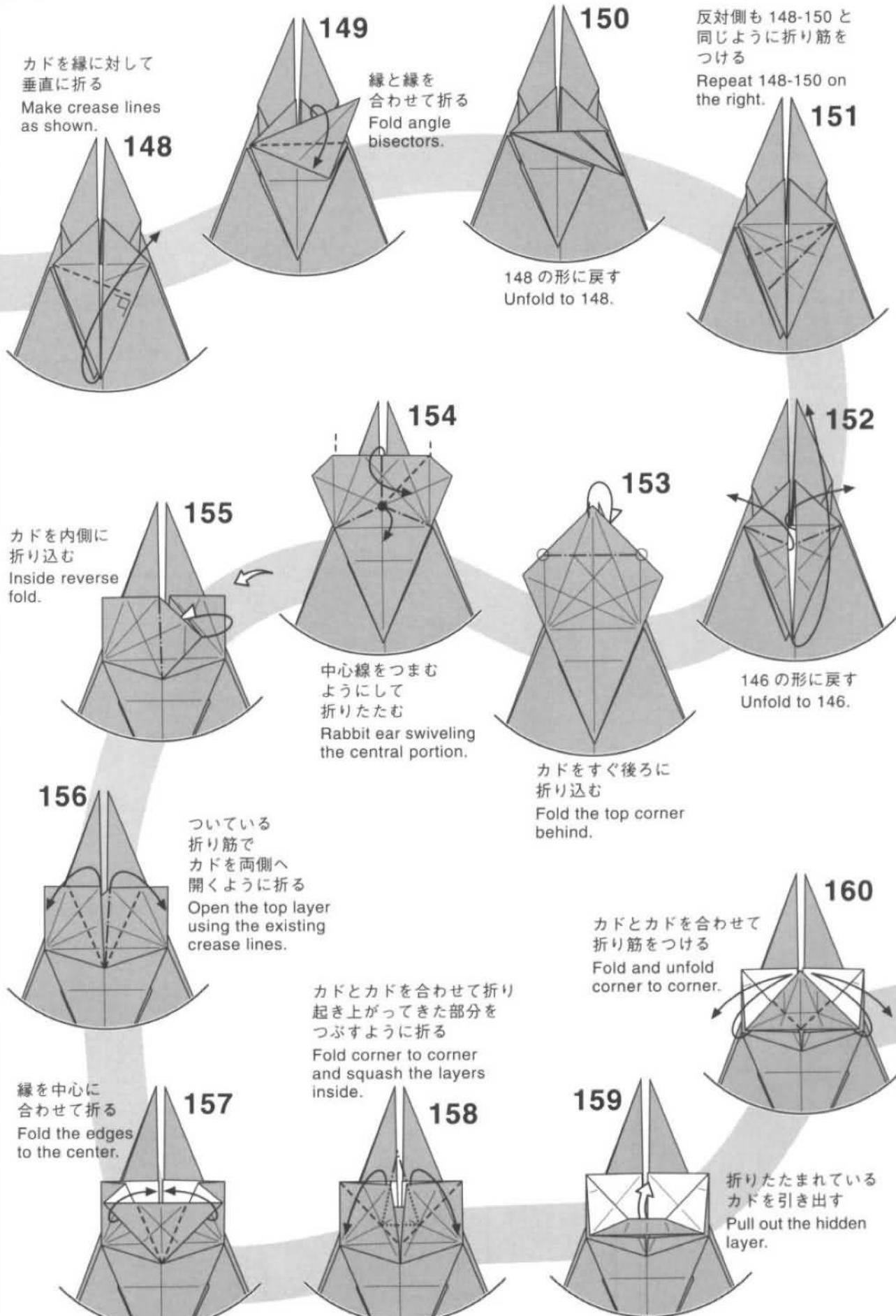
137

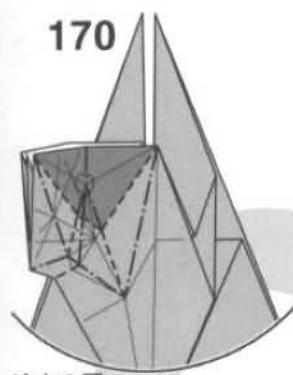


138

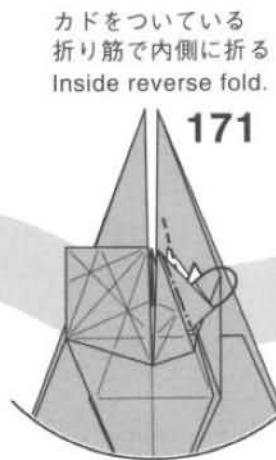


しっかりと
折り筋を
つけてから開く
Open and
unfold.

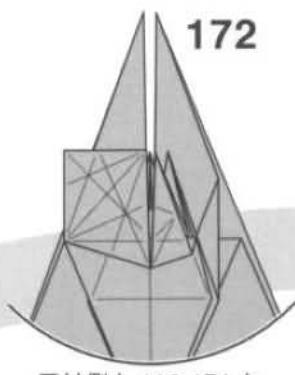




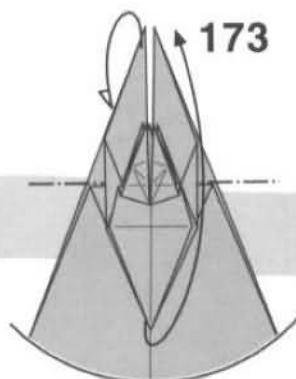
途中の図
○のカドを出すように
折りたたむ
Let the circled corner
show up.



カドをついている
折り筋で内側に折る
Inside reverse fold.



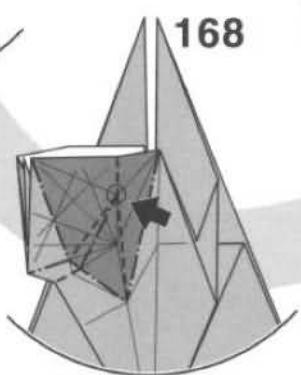
反対側も 166-171 と
同じように折る
次の図は小さくなる
Repeat 166-171 on
the left. The next view
will be zoomed out.



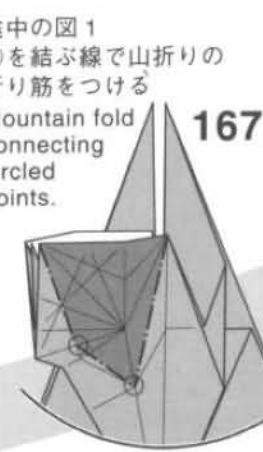
上のカドを後ろへ
折りながら下のカドを
上に折る
Swivel the corners
behind.



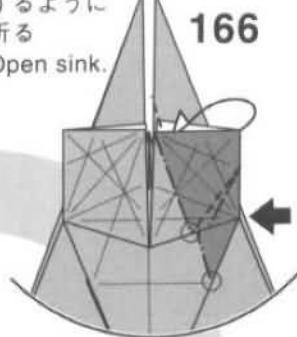
内側の部分を
外側へ中わり折り
するように
沈め折り
(Open sink)
Open sink
inside.



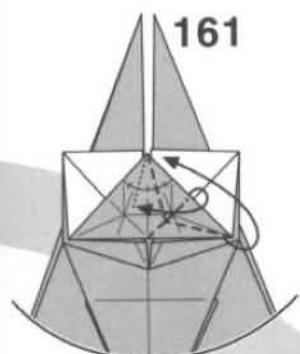
途中の図 2
○の部分を沈めるように
折りたたむ
Sink the circled point.



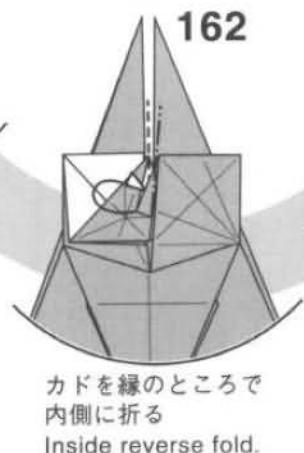
途中の図 1
○を結ぶ線で山折りの
折り筋をつける
Mountain fold
connecting
circled
points.



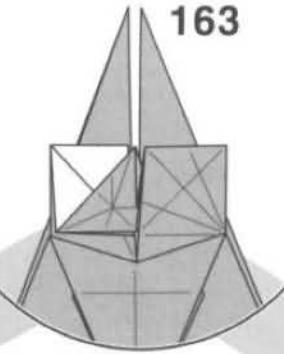
中わり折りしながら
沈め折り (Open sink)
するように
折る
Open sink.



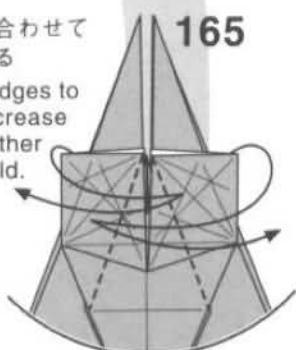
カドを上へ折りながら
縁を 1/3 の角度で
中わり折り
するように折る
Fold up the right
corner, inside
reverse folding the
edge inside at the
one-third of the angle.



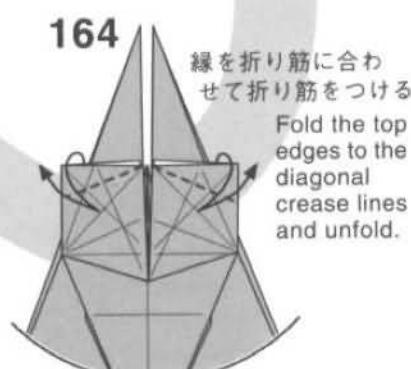
カドを縁のところで
内側に折る
Inside reverse fold.



反対側も 161-162 と
同じように折る
Repeat 161-162 on
the left.



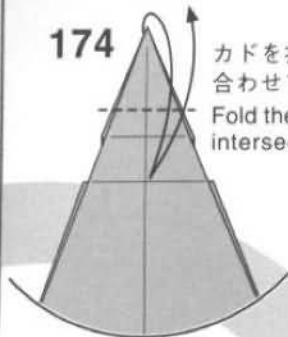
縁を折り筋に合わせて
折り筋をつける
Fold the top edges to
the diagonal crease
lines on the other
side and unfold.



縁を折り筋に合わ
せて折り筋をつける
Fold the top
edges to the
diagonal
crease
lines and unfold.

174

カドを折り筋の交点に
合わせて折り筋をつける
Fold the top corner to the
intersection and unfold.



カドをひろげて
つぶすように折る
Spread sink the
top corner.

176

177

裏側から見た図
The back view.
(Hidden inside)

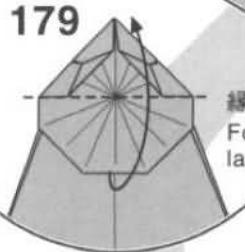
178

両側の縁を
○を結ぶ線で
折る
Fold the top
edges to the
center.

縁を上へ折る
Fold the top
layer up.

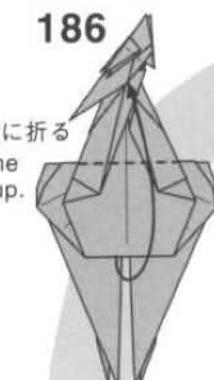
上の1枚だけ縁を
引き寄せるように折る
Fold the edges inside,
swiveling the top edges.

179



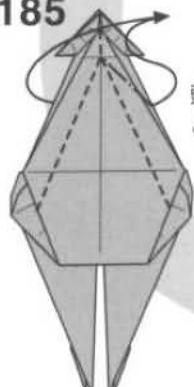
186

縁を上に折る
Fold the
edge up.



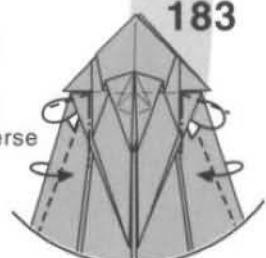
185

頭部をつまむ
ように折る
Rabbit ear
the head.



184

次の図は
裏側から見る
The next view will
be from behind.



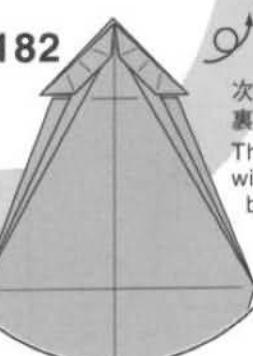
180

折り筋をつける
Fold the top
edges to the
center and
unfold.

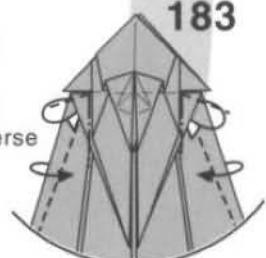
181

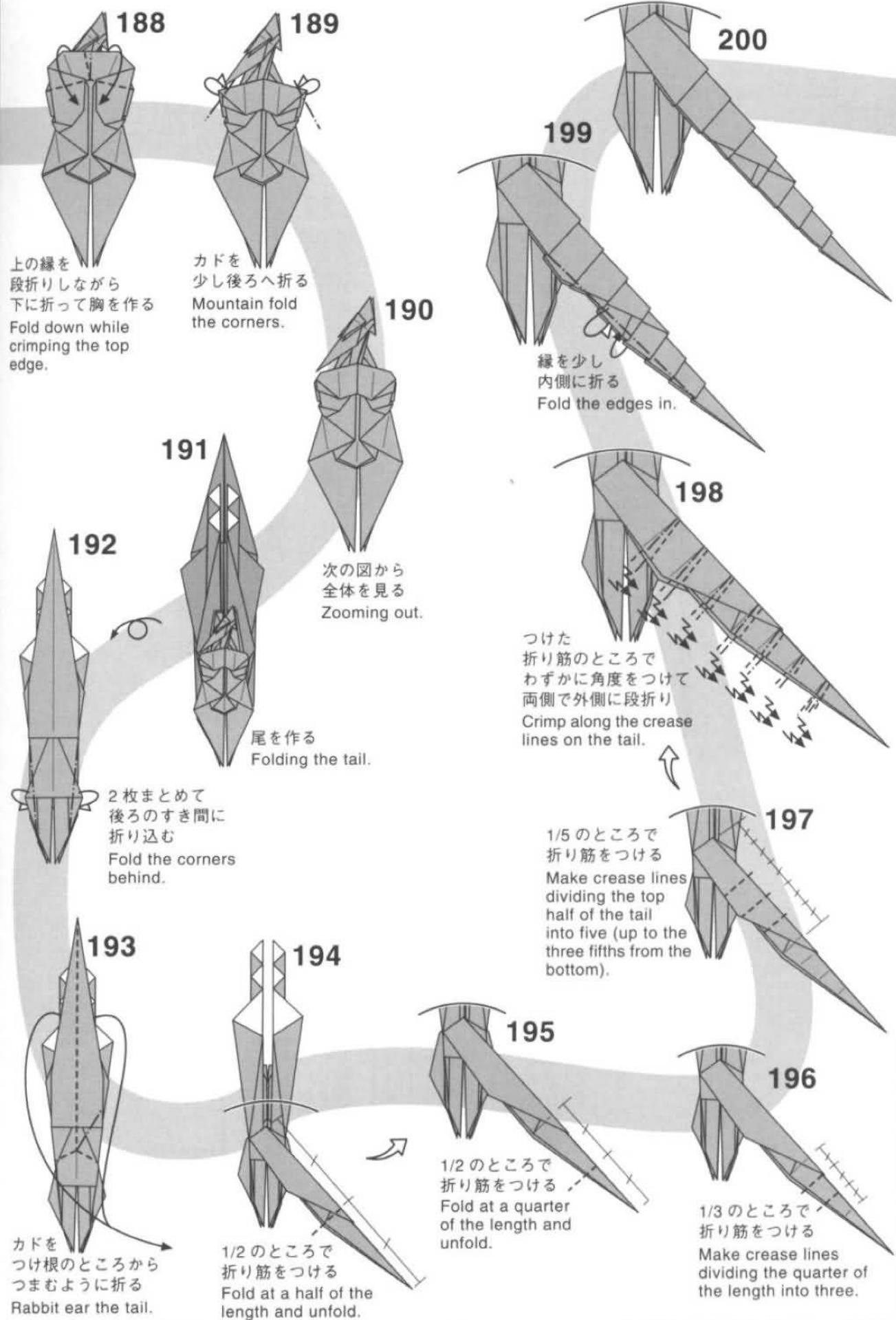
182

次の図は
裏側から見る
The next view will
be from behind.

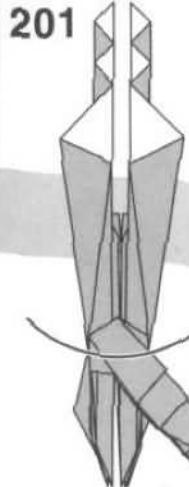


後の縁の
ところで
内側に折る
Inside reverse
fold.

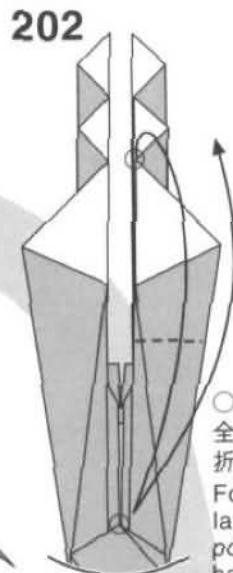




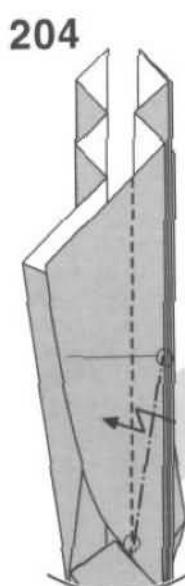
ディバインドラゴン(バハムート)



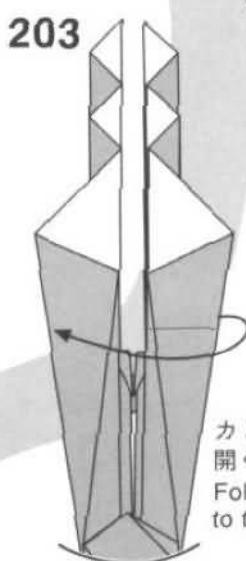
翼を作る
Folding the wings.



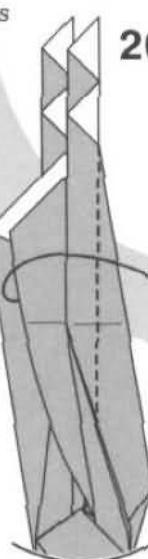
○を合わせて
全ての層に
折り筋をつける
Fold the first
layer of the top
portion at the
half of the height.
Unfold.



上の細いヒダを
4枚まとめて
斜めに段折り
Crimp four layers
to the left.

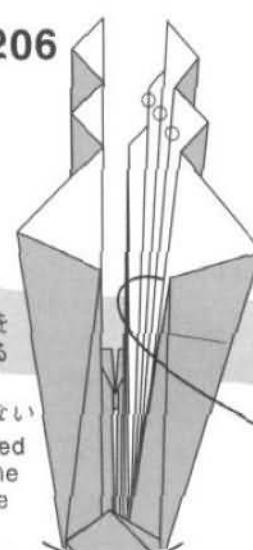


カドを反対側に
開く
Fold the first layer
to the left.

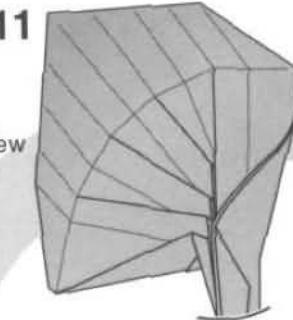
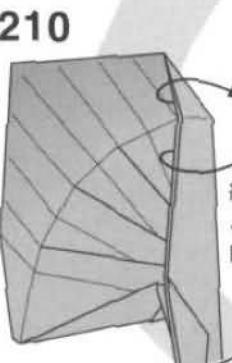


しっかりと
折り筋を
つけてから
戻す
Unfold.

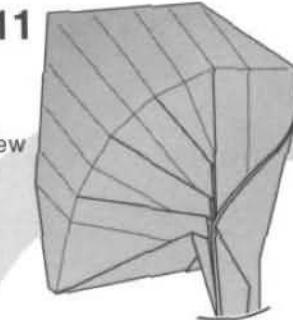
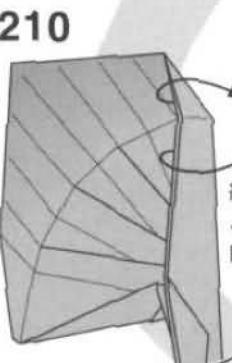
○の3つの
ヒダを204で
つけた折り筋を
使ってひろげる
ように折る
平らにはならない
Open the circled pleats using the
existing crease lines.



次の図から
翼の部分だけを見る
The next view
will only show
the wing.

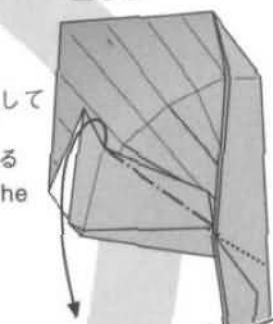


次の図は
裏から見る
The next view
will be from
behind.



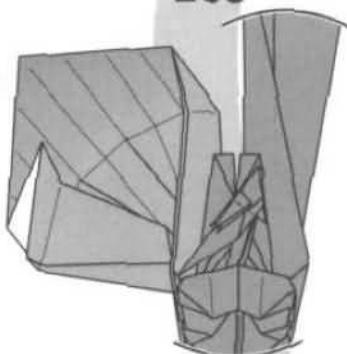
縁をずらす
ように引き出す
Pull out the layer.

209



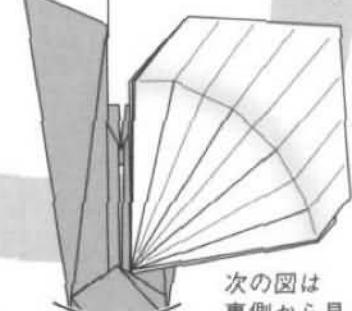
縁をずらして
引き出す
ように折る
Pull out the
layer.

208

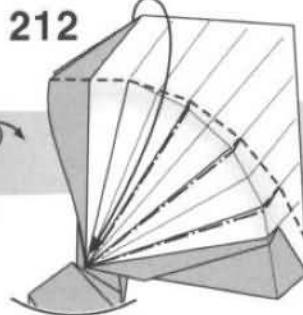


次の図から
翼の部分だけを見る
The next view
will only show
the wing.

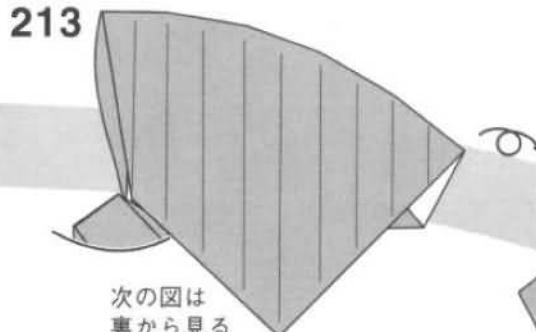
207



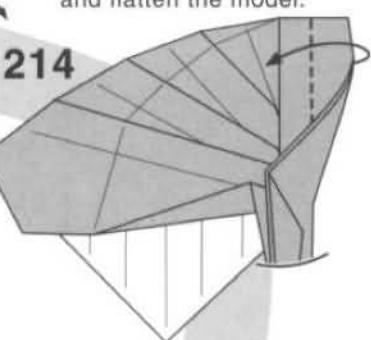
次の図は
裏側から見る
The next view
will be from
behind.



折り筋をずらして
平らになるように折りたたむ
Flatten the wing.

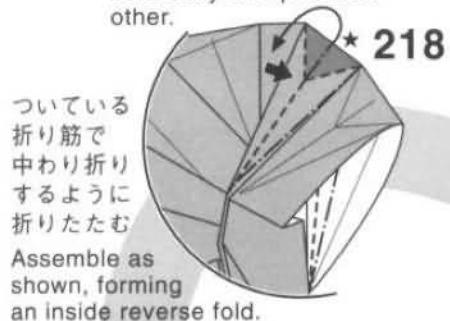


次の図は
裏から見る
The next view will be
from behind.



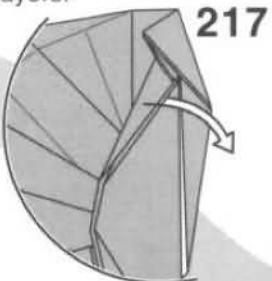
ついている折り筋で縁を
反対側に折り全体を平らに
なるよう調整する
Fold the edges to the left
and flatten the model.

■の部分は
ぴったりと重なる
The grayed regions will
be exactly on top of each
other.

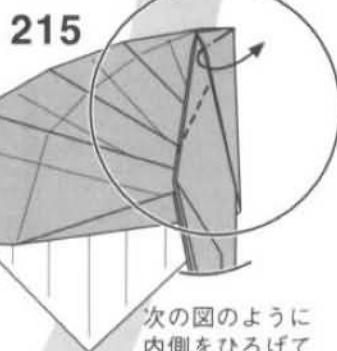


ついている
折り筋で
中わり折り
するように
折りたたむ
Assemble as
shown, forming
an inside reverse
fold.

重なっているヒダを2枚
破れないように気をつけて
次の図のように引き出す
Pull out the hidden
layers.

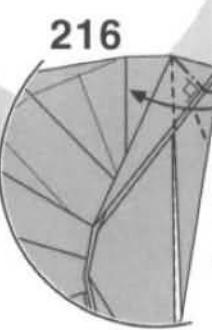


217



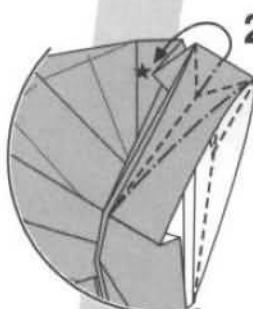
215

次の図のように
内側をひろげて
つぶすように折る
Swivel a little.



216

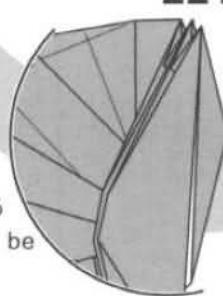
縁に対して
垂直になる線で
ずらすように折る
Another swivel fold.



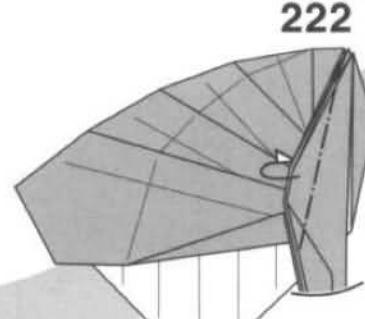
219
同じようにして
ついている折り筋で
中わり折りする
ように折りたたむ
Assemble as shown,
forming an inside
reverse fold.



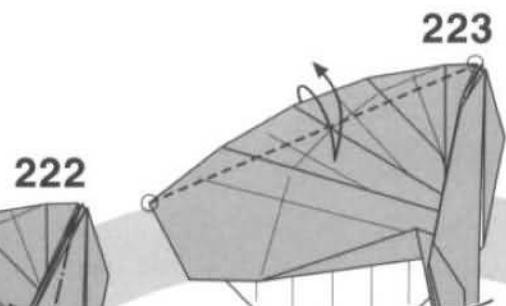
220
カドを縁のところで
内側に折る
後ろのカドも同じ
Inside reverse fold.



翼の指の
部分になる
These will be
fingers.



縁を
まとめて後ろへ折る
Fold the edges in.



223
カドと
カドを結ぶ線で
折り筋をつける
Fold along the line
connecting the
corners and unfold.

ディバインドラゴン(バハムート)

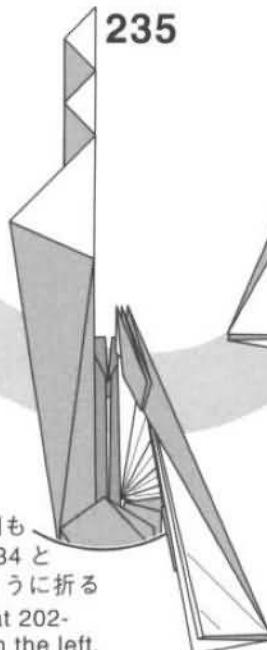


縁を後ろの
すき間に折り込む
Fold the corner
inside.

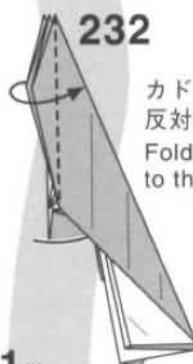


さらに
縁を後ろへ折り込む
Fold the corner
inside again.

235



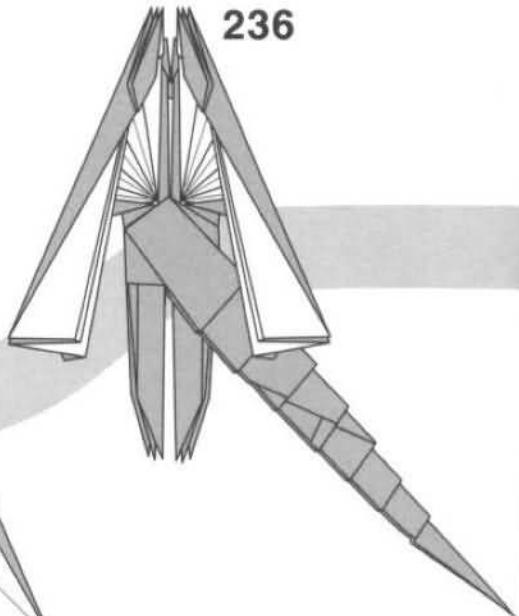
232



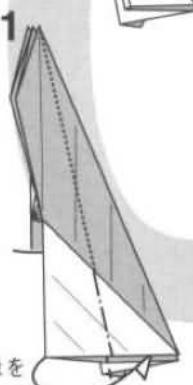
カドをまとめて
反対側に折る
Fold the layer
to the right.

反対側も
202-234 と
同じように折る
Repeat 202-
234 on the left.

236



231



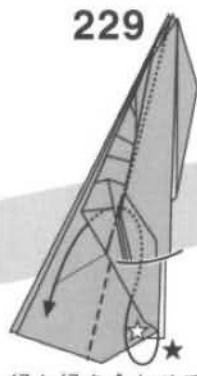
縁と縁を
合わせて
カドを内側に折る
Inside reverse fold.

230



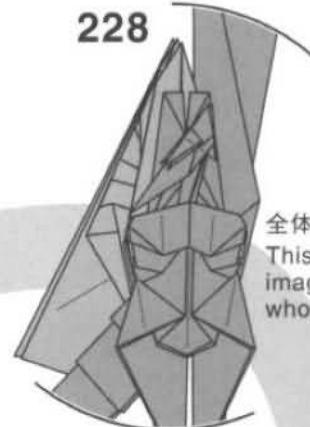
次の図は
裏から見る
The next view
will be from
behind.

229

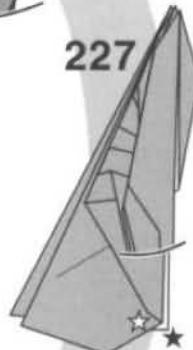


縁と縁を合わせて
中わり折り
Inside reverse fold.

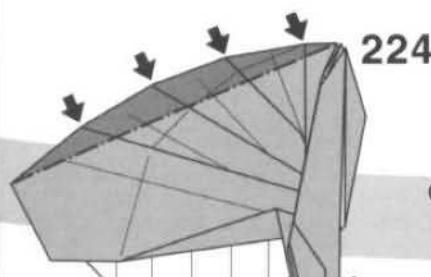
228



227

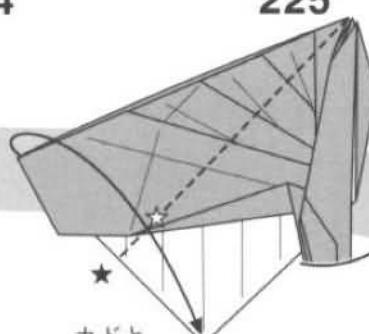


全体を見た図
This will be the
image of the
whole model.



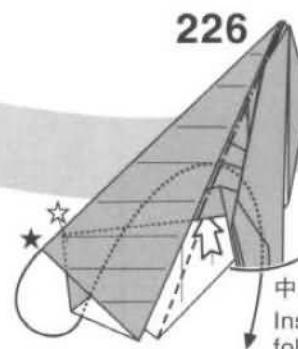
ヒダを開かないように
沈め折り (Closed sink)
Closed sink.

225



カドと
カドを合わせて折る
Fold corner to corner.

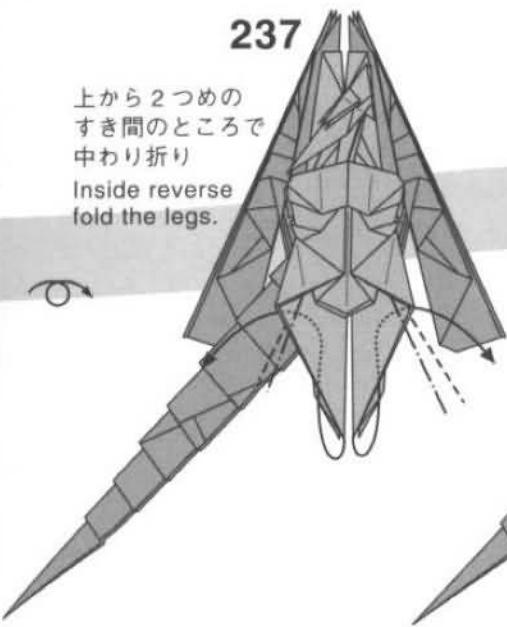
226



中わり折り
Inside reverse
fold.

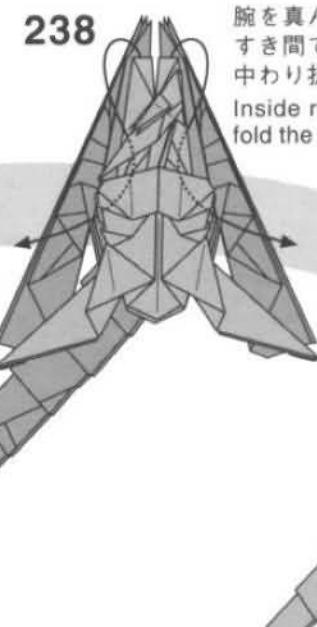
237

上から2つめの
すき間のところで
中わり折り
Inside reverse
fold the legs.



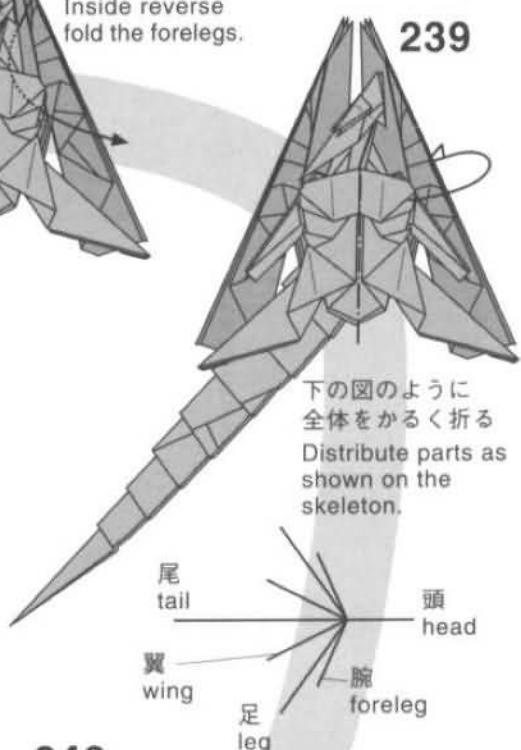
238

腕を真ん中の
すき間で
中わり折り
Inside reverse
fold the forelegs.



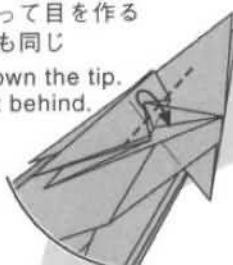
239

下の図のように
全体をかくるく折る
Distribute parts as
shown on the
skeleton.



240

カドを
下に折って目を作る
反対側も同じ
Fold down the tip.
Repeat behind.



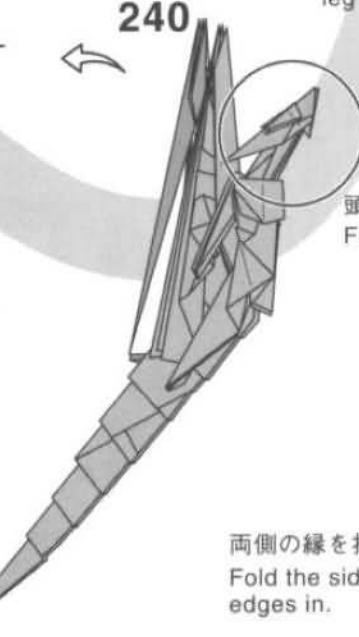
241

カドを
つまむように折る
反対側も同じ
Fold up the corner,
squashing the next layer.
Repeat behind.



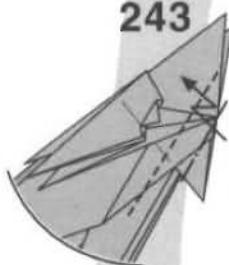
240

頭部を仕上げる
Folding a head.



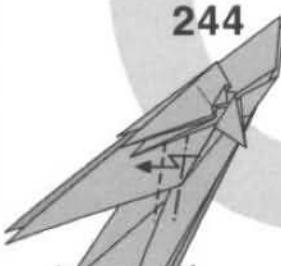
243

段折り
反対側も同じ
Pleat. Repeat
behind.



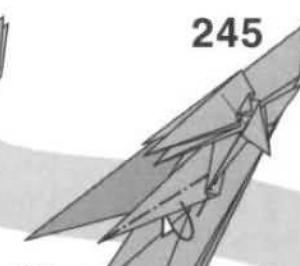
244

長いカドを
後ろに段折り
Pleat.



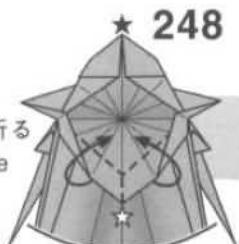
245

縁を
後ろへ折る
反対側も 244-245 と
同じように折る
Fold the edge behind.
Repeat 244-245 behind.



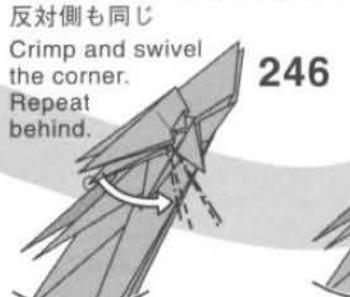
248

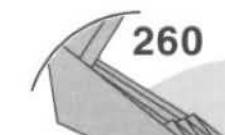
両側の縁を折る
Fold the side
edges in.



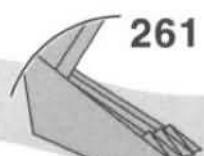
247

あごを開いて
内側を見る
Open the jaw.

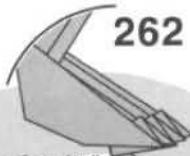




カドを
少し引き出す
Pull out the
hidden corner.

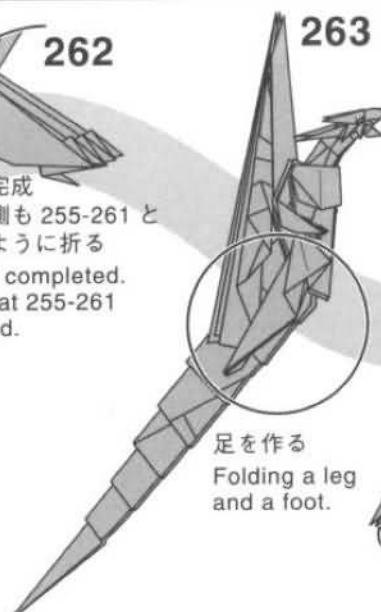


カドを
後ろへ折る
Fold the tip to
the other side.



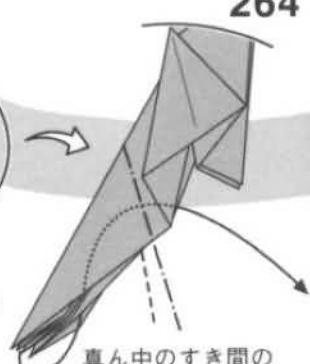
手の完成
反対側も 255-261 と
同じように折る
Hand completed.
Repeat 255-261
behind.

263

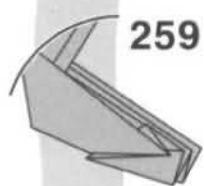


足を作る
Folding a leg
and a foot.

264



真ん中のすき間の
ところで中わり折り
Inside reverse fold
at the middle cluster
of layer.



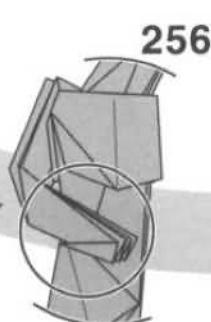
のこりも
257-258 と
同じように折る
Repeat inside
reverse folds.



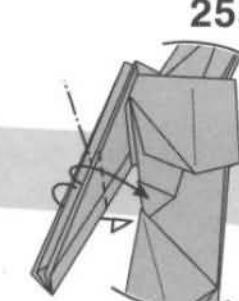
カドを内側に
折る
Inside reverse
fold.

257

縁の
ところで
中わり折り
Inside reverse fold.



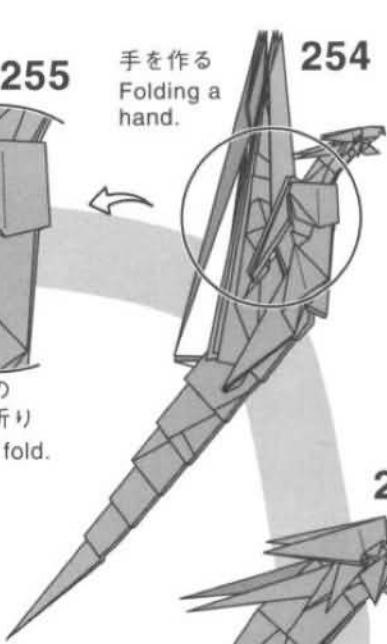
256



255

手を作る
Folding a hand.

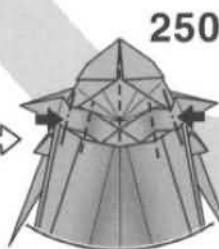
254



253



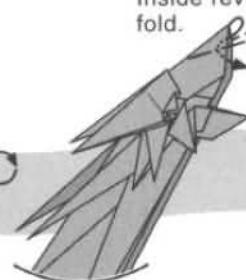
図のような折り筋で
下あごをつまむように折る
Mountain fold the inner
portion of the jaw as
shown.



左右から段折り
するように
折りたたむ
Assemble the
jaw with pleat
folds on both
sides.

中わり折り
Inside reverse
fold.

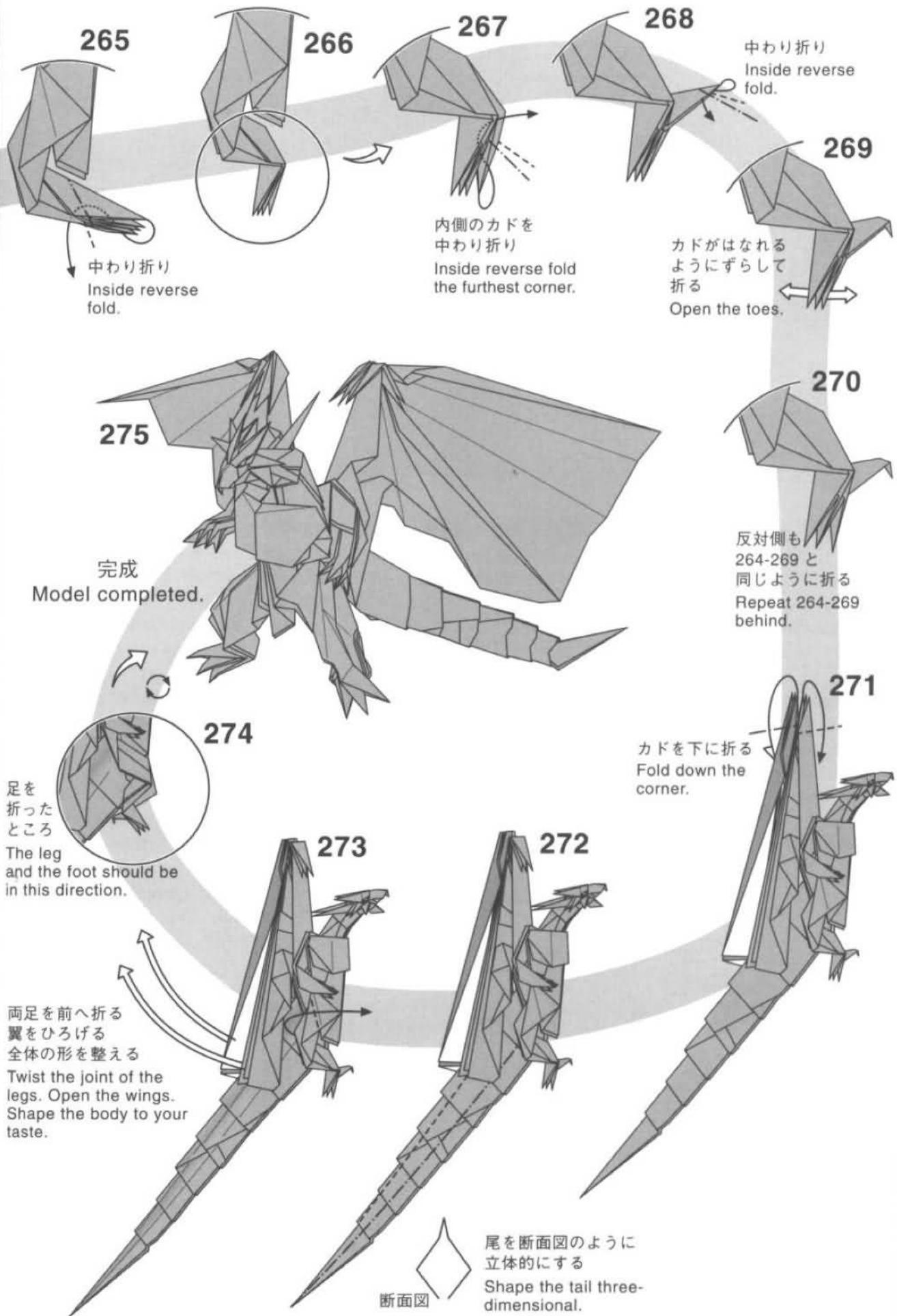
251



252

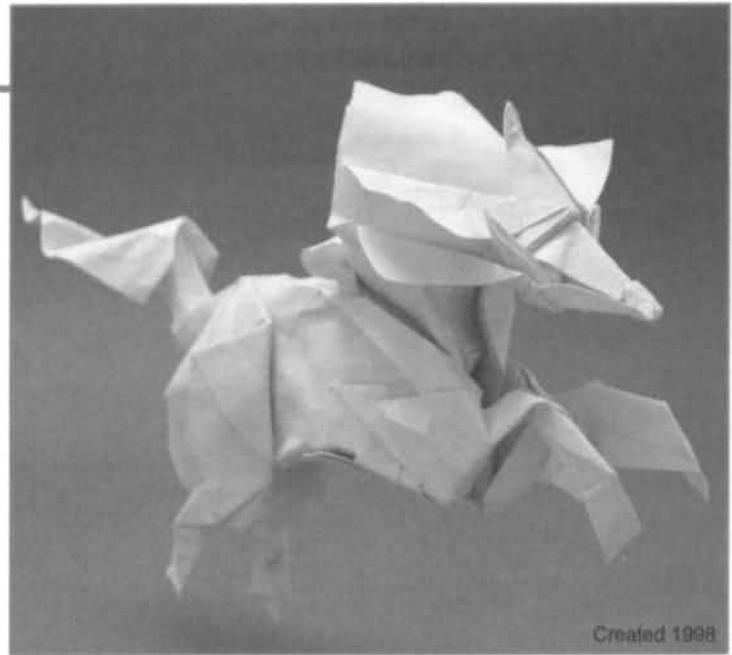
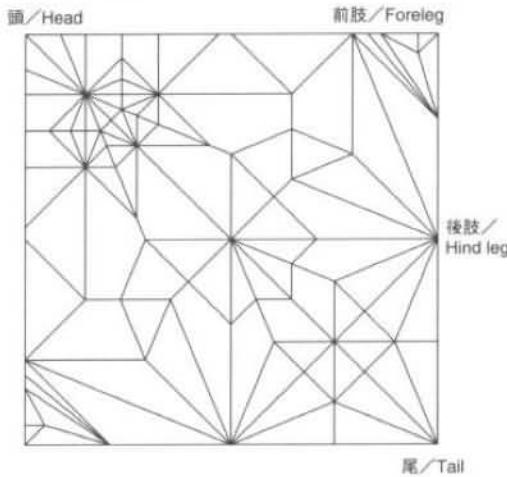


かぶせるように
両側で段折りして
首を曲げる
Crimp the neck
twice.



麒麟

Kirin



この作品、基本的な部分はひと晩で作りました。あるとき木下一郎氏から麒麟を作つてみたらどうかと勧められ、非常に惹かれる題材だったので、頭の中の紙をしばらくいじつてみたら、うまくできそうなカド配置を思いつき、そして早速折ったところ本当にできてしまったという、私の創作歴の中で最も創作期間の短い作品のひとつです。

これに限らず、試作中に「できる」と感じことがあります。残念ながら完成しない場合もあるのですが、それでも成功率はなかなかのものです。感覚的なことなので正確なところは分かりませんが、どうも大きな問題を解決したときにそう感じているようです。

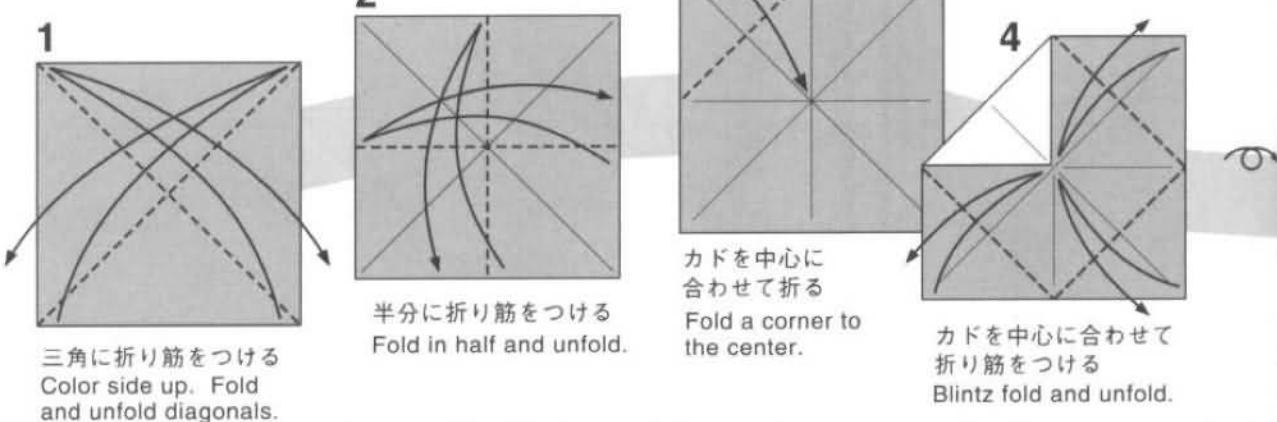
今回、雑誌『折紙探偵団』58号に収録された首のないデザインから、作品をバージョンアップしました。当時、図解作業が後半にさしかかった頃に、首を長くできることに気がついたのですが、もう修正する時間がなかったので、残念ながらヒント図のみの掲載になりました。今回はちょうど良い機会なので、折り図ごと修正しようと思い立ったわけです。

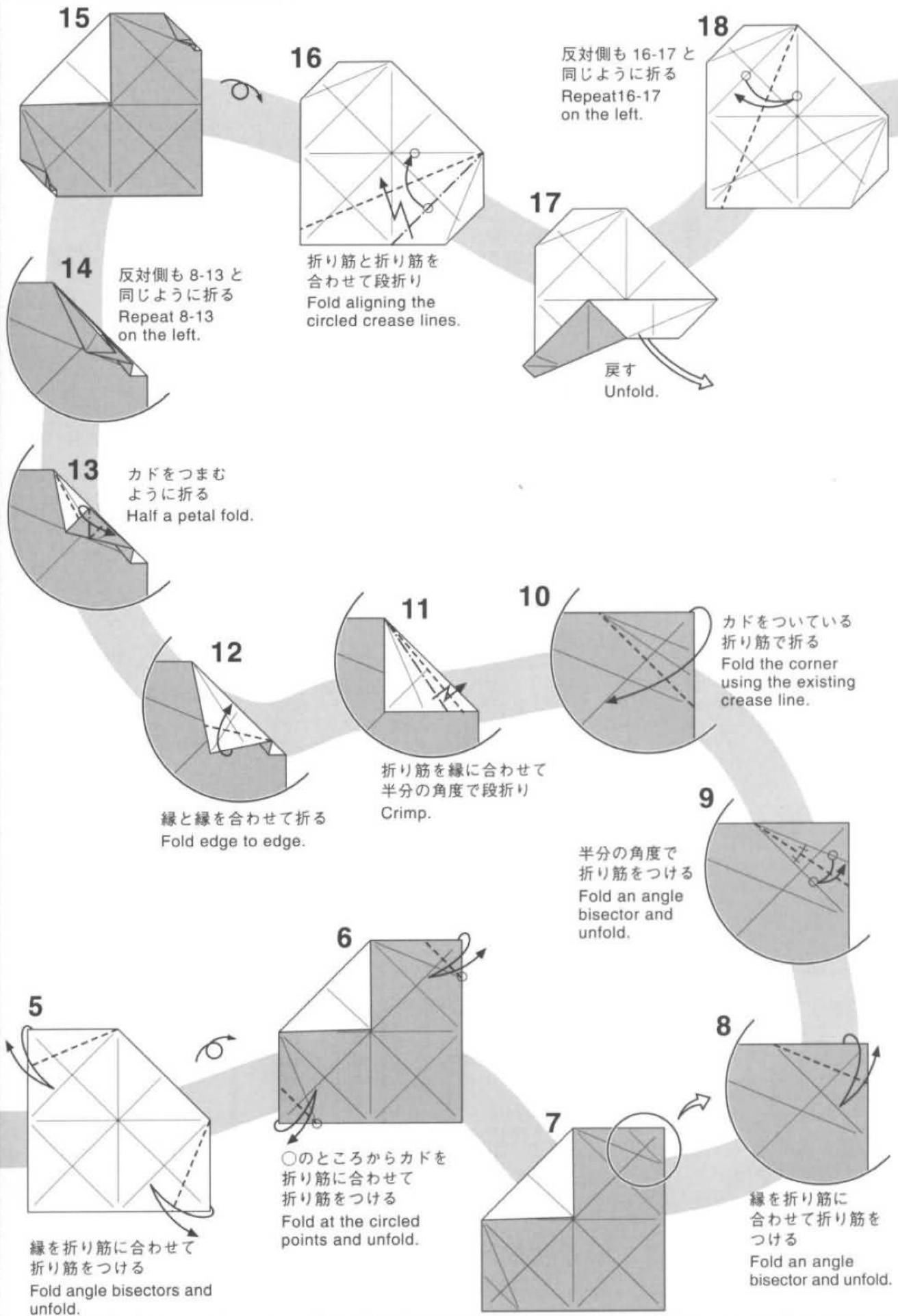
少しの作業で終わるだろう、と甘いことを考えていたのですが、結局半分以上の図に手を入れる結果となりました。しかし、もしこの図が手描きであった場合、一から書き直さなければいけないわけで、コンピューターを使った作図の便利さを実感しました。

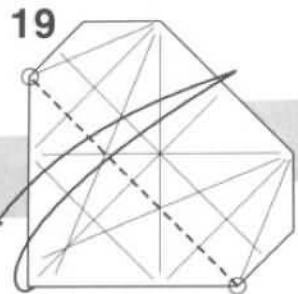
The basic structure of this model is made in one night. Mr. Ichiro Kinoshita encouraged me to create a Kirin, which I was attracted to at once, and I was folding in my brain and found the necessary pattern of the distribution of flaps. I tried actually folding it, and it was done. It is the model of mine created in the shortest period of time so far. The inspiration during the process of creation usually gives me the success, though it is only intuitive and subjective.

This time, I revised the diagrams tremendously, because I wanted to complete diagramming the version of the model with a neck. I initially thought that this would be done with minor revisions, but I revised more than half of the diagrams in the end. Thank god that I have drawn them with a PC!

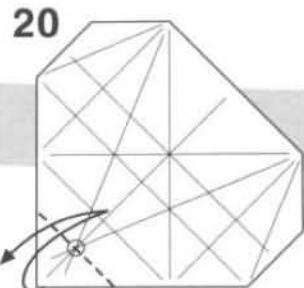
必要サイズ/ Recommended
Size of Sheet : 25×25cm



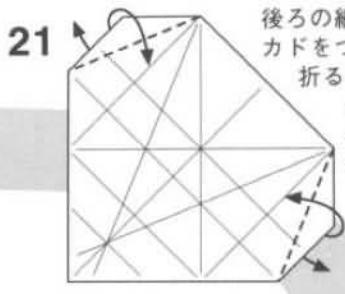




○を結ぶ線で折り筋をつける
Fold the corner up along the line connecting circled corners and unfold.

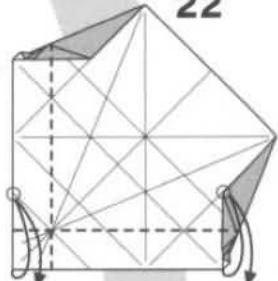


折り筋の交点のところで折り筋をつける
Fold the corner up at the intersection and unfold.



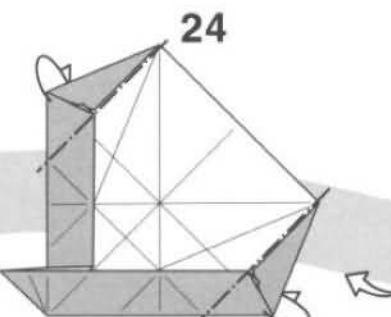
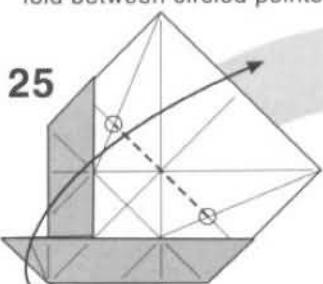
後ろの紙を出しながらカドをついている線で折る
Fold the corners along the existing crease lines.

22



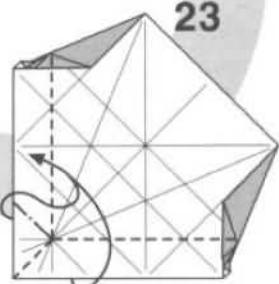
カドを○に合わせて折り筋をつける
反対側も同じ
Fold the edges to the circled points and unfold.

ついている折り筋で○の間だけ折る
Fold up the corner but only fold between circled points.



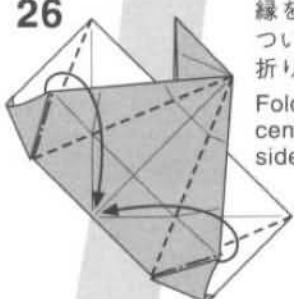
ついている折り筋でカドを後ろへ折る
Fold the corners behind along the existing crease lines.

23



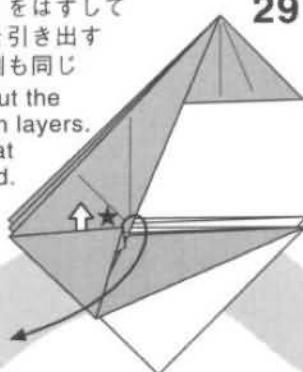
カドをつまむように折る
Rabbit ear.

26
縁を中心に行わせてついている折り筋で折りたたむ
Fold the edges to the center and swivel the side edges.

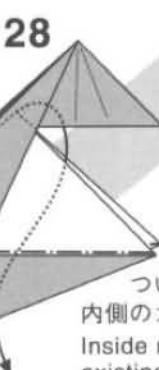
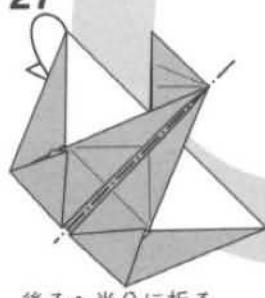


内側の紙の重なりをはずしてカドを引き出す
反対側も同じ
Pull out the hidden layers. Repeat behind.

29

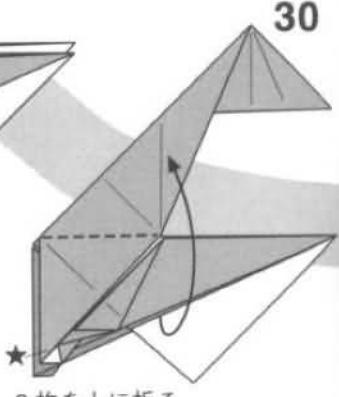


27
後ろへ半分に折る
Fold in half.

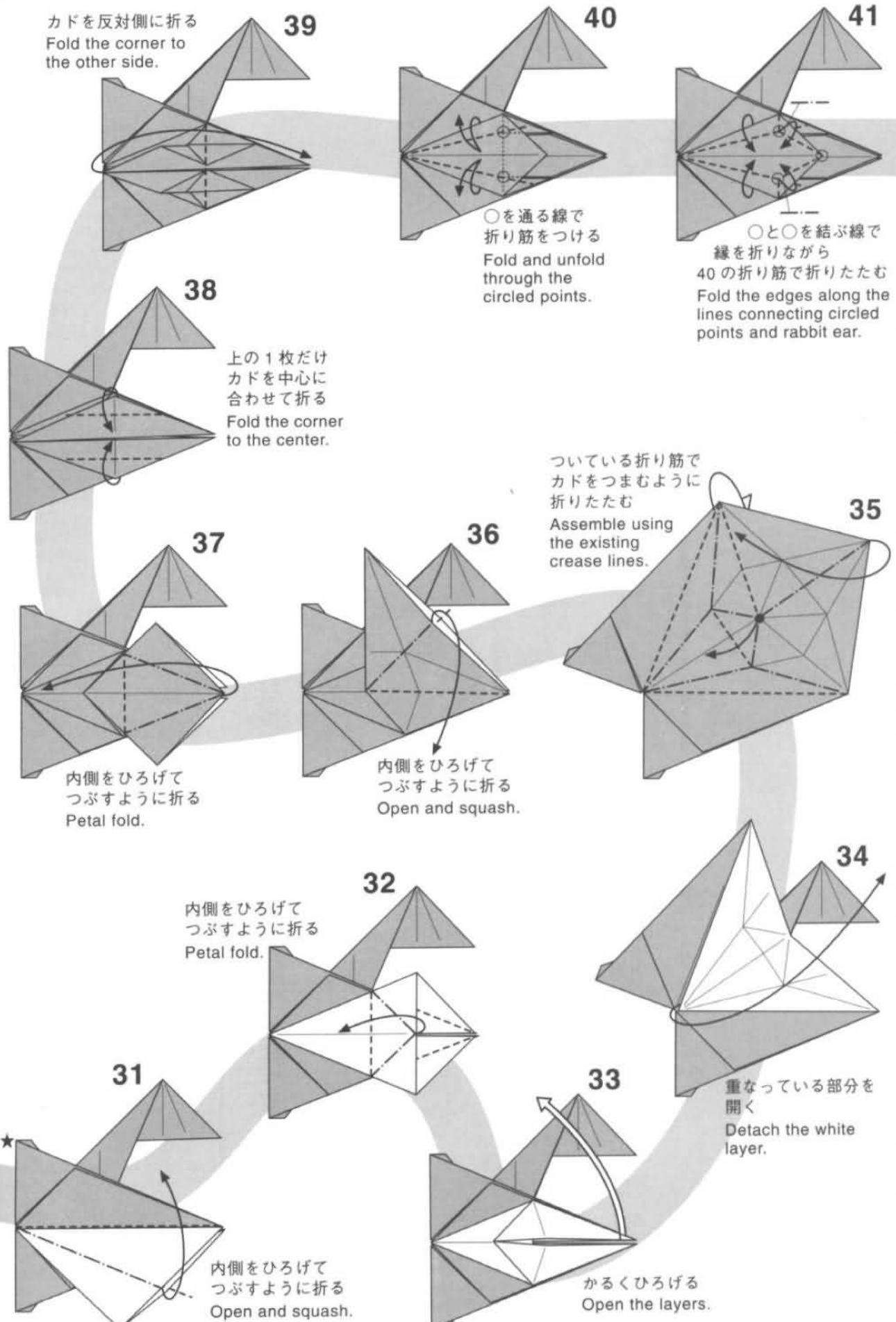


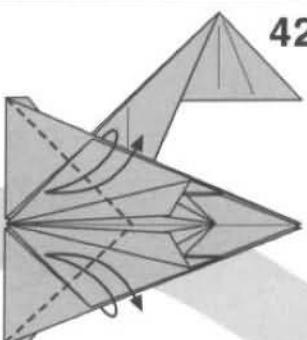
ついている折り筋で内側のカドを中わり折り
Inside reverse fold using existing crease lines.

30



★
2枚を上に折る
Fold two layers up.

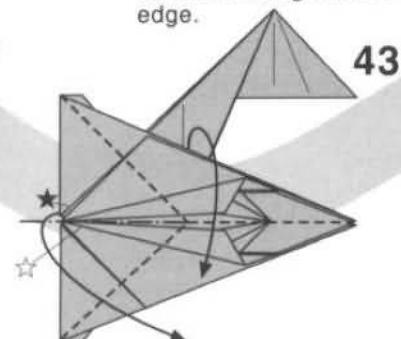




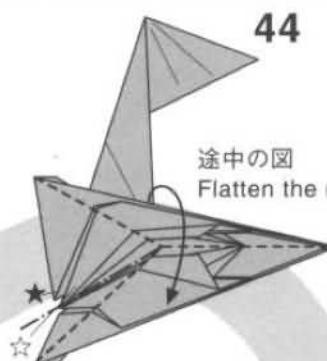
42

後ろの縁のところで
折り筋をつける
Fold and unfold along
edges behind.

つけた折り筋を使って
中心の部分を中わり折り
するように折りたたむ
Fold in half, inside
reverse folding the left
edge.

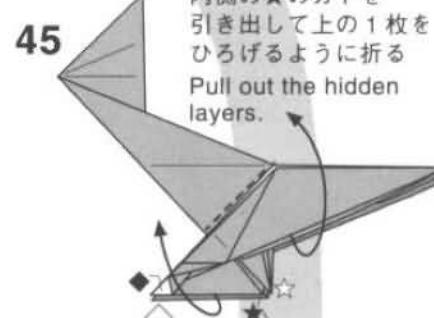


43



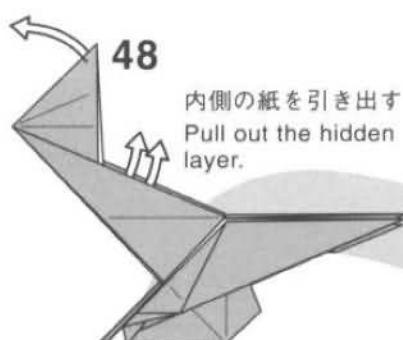
44

途中の図
Flatten the model.



45

内側の★のカドを
引き出して上の1枚を
ひろげるように折る
Pull out the hidden
layers.

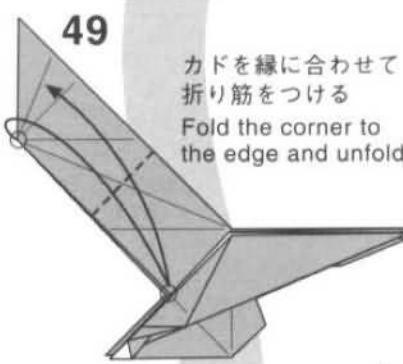


46

内側の紙を引き出す
Pull out the hidden
layer.

47

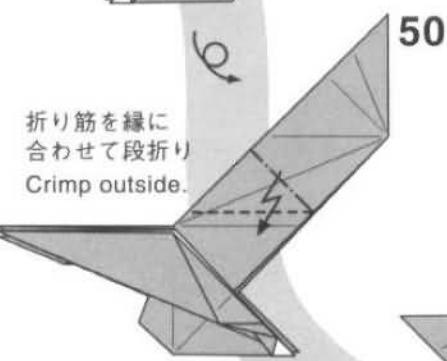
カドを縁に合わせて
折り筋をつける
Fold the corner to
the edge and unfold.
反対側も45-46と
同じように折る
Repeat 45-46 behind.



48

48

上の1枚を○を結ぶ線で
ひろげて★と☆、◆と◇を
合わせて折りたたむ
Inside reverse fold the
edge and fold the layer
down.



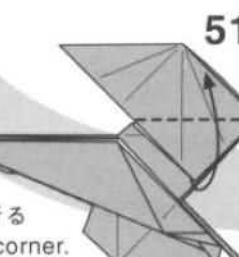
49

6

折り筋を縁に
合わせて段折り
Crimp outside.

53

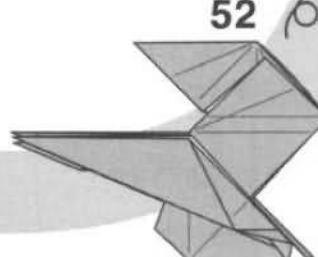
カドを○に
合わせて
折り筋をつける
Fold the corner to
the circled point and
unfold.



50

51

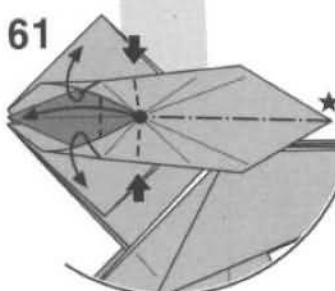
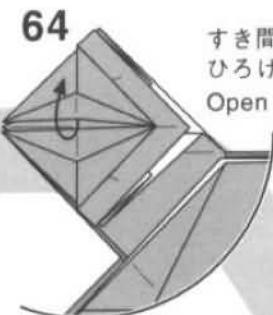
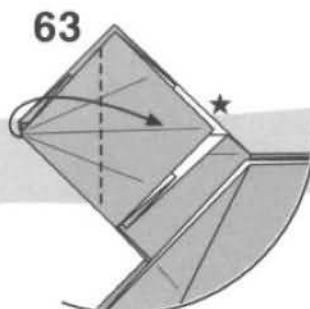
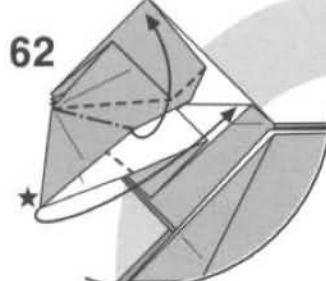
カドを上に折る
Fold up the corner.



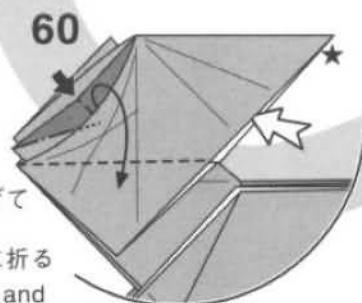
52

しっかりと折り筋を
つけてから
50の形に戻す
Unfold to 50.

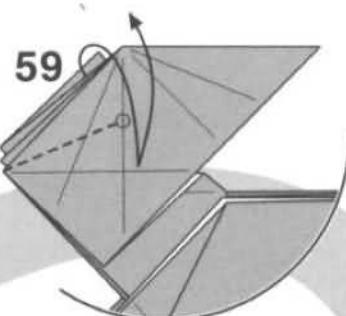
内側をひろげて
つぶすように折りたたむ
Open and squash.



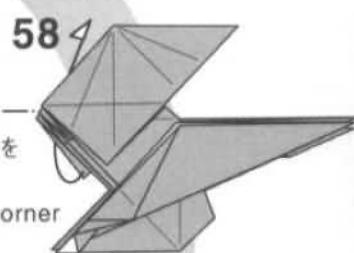
■の部分の両側の
縁をひろげながら
中心線をつまんで
カドに合わせて折る
Fold the corner in
half and swivel it to
the other direction.
The layers behind
the grayed area
should be pulled out.



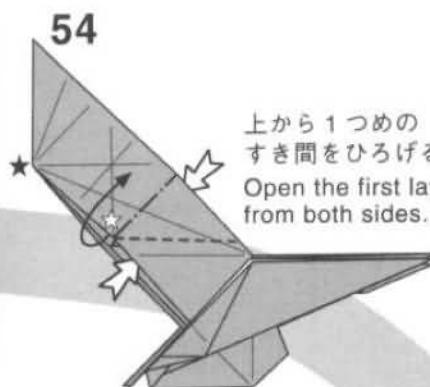
内側をひろげて
■の部分を
つぶすように折る
Open layers and
squash the gray part.



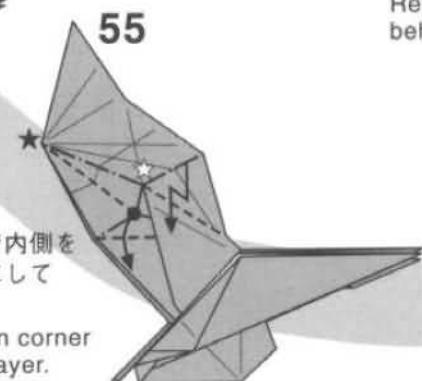
縁を折り筋に
合わせて折り筋を
つける
Fold the edge to
the crease line and
unfold.



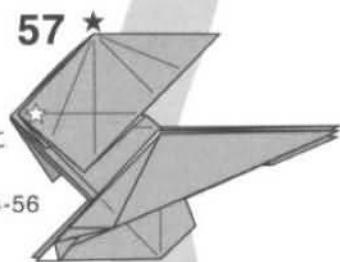
後ろの1枚を
上に折る
Fold up a corner
behind.



上から1つめの
すき間をひろげる
Open the first layer
from both sides.



ついている折り筋で内側を
下に押し出すようにして
全体を折りたたむ
Push out the hidden corner
and crimp the top layer.



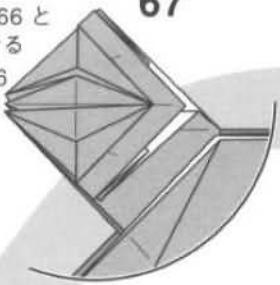
反対側も
54-56と
同じように
折る
Repeat 54-56
behind.



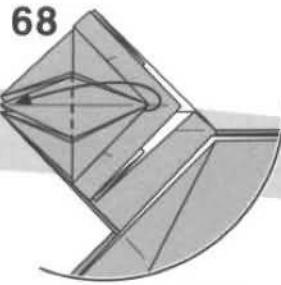
途中の図
カドを合わせて
折りたたむ
Align the corners.

反対側も 64-66 と同じように折る
Repeat 64-66 on the other side.

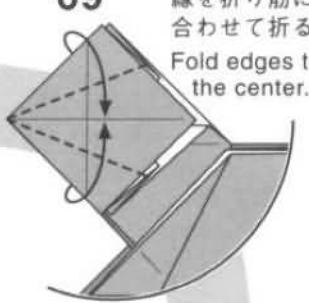
67



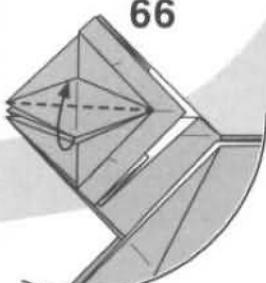
68



69



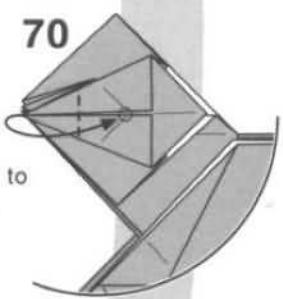
66



カドを反対側に折る
Fold up the corner.

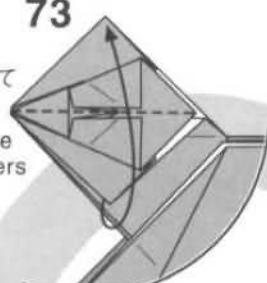
カドを開くところで
反対側に折る
Fold the corner to the left.

70



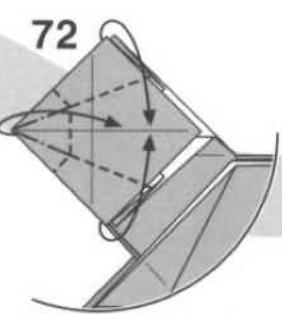
カドを○に
合わせて折る
Fold the corner to the crease line.

73

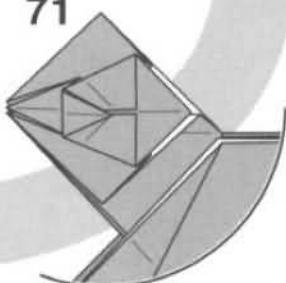


カドをまとめて
上に折る
Fold the whole cluster of layers upwards.

72

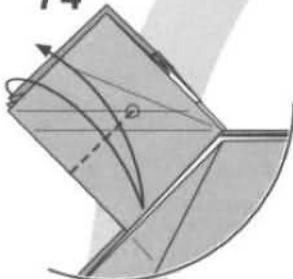


71



69 の形に戻す
Unfold to 69.

74



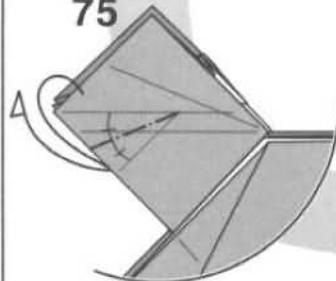
縁と縁を合わせて全ての層に
しっかりと折り筋をつける
Make tight crease lines through all layers.

ついている折り筋で
カドが内側になるように
折りたたむ

Fold the corner inside
while swiveling the edges.

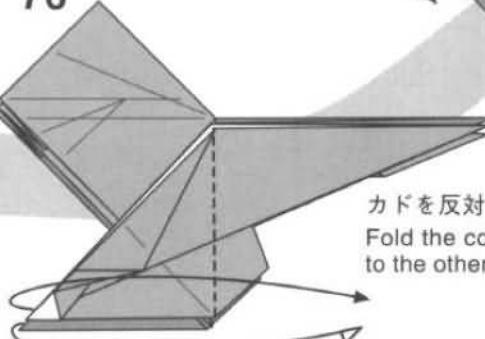
ついている折り筋で
上の3枚を手前に
残りの2枚を後ろへ段折り
Crimp on both sides using
existing crease lines
(three layers above, two layers behind).

75

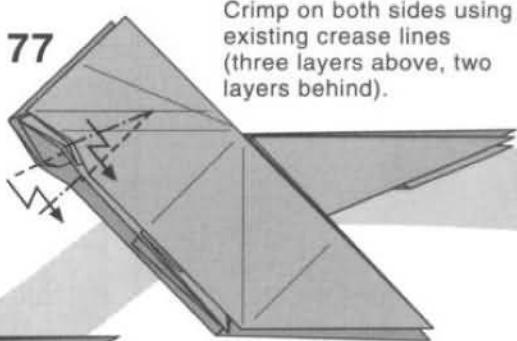


半分の角度で全ての層に
しっかりと折り筋をつける
Fold the whole cluster of layers.

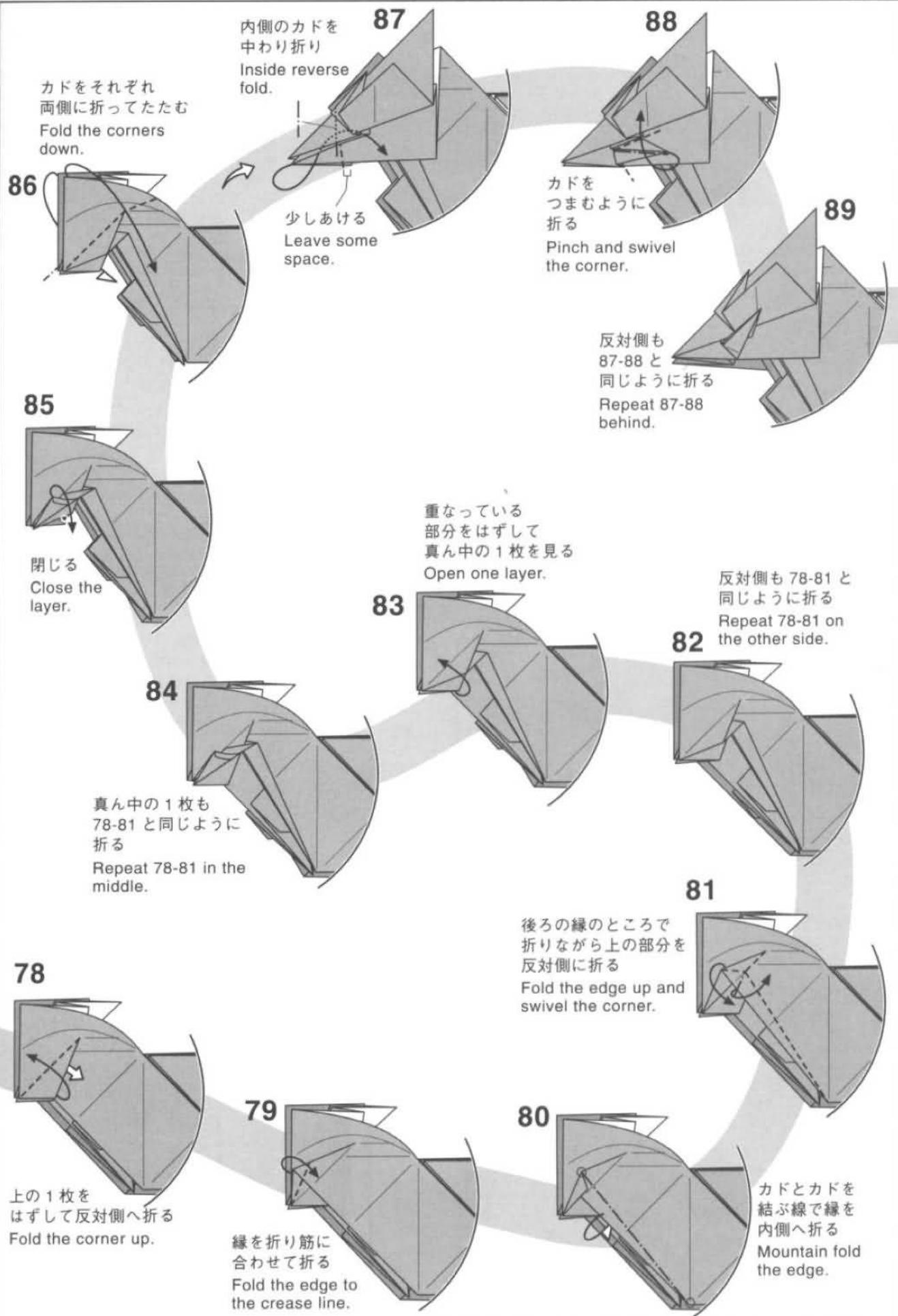
76

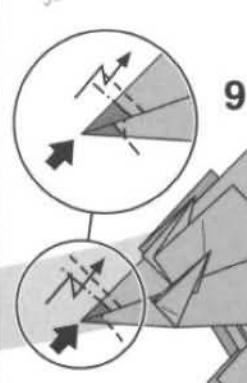


77



カドを反対側に折る
Fold the corners to the other side.



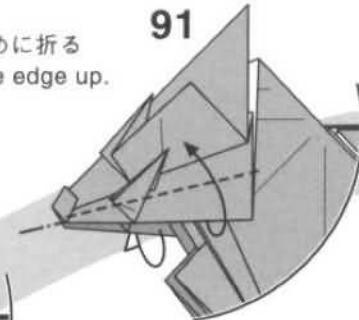


カドの先を
ひろげてつぶすように
折って鼻を作る
Push and squash
the nose up.

90

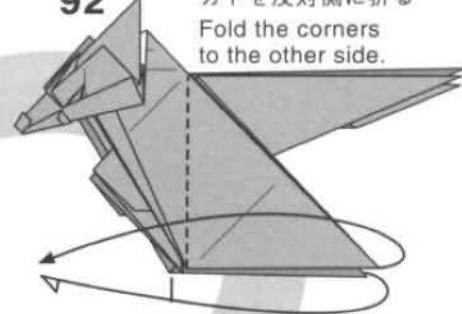
縁を斜めに折る
Fold the edge up.

91

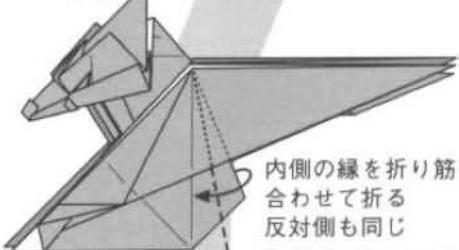


92

カドを反対側に折る
Fold the corners
to the other side.



93

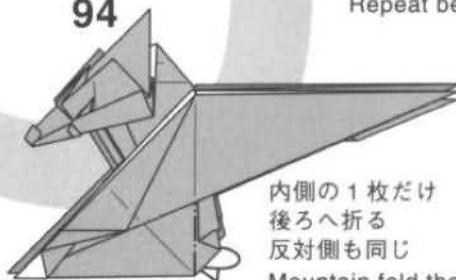


内側の縁を折り筋に
合わせて折る
反対側も同じ
Fold the inner edge
to the crease line.
Repeat behind.

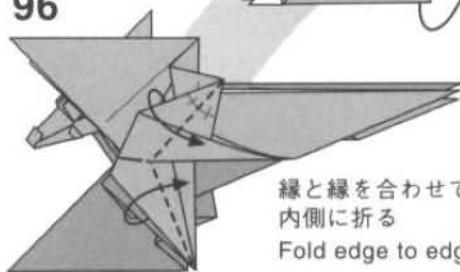
95

かるくひろげて
内側を見る
Open the layers so
we can see inside.

94



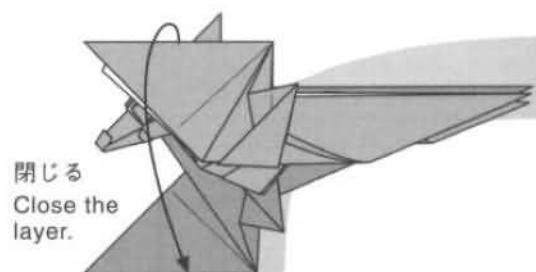
96



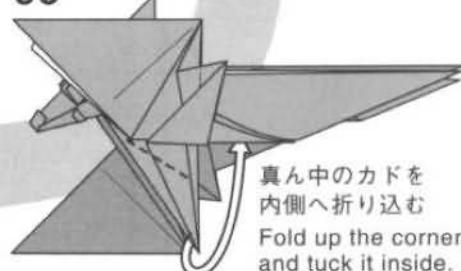
縁と縁を合わせて
内側に折る
Fold edge to edge.

内側の1枚だけ
後ろへ折る
反対側も同じ
Mountain fold the
innermost layers.
Repeat behind.

100



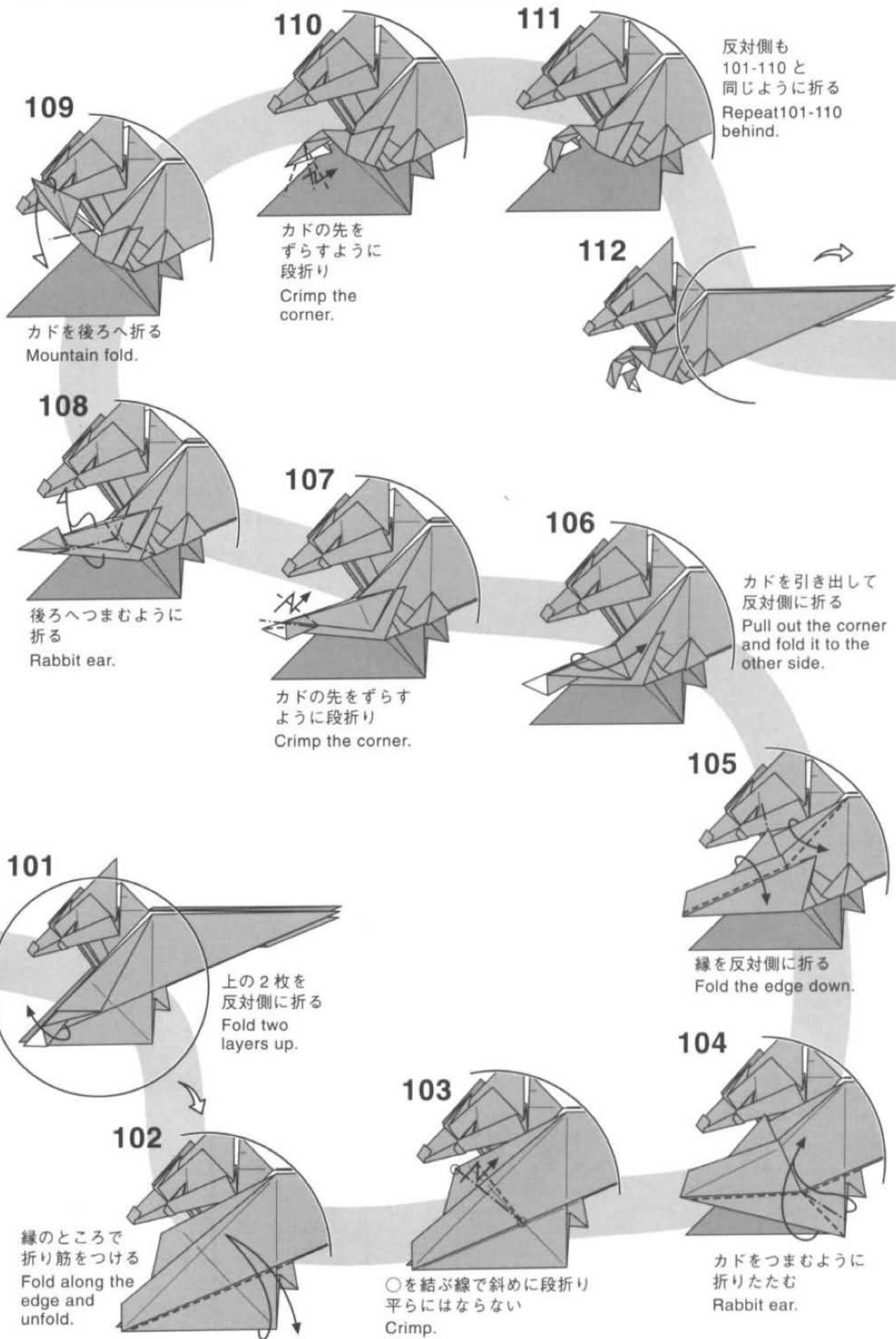
99

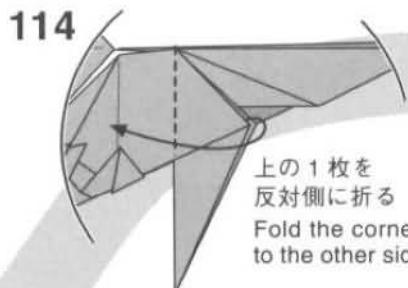


真ん中のカドを
内側へ折り込む
Fold up the corner
and tuck it inside.

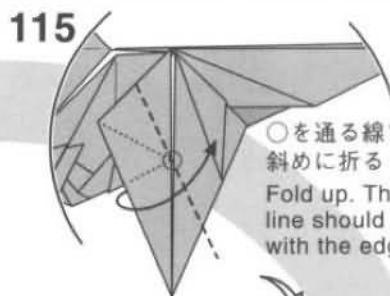
98

反対側も96-97と
同じように折る
Repeat 96-97
behind.

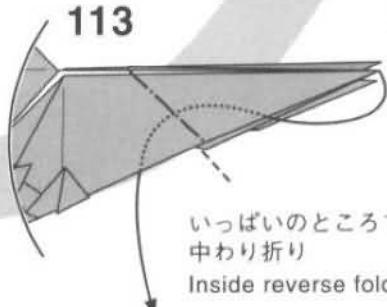




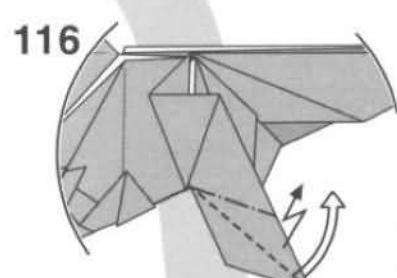
上の1枚を
反対側に折る
Fold the corner
to the other side.



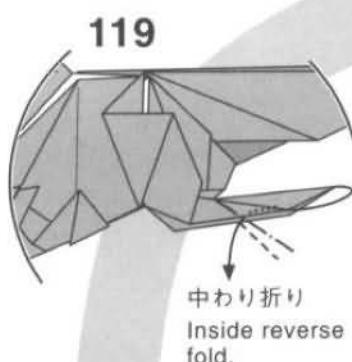
○を通る線で
斜めに折る
Fold up. The crease
line should be parallel
with the edge.



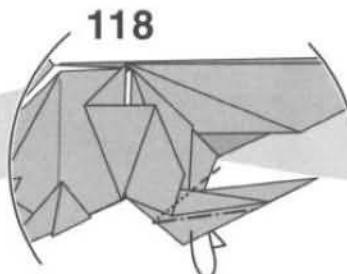
いっぱいのところで
中わり折り
Inside reverse fold.



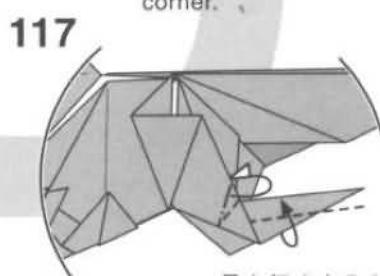
内側へずらすように段折り
Crimp and slide the
corner.



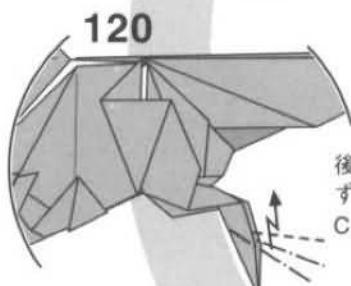
中わり折り
Inside reverse
fold.



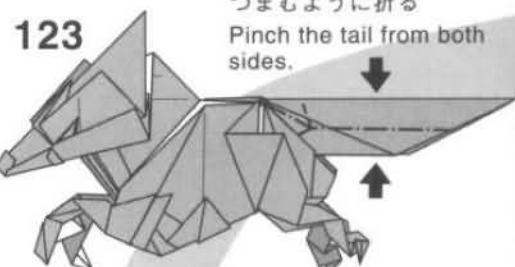
反対側も117と
同じように折る
Repeat 117 behind.



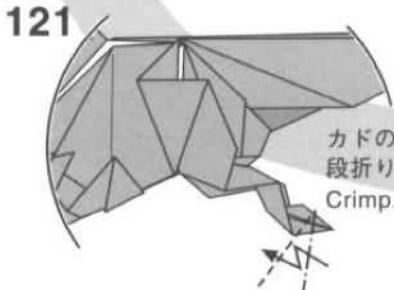
足を細くするように
縁を内側に折る
Crimp and swivel.



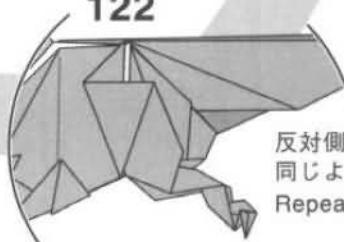
後ろの縁を内側へ
ずらすように段折り
Crimp and swivel.



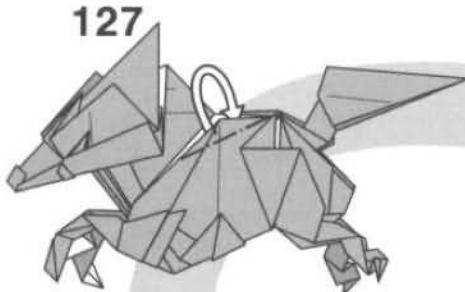
カドを両側で
つまむように折る
Pinch the tail from both
sides.



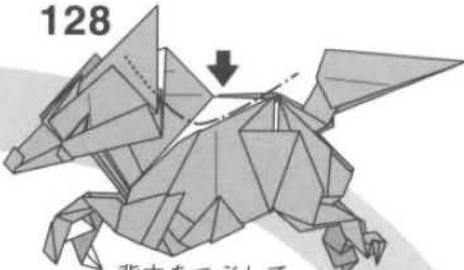
カドの先を
段折り
Crimp.



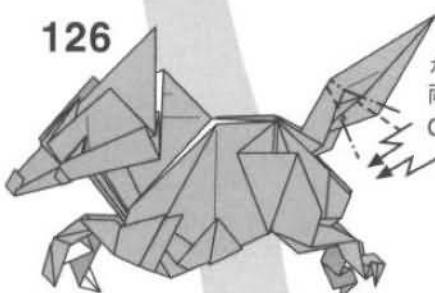
反対側も113-121と
同じように折る
Repeat 113-121 behind.



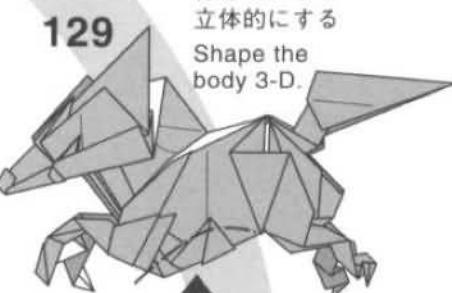
カドをすき間へ折り込む
反対側も同じ
Mountain fold and tuck
the corners in.
Repeat behind.



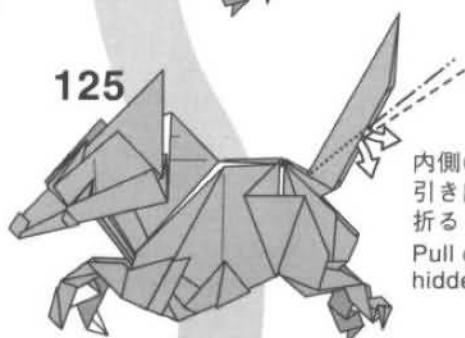
背中をつぶして
立体的にする
Push in and
squash the back.



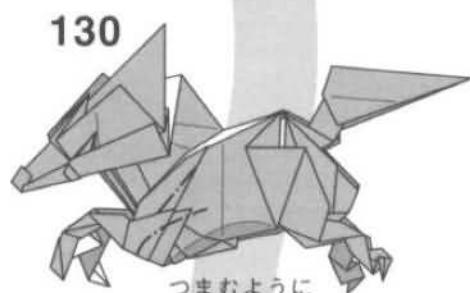
かぶせるように
両側に段折り
Crimp outside.



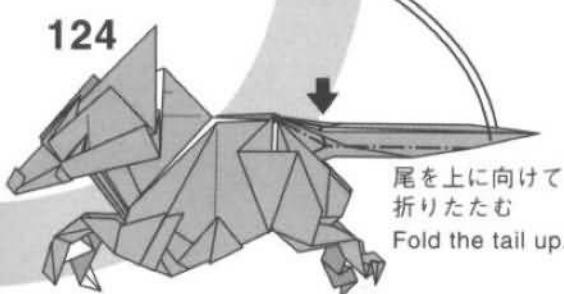
体をつぶして
立体的にする
Shape the
body 3-D.



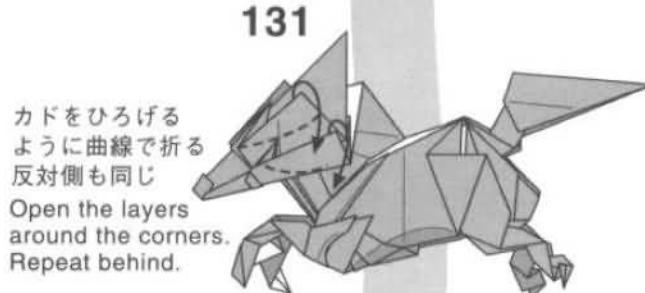
内側の部分を
引き出すように
折る
Pull out the
hidden layers.



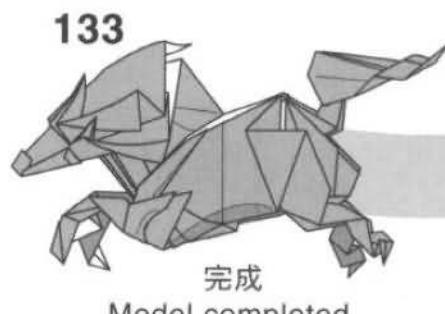
つまむように
折って丸みをつける
反対側も同じ
Pinch the edges.
Repeat behind.



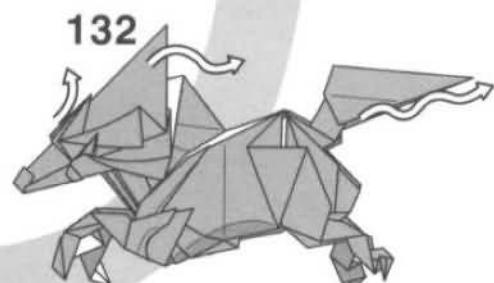
尾を上に向けて
折りたたむ
Fold the tail up.



カドをひろげる
ように曲線で折る
反対側も同じ
Open the layers
around the corners.
Repeat behind.



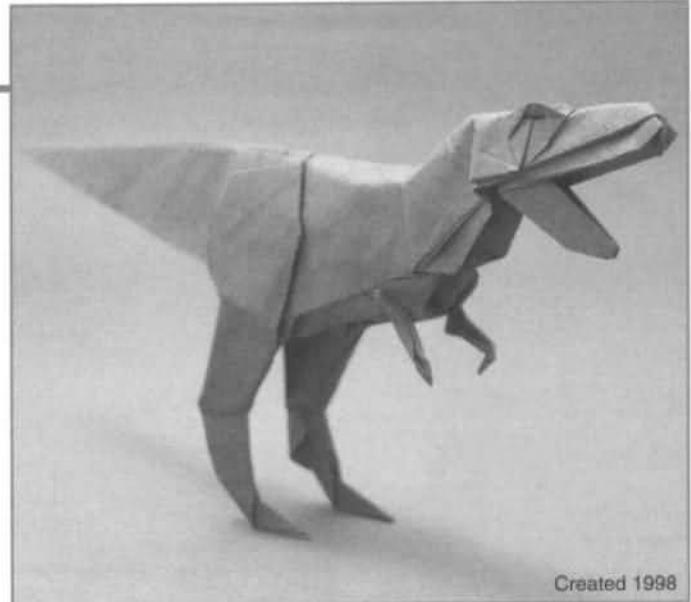
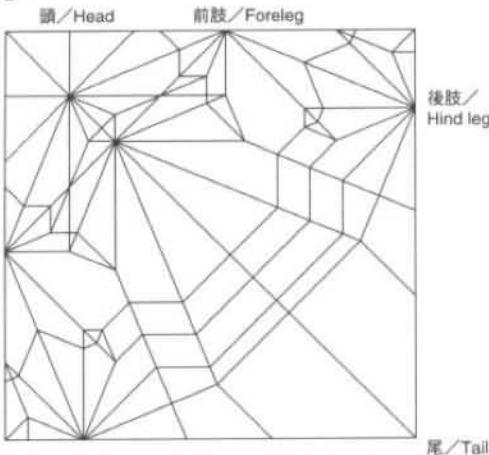
完成
Model completed.



丸みをつけて形を整える
Shape the details.

ティラノサウルス

Tyrannosaurus



Created 1998

特

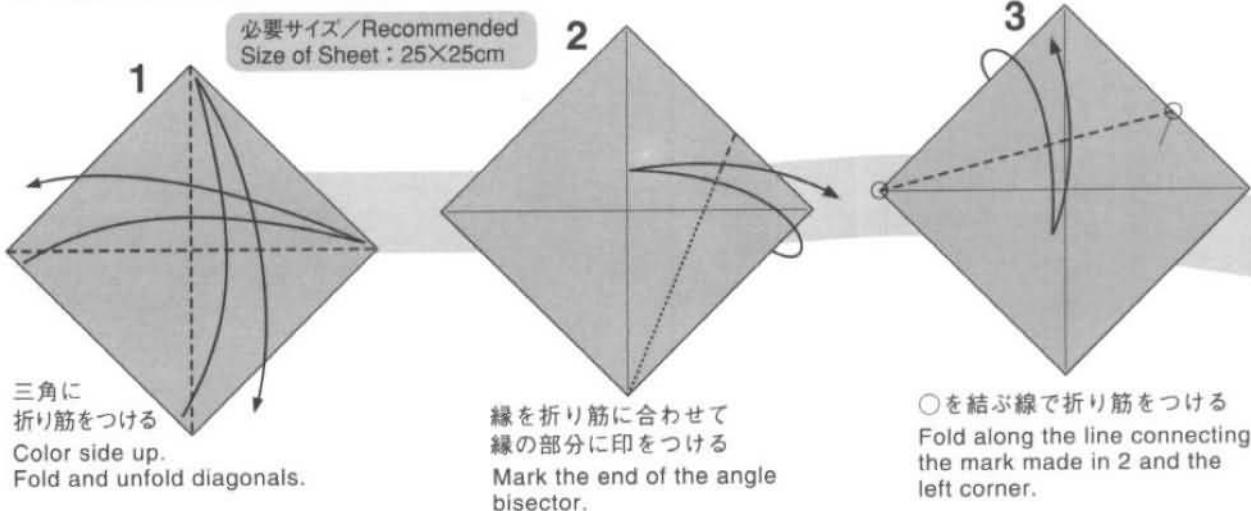
徴的な構造を持つバーツは、うまく使えば大きな効果を得ることができます。ただそれが非常に扱いにくい場合も少なくありません。そのような場合、まずその部分を作つてから残りの部分を伸ばしていくのが一番効率がいいようです。このティラノサウルスもそういう手順で作られています。

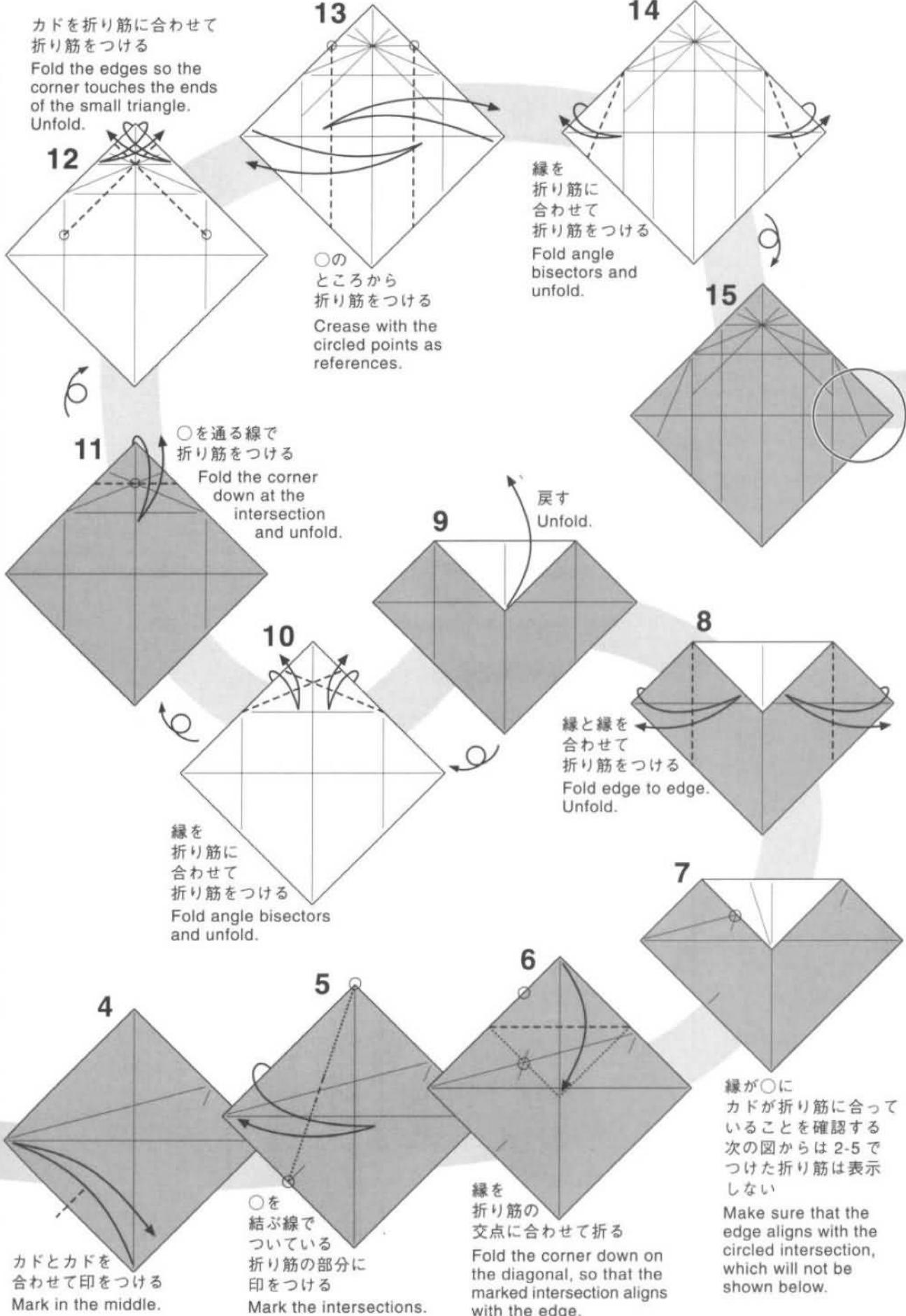
この作品では、頭部からデザインをはじめました。紙をいじっているうちにそれらしき形ができたところまでは良いのですが、その後胴体を作ろうとした段階で困ってしまいました。というのも頭部から伸びてくる構造は、 22.5° のヒダが外側に広がっているもので、一值分子[®]がないのです。一值性のある構造の場合、他のバーツとの組み合わせは、例えばエンシェントドラゴンの頭部のような複雑な構造でもあまり難しいものではありません。ところが、接続部分に一值性がないと一気に難度がはね上がります。幸いなことに、この作品は頭部以外の構造をまだ何も決めていなかったので、 22.5° の範囲で頭部から順番に必要なカドを出していくことで全身を完成させることができました。折り手順を見ると、頭部—前肢—後肢—尾と順に作つていくのが分かります。これがもし体の構造を先に決めてしまっていたら（たとえばカルノタウルスの体とつなぐとか）いまだに完成していなかつたかもしれません。

※一值分子：多角形の全ての辺が一直線上に載る（これを一值性という）ように折りたたんだ構造。

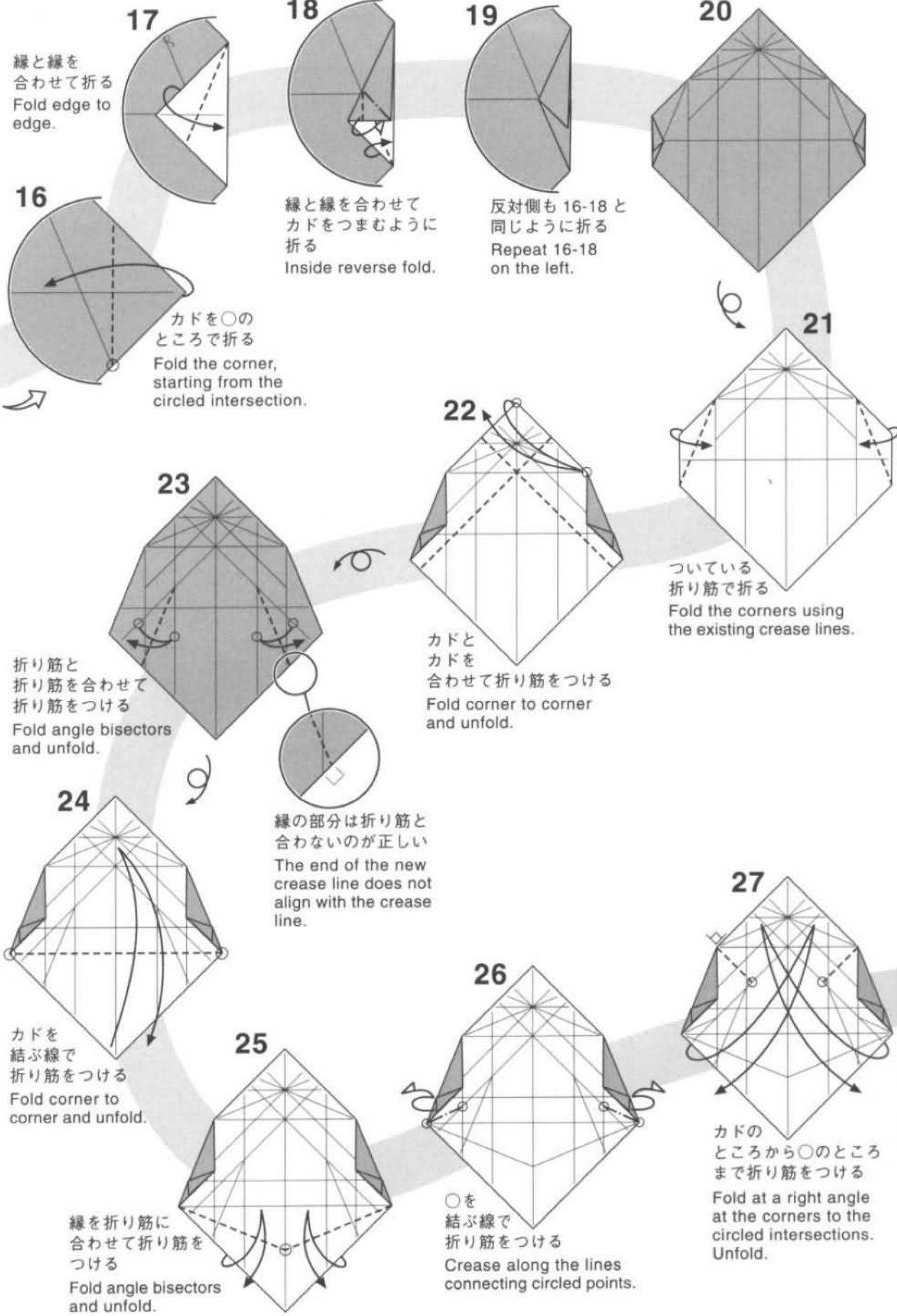
Parts with peculiar structures can give us good outputs when used well. Otherwise, modeling with such parts is just cumbersome. In such cases, we perhaps have to start from folding such parts, then trying the rest.

With this model, I started from folding the head. However, when I finished the head, I found that there is no uniaxial molecule necessary for me to continue folding the rest of it. The only thing I had was two 22.5° structures which projects from the head. Almost impossible to go on designing, I decided that I fold out necessary flaps out of the 22.5° structure. Thus, the folding procedures for this model starts from the head, and then they go on with forelegs, hind legs, and the tail. If I had decided on the structure of the body first, the model would not have been completed yet.





ティラノサウルス

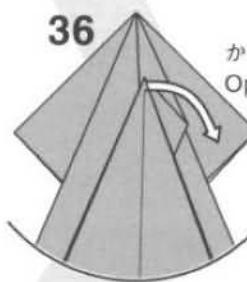


■の部分を両側にひろげて
つぶすように折る
Push the edge in,
and squash.

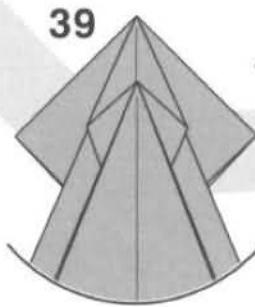


途中の図
Flatten the model.

37



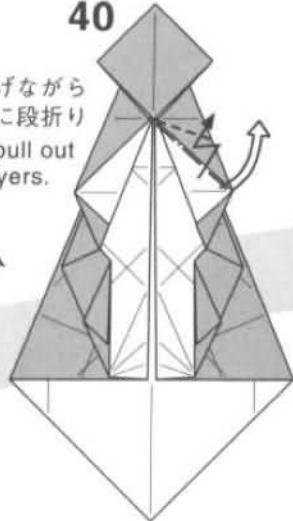
36



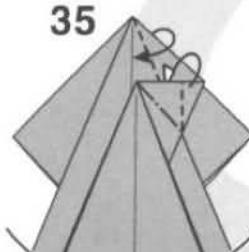
39

ヒダをひろげながら
すらすように段折り
Crimp and pull out
the inner layers.

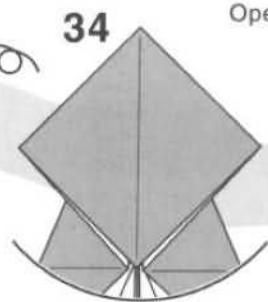
40



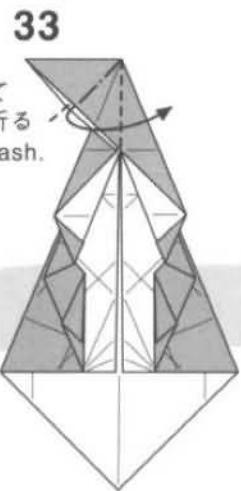
縁を折り筋に合わせて
内側に折る
Inside reverse fold.



内側をひろげて
つぶすように折る
Open and squash.



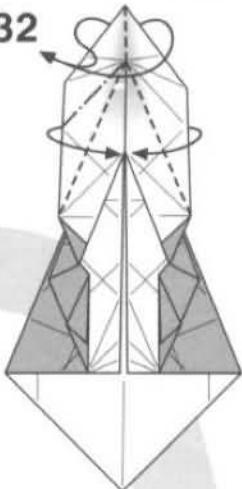
34



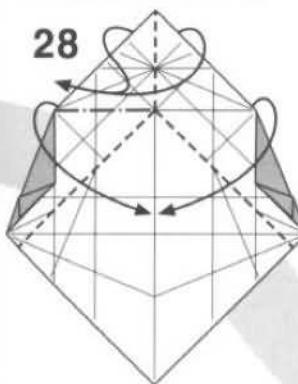
33

カドをついている
折り筋でつまむように
して折りたたむ
A rabbit ear-like fold.

32



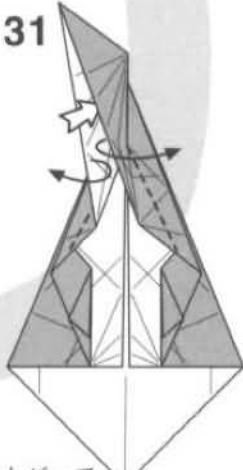
ついている折り筋でカドを
つまむように折る
A rabbit ear-like fold.



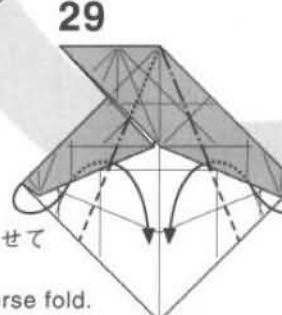
28

半分の角度で
すらすように段折り
平らにはならない
Crimp the top corner.
The model will not lie flat.

31

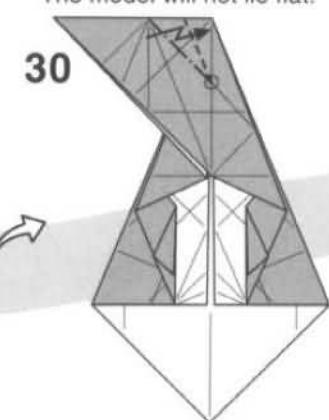


中心に合わせて
中わり折り
Inside reverse fold.



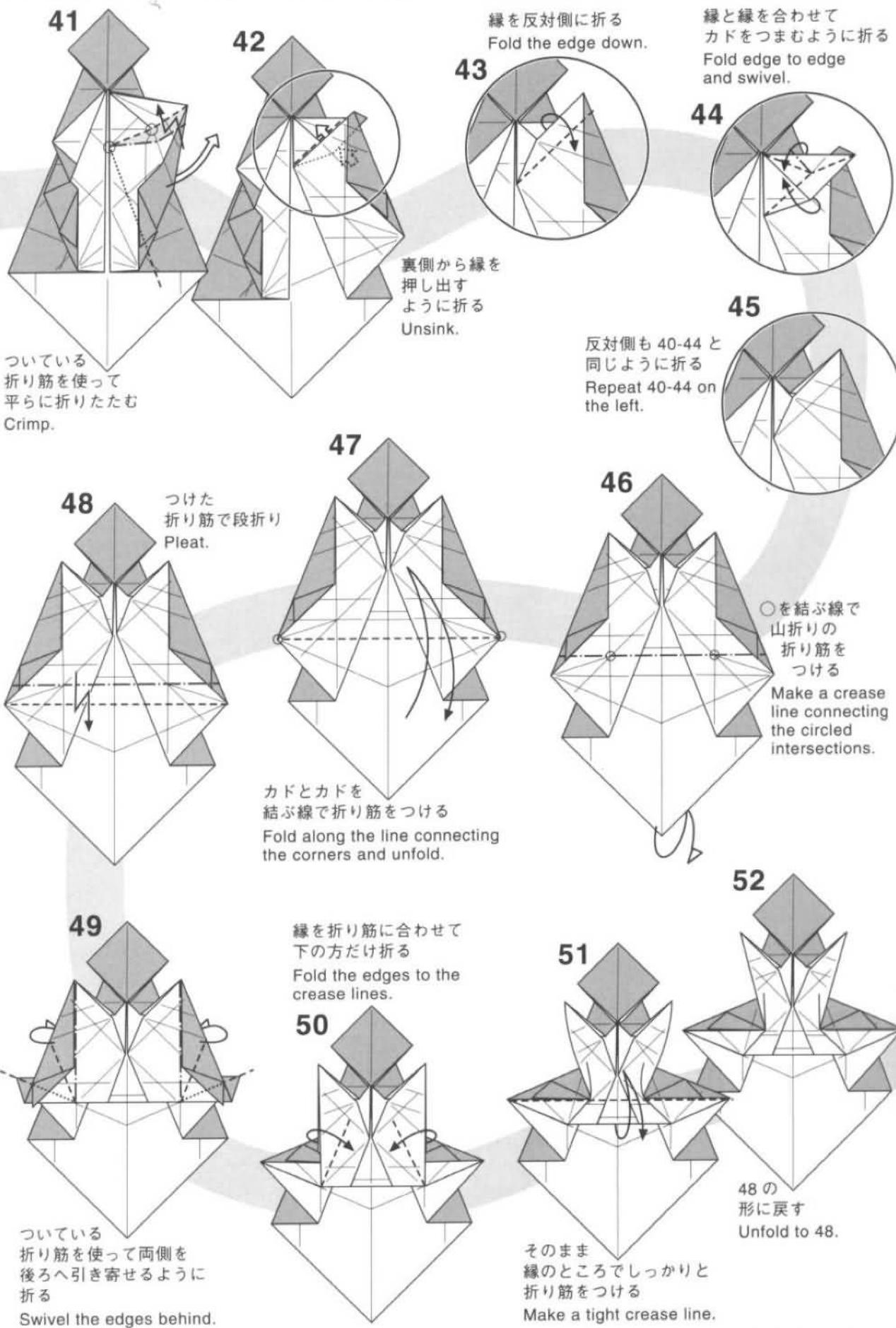
29

30

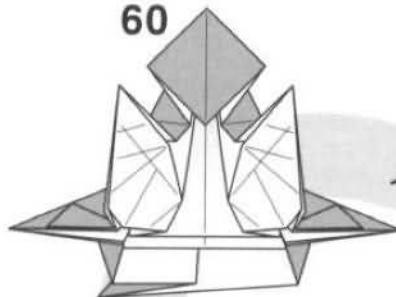


起き上がって
きた部分の内側をひろげて
つぶすように折る
Open the middle layers.

ティラノサウルス

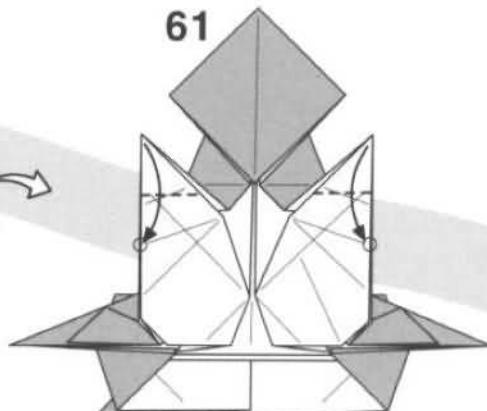


60

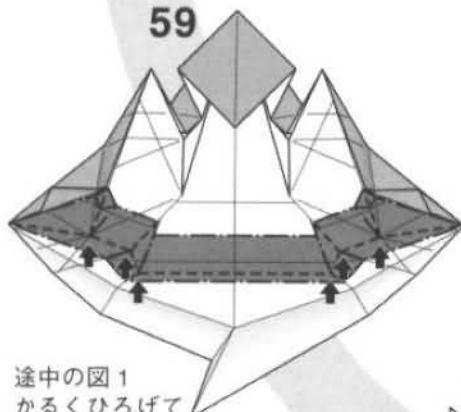


途中の図2
Flatten as shown.

61



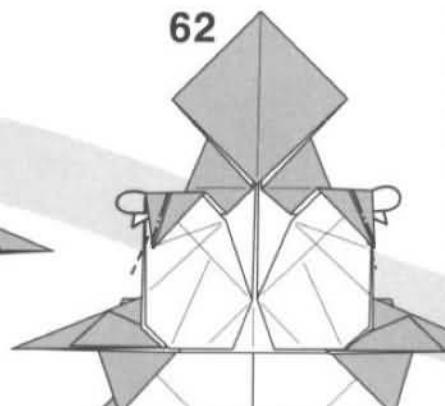
59



途中の図1
かるくひろげて
51でつけた折り筋を
使って折りたたむ
Sinking the dark area

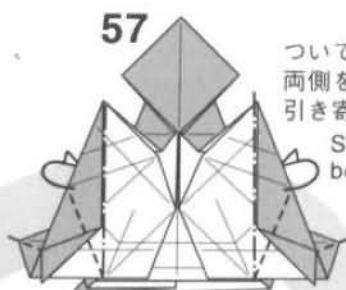
カドを折り筋に合わせて折る
Fold the corners to the
crease line.

62



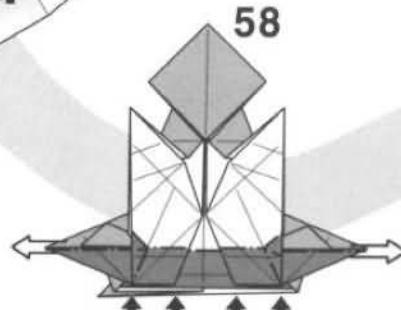
縁のところでカドを内側に折る
Inside reverse fold.

57



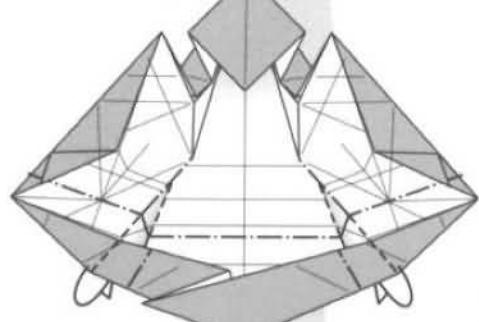
ついている折り筋で
両側を後ろへ
引き寄せるように折る
Swivel the edges
behind.

58



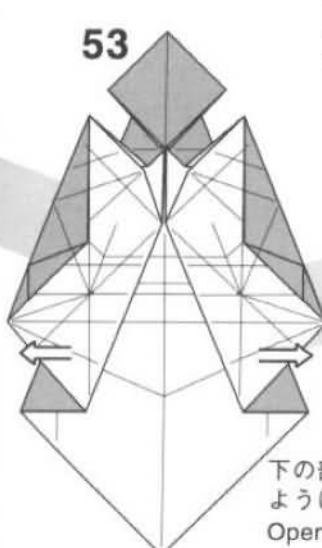
■の部分を
沈め折り (Open sink)
Open sink.

56



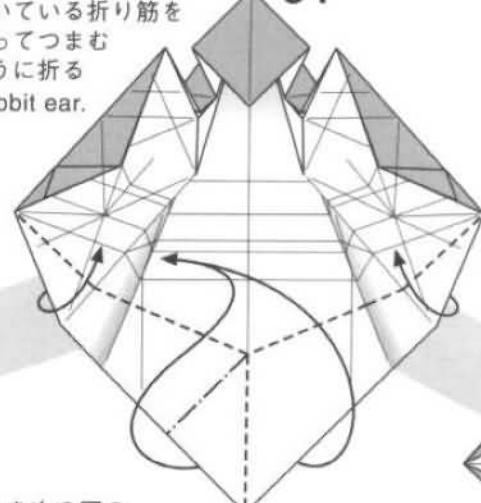
ついている
折り筋で後ろへかぶせるように
折りたたむ
Mountain fold and crimp.

53



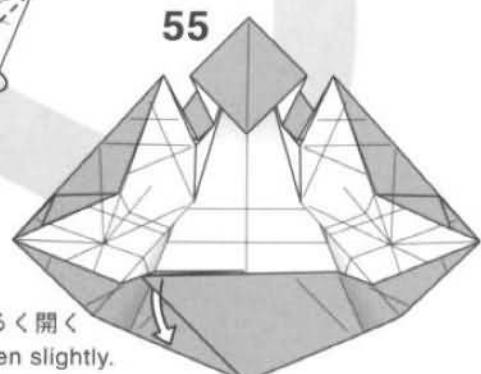
ついている折り筋を
使ってつまむ
ように折る
Rabbit ear.

54



下の部分を次の図の
ようにひろげる
Open the bottom layers.

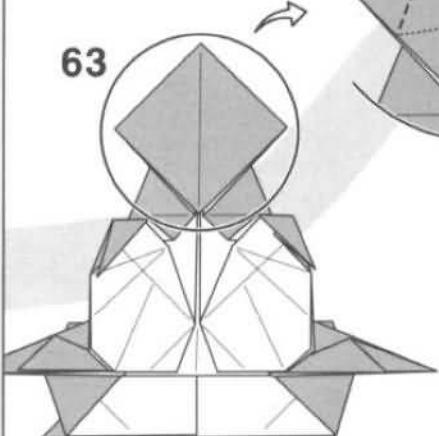
55



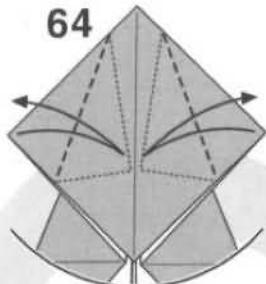
かるく開く
Open slightly.

図のように
折り筋をつける
Fold and unfold.

63

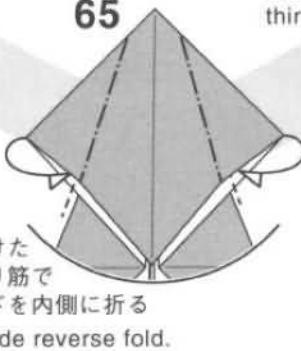


64



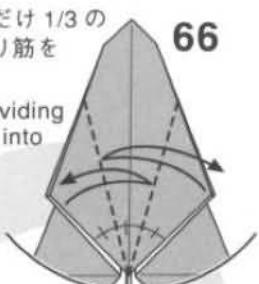
上の1枚だけ1/3の
角度で折り筋を
つける
Crease dividing
the angle into
thirds.

65



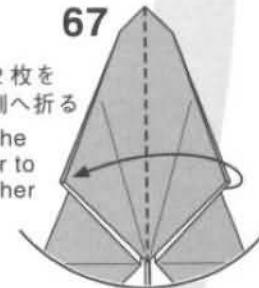
つけた
折り筋で
カドを内側に折る
Inside reverse fold.

66



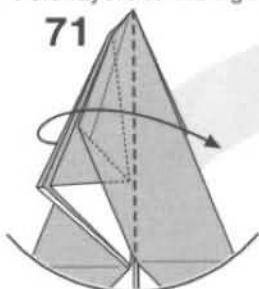
上の2枚を
反対側へ折る
Fold the
corner to
the other
side.

67

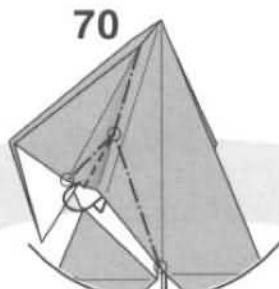


縁を反対側に折る
Fold layers to the right.

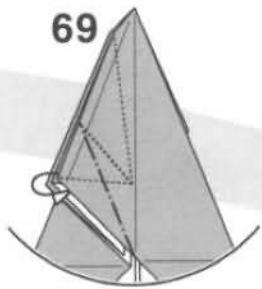
71



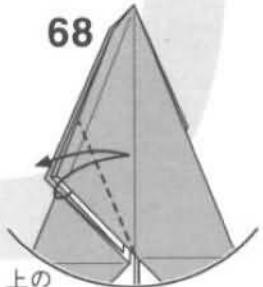
70



69

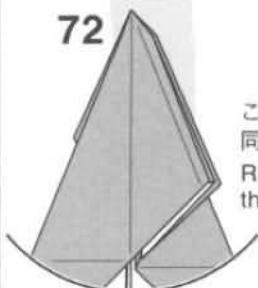


68



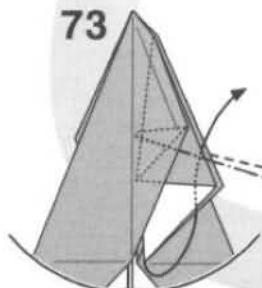
上の
1枚だけ縁を折り筋に
合わせて折り筋をつける
Align the edge to the
crease line and unfold.

72



こちら側も68-70と
同じように折る
Repeat 68-70 on
this side.

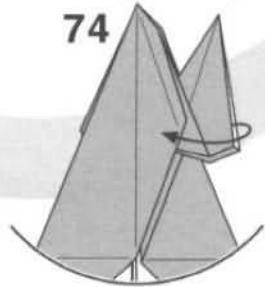
73



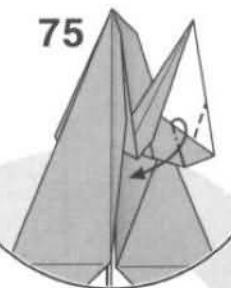
つけ根のところから
中わり折り
Inside reverse fold.

かるく開く
Open the layer.

74

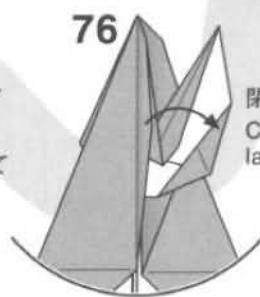


75



内側のカドをひろげて
つぶすように折る
Open and squash.

76



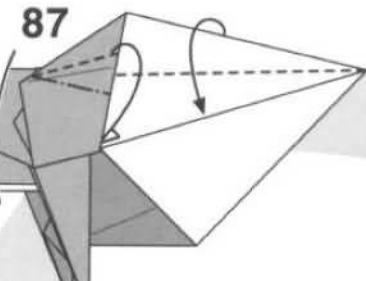
閉じる
Close the
layers.

77

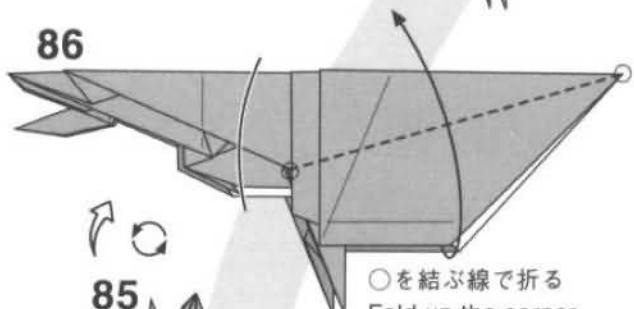


反対側も75と
同じように折る
Repeat on the
other layer.

縁と縁を合わせて
内側に折る
Fold edge to edge and inside
reverse fold on the left.

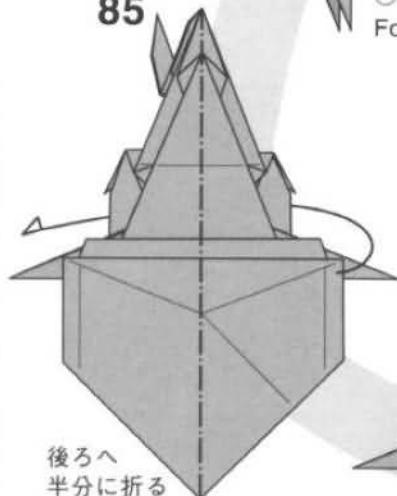


86



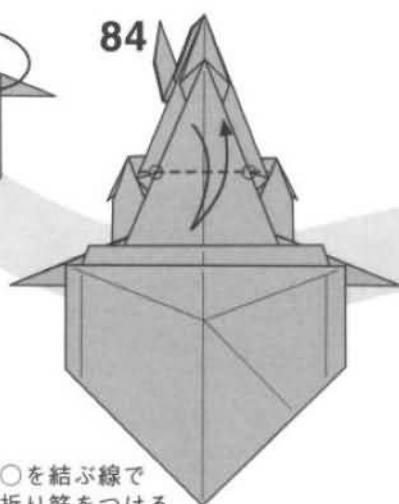
85

○を結ぶ線で折る
Fold up the corner.



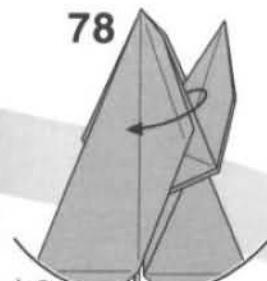
後ろへ
半分に折る
Mountain fold in half.

84



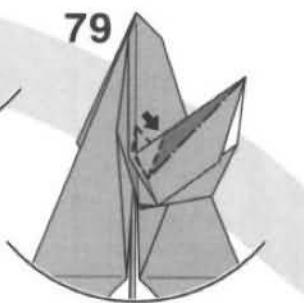
○を結ぶ線で
折り筋をつくる
Crease connecting the
circled points.

78



上の
部分を開いて内側を
見る
Open the layers.

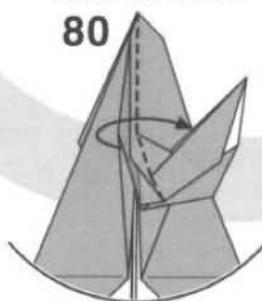
79



ついている折り筋を使って
沈めるように折って
下あごのカドを細くする
Push in the jaw.

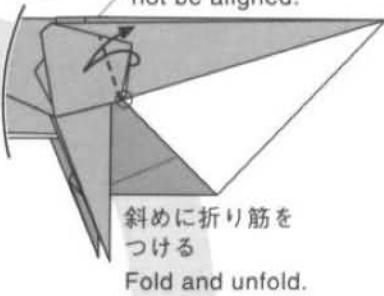
閉じる
Close the model.

80



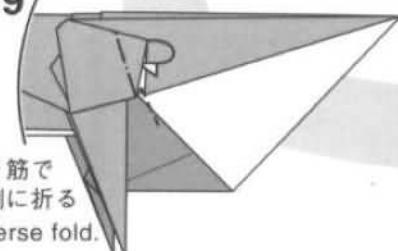
上の縁は少しずれる
The top edges will
not be aligned.

88



斜めに折り筋を
つける
Fold and unfold.

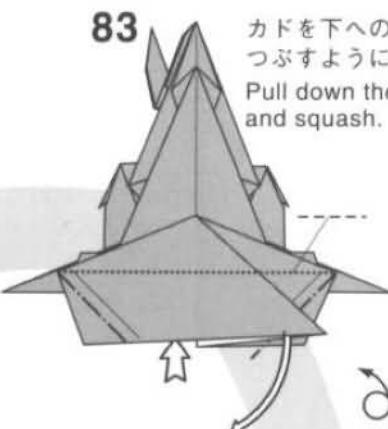
89



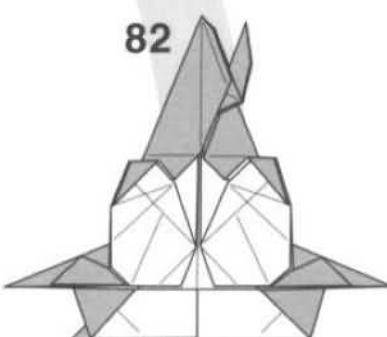
つけた折り筋で
カドを内側に折る
Inside reverse fold.

83

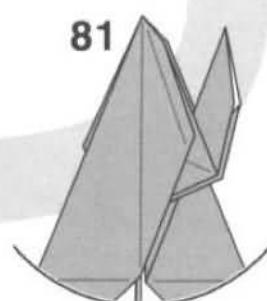
カドを下へのばして
つぶすように折る
Pull down the corner
and squash.



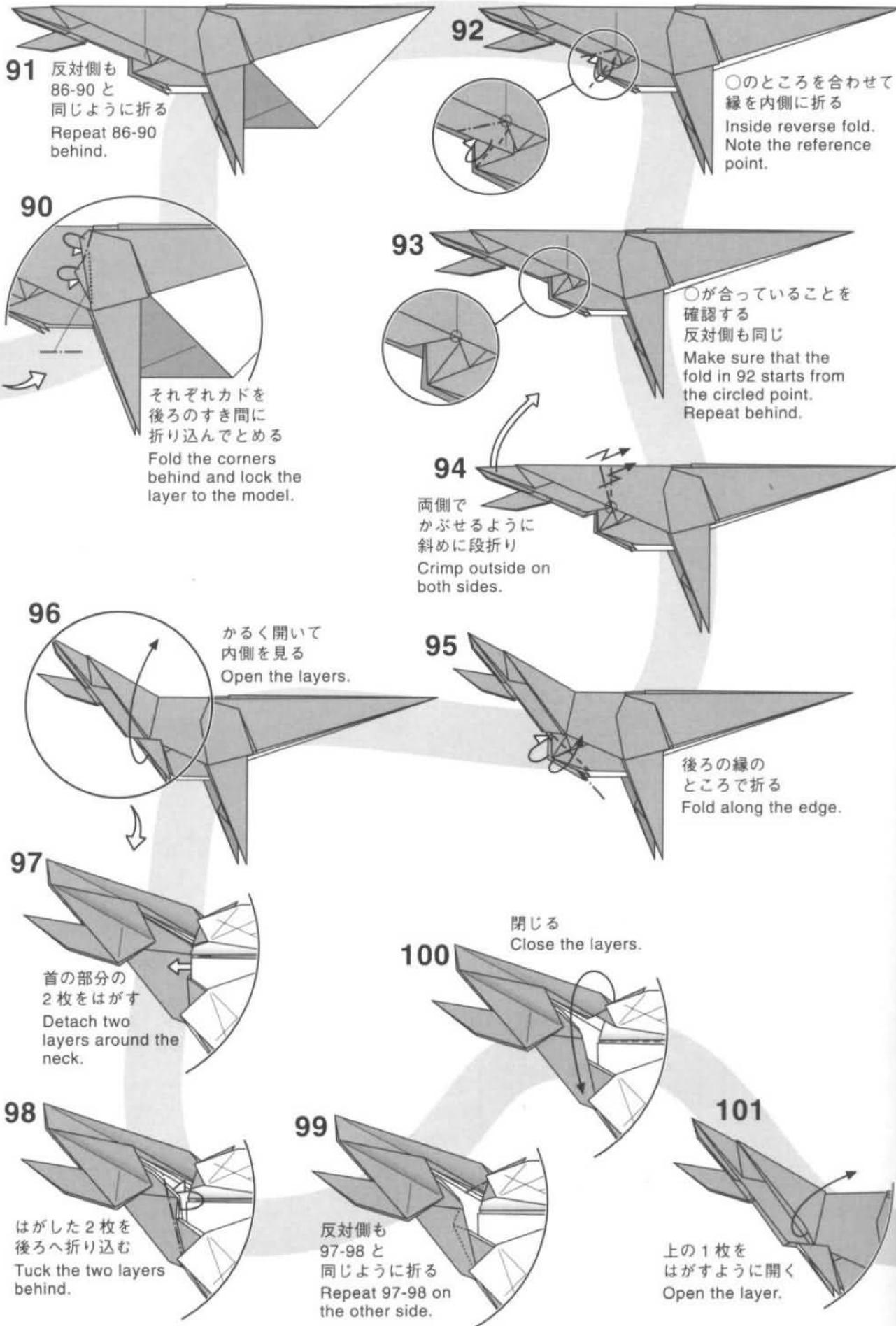
82

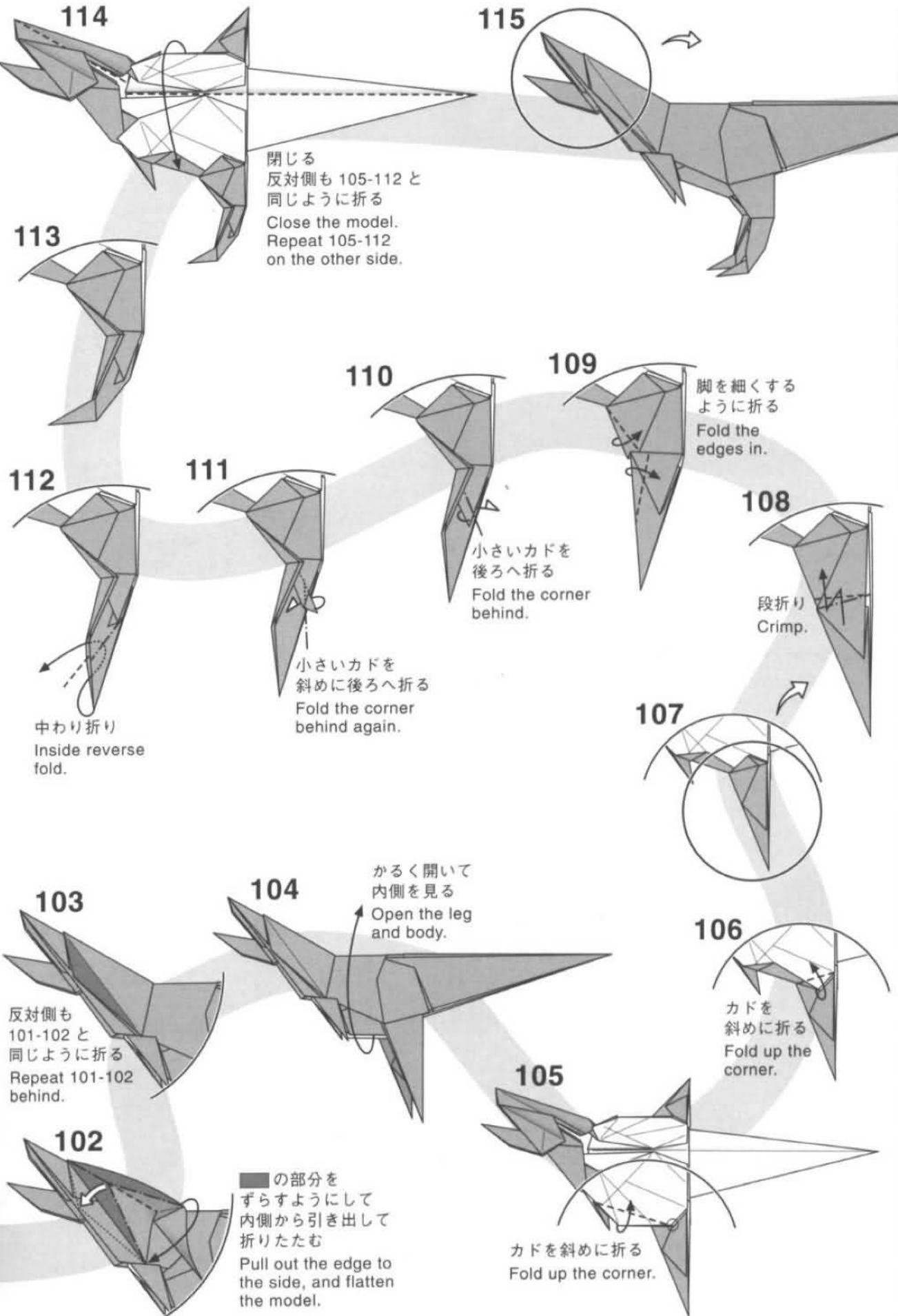


81



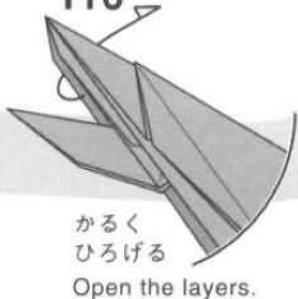
ティラノサウルス





ティラノサウルス

116



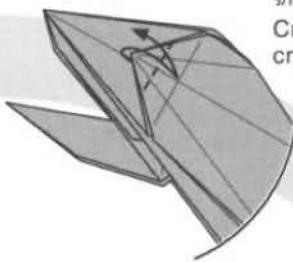
かるく
ひろげる
Open the layers.

117



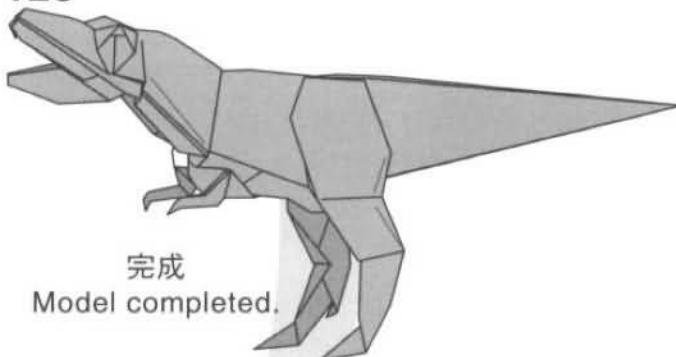
開くところで
折り筋をつける
Crease as shown.

118



カドを折り筋に合わせて
折り筋をつける
Crease the corner to the
crease line.

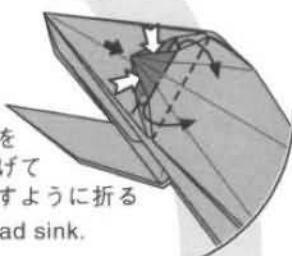
128



完成

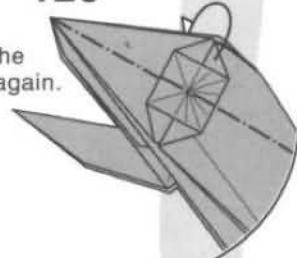
Model completed.

119



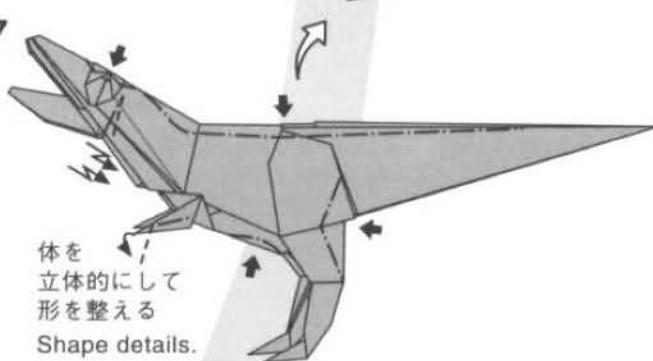
カドを
ひろげて
つぶすように折る
Spread sink.

120



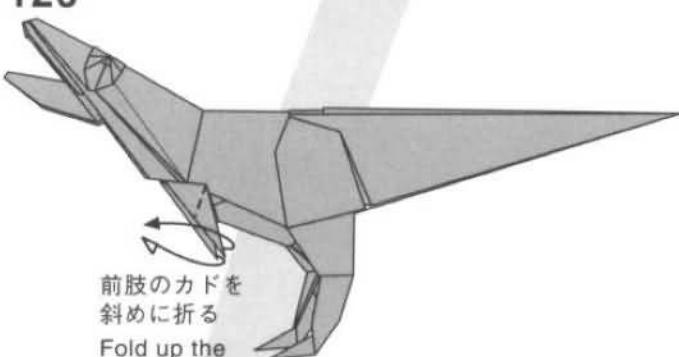
閉じる
Close the
layers again.

127



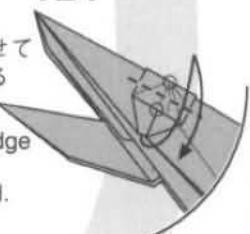
体を
立体的にして
形を整える
Shape details.

126



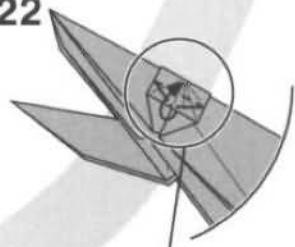
前肢のカドを
斜めに折る
Fold up the
foreleg.

121



縁と縁を合わせて
折り筋をつける
反対側も同じ
Fold edge to edge
and unfold.
Repeat behind.

122

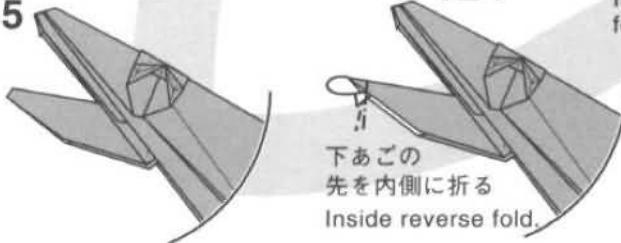


123



上あご
の先を中わり折り
Inside reverse
fold.

125



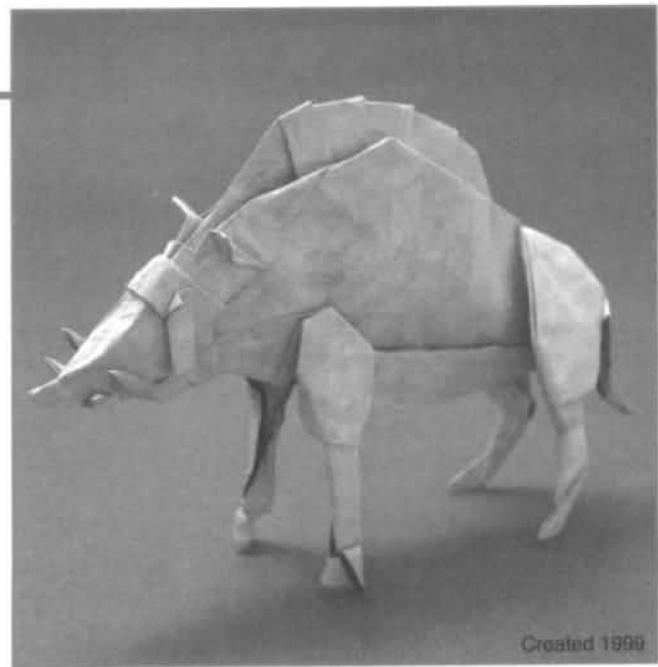
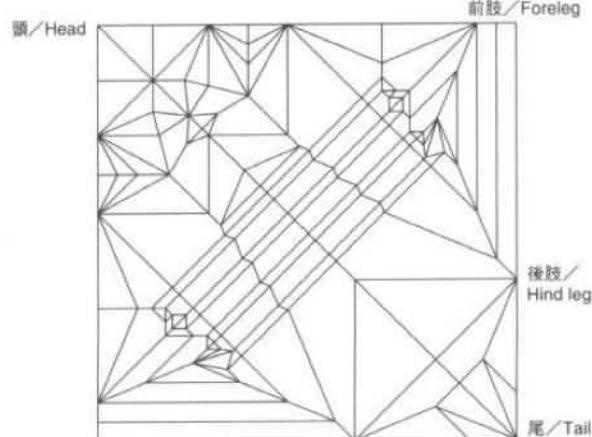
下あご
の先を内側に折る
Inside reverse fold.

両側をつぶしながら
121でつけた線で折る
反対側も同じ

Fold up the edge using
the crease line made in 121.
Repeat behind.

猪 神

Inoshishigami (The Divine Boar)



Created 1990

現 在私の創作方法のなかで、重要なもののひとつに「部品化」があります。考え方としては、それぞれの部分を先に作っておいてから、それらを1枚の紙に組み込んでいくというものです。特に目新しい方法ではありませんが、設計的な創作方法の場合にはとても有効だと思います。この方法の利点のひとつは、各部品の再利用が可能ということであり、これは創作の効率を劇的に上げるとともに作風の統一感を出しやすくなります。

また、この「部品化」は、パーツに限らず構造・造形手法といったものにも適用することができます。本作品では3種類の部品を組み合わせています。1つめは北條高史氏の虎からヒントを得た、浮き出た肋骨をヒダで表現するというアイディアです。2つめは吉野一生氏のたてがみの手法で、これは吉野氏の馬をはじめ多くの作品に使われています。そして3つめは鶴の基本形の中心のカドから作り出したヒダで、それら3つを文字通りつなげて作品のなかに組み込んでいます。

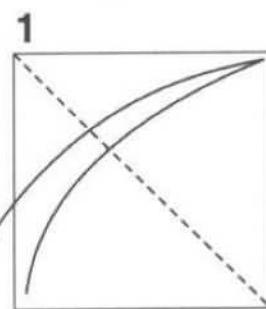
感覚的な部分が多いのでうまく文章にできませんが、私の創作方法とは、どうやら自分の脳内ライブラリーにある、この部品化されたパーツ・構造などから必要なものを取り出し、それらを組み合わせて形を創るというものようです。問題は、このライブラリーがちゃんと整理しきれていないことで、毎回頭の中を引っかきまわさなければいけないという…。

Having the library of parts is very important for my creation of models. This is not a new way of designing models, but it works well. You can always reuse the parts, which makes keeping the coherence of the created model easier.

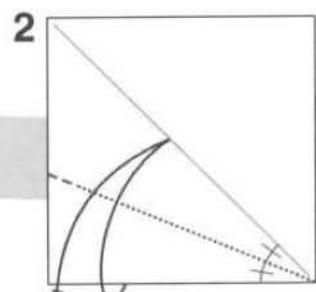
This model reuses three kinds of parts: designing of ribs with pleats inspired by Hojo's Tiger, mane based on Yoshino's Horse and others, and pleats folded out of the bird base.

The problem for me is: Why in the hell do I have to reorder the listings of parts in my library each time I design something?

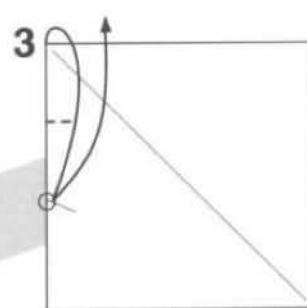
必要サイズ / Recommended Size of Sheet : 25×25cm



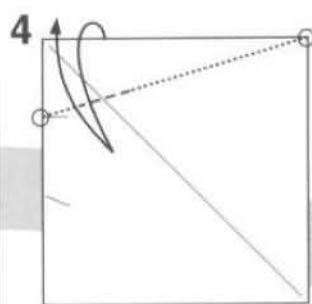
三角に折り筋をつける
Fold diagonally and unfold.



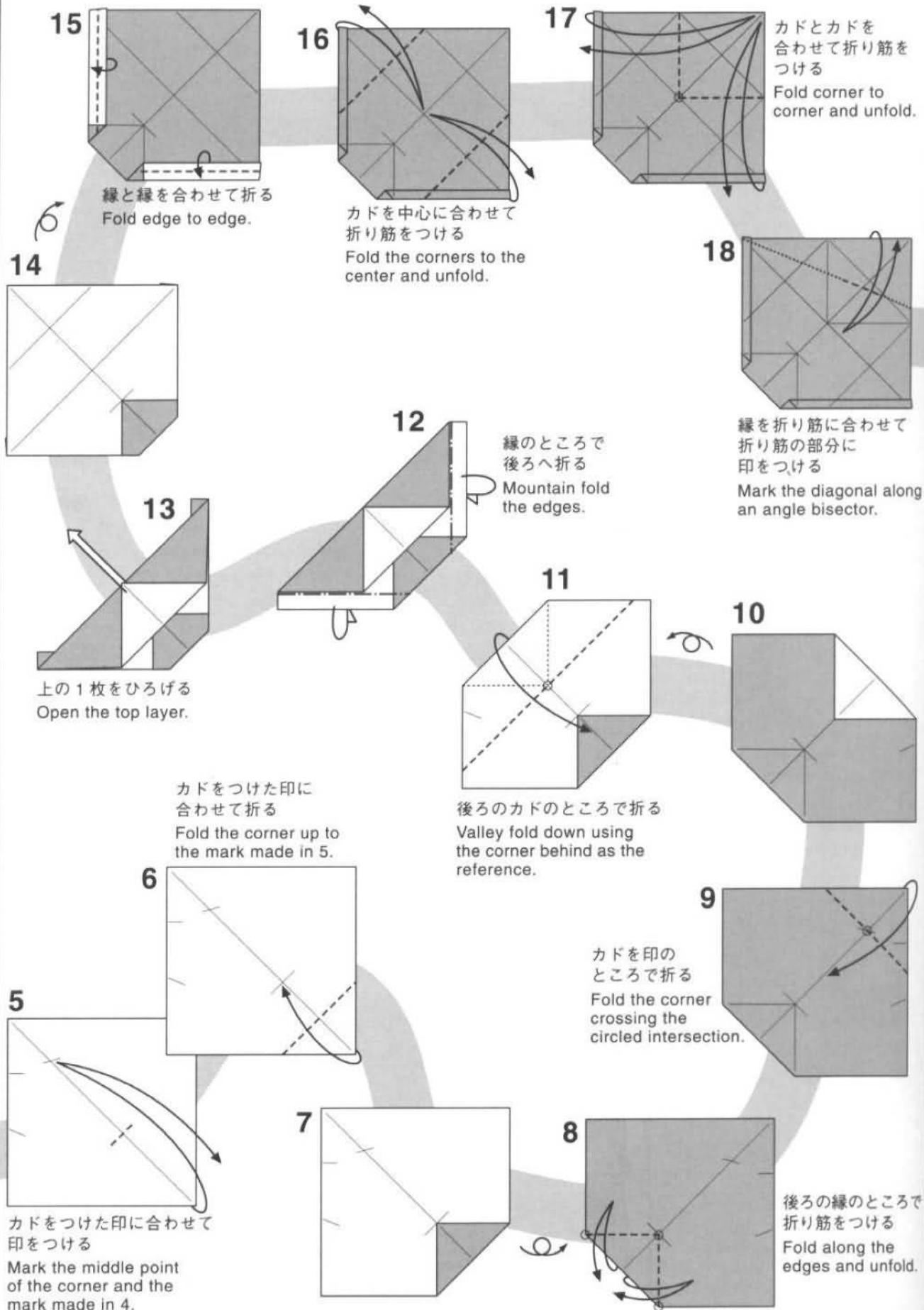
縁を中心に行わせて印をつける
Mark the edge along the angle bisector.

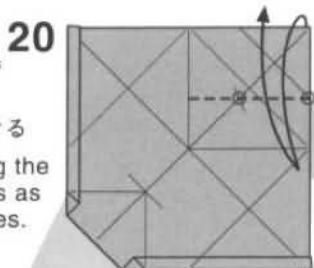


カドを印に合わせて印をつける
Fold the corner to the mark and mark the edge.



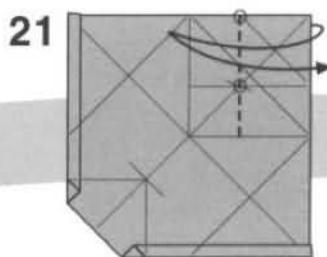
○を結ぶ線で折り筋の部分に印をつける
Mark the intersection of the diagonal and the virtual line.





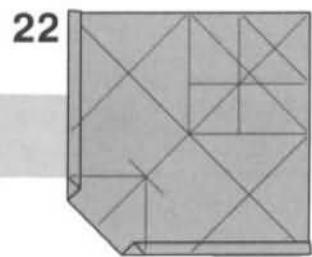
○を通る線で
図のように
折り筋をつける

Crease using the
circled points as
the references.

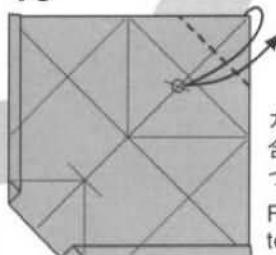


反対側も 20 と同じように
折り筋をつける

Crease using the circled
points as the references.

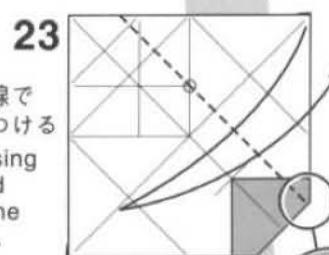


19



カドをつけた印に
合わせて折り筋を
つける

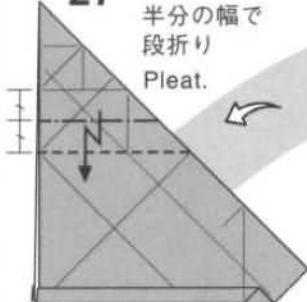
Fold the top corner
to the mark and unfold.



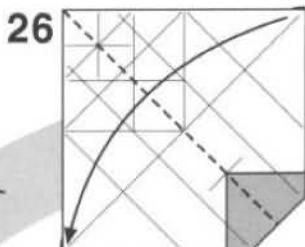
○を通る線で
折り筋をつける
Crease using
the circled
point as the
reference.

少しあくのが正しい
The end of the
crease line should
be below the corner.

27

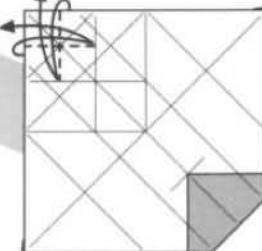


半分の幅で
段折り
Pleat.



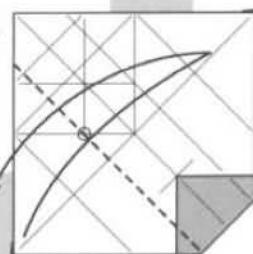
半分に折る
Fold in half.

25



縁を折り筋に合わせて
図のように折り筋をつける
Fold the edges to the
crease lines and unfold.

24



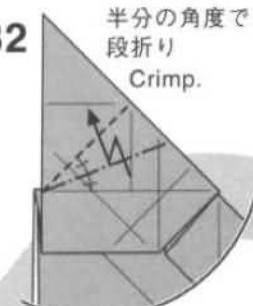
反対側も 23 と同じように
折り筋をつける
Repeat 23 on the left.

28



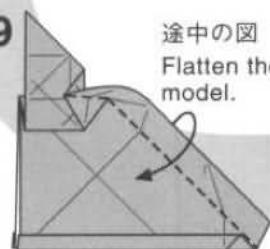
ついている折り筋を使って
カドを作るようすに折る
Make a triangular
corner by swiveling
using the existing
crease lines.

32



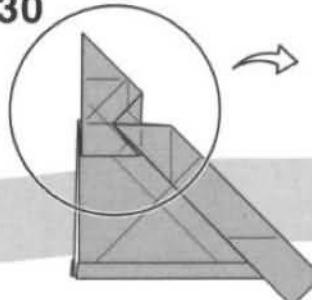
半分の角度で
段折り
Crimp.

29

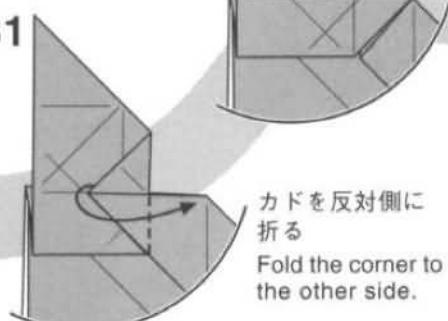


途中の図
Flatten the
model.

30

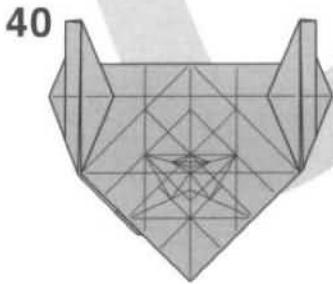
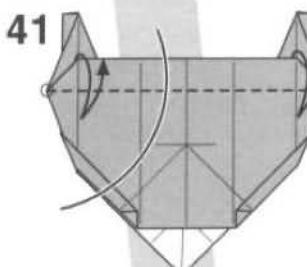
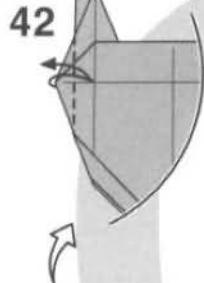


31

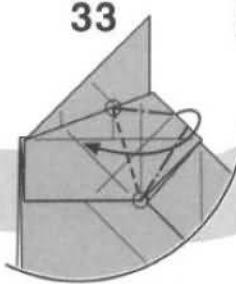


カドを反対側に
折る
Fold the corner to
the other side.

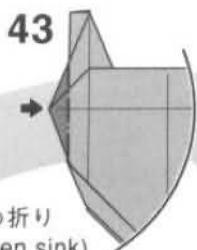
カドを折り筋に合わせて
折り筋をつける
Fold the corner to the
first crease line and
unfold.



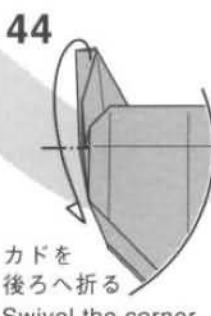
縁を合わせるように
内側に折り込む
Inside reverse
fold the edges.



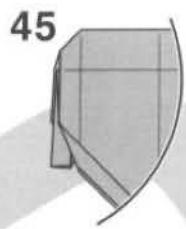
内側をひろげて
つぶすように折る
Petal fold.



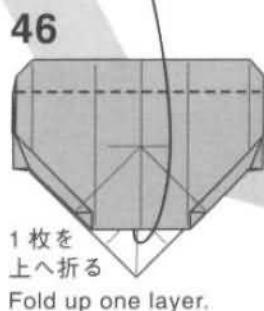
沈め折り
(Open sink)
Open sink the
corner.



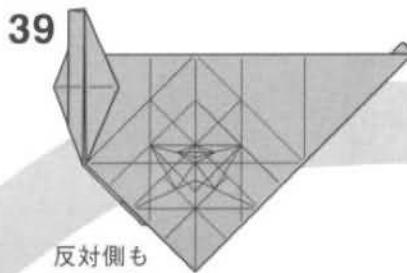
カドを
後ろへ折る
Swivel the corner
behind.



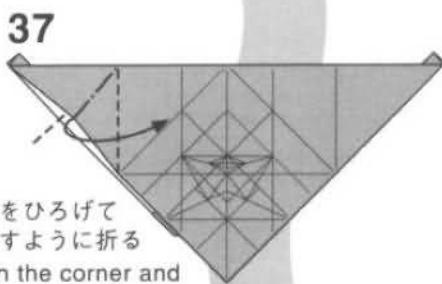
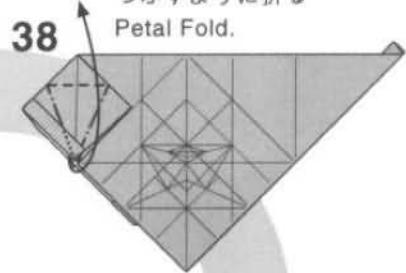
反対側も 42-44 と
同じように折る
Repeat 42-44
on the right.



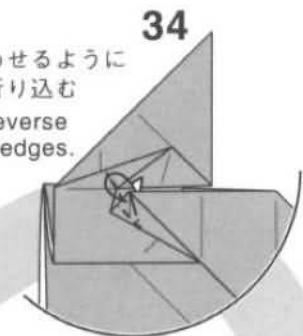
1枚を
上へ折る
Fold up one layer.



反対側も
37-38 と
同じように折る
Repeat 37-38 on
the right.

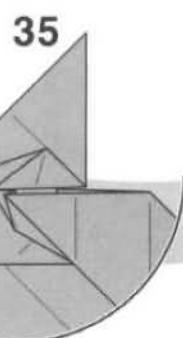


内側をひろげて
つぶすように折る
Open the corner and
squash.



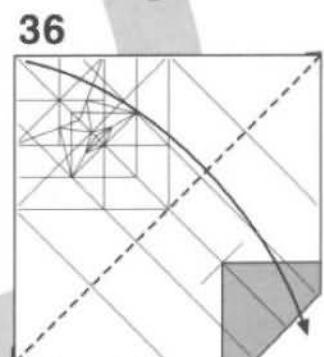
34

縁を合わせるように
内側に折り込む
Inside reverse
fold the edges.



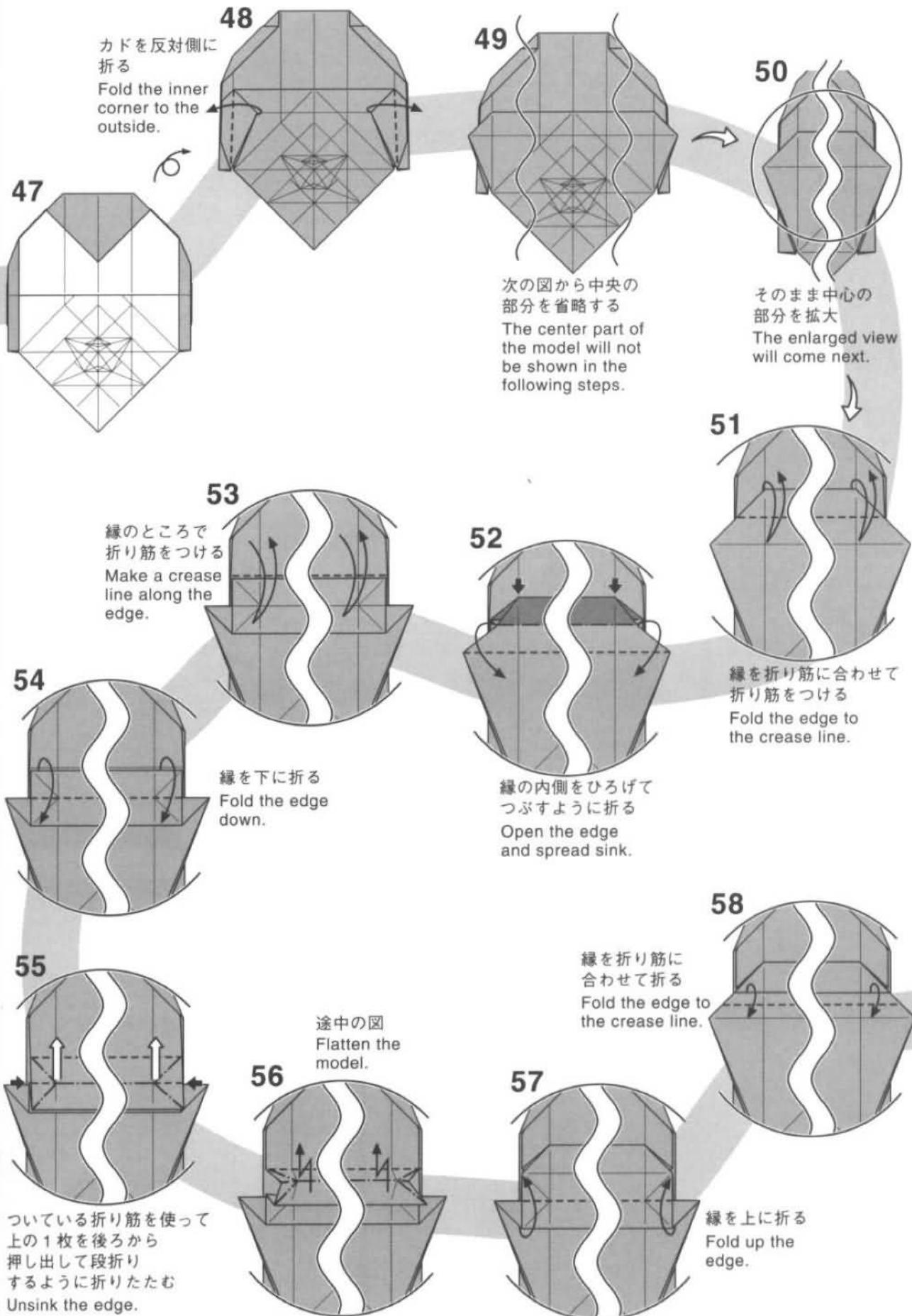
35

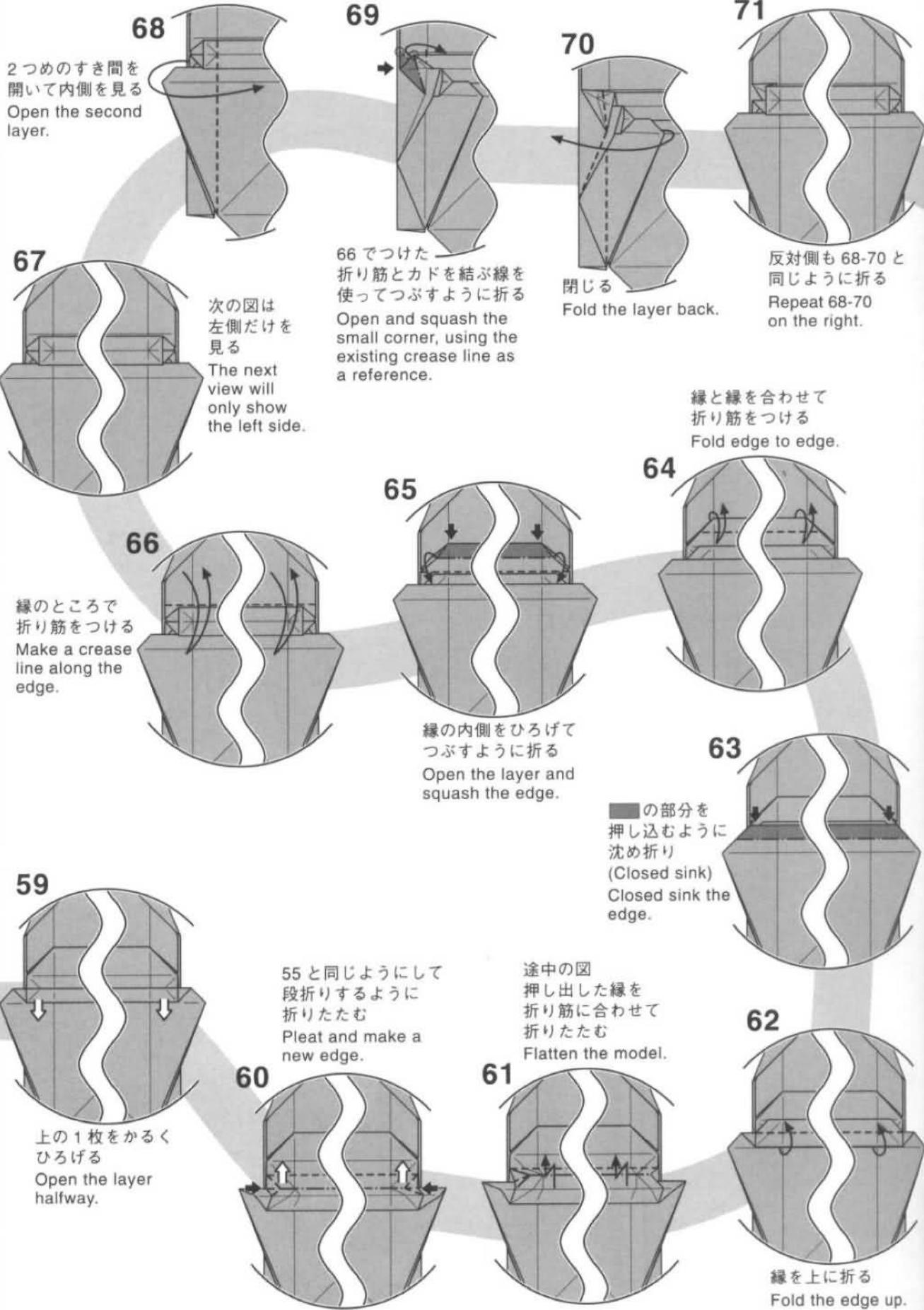
しっかりと
折り筋を
つけてから
26 の形に戻す
Unfold to 26.



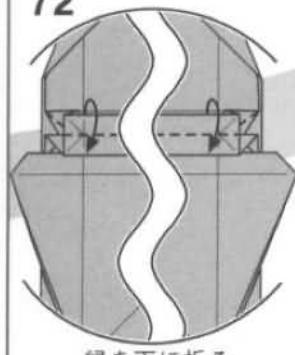
36

三角に折る
Fold along a diagonal.



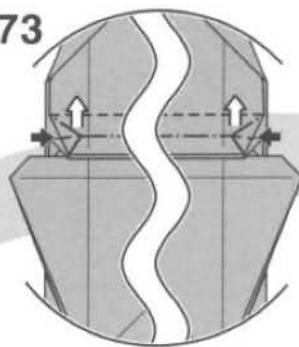


72



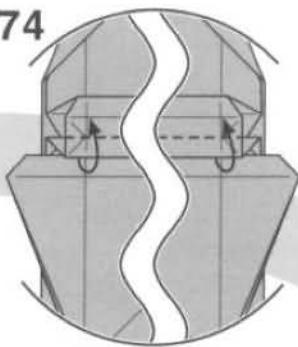
縁を下に折る
Fold the edge down.

73



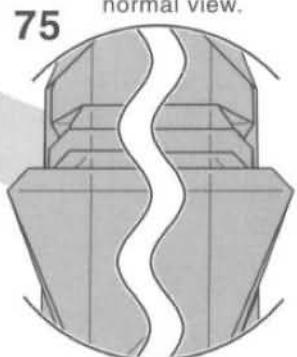
ついている折り筋を使って55・60と同じように段折りするように折りたたむ
Pleat and create a new edge.

74



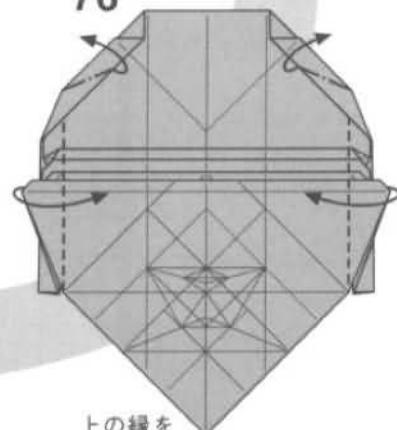
縁を上に折る
Fold up the edge.

75



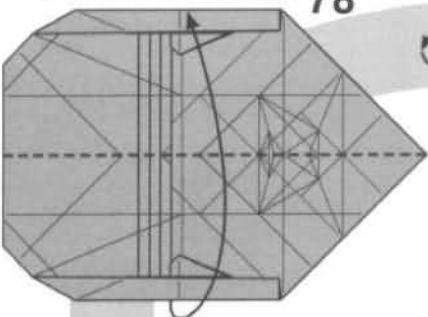
次の図から全体を見る
Back to the normal view.

76



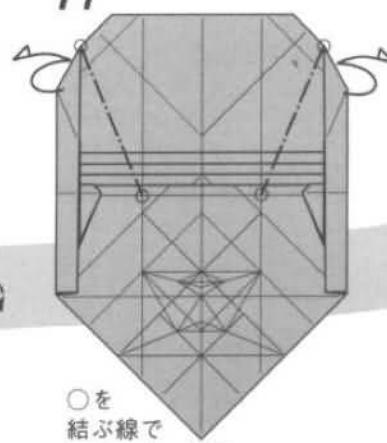
半分に折る
Fold the model in half.

78



縁をついている折り筋で折る
Fold down the model using the existing crease lines.

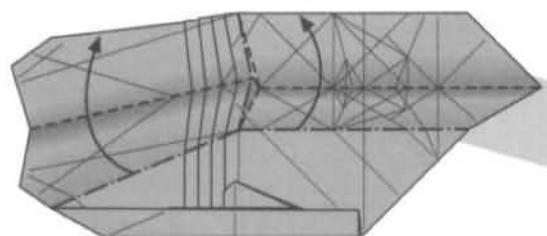
77



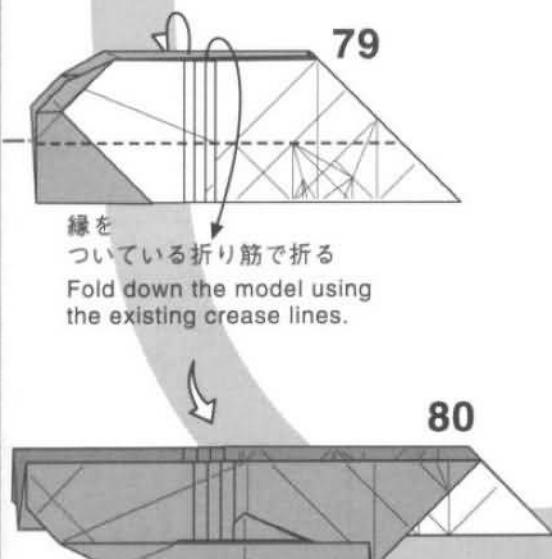
○を結ぶ線で折り筋をつける
Make crease lines connecting circled points.

上の縁を開くように折る
Fold the edge, widening the top portion of the model.

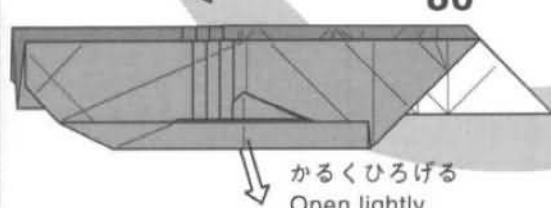
82



途中の図
Flatten the model.

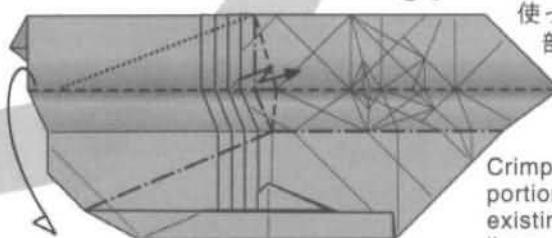


80



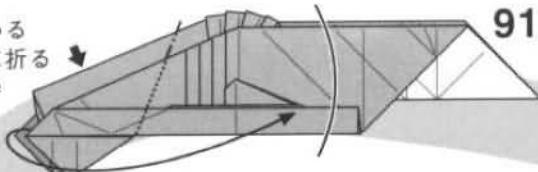
かるくひろげる
Open lightly.

81



ついている折り筋を使って真ん中の部分を段折りするようにして折りたたむ
Crimp the middle portion using the existing crease lines.

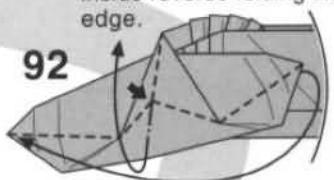
真ん中の縁をついている
折り筋でつぶすように折る
Open and squash the
layers in the middle.



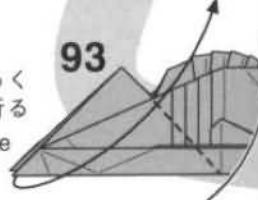
91

中わり折りするように
折りたたむ
Flatten the model while
inside reverse folding the
edge.

92

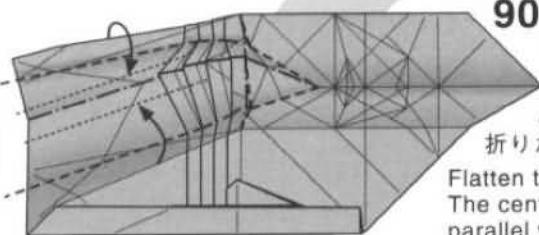


93

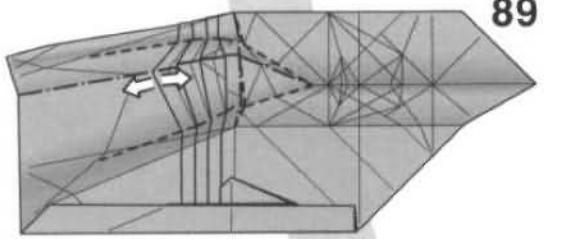


90

次の図のように中央と
左右の縁が平行になる
よう調整しながら平らに
折りたたむ
Flatten the model as shown.
The central edge should be
parallel with the top edge.

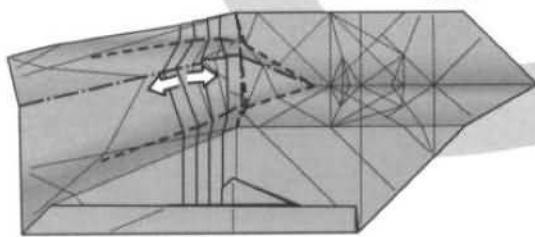


89



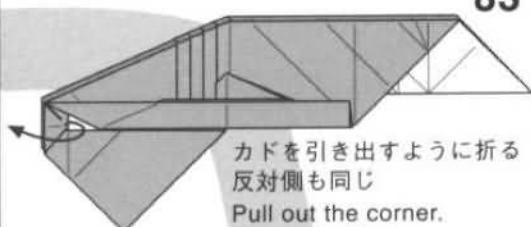
次のヒダも同じように折る
Repeat on the next pleated
layers.

88



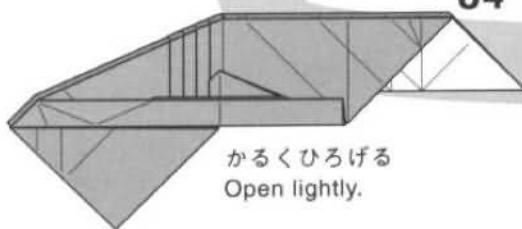
次のヒダも同じように折る
Repeat on the next pleated
layers.

83



カドを引き出すように折る
反対側も同じ
Pull out the corner.
Repeat behind.

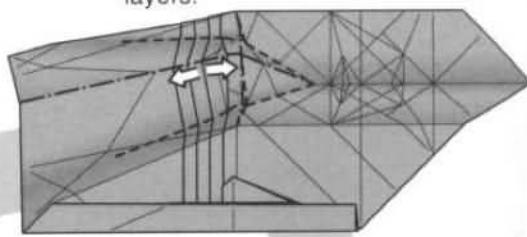
84



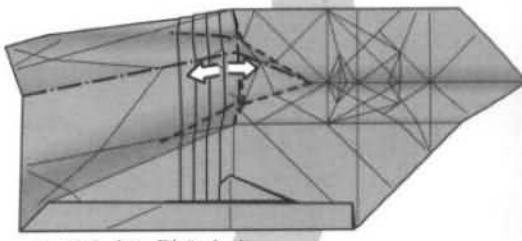
かるくひろげる
Open lightly.

次のヒダも同じように折る
Repeat on the next pleated
layers.

87

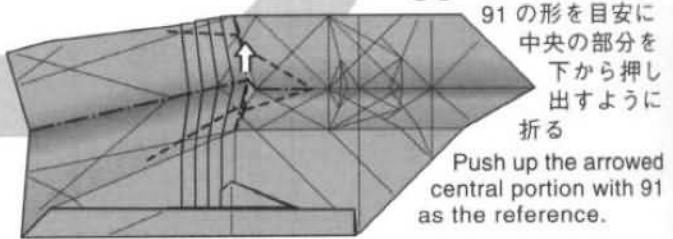


86

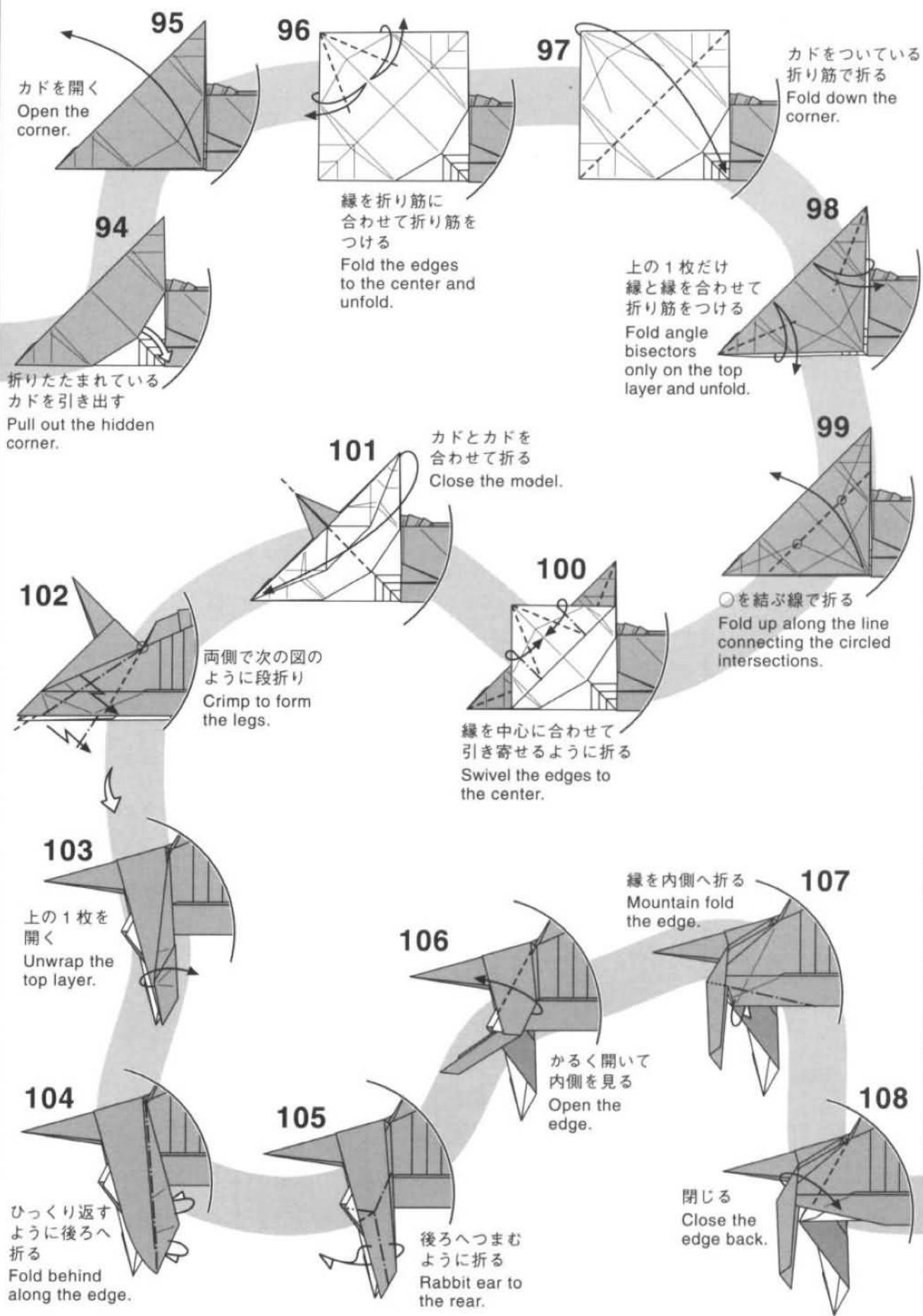


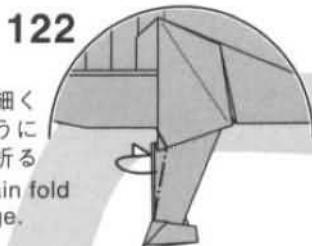
ヒダを少し引き出す
たるんだ部分は左側の
谷折り線をずらして調整する
Pull out the layer inside the pleat.
Shift the valley fold crease line inside
further to the left.

85

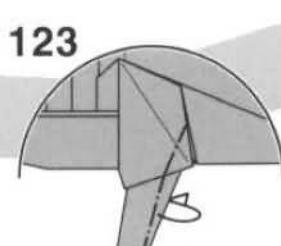


91 の形を目安に
中央の部分を
下から押し
出すように
折る
Push up the arrowed
central portion with 91
as the reference.

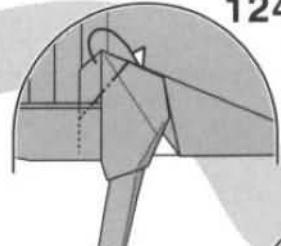




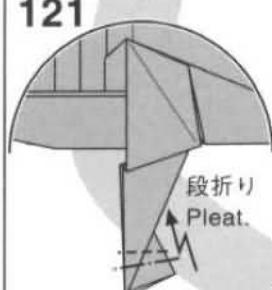
前肢を細く
するように
後ろへ折る
Mountain fold
the edge.



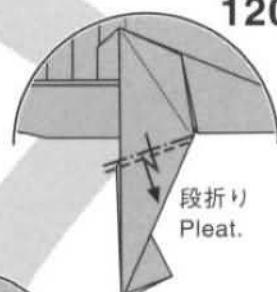
前肢を
細くするように
立体的にする
Mountain fold
the other edge.



カドを後ろへ
折る
Mountain fold
the corner.



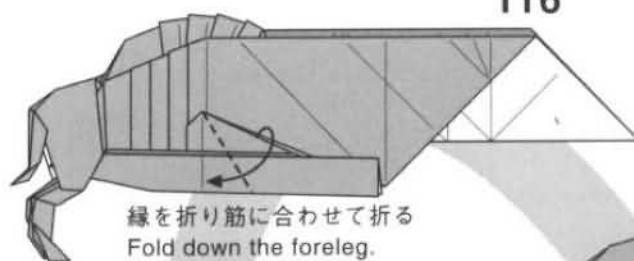
段折り
Pleat.



段折り
Pleat.



反対側も
116-124 と
同じように折る
Repeat 116-124
behind.



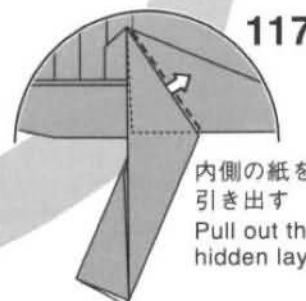
縁を折り筋に合わせて折る
Fold down the foreleg.



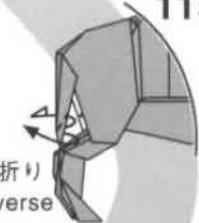
カドを縁のところで
後ろに折る
Mountain fold
along the edge.



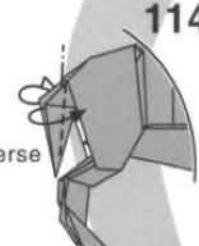
カドを
内側に折る
Inside reverse
fold.



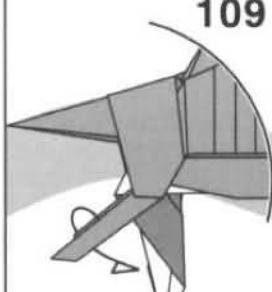
内側の紙を
引き出す
Pull out the
hidden layer.



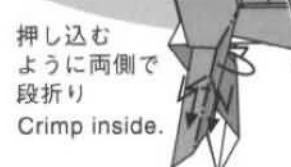
カドの先を
少しかぶせ折り
Outside reverse
fold the tip.



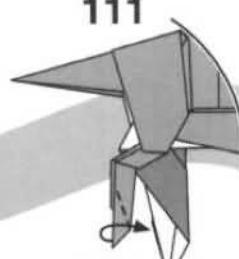
かぶせ折り
Outside reverse
fold the tail.



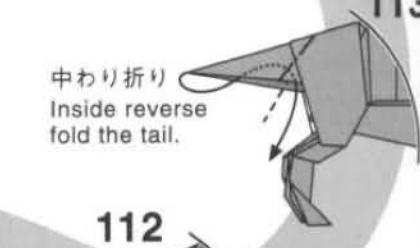
かるくひろげる
Open lightly.



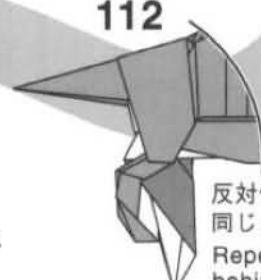
押し込む
ように両側で
段折り
Crimp inside.



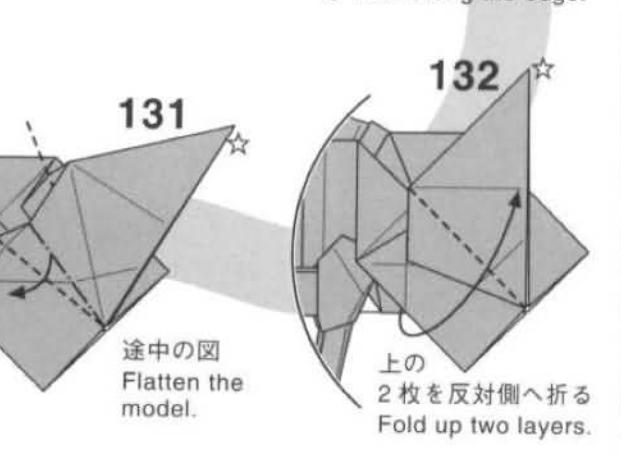
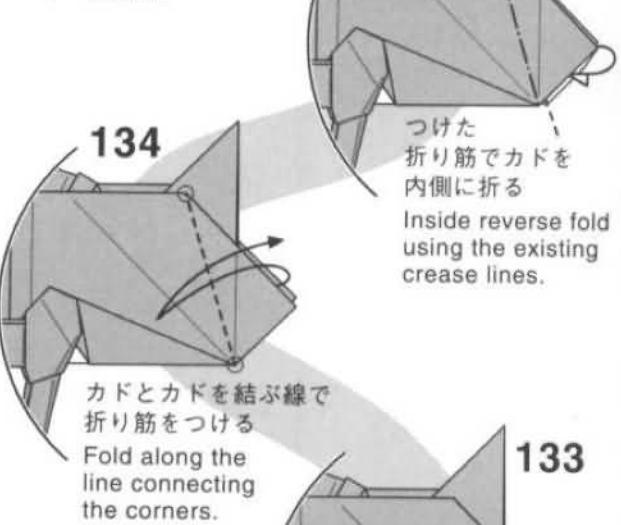
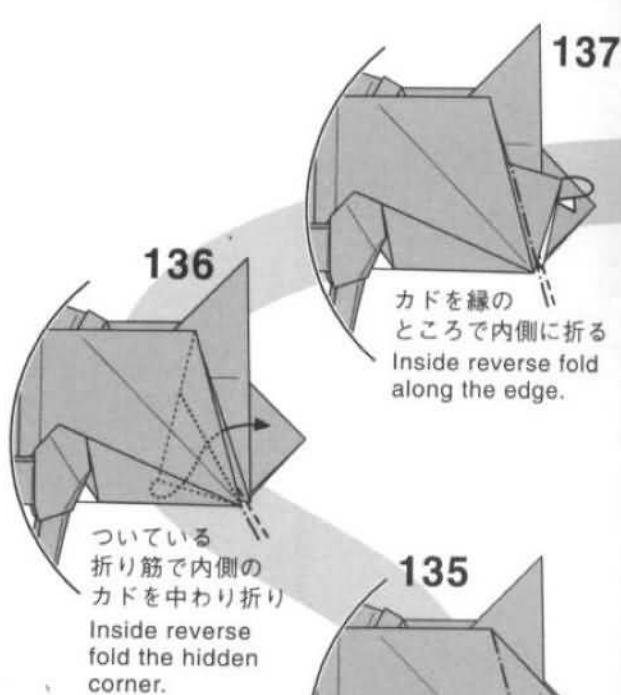
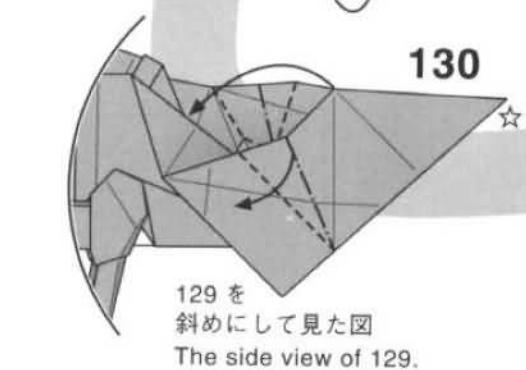
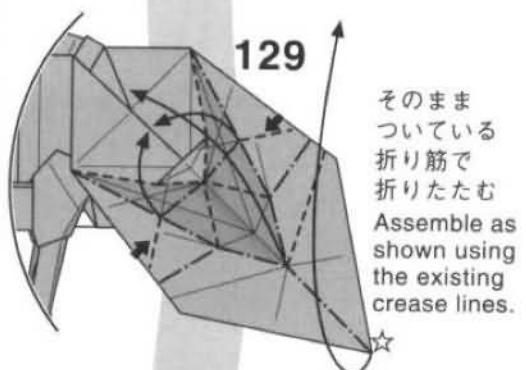
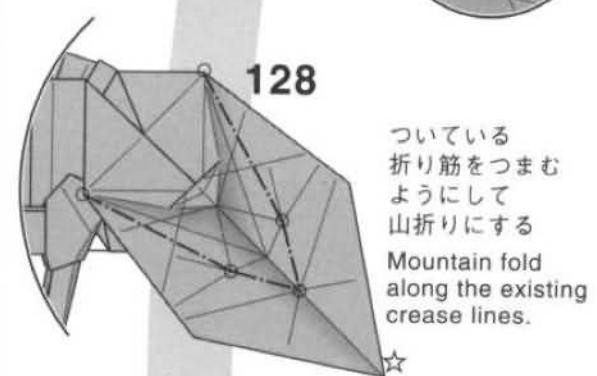
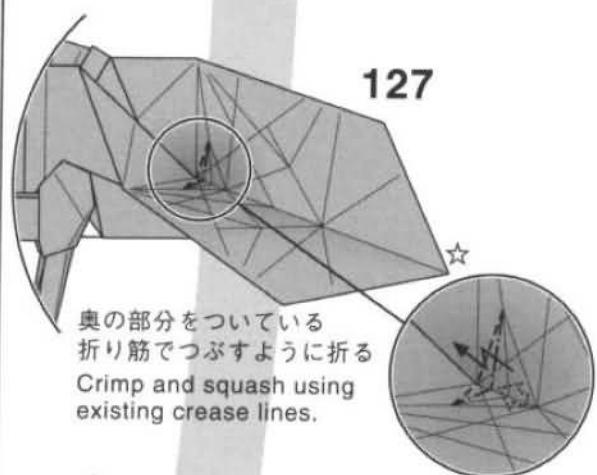
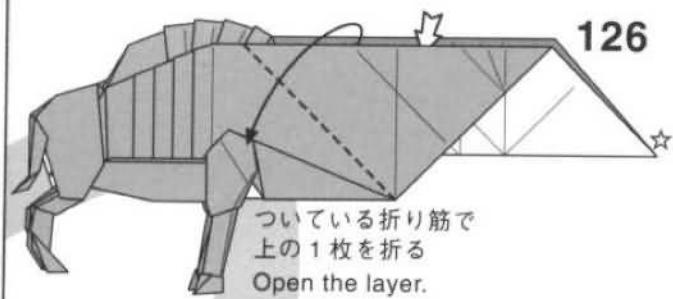
カドを
斜めに折る
Fold up the corner.

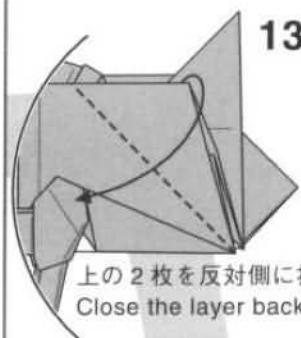


中わり折り
Inside reverse
fold the tail.



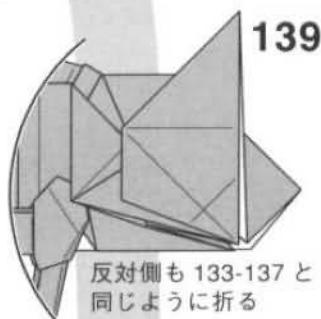
反対側も 103-111 と
同じように折る
Repeat 103-111
behind.





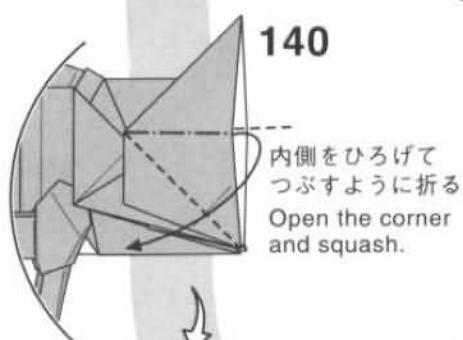
138

上の2枚を反対側に折る
Close the layer back.



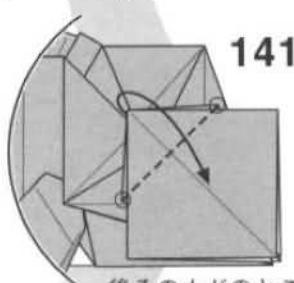
139

反対側も133-137と同じように折る
Repeat 133-137 behind.



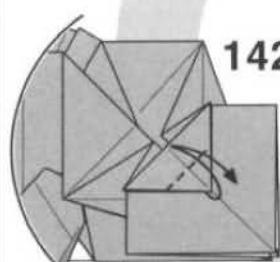
140

内側をひろげて
つぶすように折る
Open the corner
and squash.



141

後ろのカドのところで
カドを反対側に折る
Fold the top corner down.



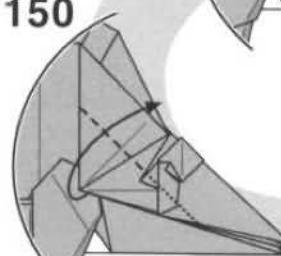
142

カドを縁に合わせて
折り筋をつくる
Fold corner to edge
and unfold.

151

縁と縁を合わせて
カドをつまむ
ように折る
Inside
reverse fold
the edge.

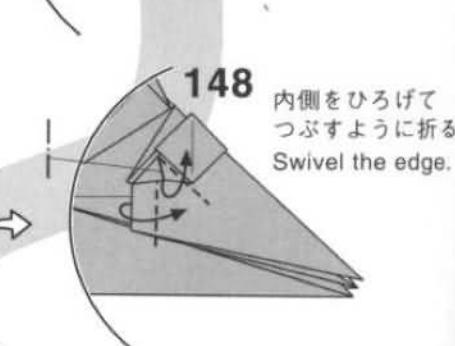
150



耳になる
カドを上の縁と
平行に折る
Fold the corner up.
Note that the crease line
should be parallel to the
edge.

149

カドを斜めに
折って目を作る
Fold down the tip.

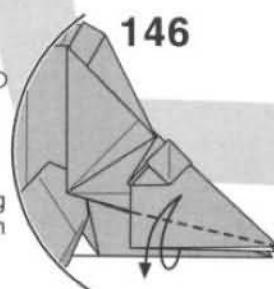


148

内側をひろげて
つぶすように折る
Swivel the edge.

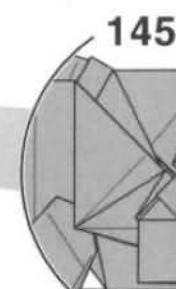
147

つけた折り筋で
カドを内側に折る
Inside reverse fold.



146

後ろの縁の
ところで
折り筋を
つくる
Fold along
the hidden
edge and
unfold.

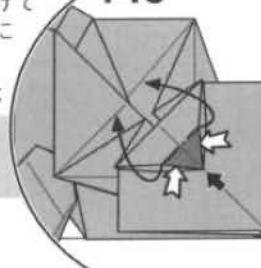


145

後ろへ半分に折る
Fold the head in
half.

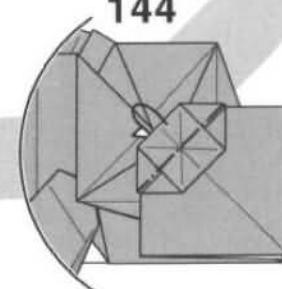
143

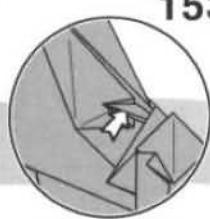
カドをひろげて
つぶすように
折る
Spread sink
the corner.



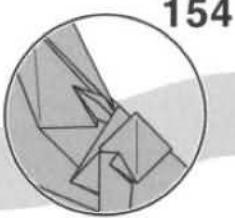
144

縁を後ろへ
折り込む
Fold the edge
behind.

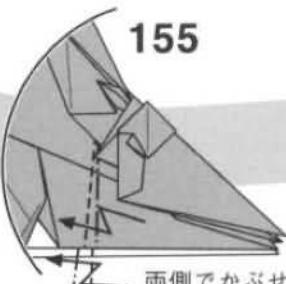




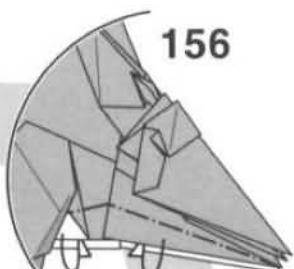
耳のすき間を
ひろげる
Open the slit
between layers.



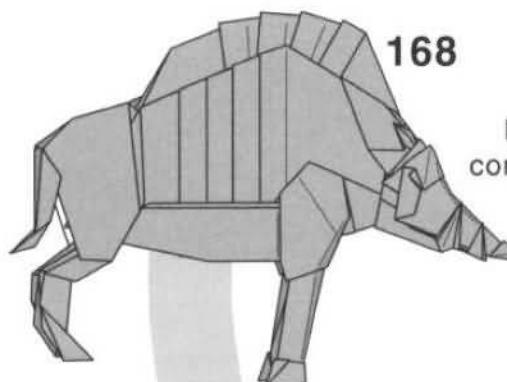
反対側も 146-153 と
同じように折る
Repeat 146-153
behind.



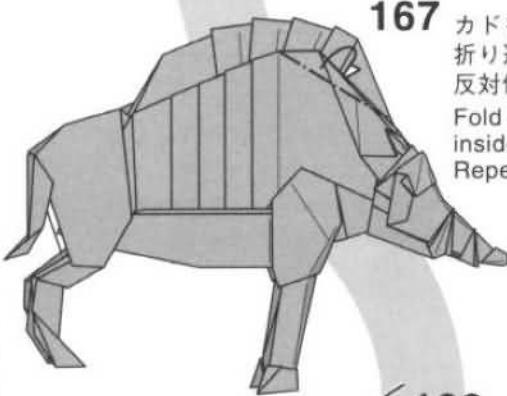
両側でかぶせる
ように段折り
Crimp on both
sides.



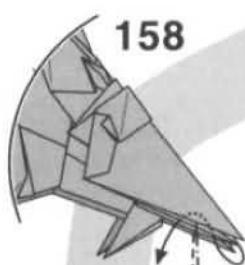
あごの縁を内側へ
折り込む
反対側も同じ
Fold the edge inside.
Repeat behind.



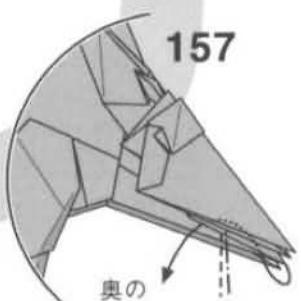
完成
Model
completed.



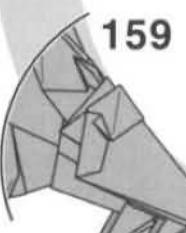
167 カドを後ろへ
折り込む
反対側も同じ
Fold the corner
inside.
Repeat behind.



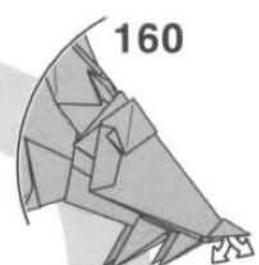
中わり折り
反対側も同じ
Inside reverse fold.
Repeat behind.



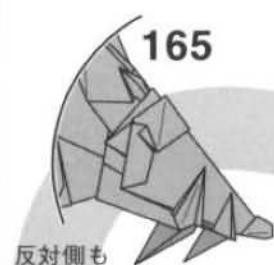
奥の
カドを中わり折り
反対側も同じ
Inside reverse fold.
Repeat behind.



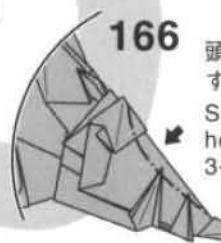
かぶせるように
両側で段折り
Crimp outside.



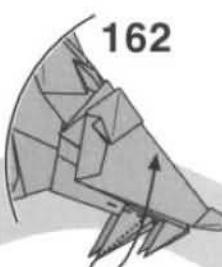
内側の紙を引き出す
Pull out the layer
behind.



反対側も
162-164 と同じように折る
Repeat 162-164 behind.



166 頭を立体的に
する
Shape the
head into a
3-D shape.

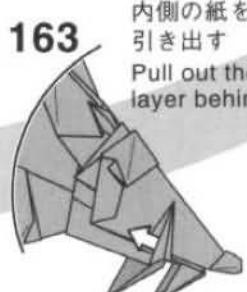


162

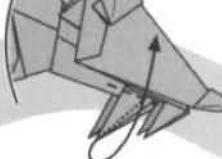
キバを上に折って
起き上がってきた部分を
つぶすように折る
Fold up the corner, swivel
the edge, and squash.



164 キバを上に
折る
Fold up the
corner.



163 内側の紙を
引き出す
Pull out the
layer behind.

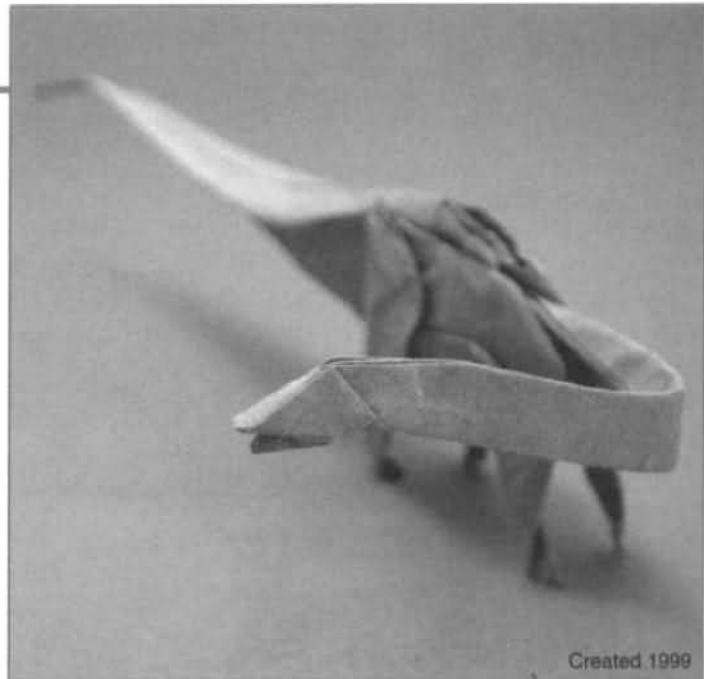
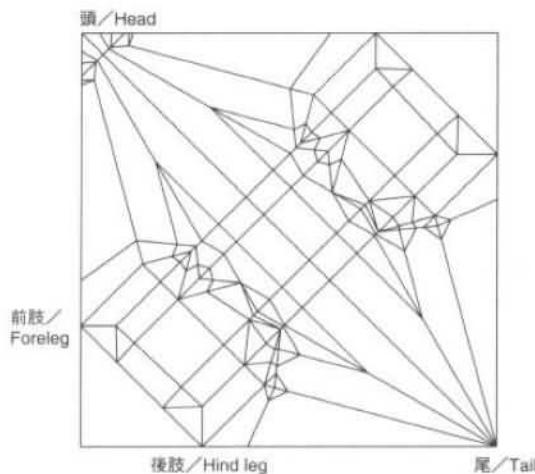


161

カドの先を
少し内側に折る
Inside reverse
fold the tip.

パロサウルス

Barosaurus



Created 1999

この作品では45度、22.5度などの見慣れた角度がほとんど使われていません。頭や尾の部分は15度ですし、体の内部にいたっては、不可解な角度で埋めつくされています。また一価性や分子などもほとんどありません。面白いのは、このような作品は初級・中級にはたくさんあるのに、ある程度以上複雑になるとその数が減ることです。それを考えると吉野一生氏の作品群は非常に特殊であると思われます。

このタイプの構造を設計的な方法で作るのは、不可能とまでは言わざとも非常に難しいものです。バロサウルスの場合、ある部分を欲しい形にしてしまってから、周りの部分とのつじつまを合わせつつ進めていくという試行錯誤的な方法で作りました。

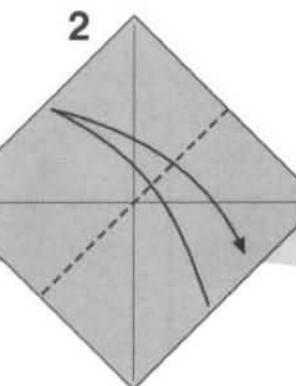
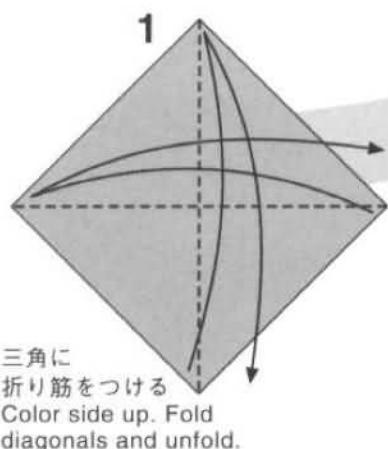
この創作方法の利点は、組み込むことができる構造に、ほとんど制限がないことです。設計的な方法では取り扱いが非常に難しいバツ、たとえばシロナガスクジラの下あごのような、特殊なものまで組み込むことができます。また、有機的な仕上がりも大きな魅力です。

問題点としては、さまざまな角度が混じり合うことが多いため、それをうまく制御するのが難しく、場合によってはまとめきれずに破たんしてしまうことでしょうか。

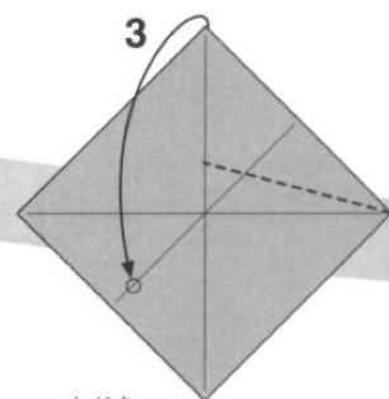
This model does not use our old angles like 22.5° and 45°. The head and the tail are based on 15°, and the body is based on other various angles. No uniaxiality, no molecules.

Such models can be easily found in simple models, but can hardly be found in complex ones, except for Issei Yoshino's models. Of course it is difficult to design such a model with crease pattern planning. The model was created by trials and errors. You can try various patterns and parts, but with the risk of lacking integration of any forms.

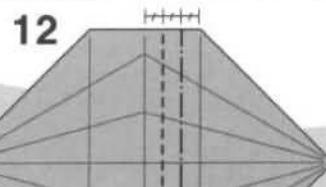
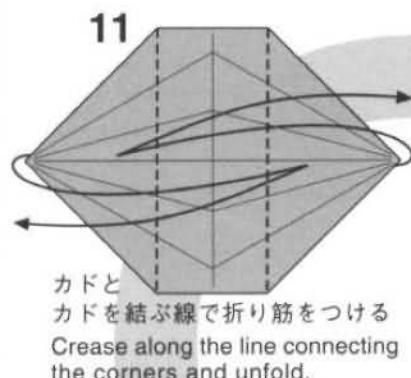
必要サイズ/Recommended
Size of Sheet : 25×25cm



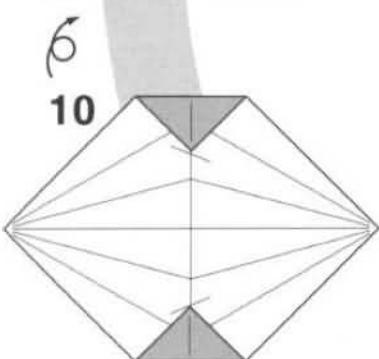
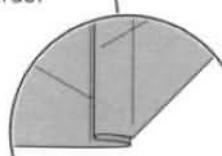
半分に折り筋をつける
Fold in half and unfold.



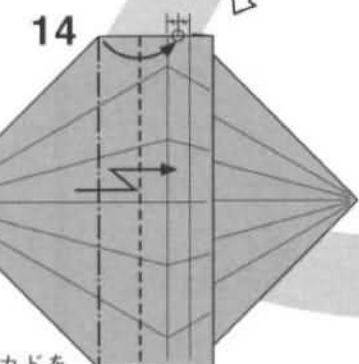
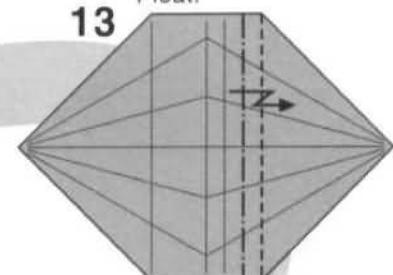
カドを
折り筋に合わせて折る
Fold the corner to the
center line.



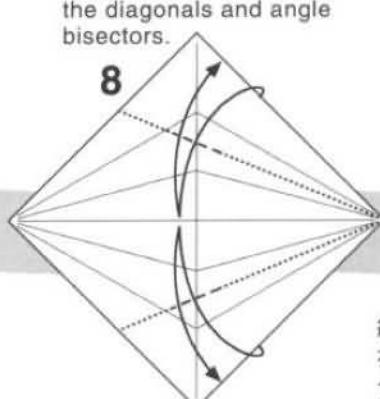
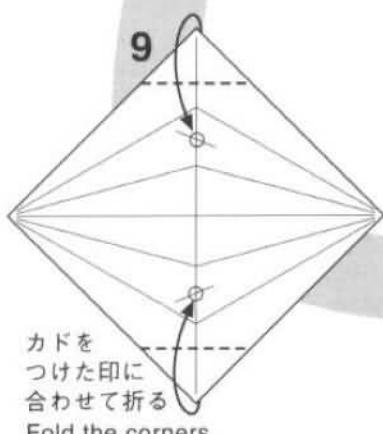
3等分の
折り筋をつける
Crease dividing the
width in thirds.



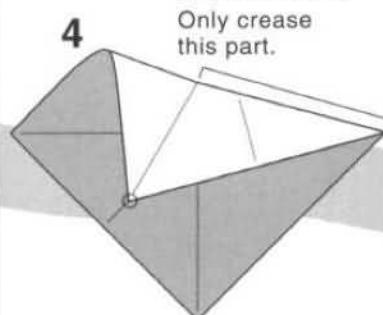
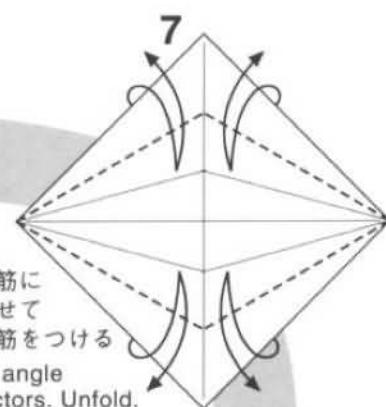
図のように3等分
すると良い
Fold the tripartite
pleats like this.



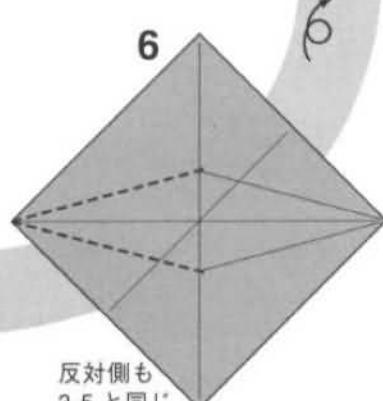
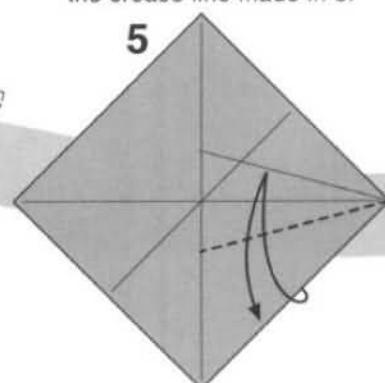
カドを
○の位置に合わせて段折り
Pleat aligning the
corners to the circled
edge.



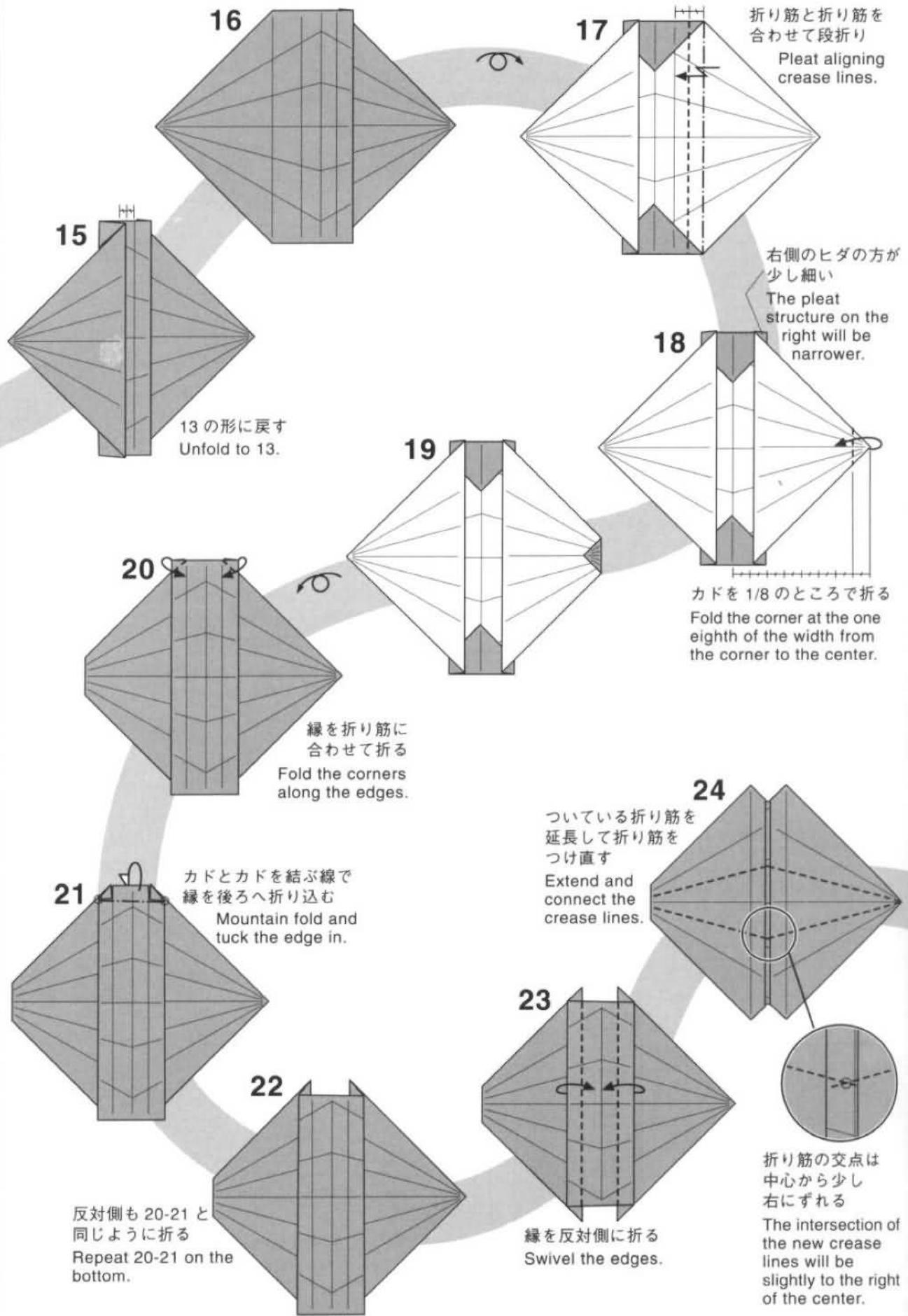
縁を中心にはわせて
折り筋の部分に印をつける
Mark the intersection of
the diagonals and angle
bisectors.

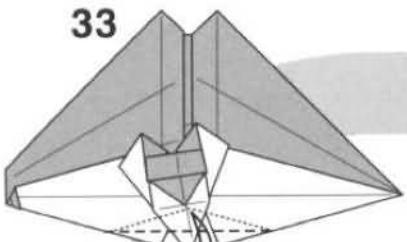


縁を折り筋に合わせて
折り筋をつける
Crease the right edge to
the crease line made in 3.

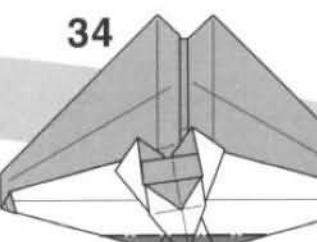


折り筋をつけてから戻す
Crease and unfold.

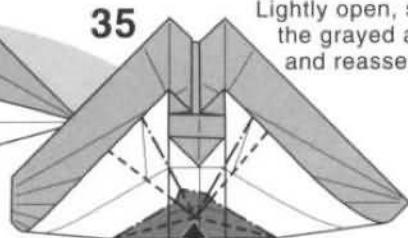




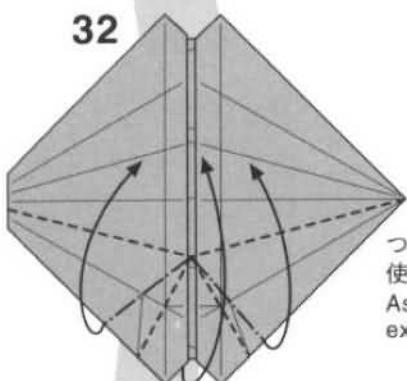
しっかりと水平な折り筋をつける
Crease tightly.



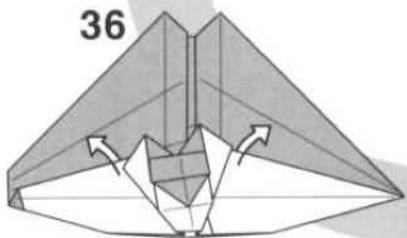
沈め折り (Open sink)
Open sink.



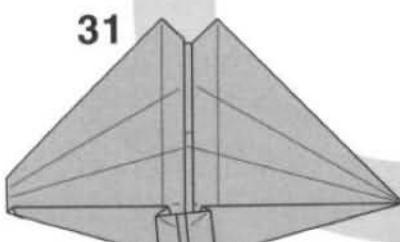
途中の図
Lightly open, sink the grayed area, and reassemble.



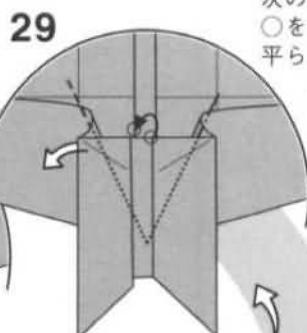
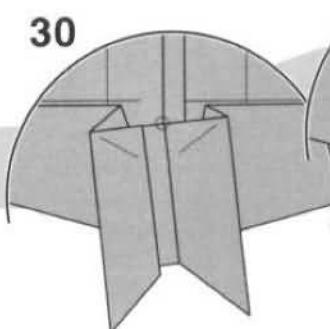
ついている折り筋を使って折りたたむ
Assemble using the existing crease lines.



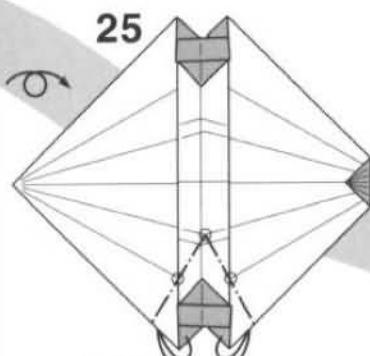
手前の部分をかるくひろげる
Open the layers gently.



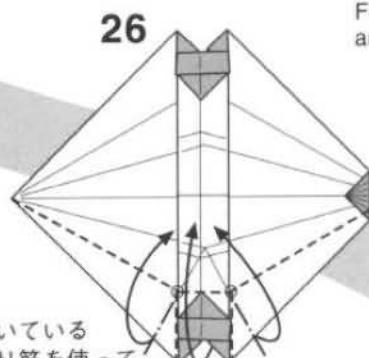
しっかりと折り筋をつけてから
24の形にひろげる
Unfold to 24.



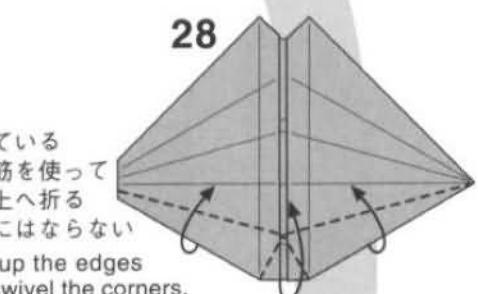
次の図のように
○を合わせて
平らに折りたたむ
Align circles and swivel.



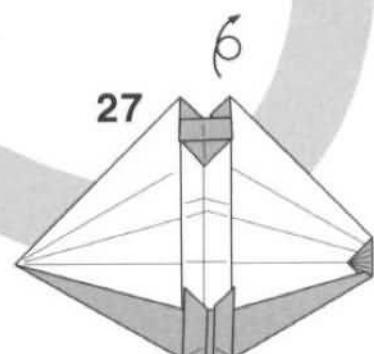
24の
交点と○を結ぶ線で
折り筋をつける
Make crease lines with circles as references.



ついている
折り筋を使って
両側を同時につまみ折りするように折る
Fold up the edges and swivel the corners.



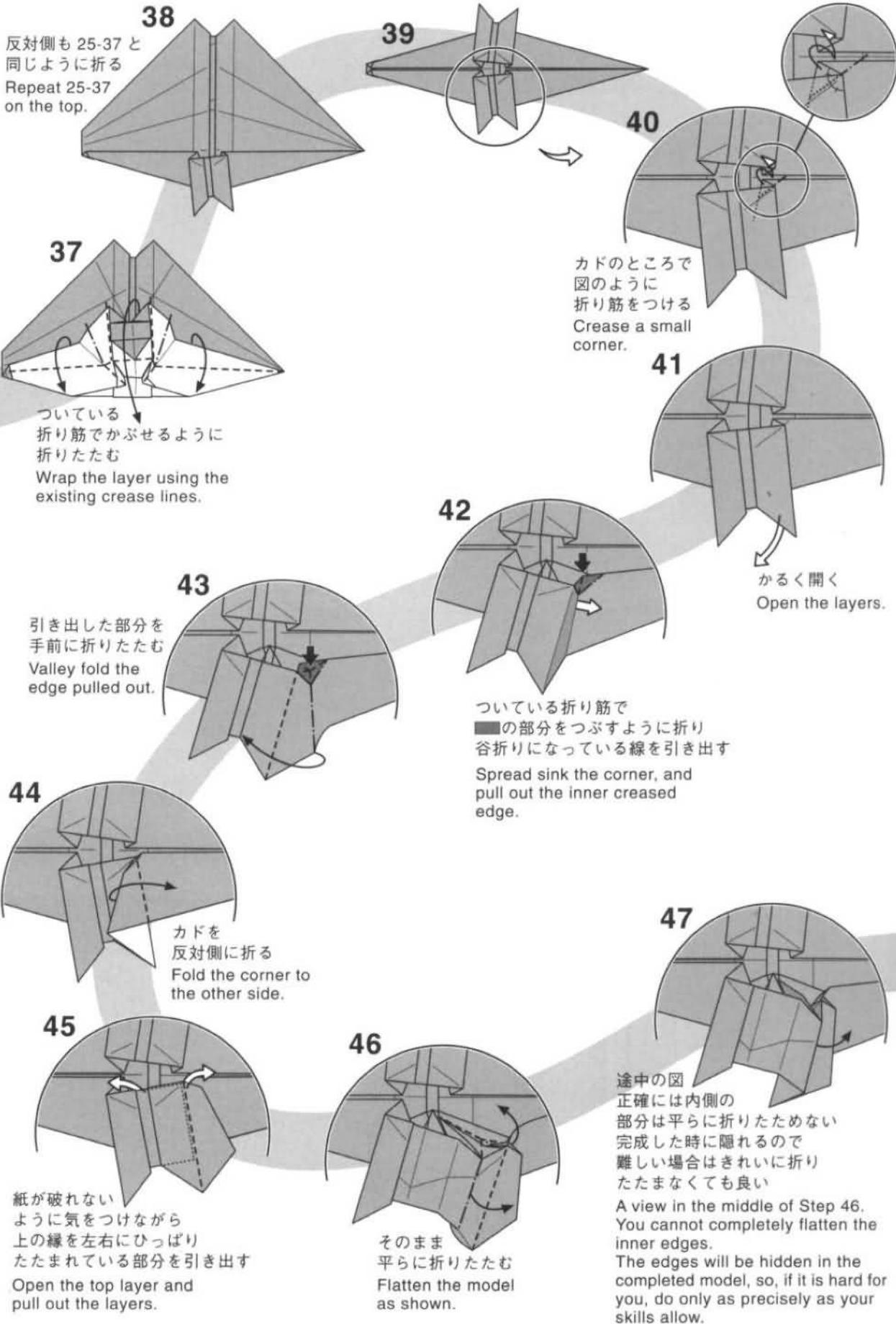
ついている
折り筋を使って
縁を上へ折る
平らにはならない
Fold up the edges and swivel the corners.

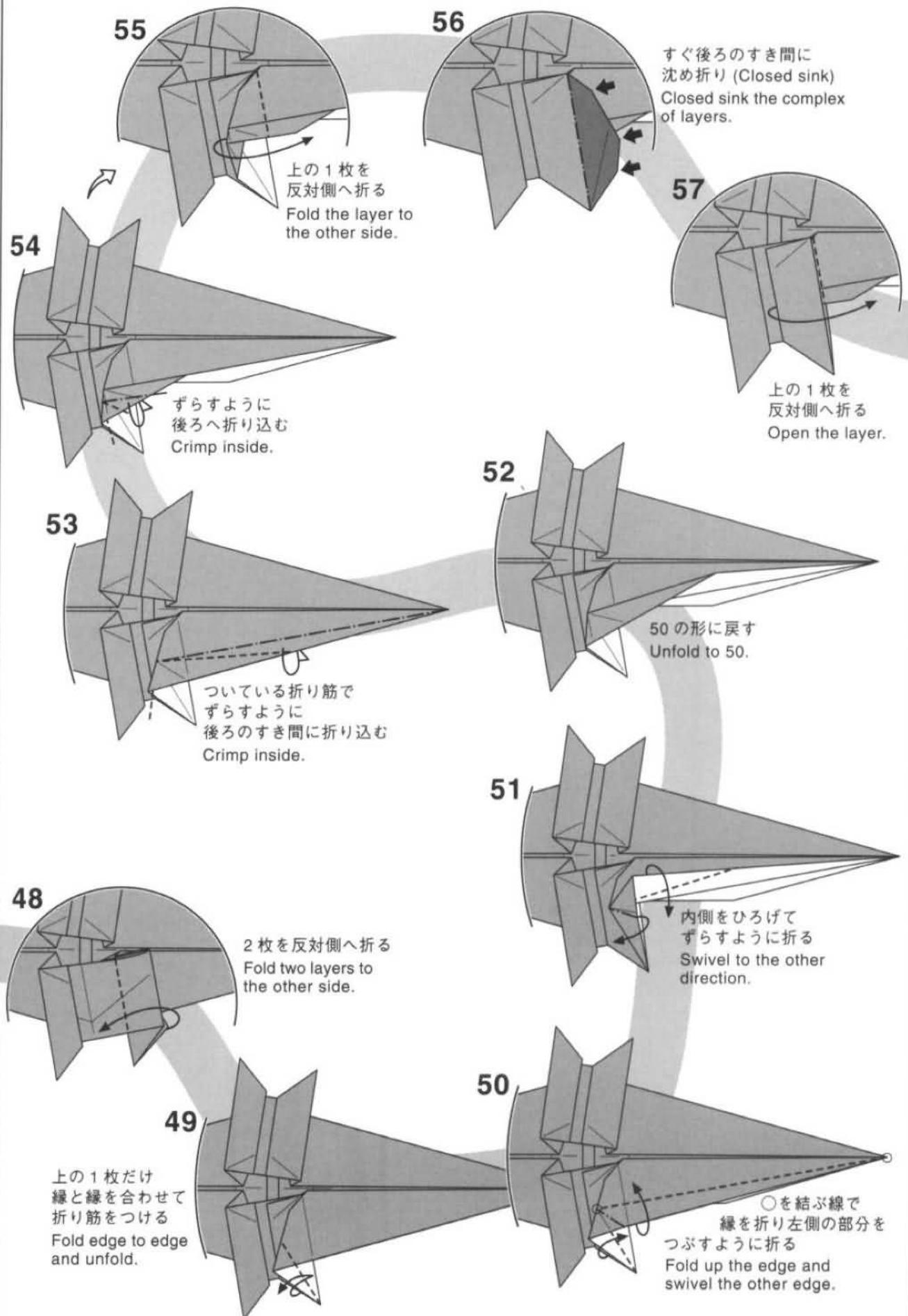


27

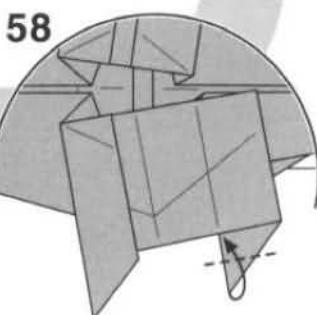
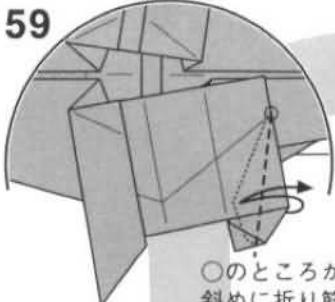
6

バロサウルス

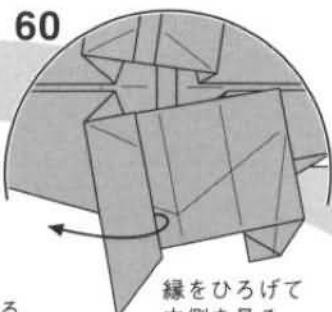




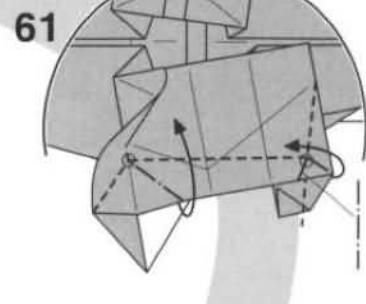
バロサウルス



○のところから
斜めに折り筋をつける
Crease as shown.

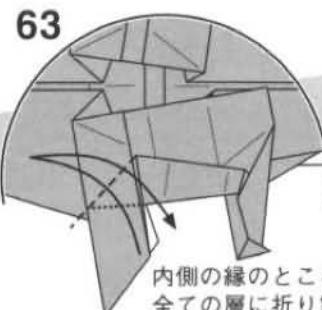
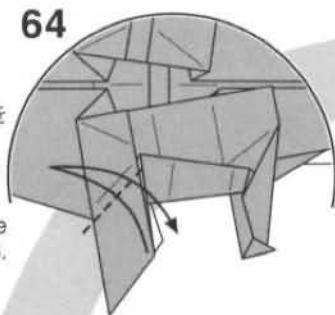


縁をひろげて
内側を見る
Open the layer.

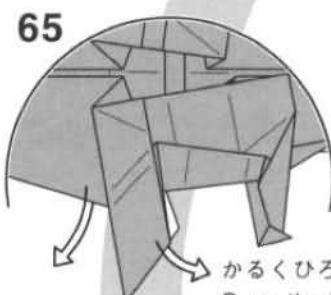


カドを斜めに折る
Fold the corner down.

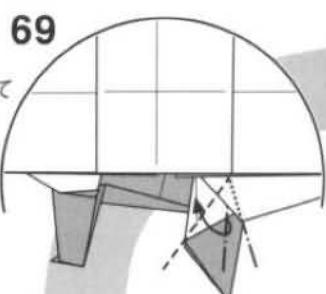
63 でつけた
折り筋の下に
平行な折り筋を
つける
Make another
crease line
parallel with the
line made in 63.



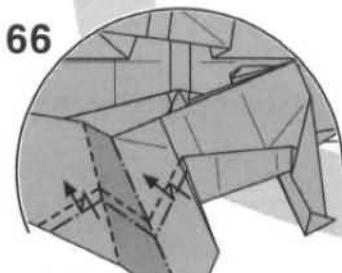
内側の縁のところで
全ての層に折り筋を
つける
Crease all layers
along the inner
edge.



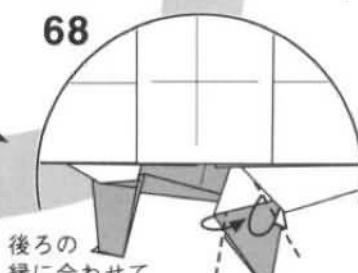
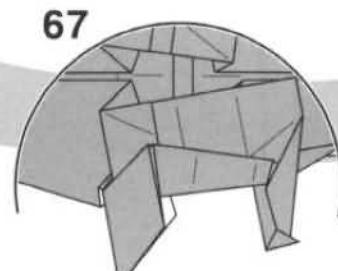
かるくひろげる
Open the layer.



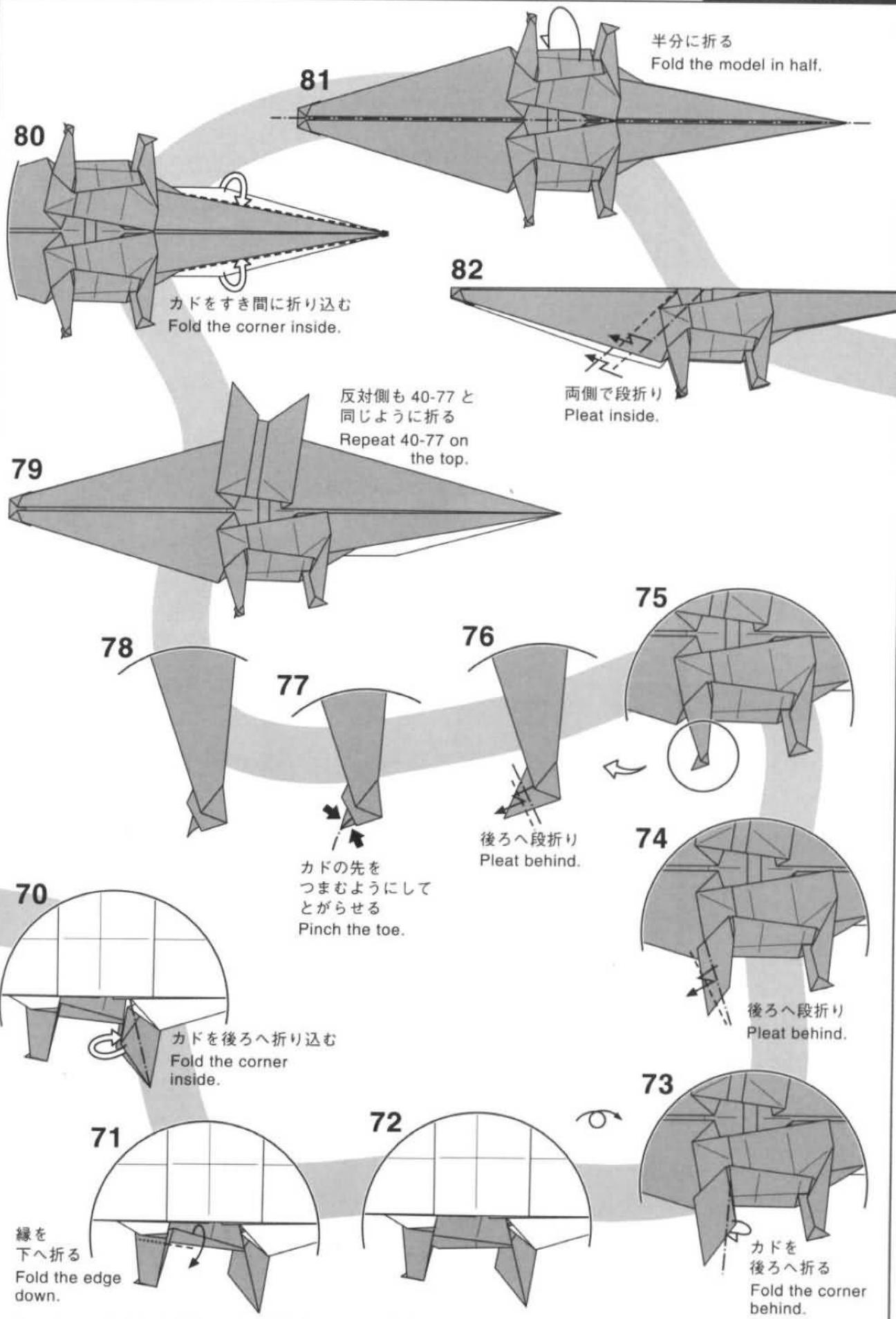
縁と縁を合わせて
中わり折りする
ように折る
Inside reverse
fold.



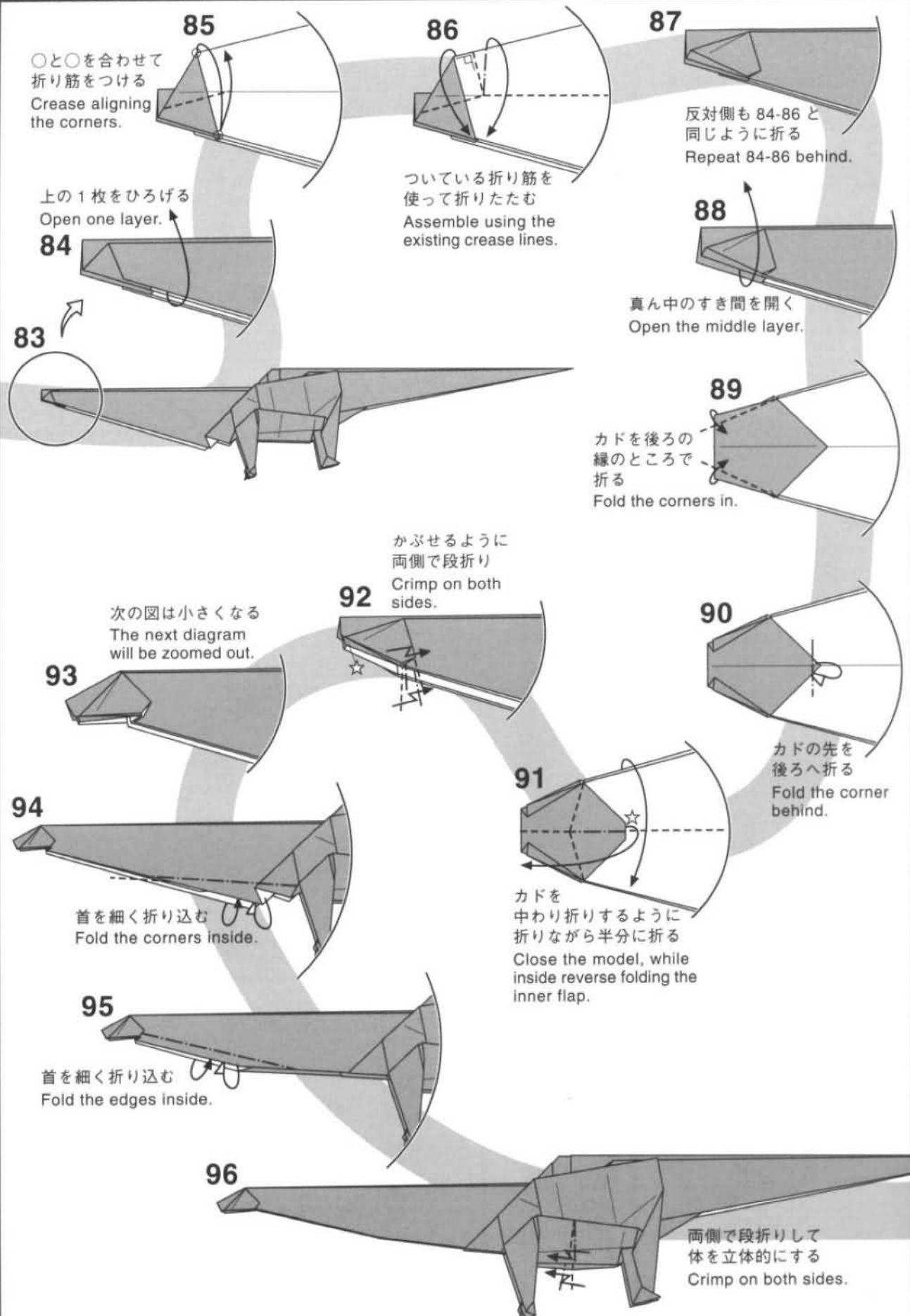
ついている
折り筋で
段折りしながら折りたたむ
Pleat and flatten the model.



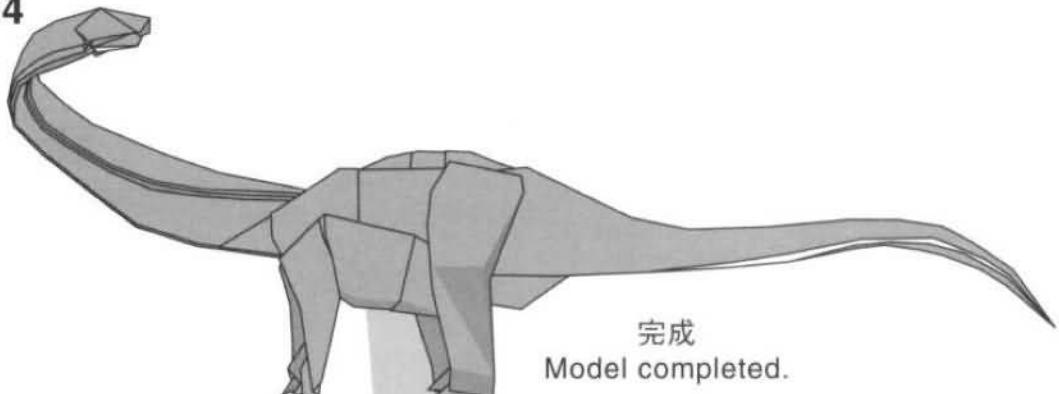
後ろの
縁に合わせて
ずらすように折る
Swivel aligning the edges.



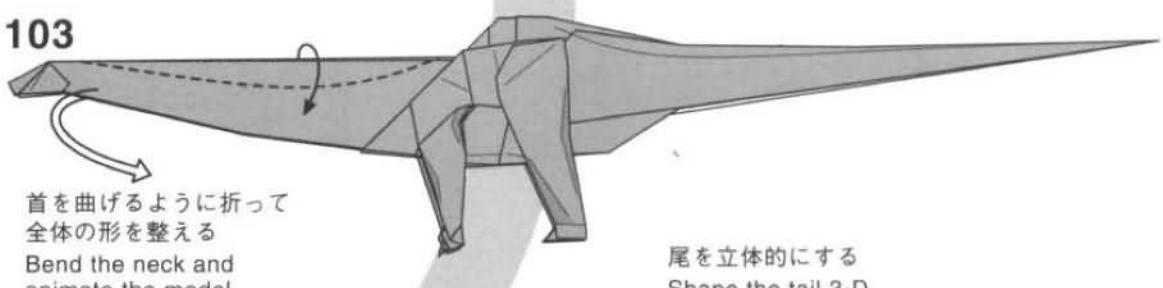
バロサウルス



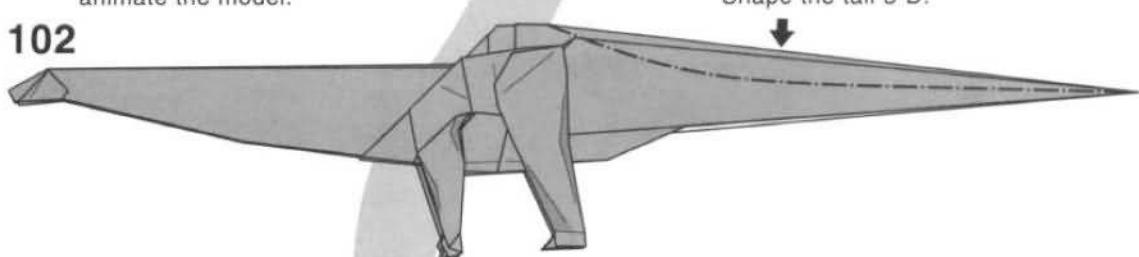
104



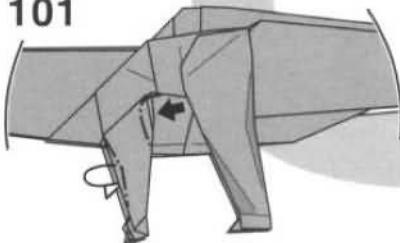
103



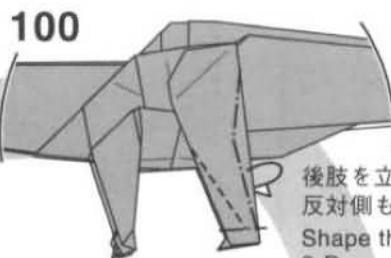
102



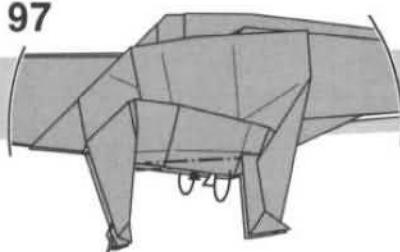
101



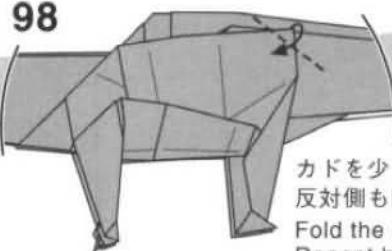
100



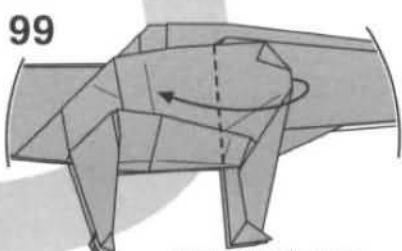
97



98



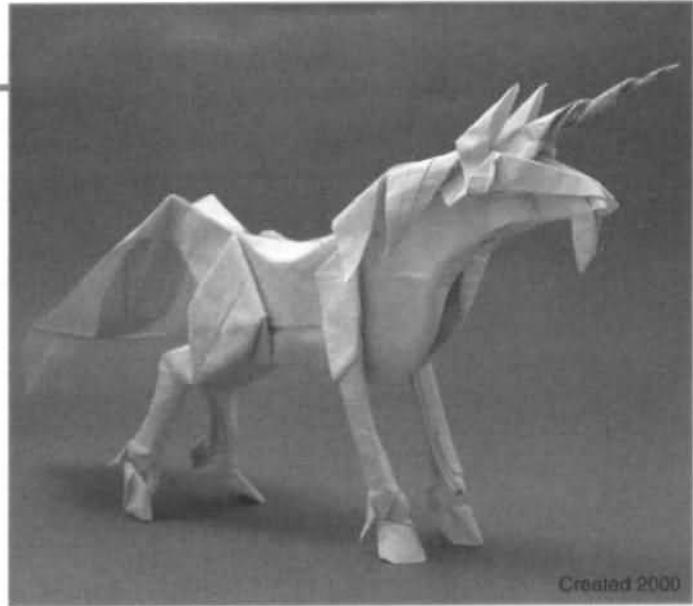
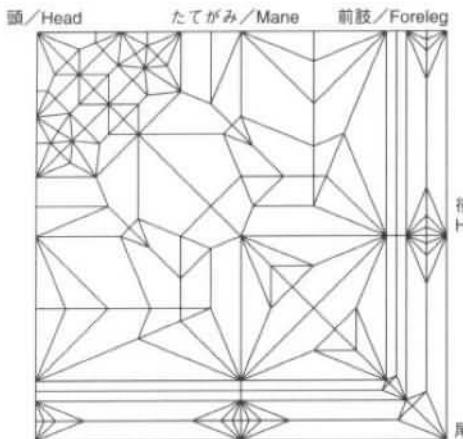
99



ユニコーン

ユニコーン

Unicorn



Created 2000

1 ラストなどのユニコーンは、多くの場合長いたてがみや尾をもつ優雅な姿で描かれています。この作品はそといった部分を折り出すことができないかと試してみたもので、毛をカドに置き換えて表現しています。

この作品ではたてがみ用に4つのカドを折り出しているだけですが、題材によってはさらに多数のカドが必要になることもあります。カドだけで形を作ろうとすると、紙の厚みなどでどうしても色々な部分に無理が出てしまう場合もありますが、私はとりあえずやってみればいいのではと思います。それが良いか悪いかは実際に完成してみないと分かりません。

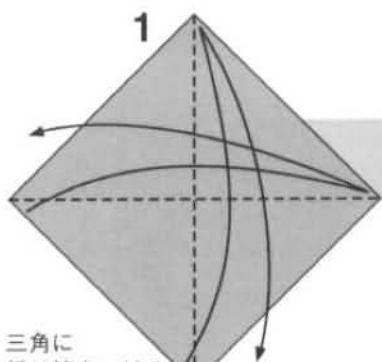
22.5度の基本構造のまわりにヒダを追加して作られているのは、足の毛の部分を折り出すのが目的なのですが、実はもうひとつ重要な意味があります。折り紙で普通にカドを折り出すと尖った形になりますが、題材によってはカドの先端にボリュームの必要な場合があります。カドの先端を折り込むことで対処されることが多いのですが、問題は折り込んだ分カドが短くなってしまうことです。カドの長さが少し変わるだけでずいぶんとイメージが変わることもありますので、あらかじめ仕込みで余裕を持たせておくというのが効果的です。この作品ではヒダを埋め込んで、先端を四角くし、ひづめを折り出すためのボリュームをつけています。

Unicorns in picture books are usually with curled mane and tail. I tried this with this model, folding them with flaps.

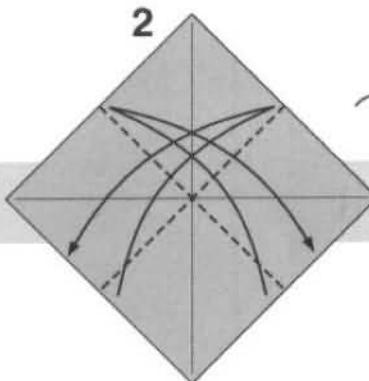
Four flaps were used for the mane. Of course, it is theoretically possible to use as many flaps as possible for another model, but this probably will give the paper stress with thickness of layers. However, giving it a try is certainly better than not trying, and you can always think it over.

The model is based on the pleated 22.5° structure, to fold fur around the foot. Another merit of doing this is that folding details from the tip of a flap will become easier by the pleats giving a room for that. The device was used for folding cubic hooves.

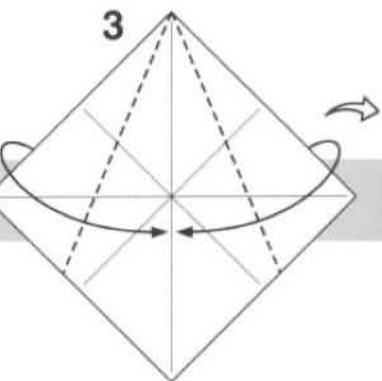
必要サイズ/Recommended
Size of Sheet : 35×35cm



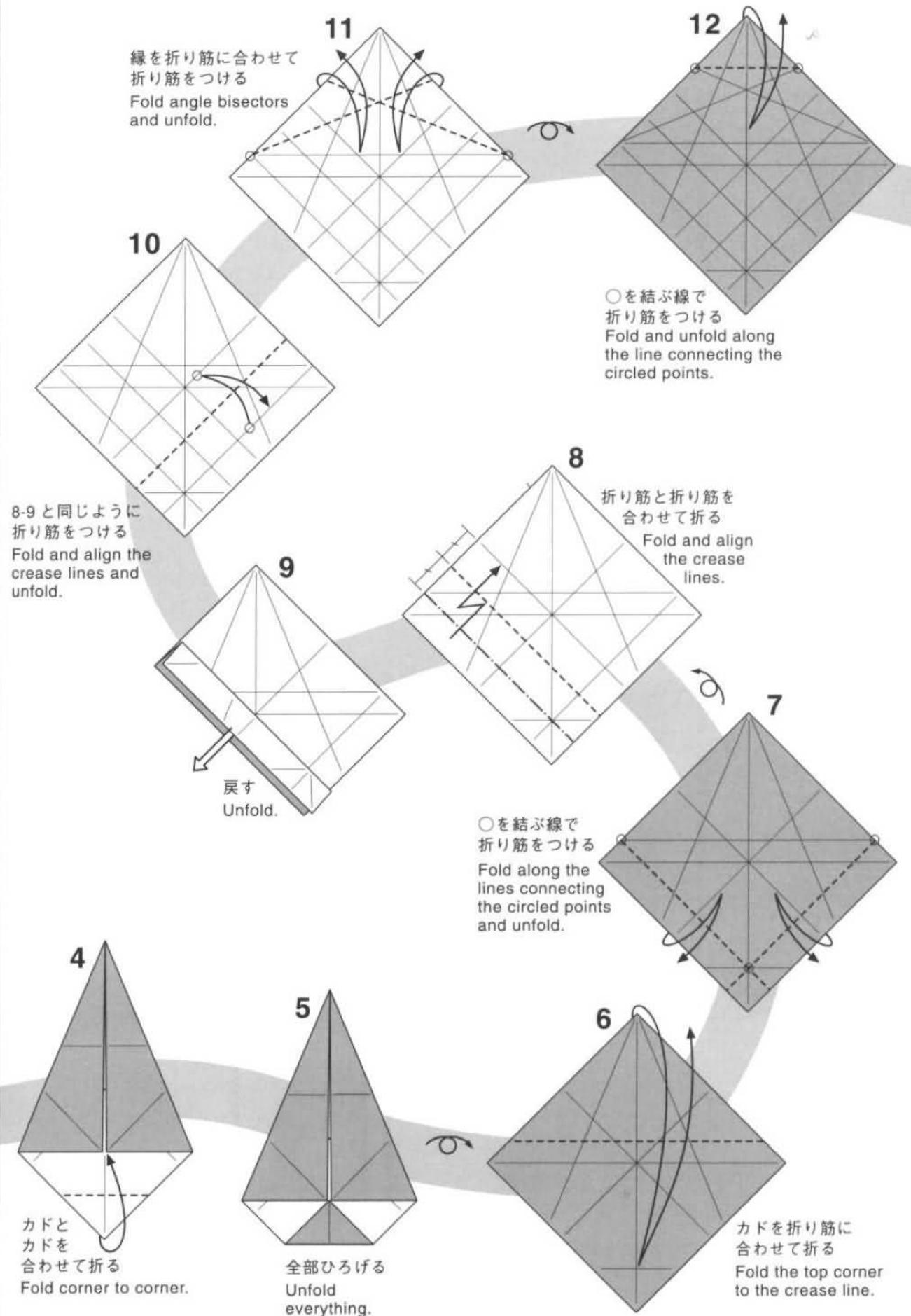
三角に
折り筋をつける
Color side up.
Fold diagonals and unfold.

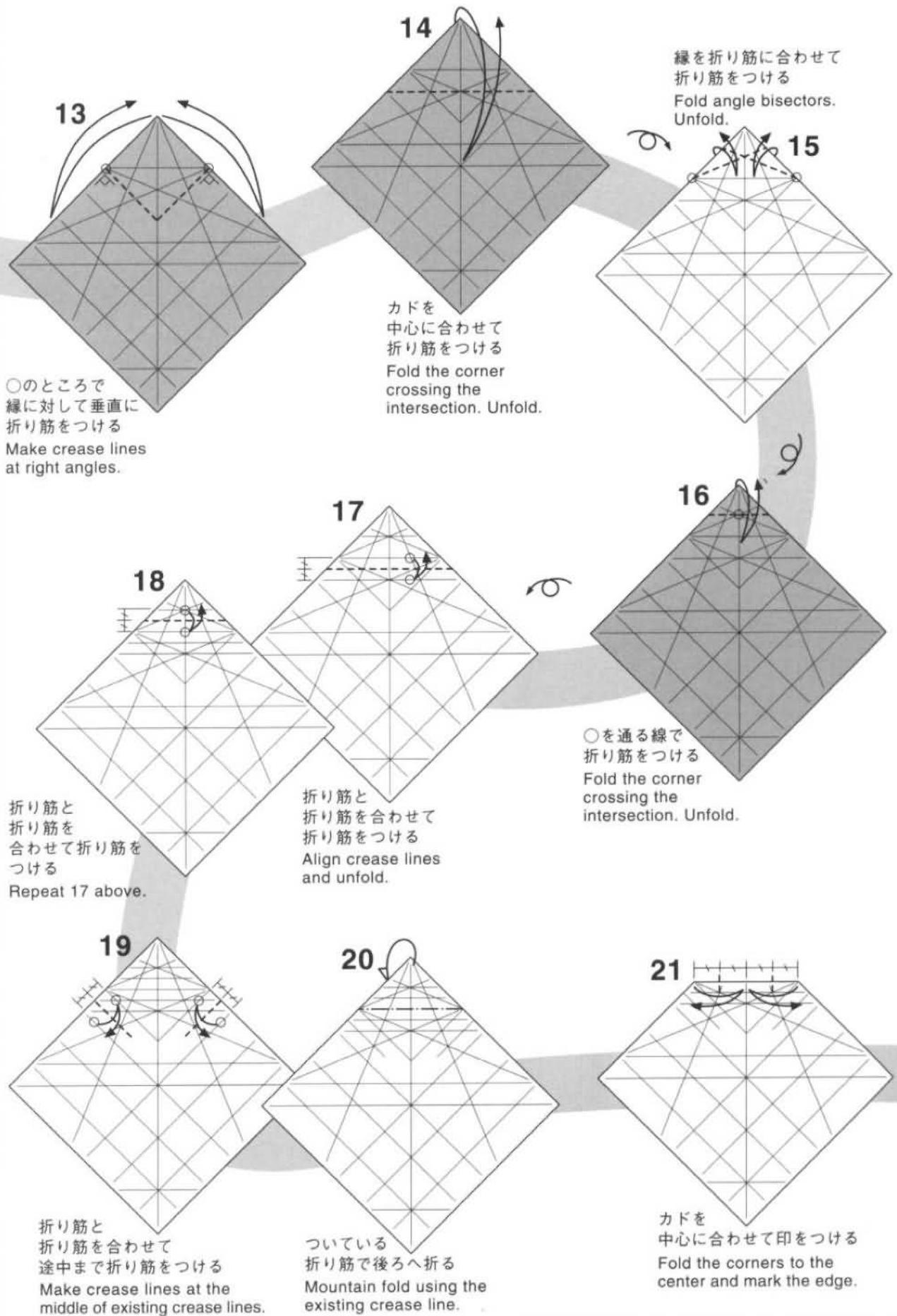


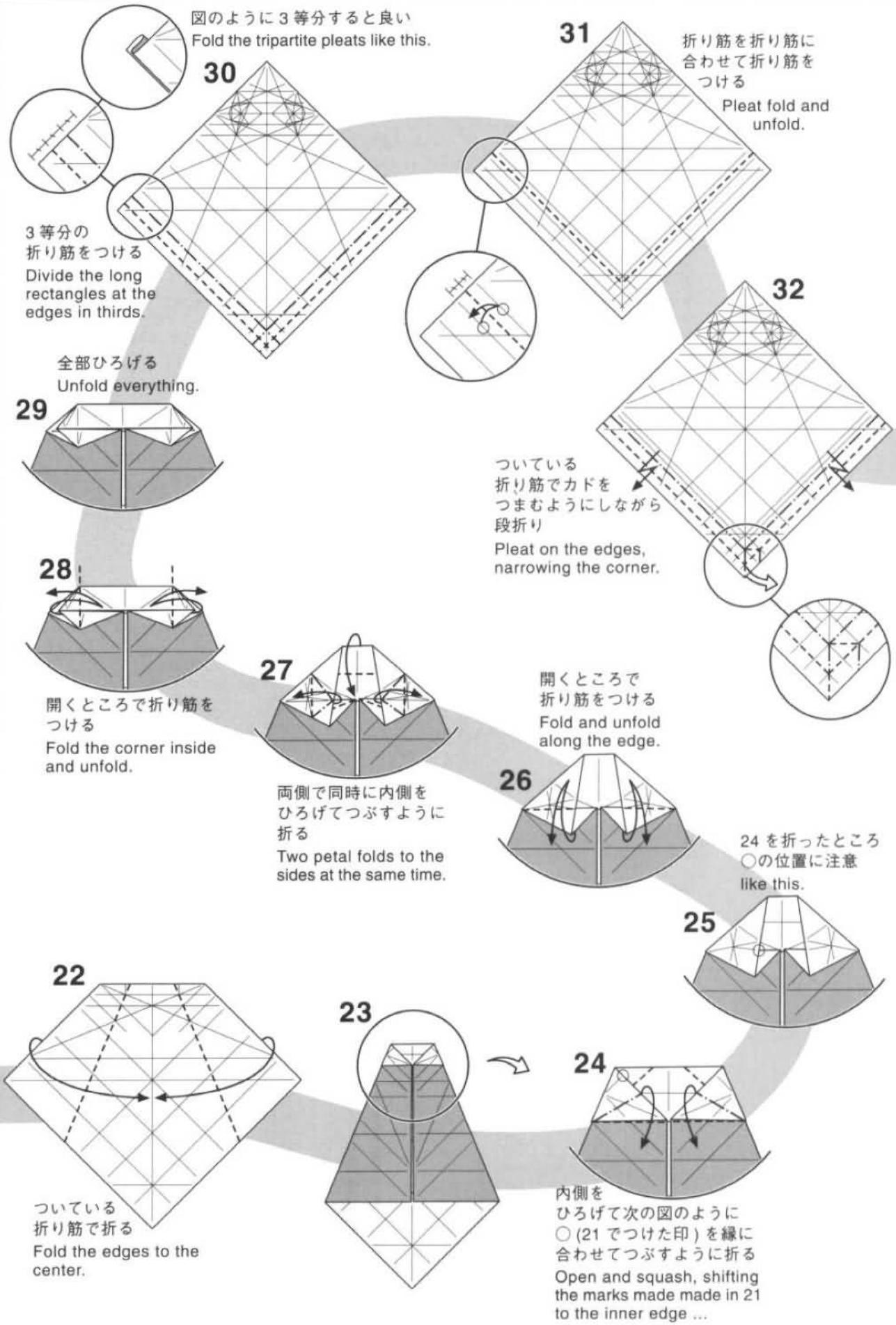
半分に折り筋をつける
Fold in half and unfold.

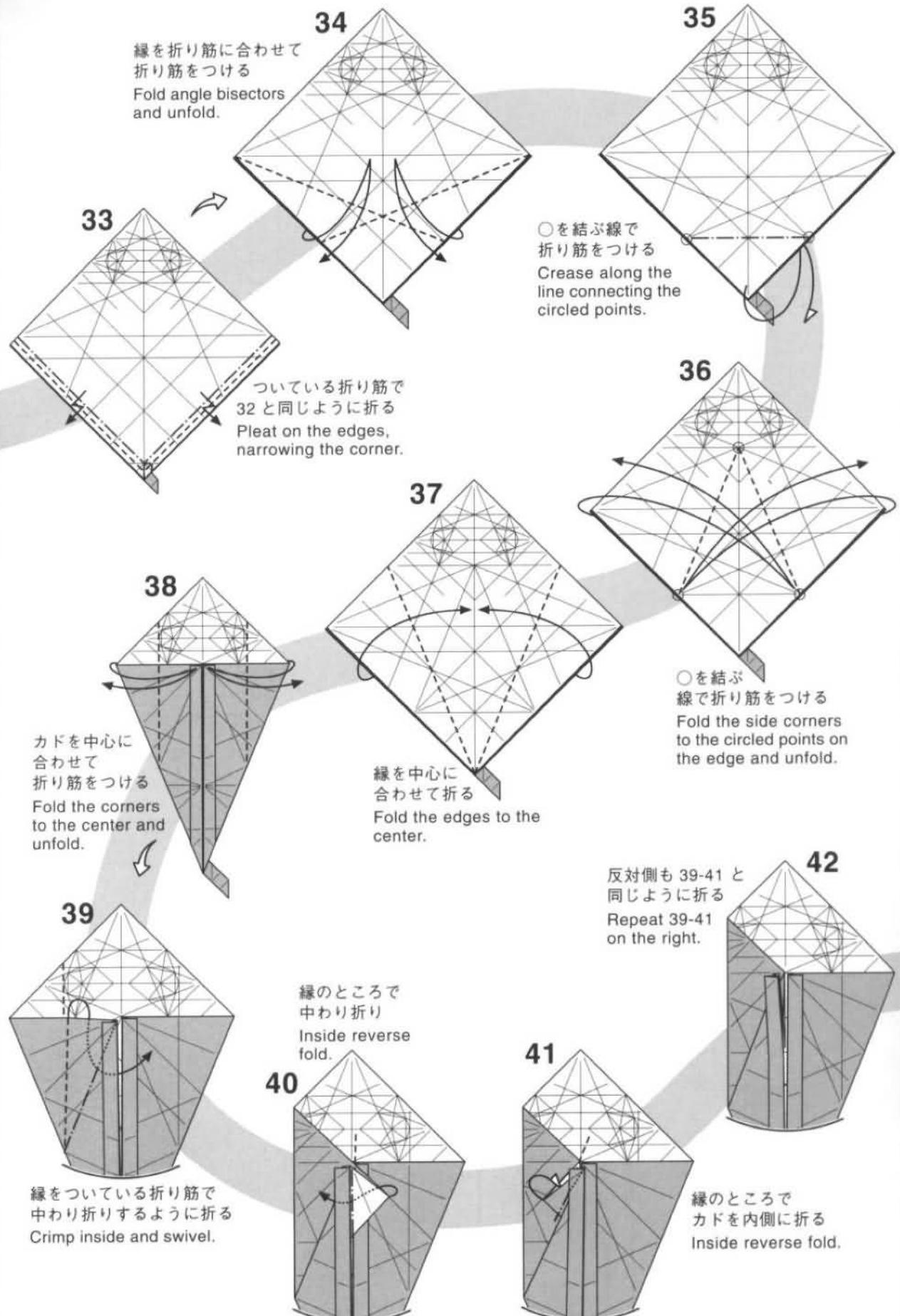


縁を中心に行わせて折る
Fold edges to the center.



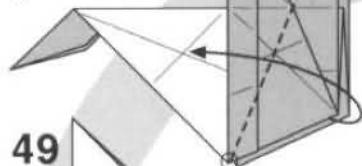






50

○を結ぶ線で
カドを折る
起き上がってきた
縁は折らない
Fold the corner up
along the line
connecting circled
points. Do not
squash the raised
edge.



51

しっかりと
折り筋を
つけてから戻す
反対側も
50-51と同じ
Crease firmly
and unfold.
Repeat 50-51
behind.

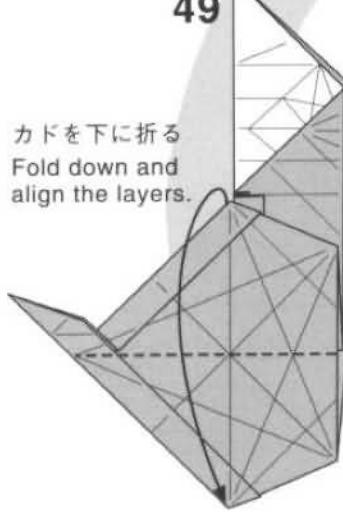


52

縁を
それぞれ
折り筋に合わせて
折り筋をつける
Fold the edge to the
crease line and unfold.

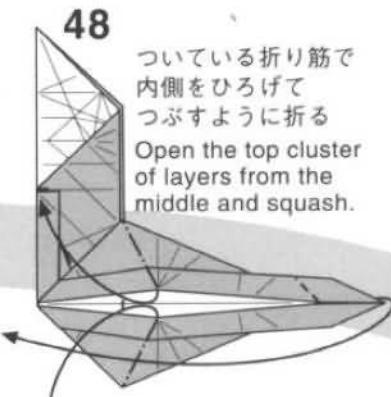
49

カドを下に折る
Fold down and
align the layers.



48

ついている折り筋で
内側をひろげて
つぶすように折る
Open the top cluster
of layers from the
middle and squash.

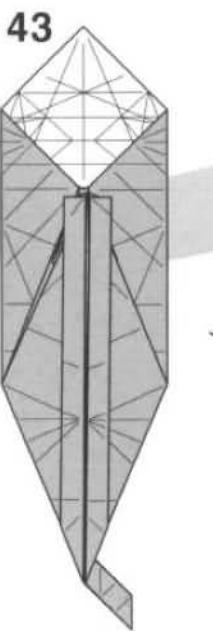


47

ついている
折り筋で
内側をひろげて
つぶすように折る
Open the layers
and squash.

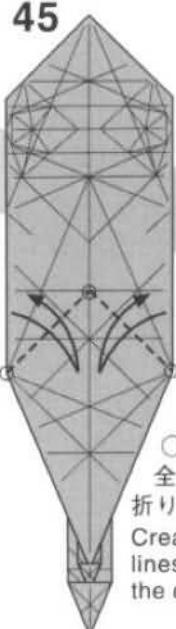


44



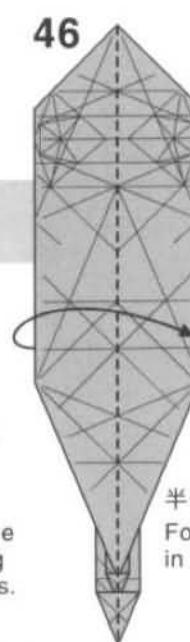
カドの先をひろげて
つぶすように折る
内側の小さいカドも
同じように折る
Open the layers and
squash two corners,
one of which is hidden.

45

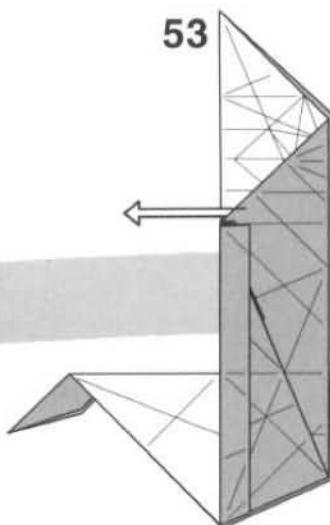


○を結ぶ線で
全ての層に
折り筋をつける
Crease along the
lines connecting
the circled points.

46

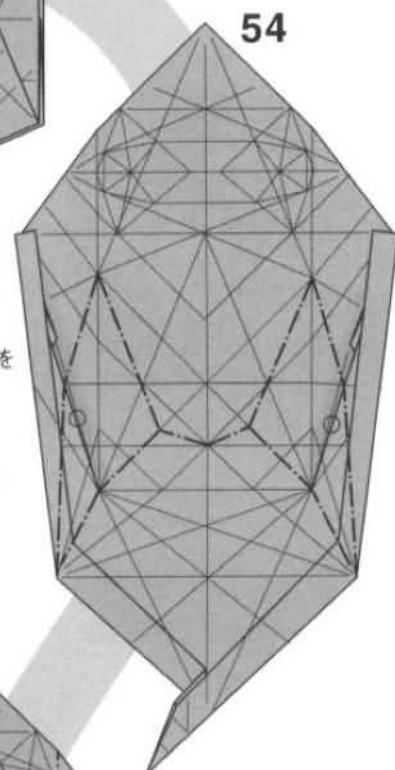


半分に折る
Fold the model
in half.



53

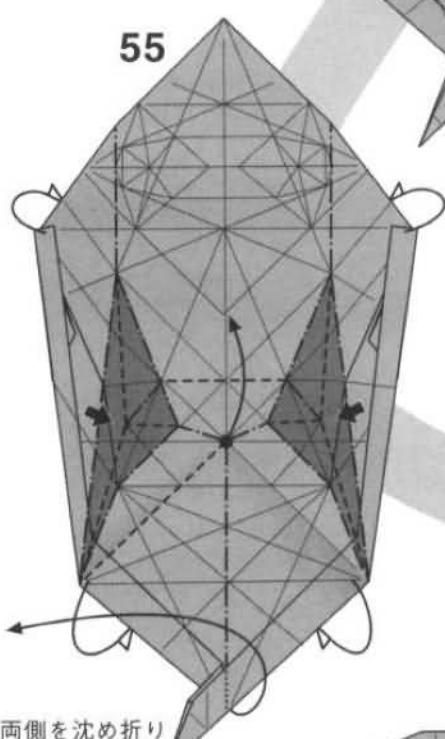
次の図のようにひろげる
Open the model.



54

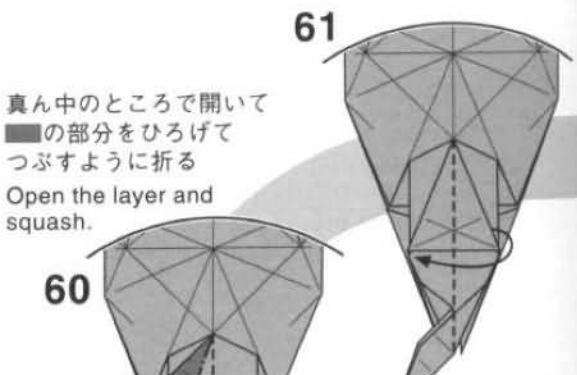
○の部分はひろげないようにする
図のように折り筋をつけなおす

Do not open the circled edges.
Crease as shown.



55

両側を沈め折りするように
しながら下のカドをつまむ
ように折りたたむ
Assemble the model, open sinking the darkened areas.



61

真ん中のところで開いて
■の部分をひろげて
つぶすように折る
Open the layer and squash.

60

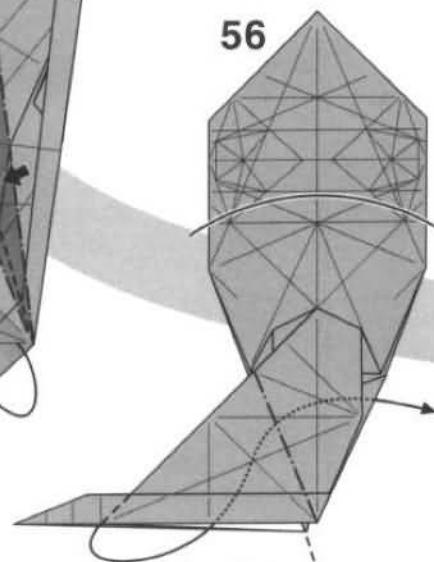
カドを
反対側に折る
Fold the layer to the left.

59



58

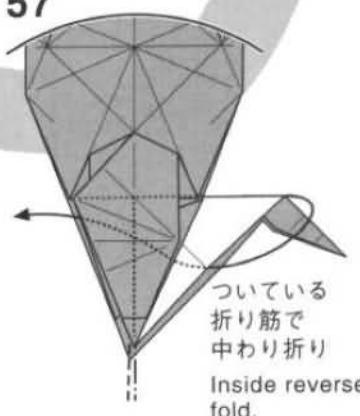
縁のところで
カドを内側に折る
反対側も同じ
Inside reverse fold.
Repeat behind.



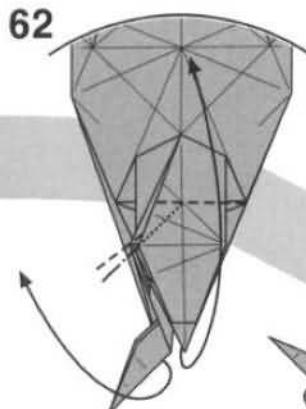
56

ついている
折り筋で
中わり折り
Inside reverse fold.

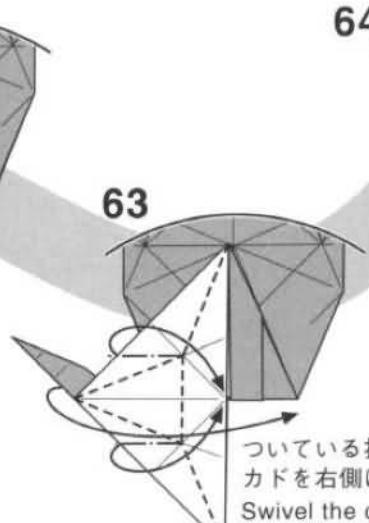
57



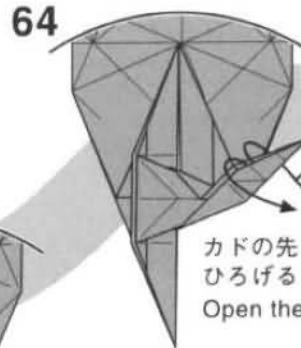
ついている
折り筋で
中わり折り
Inside reverse
fold.



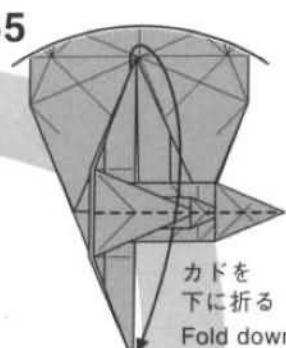
カドを上に折って
次の図のように開く
Open the bottom
layers.



ついている折り筋を使って
カドを右側に折りたたむ
Swivel the corner to the
other side, using the
existing crease lines.



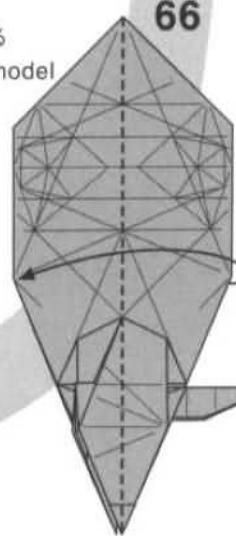
カドの先を
ひろげる
Open the layers.



カドを
下に折る
Fold down the corner.

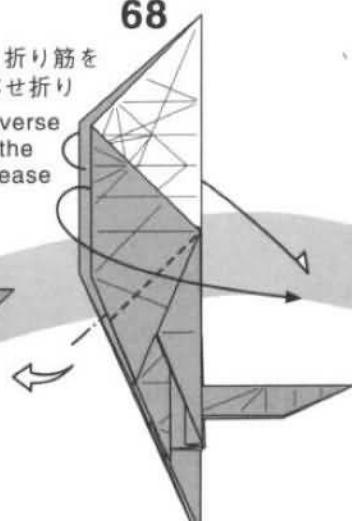
半分に折る
Fold the model
in half.

66



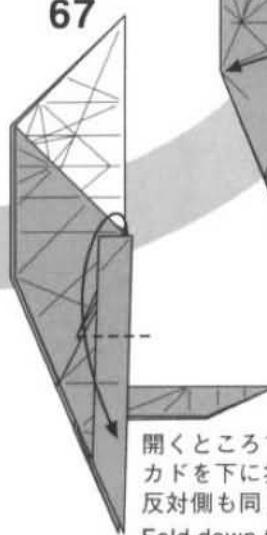
ついている折り筋を
使ってかぶせ折り
Outside reverse
fold using the
existing crease
lines.

68



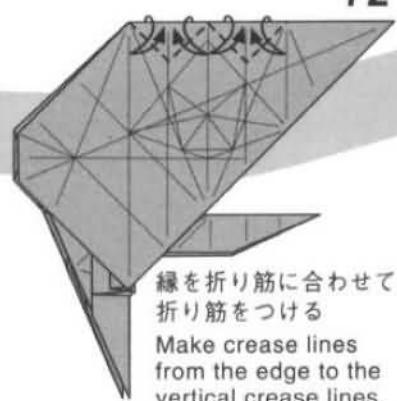
内側の紙を引き出す
平らにはならない
Pull out the hidden layer.
The model will not lie
flat.

67



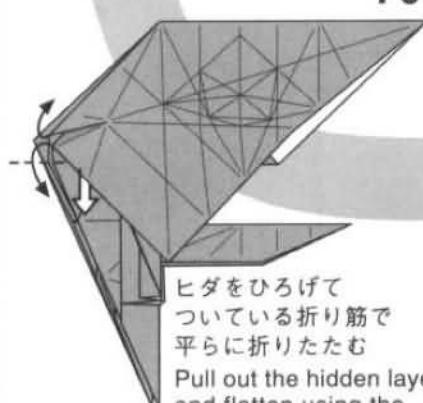
開くところで
カドを下に折る
反対側も同じ
Fold down the top flap.
Repeat behind.

72



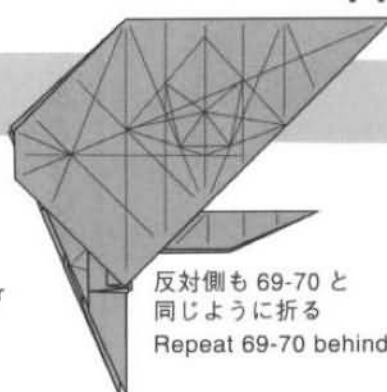
縁を折り筋に合わせて
折り筋をつける
Make crease lines
from the edge to the
vertical crease lines.

70



ヒダをひろげて
ついている折り筋で
平らに折りたたむ
Pull out the hidden layer
and flatten using the
existing crease lines.

71



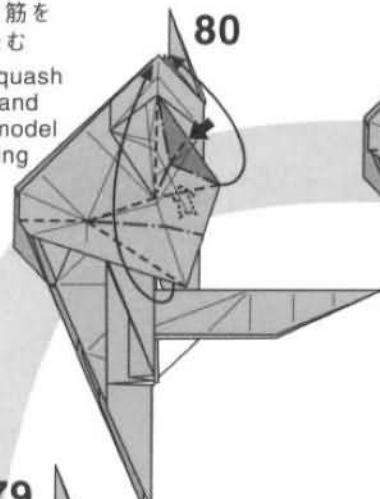
反対側も 69-70 と
同じように折る
Repeat 69-70 behind.

ユニコーン

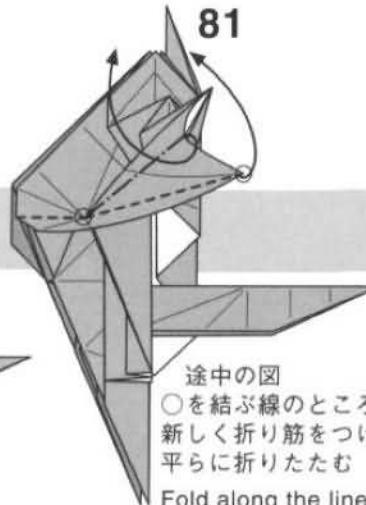
内側をひろげて■の部分をつぶしながらついている折り筋を使って折りたたむ

Open inside, squash the gray area, and assemble the model using the existing crease lines.

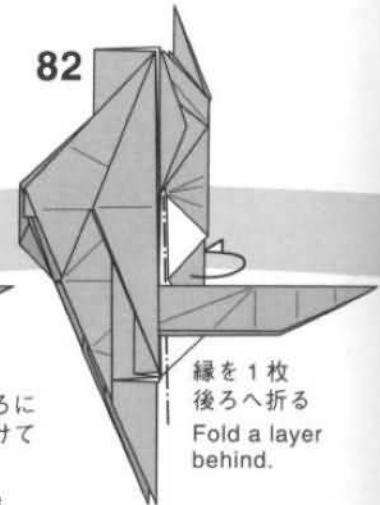
80



81

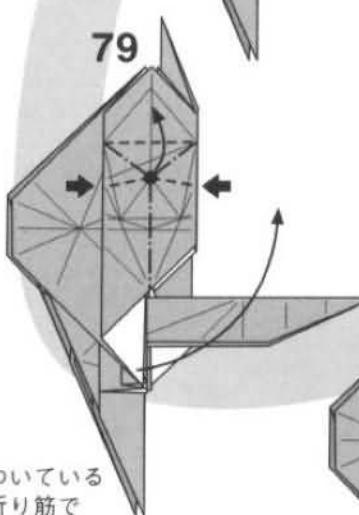


82



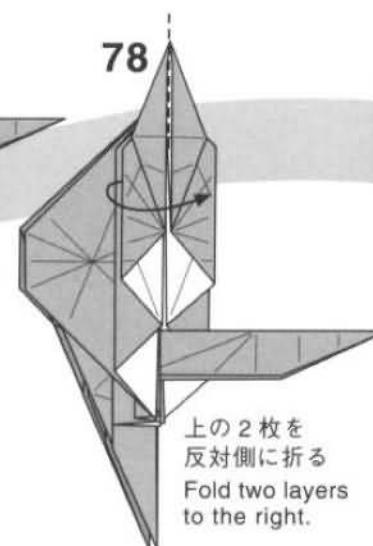
途中の図
○を結ぶ線のところに新しく折り筋をつけて平らに折りたたむ
Fold along the line connecting circled points and flatten.

79



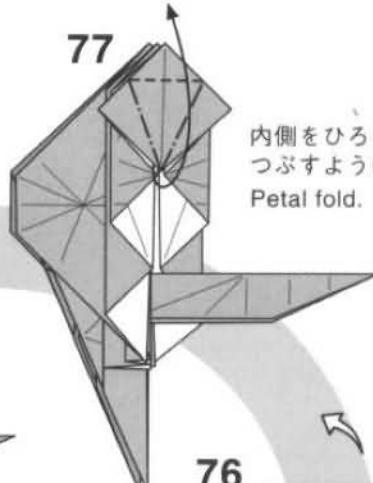
ついている
折り筋で
中心の部分をつまむ
ようにして持ち上げる
Pinch the layers in
the middle and
fold the middle
portion up.

78



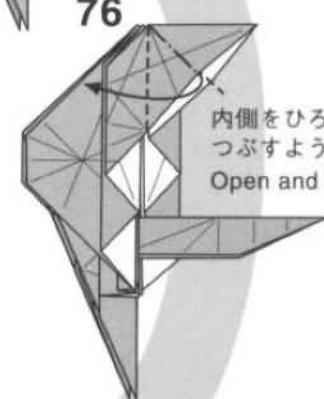
上の2枚を
反対側に折る
Fold two layers
to the right.

77



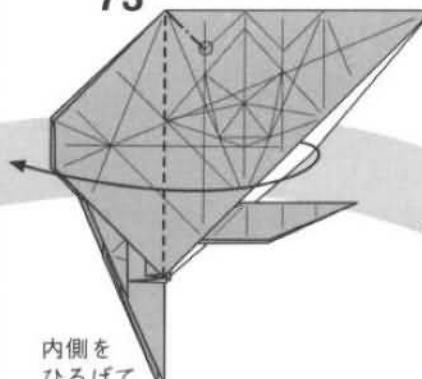
内側をひろげて
つぶすように折る
Petal fold.

76



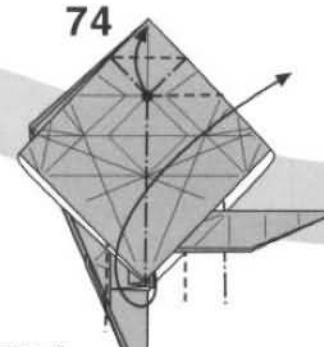
内側をひろげて
つぶすように折る
Open and squash.

73



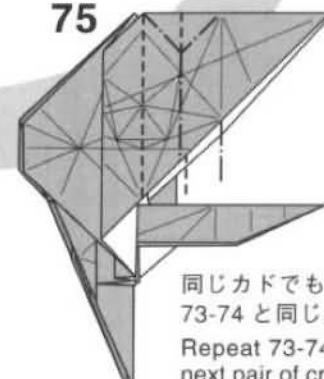
内側を
ひろげて
○のところまで
つぶすように折る
Open the corner and
squash the top portion.

74

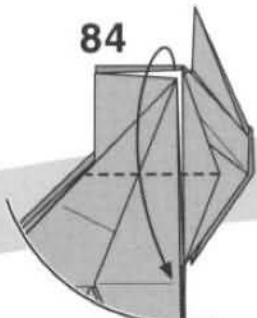


ついている
折り筋でカドを
つまむようにして折りたたむ
Swivel and fold the
corner in half.

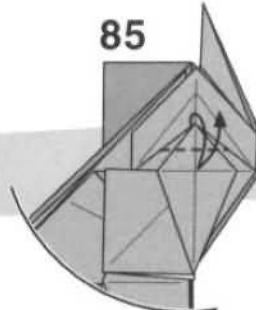
75



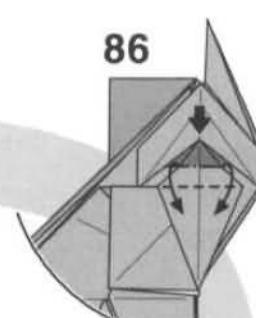
同じカドでもう1回
73-74と同じように折る
Repeat 73-74 on the
next pair of crease lines.



開くところで
カドを下に折る
Fold down the
corner.

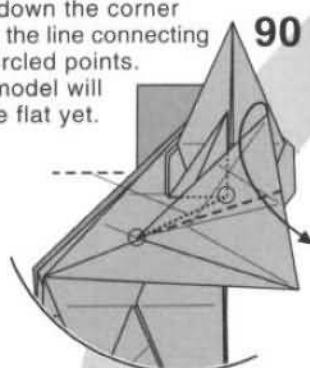


カドを折り筋に合わせて
折り筋をつける
Fold the corner to the
intersection. Unfold.



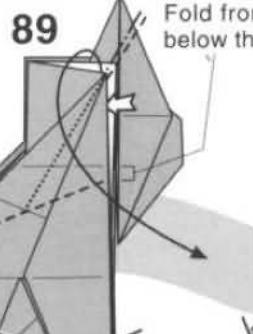
カドをひろげて
つぶすように折る
Spread sink.

○を結ぶ線で
次のカドを斜めに折る
まだ平らにはならない
Fold down the corner
along the line connecting
the circled points.
The model will
not lie flat yet.



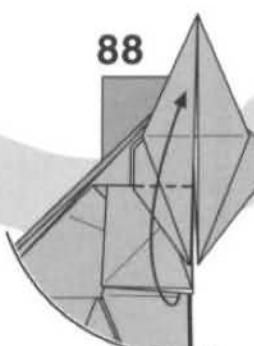
内側をひろげて
つぶすように折る
平らにはならない
Open and squash
the corner. The
model will not lie
flat.

89

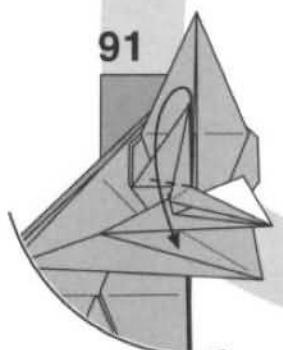


少しあげる
Fold from slightly
below the crease line.

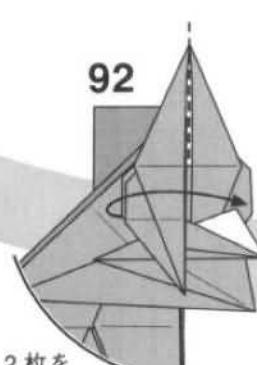
88



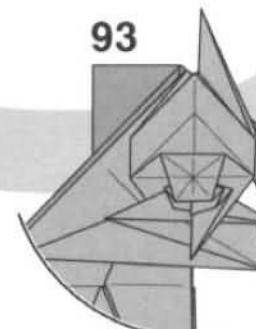
上の2枚を
反対側へ折る
Fold two layers
to the left.



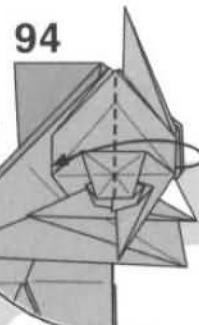
起き上がってきたカドを
平らになるように下に
折りたたむ
Fold down the corner.



2枚を
反対側に折る
Fold two layers
to the right.

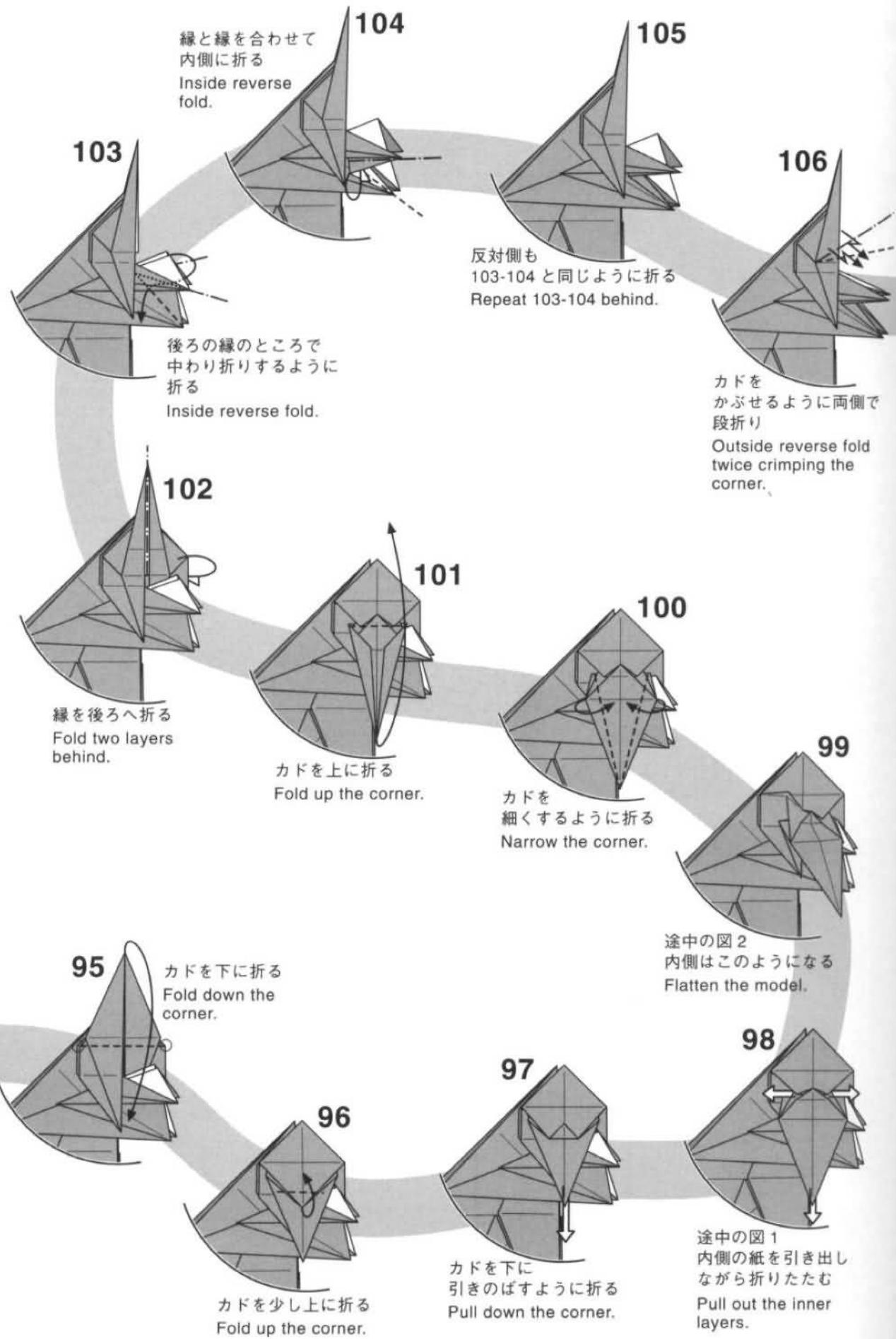


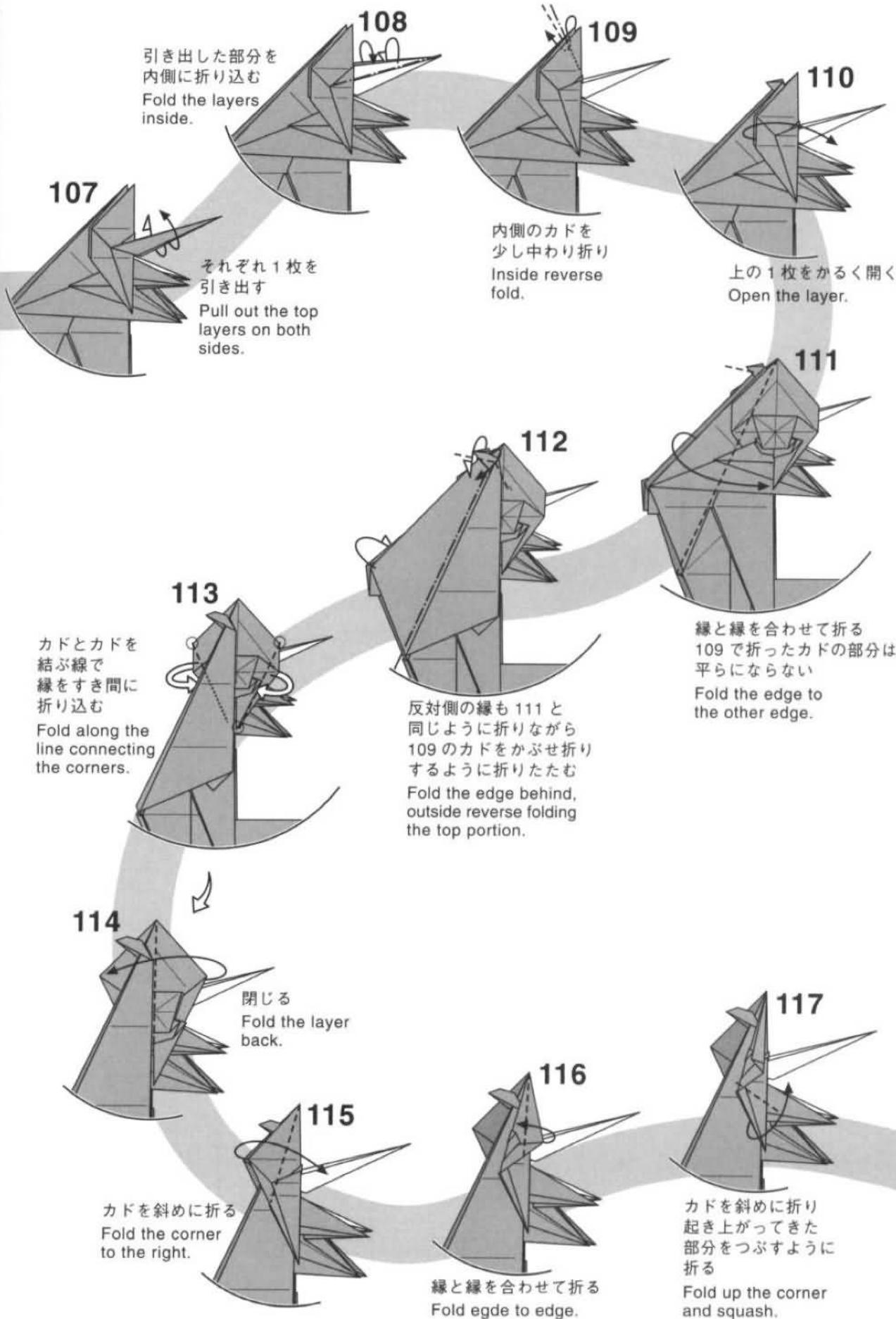
86 でつぶした部分は
図のようになっている
Make sure that the
part squashed in 86
is as shown now.



戻す
反対側も 84-92 と
同じように折る
Fold two layers to the
left. Repeat 84-92 on
the other side.

93

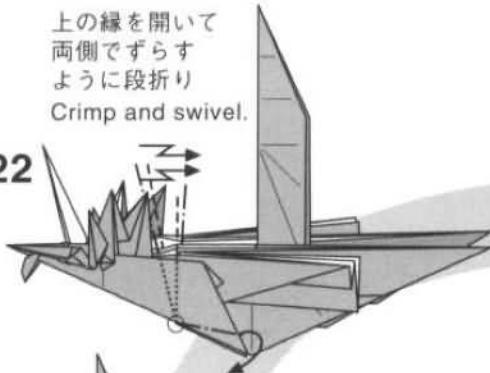




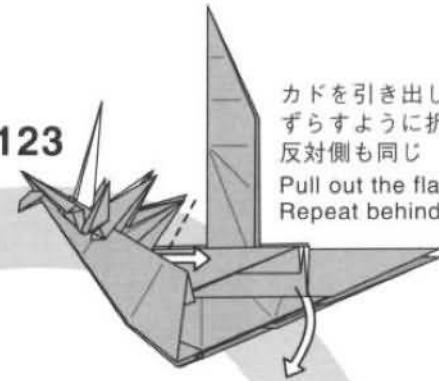
ユニコーン

上の縁を開いて
両側でずらす
ように段折り
Crimp and swivel.

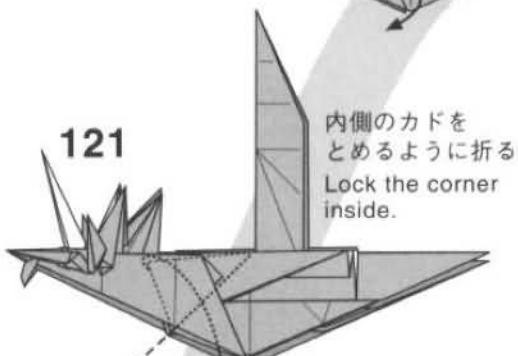
122



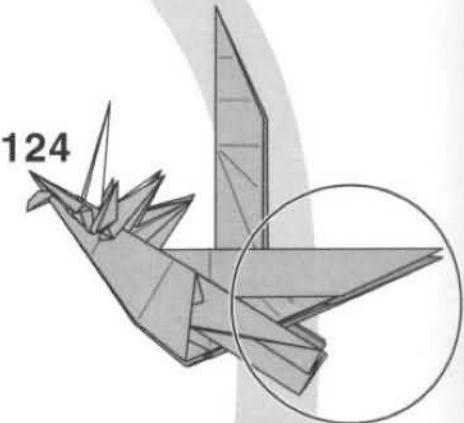
123



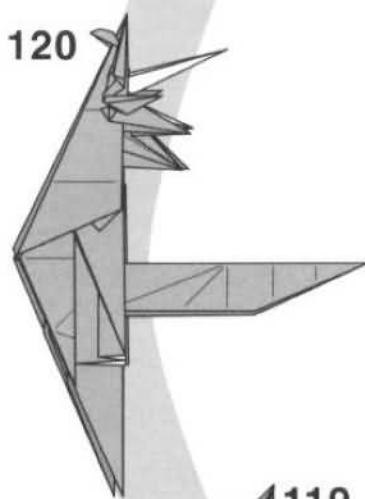
121



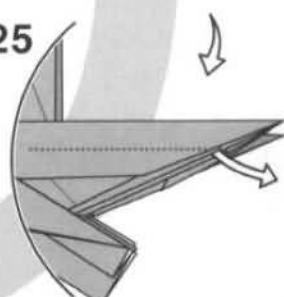
124



120

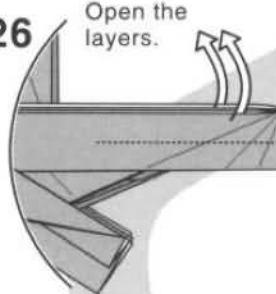


125



破かないように
注意して
ヒダを1段ひろげる
Open the
layers.

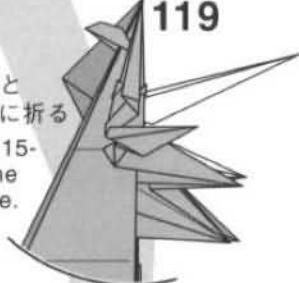
126



折りたたまれている
紙を内側の細いヒダも
一緒に引き出す
Pull out the hidden
layers.

反対側も
115-118と
同じように折る
Repeat 115-
118 on the
other side.

119



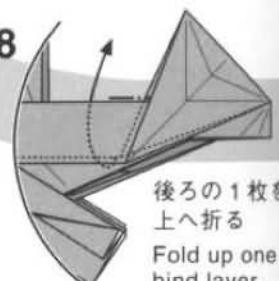
ついている線を使って
縁を折りたたむ
Fold the edges inside
and swivel the edge,
using the existing
crease lines.

118

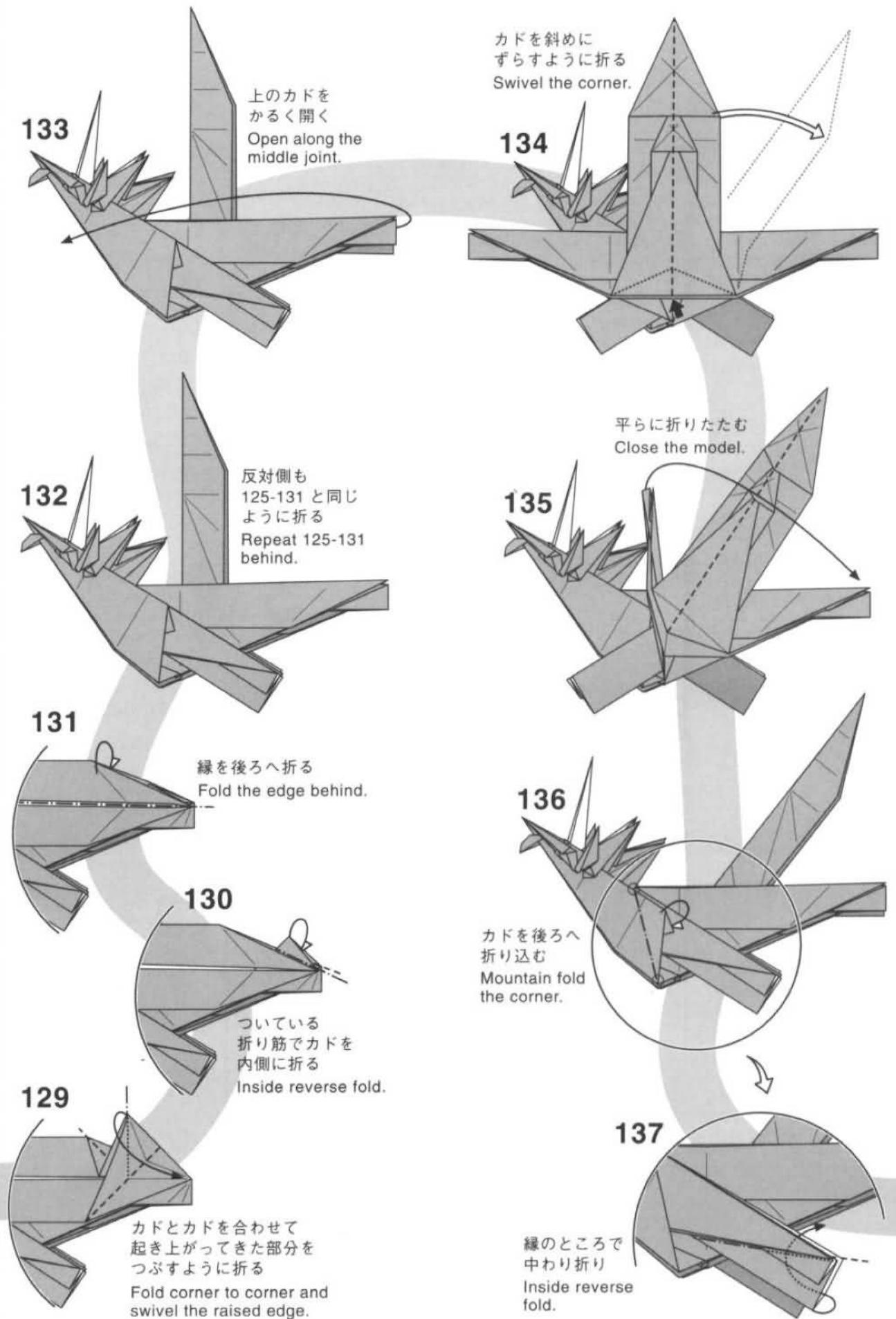


上の1枚を裏返す
ように折る
Detach one layer
and wrap the
corner with it.

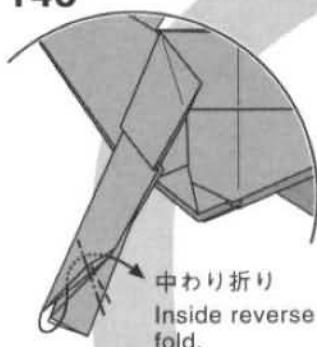
128



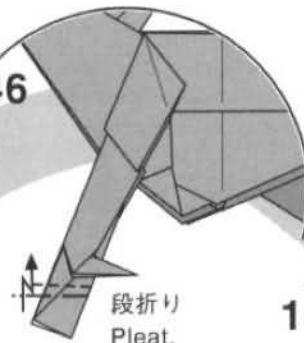
後ろの1枚を
上へ折る
Fold up one
hind layer.



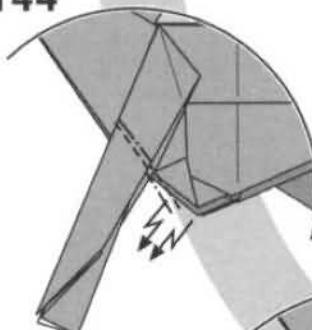
145



146



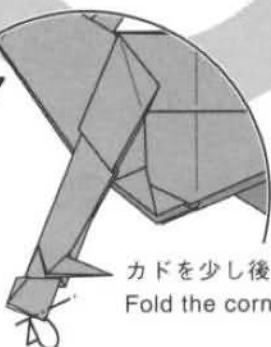
144



143



147



148



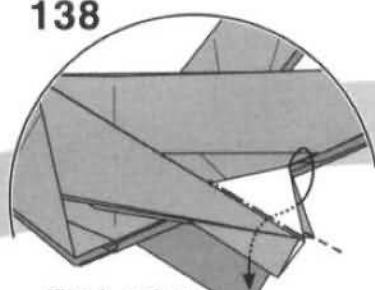
142



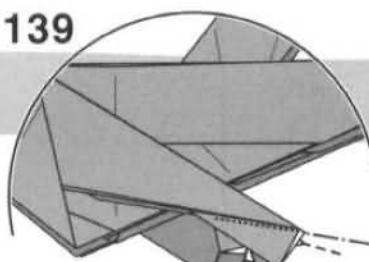
141



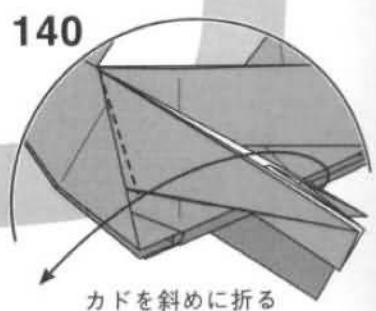
138



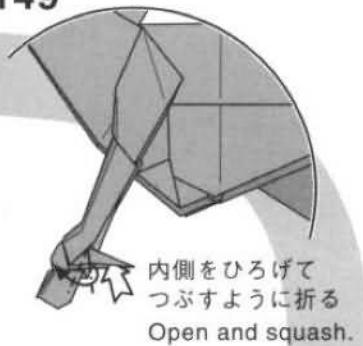
139



140



149



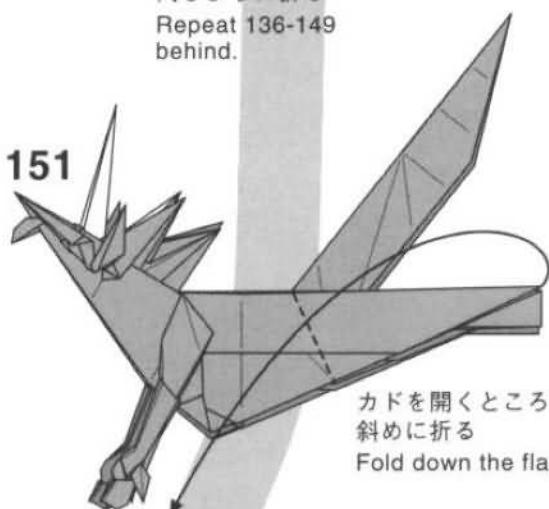
内側をひろげて
つぶすように折る
Open and squash.

150



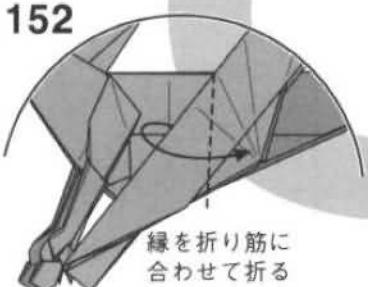
反対側も136-149と
同じように折る
Repeat 136-149
behind.

151



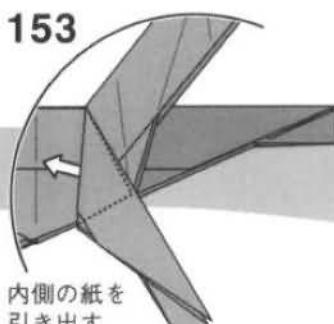
カドを開くところで
斜めに折る
Fold down the flap.

152



縁を折り筋に
合わせて折る
Fold the edge to
the crease line.

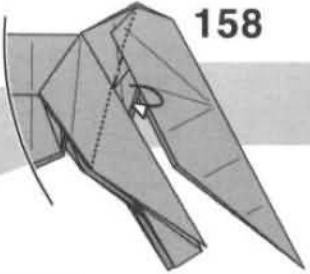
153



内側の紙を
引き出す
Pull out the
hidden layer.

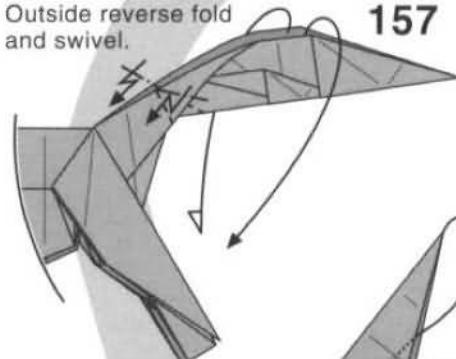
縁を内側に折り込む
反対側も同じ
Fold the edge inside.
Repeat behind.

158



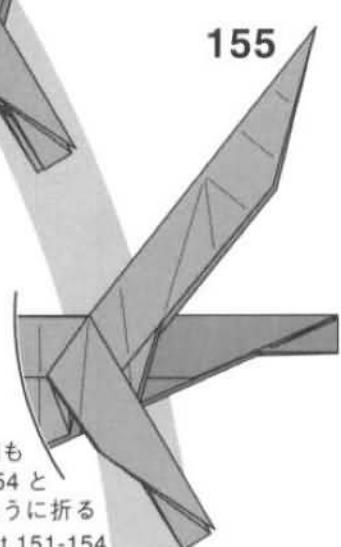
かぶせ折りするように
折りたたむ
Outside reverse fold
and swivel.

157



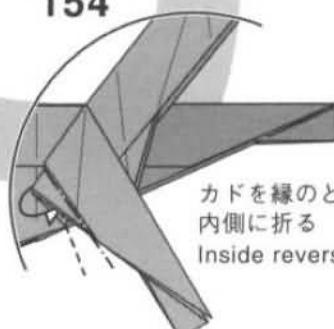
つけ根の部分だけ
中わり折り
Inside reverse fold.

155



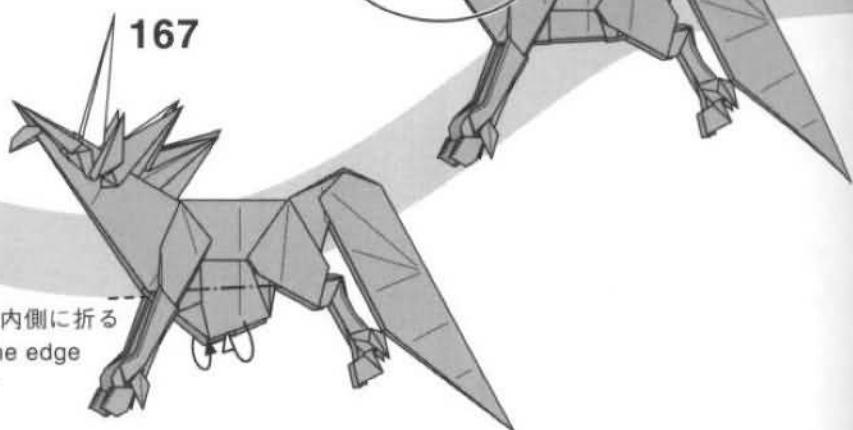
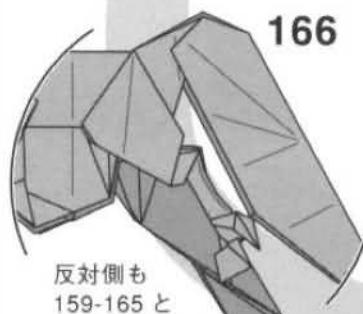
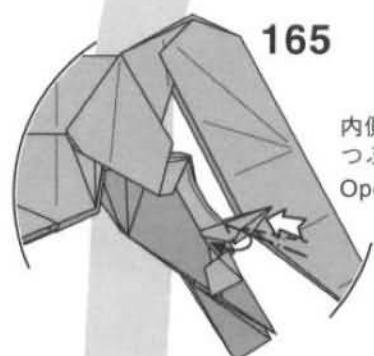
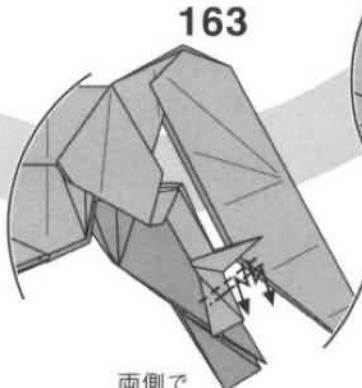
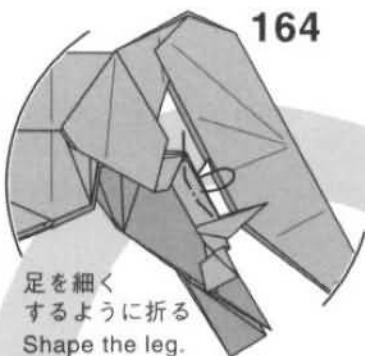
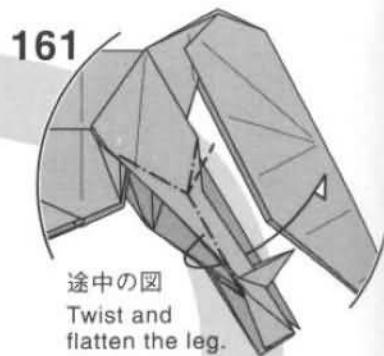
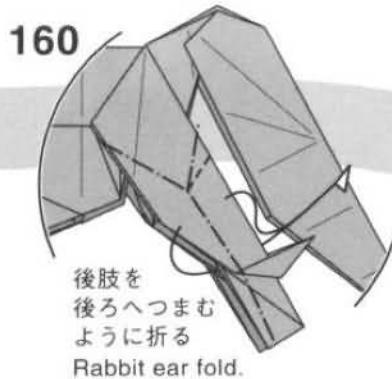
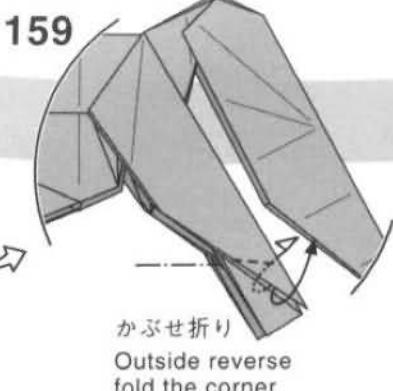
反対側も
151-154と
同じように折る
Repeat 151-154
behind.

154

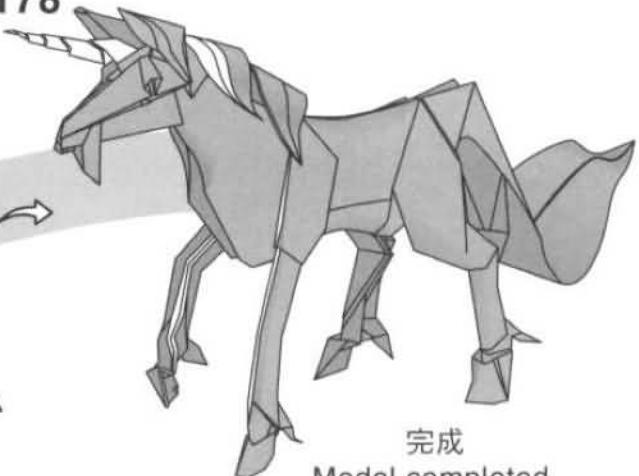


カドを縁のところで
内側に折る
Inside reverse fold.

ユニコーン



178



177

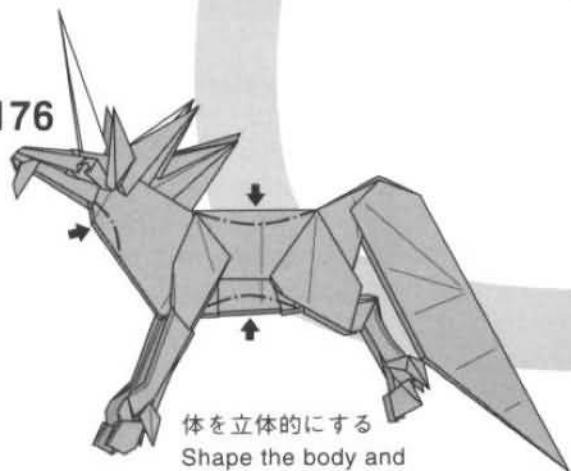
カドをねじってツノを作る
尾とたてがみをカールさせる
Twist the horn. Curl the mane and the tail.



完成
Model completed.

176

体を立体的にする
Shape the body and
make the model 3-D.



175

反対側も
173-174 と
同じように折る
Repeat 173-174
behind.



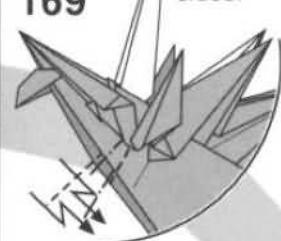
174

内側をひろげて
目を作る
Open the slot to
form an eye.



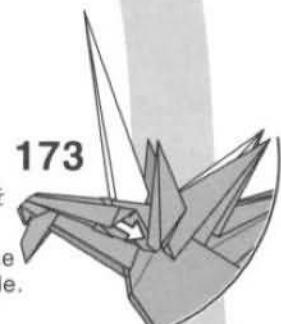
169

かぶせるように
両側で段折り
Crimp on both
sides.



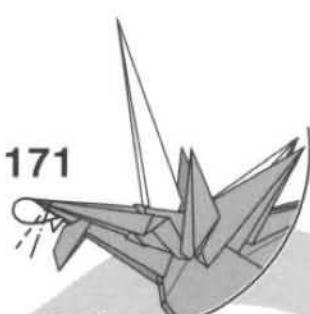
173

内側の紙を
引き出す
Pull out the
layer inside.



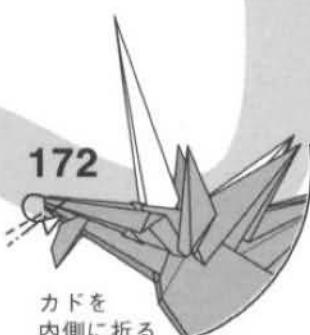
171

カドを
内側に折る
Inside reverse
fold.



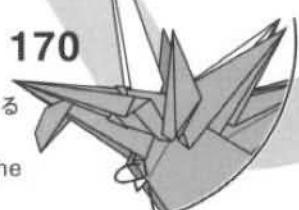
172

カドを
内側に折る
Inside reverse fold.



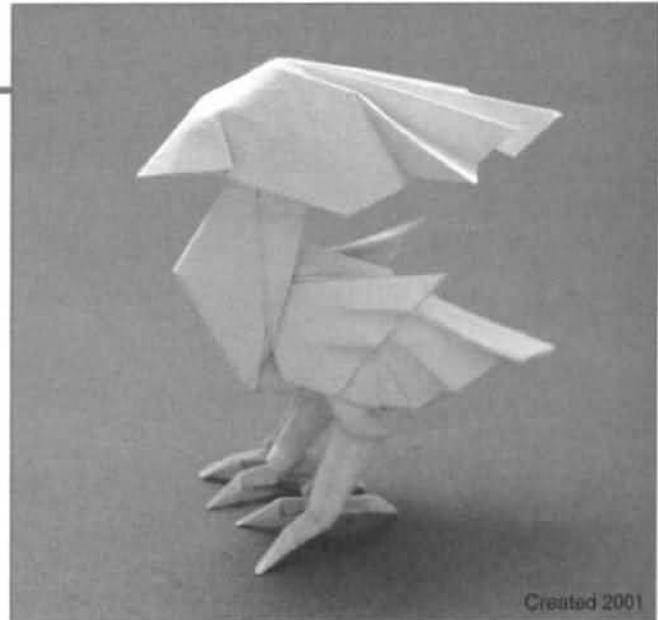
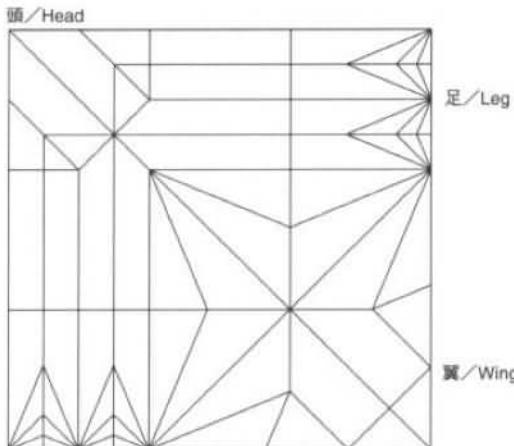
カドを内側に折る
反対側も同じ
Mountain fold the
corner.
Repeat behind.

170



黄色い鳥

The Yellow Bird



Created 2001

有名ゲームのキャラクターがモデルになっています。私も同じ世代の例にもれず、テレビゲームにはまっていた(正確には現在形ですが)時期があり、特に新しいソフトを買ったときには寝る間どろか折り紙もせずに延々とかじりついていました。

私の場合、題材選びが興味の対象と見事に一致していることが多いのですが、その中でも特にゲームのキャラクターやモンスターの作品は、質・量ともに非常に大きな位置を占めています。

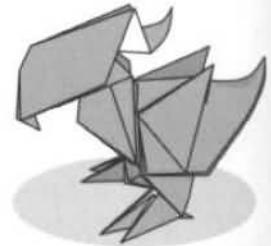
創作の原動力のひとつに、「好きなもの、好きな形を作りたい」という気持ちがありますが、題材を決めてから創作を始める場合、特にそれが強く出るようです。

この作品を作るとき、題材としてイメージしていたのは古いテレビゲーム用に8×8程度のドットで描かれたキャラクターで、プロトタイプ(右図)では意識的に細部を作り込まないようにしていました。今回収録のバージョンではイメージイラストを参考にしているため、ある程度細かいところまで作り込んであります。実際に作品化はしていませんが、無駄に細かい3D-CGバージョンを作ってしまうのも、おもしろいかもしれません。

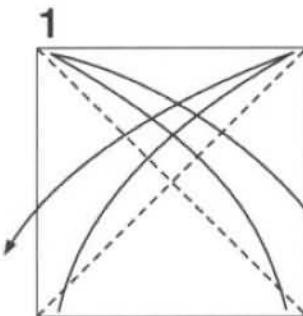
This model of course is based on the famous character in the famous video game series, which I have been being enthusiastical about.

The game characters are one of my favorites, because I always would like to create a model of my favorite shape and of my favorite thing.

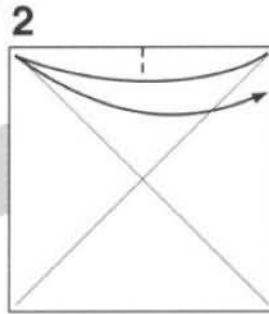
When I created this model, I had in mind a character icon drawn with a 8×8 resolution, so I tried not to fold details at first. In the present version, I tried to picture an illustrated image, so details are folded. It may be of interest to create a model out of a 3-D CG picture.



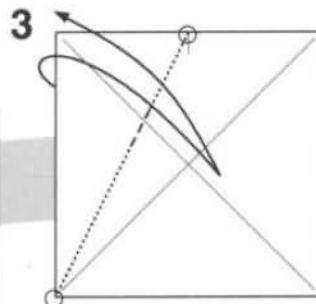
必要サイズ/Recommended Size of Sheet : 15×15cm



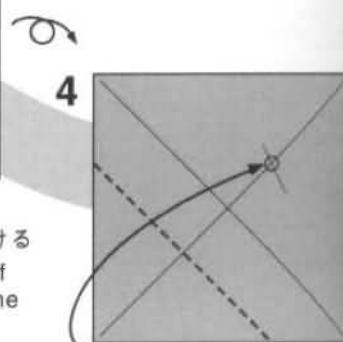
三角に折り筋をつける
White side up. Fold diagonals and unfold.



カドとカドを合わせて印をつける
Mark the middle of the top edge.



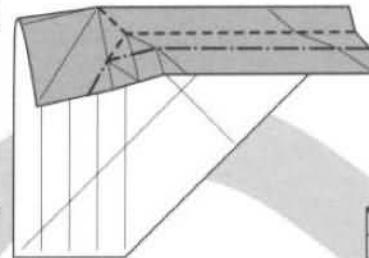
○を結ぶ線で
折り筋の部分に印をつける
Mark the intersection of
the diagonal and the line
connecting the circled points.



カドをつけた印に
合わせて折る
Fold the corner to the
mark.

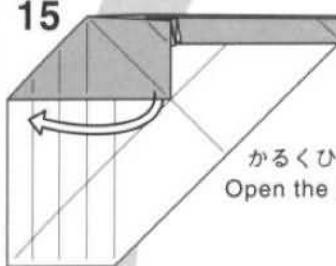
16

ヒダをひろげて
ついている折り筋を使って折りたたむ
Assemble using the
existing crease lines.



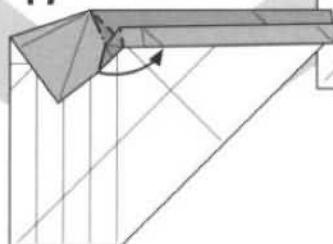
15

かるくひろげる
Open the pleats.



17

途中の図
Flatten the
model.



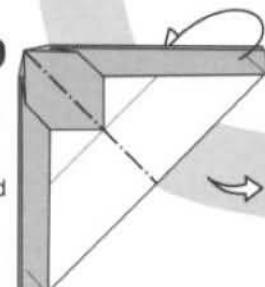
18

反対側も
11-17と
同じように折る
Repeat 11-17
on the left.



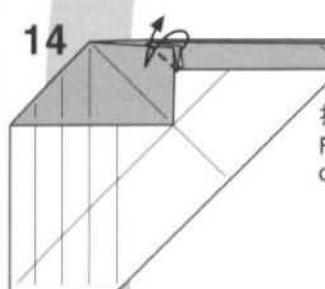
19

後ろへ半分に
折る
Mountain fold
in half.



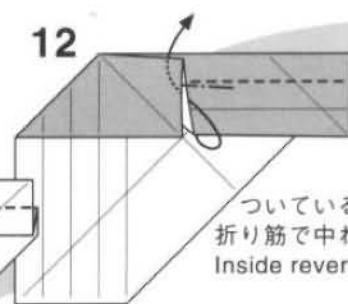
14

2枚重ねて
開くところで
折り筋をつける
Fold down the
corner and unfold.



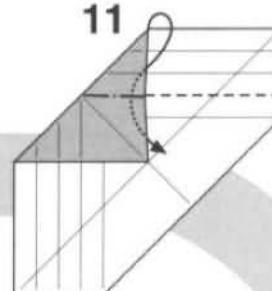
12

ついている
折り筋で中わり折り
Inside reverse
fold.



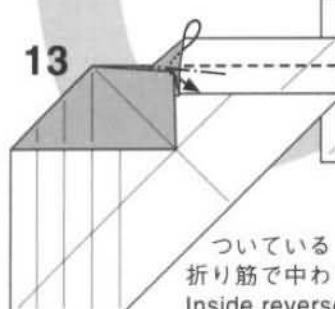
11

つけた折り筋で
中わり折り
Inside reverse
fold.



13

ついている
折り筋で中わり折り
Inside reverse fold.



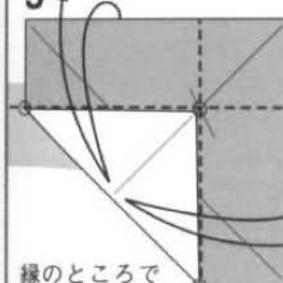
10

1/4の幅で
折り筋を
つける
Fold at
quarters of
the width.



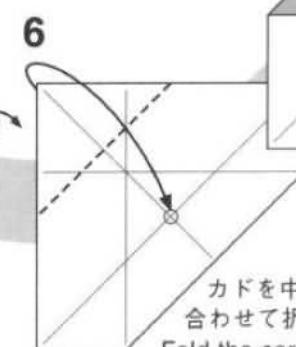
5

縁のところで
折り筋をつける
Crease through along
the edges.

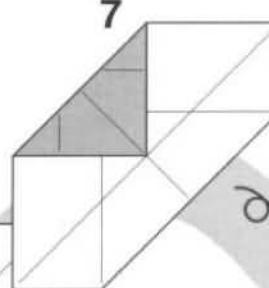


6

カドを中心
に合わせて折る
Fold the corner to the
circled intersection.

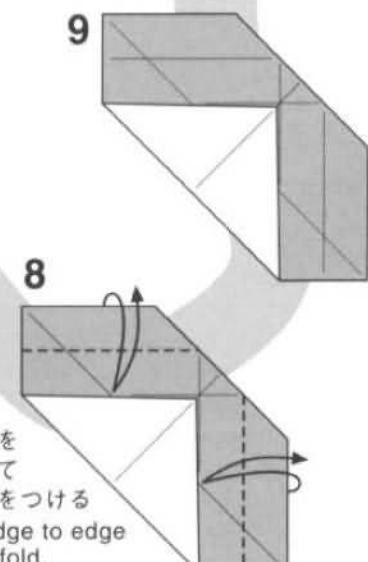


7



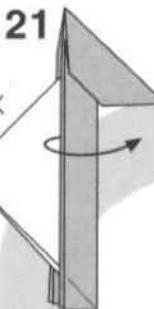
9

縁と縁を
合わせて
折り筋をつける
Fold edge to edge
and unfold.



8

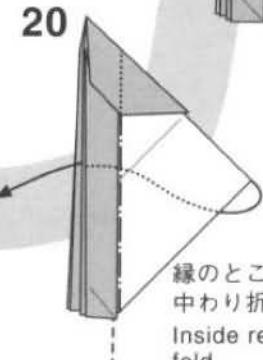




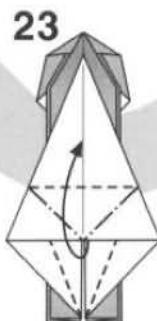
上の2枚を
反対側に開く
Open the
layers.



上の部分は
平らにならない
The top part
will not lie flat.



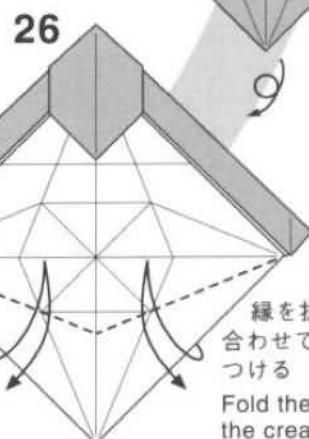
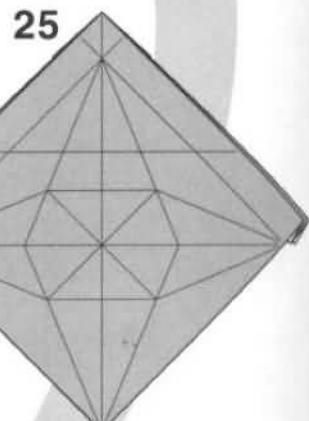
縁のところで
中わり折り
Inside reverse
fold.



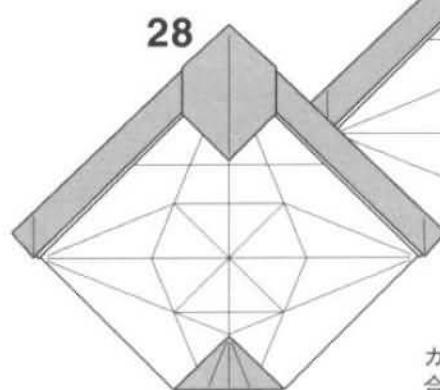
内側をひろげて
つぶすように折る
Petal fold.



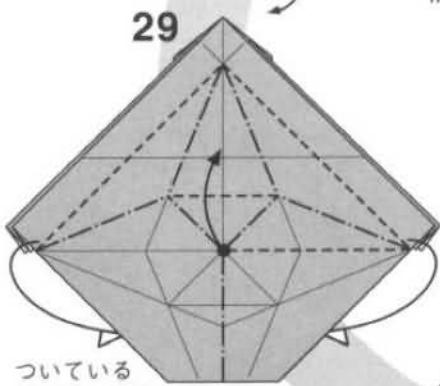
次の図のように
ひろげる
Detach the white
layers and open
like 25.



縁を折り筋に
合わせて折り筋を
つける
Fold the edges to
the crease line and
unfold.

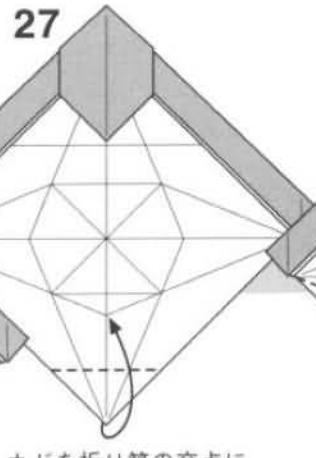


カドを折り筋の交点に
合わせて折る
Fold the corner to the
intersection.



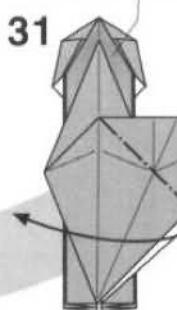
ついている
折り筋で中心線をつまむ
ようにして折りたたむ
Assemble using the
existing crease lines.

途中の図
Flatten the
model.

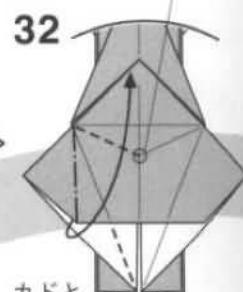


55まで上の部分は
平らにならない
The top part will not
lie flat (until 55).

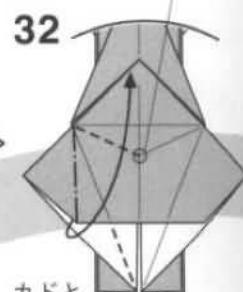
ここまで折る
Stop folding at
the center.

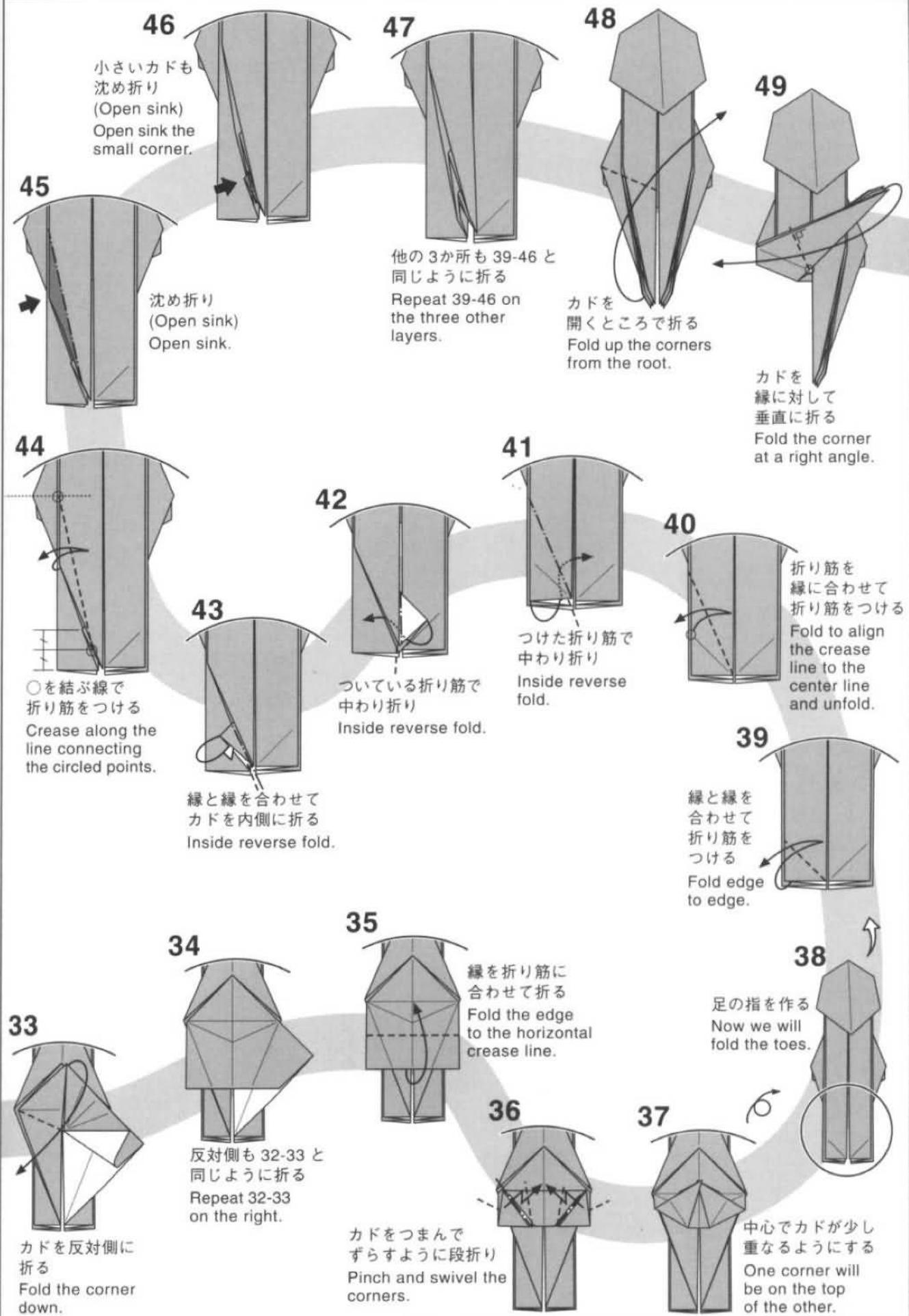


内側をひろげて
つぶすように折る
Open and squash.



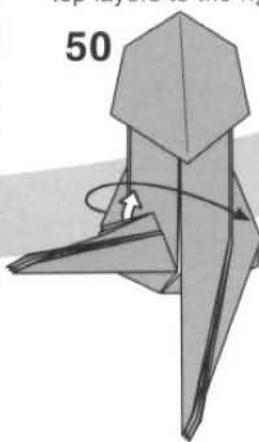
カドと
カドを合わせて
起き上がってきた部分を
つぶすように折る
Fold corner to corner
and squash the excess
paper.



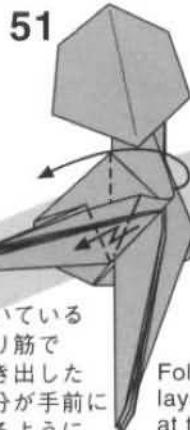


黄色い鳥

下に1枚残して
上の3枚をまとめて
引き出す
Fold and swivel the three
top layers to the right.



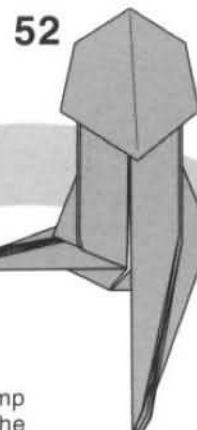
50



51

ついている
折り筋で
引き出した
部分が手前
に来るよう
に段折り

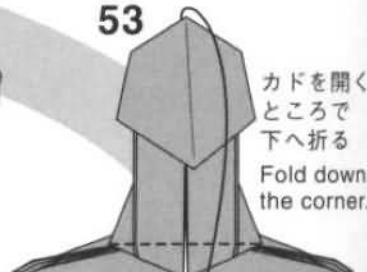
Fold back the
layers and crimp
at the root of the
flap.



52

反対側も48-51と
同じように折る
Repeat 48-51
on the right.

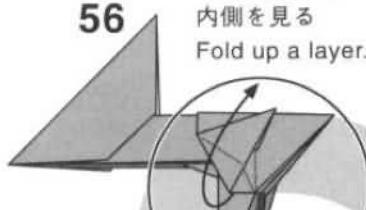
53



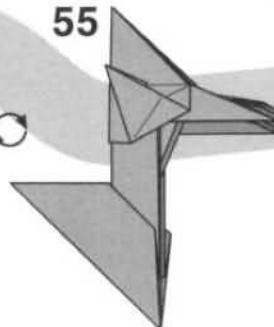
カドを開く
ところで
下へ折る
Fold down
the corner.

56

かるく開いて
内側を見る
Fold up a layer.



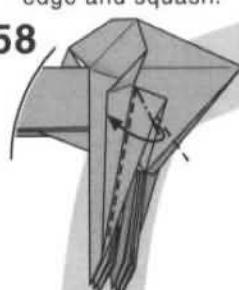
55



54

半分に折る
Fold in half.

58

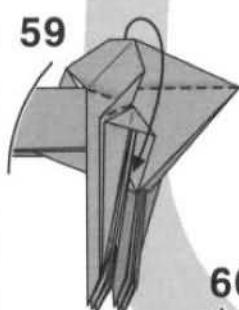


57



上の1枚を
引き寄せるように折る
Fold the top layer to the
left and swivel the edge.

59

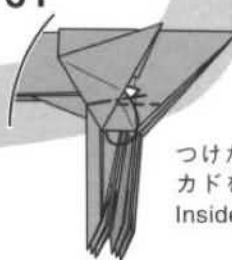


そのまま閉じる
反対側も56-59と
同じように折る
Close down.
Repeat 56-59
behind.

60

翼の下の
ところで
折り筋をつける
Make a crease
line as shown.

61

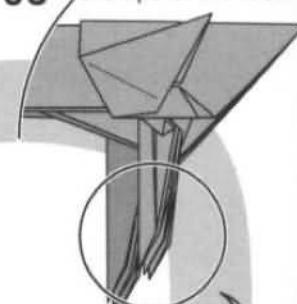


62



足を両側で
内側に段折り
Pleat inside.

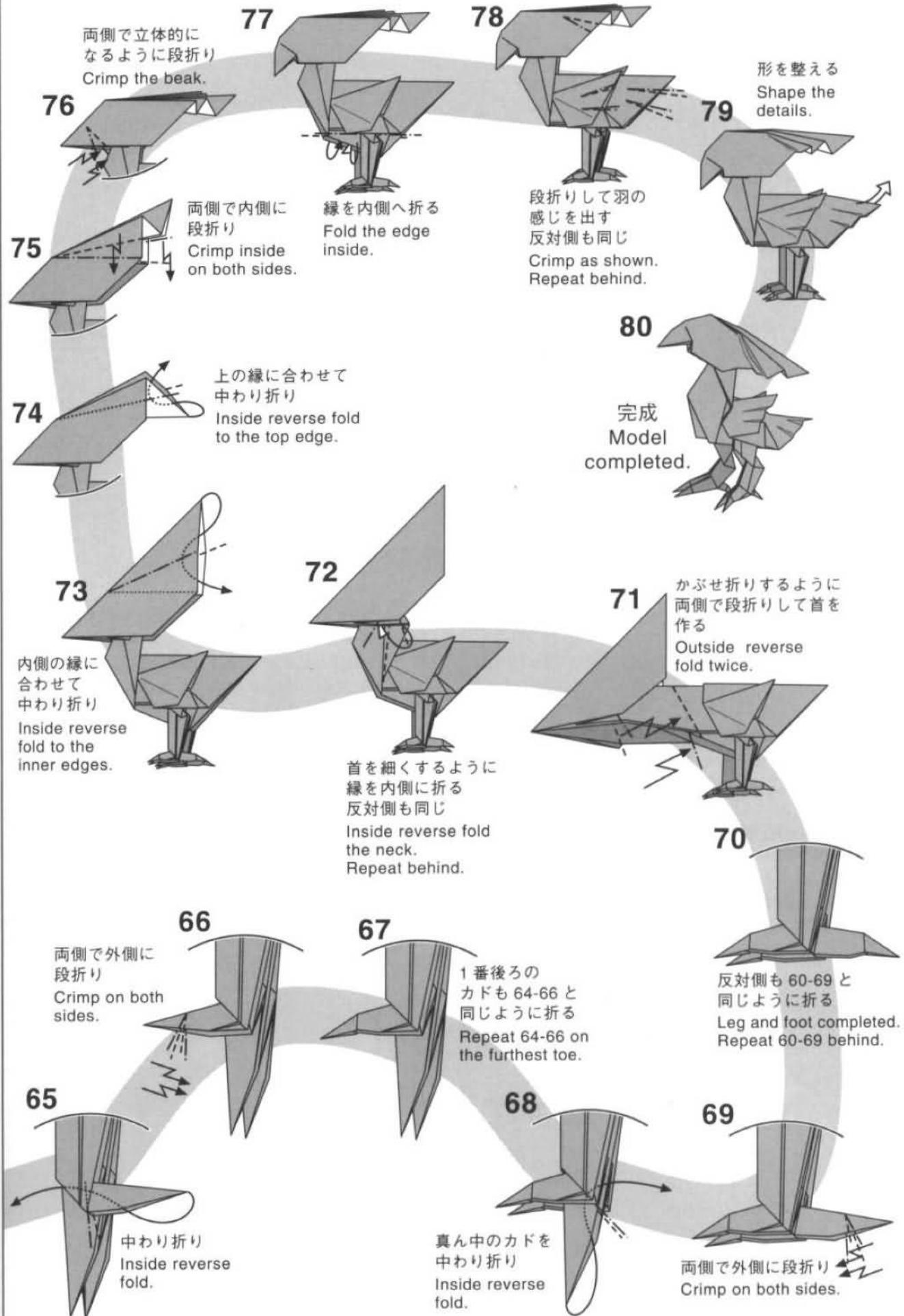
63



中わり折り
Inside reverse
fold.

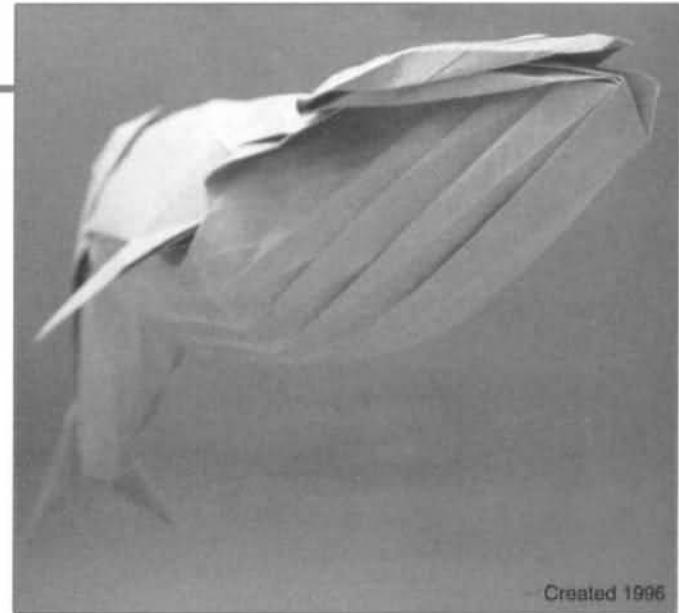
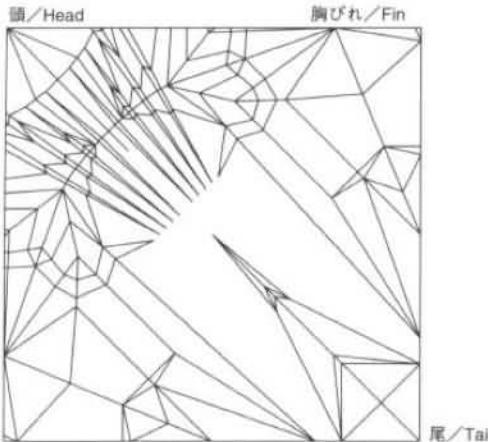
64





シロナガスクジラ

Blue Whale



Created 1996

この数年興味のあることのひとつに「ヒダをどう折り出すか」また「どう使うか」ということがあります。折り紙の造形で「模様を折り出す」ということは完成形に大きな影響を与えるもので、簡単なヒダを折り出すだけでも非常に大きな効果を得ることができます。ただ、うまく作品に組み込むのは結構難しくて、他の構造から孤立してしまうことも少なくありません。

この作品はそうしたことを考えながらできたもののひとつで、まず下あごのヒダを作るところから始めました。最初のバージョンでは、平行についた折り筋をそのまま使ったので、ヒダが下あごの先に集まってしまいました。そこで今回の折り図(現在のバージョン)ではヒダを放射状に配置することにより、完成形のヒダを平行にしています。ただそれに伴って変則的な角度が多くなり、うまくまとめるのが非常に難しくなってしまいます。これはヒダ部分を最初に作っていく場合の大問題点といえます。

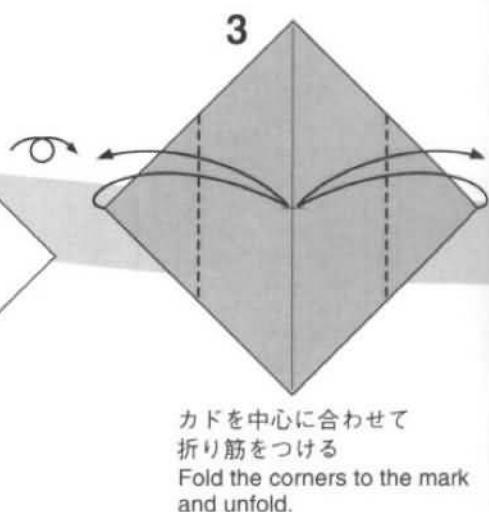
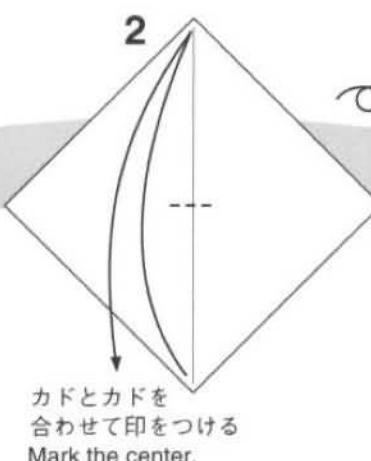
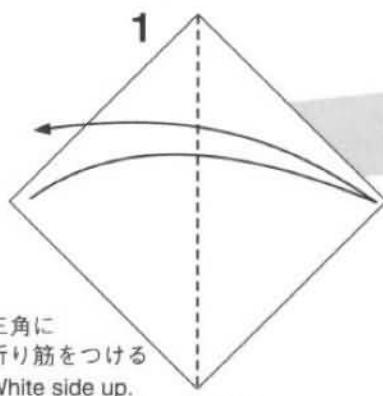
また猪神のように、ヒダとそれ以外の部分をうまく融合させてしまうという方法もあります。この場合、他の部分の自由度・構造の整然さは上がりますが、折り出せるヒダのパターンがある程度限定されてしまうのも事実です。このあたりのことはまだ自分でもよく分からぬ部分も多く、今後の研究課題と言えそうです。

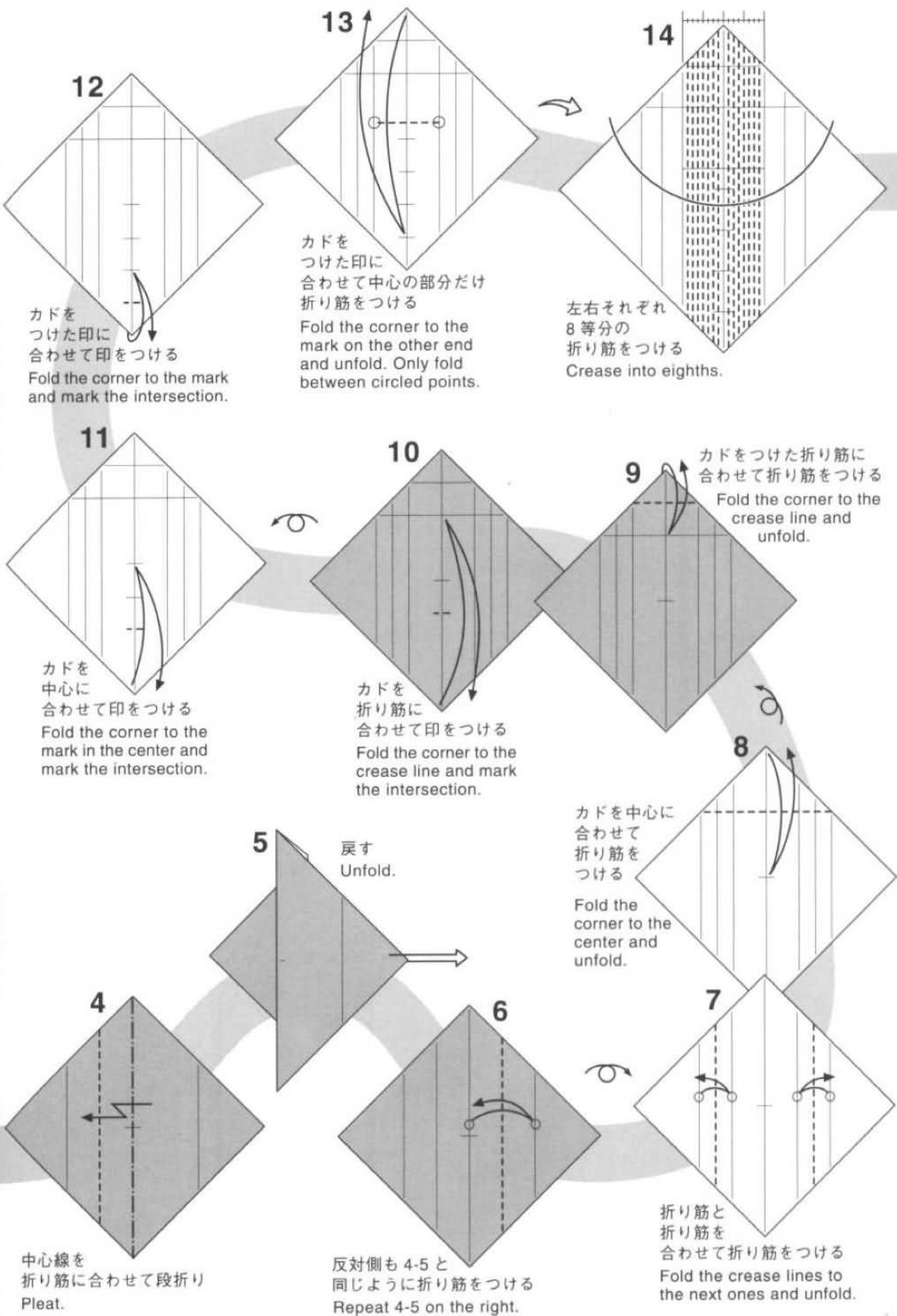
I have been always interested in where to pleat and how to use pleats. Patterns on the surface of a model give a tremendous effect on the final touch of a model. However, it is very hard to integrate pleats with the basic structure.

In designing this model, I began with designing pleats on the jaw. However, the pleats will not be as it should be if you fold parallel pleats on the initial square. Finally, I came to the conclusion that the pleat-like structure should be folded in a radial pattern, which gives the parallel pleats on the output model, but the angle of the radial pattern will be irregular. This is a big problem when you need pleats first in designing a model.

Integrating pleats into the basic structure is another option, but this deprives us of freedom of choice of pleat structures. This among others is a problem for future investigations.

必要サイズ/Recommended
Size of Sheet : 30×30cm





15

中心線
The center line.

16

15で折った縁
The edge created by 15.

○を結ぶ線(谷折り線)で
段折り 少し立体になる
Crimp. Note the
reference. The model
will not lie flat.

19 全部ひろげる
Unfold.

18

立体的なままついている
折り筋を右に延長して
後ろへ折る
Extend the crease line
straight and mountain
fold.

17

16で折った縁
The edge created by 16.

同じように2か所段折り
Repeat crimping in the
same way twice.

20

反対側も15-19と
同じように折る
Repeat 15-19 on the left.

23

○を結ぶ線で折り筋を
つける
Valley fold along lines
connecting circled points
and unfold.

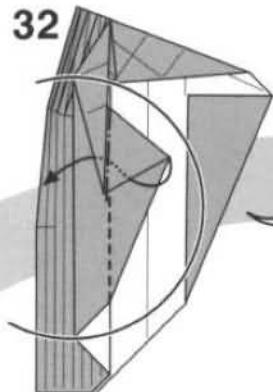
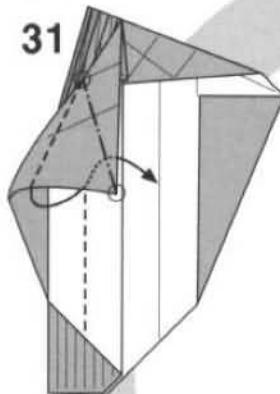
縁を中心
に合わせて
カドの先の
部分に折り筋
をつける

Fold the edge to the
diagonal and unfold.

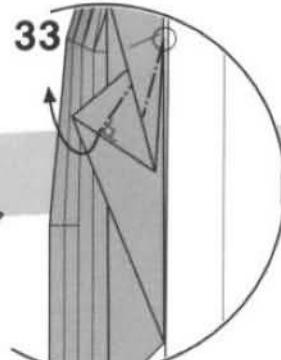
22

縁を折り筋に
合わせて折る
Fold angle
bisectors.

ついている折り筋を使って中わり折りするように折る
Inside reverse fold using the existing crease line.

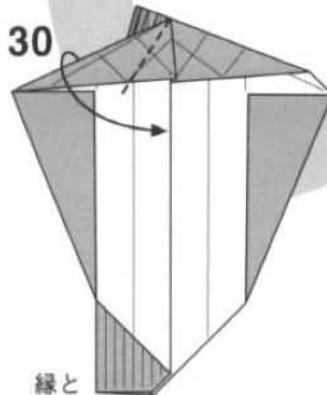
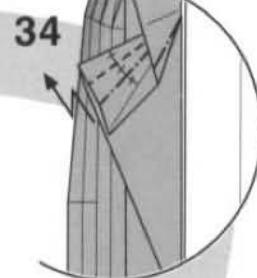


縁のところで中わり折り
Inside reverse fold.

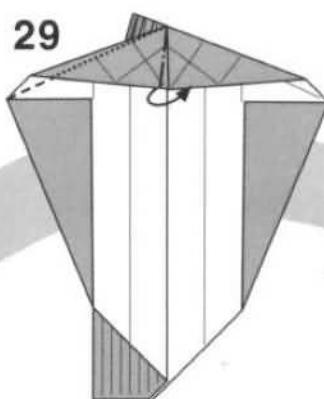


縁を合わせてずらすように折る
Swivel so the crease line will be at a right angle with the edge.

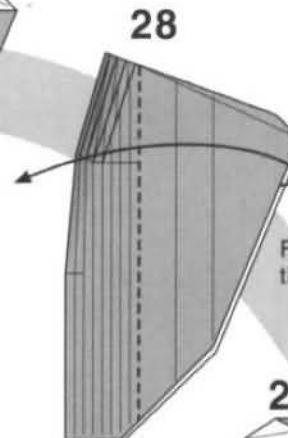
1/3 の角度で上の1枚をずらすように段折り
Crimp at one thirds of the angle.



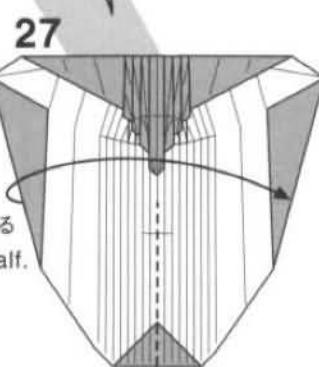
縁と縁を合わせて上の部分だけ折る
Fold edge to edge.



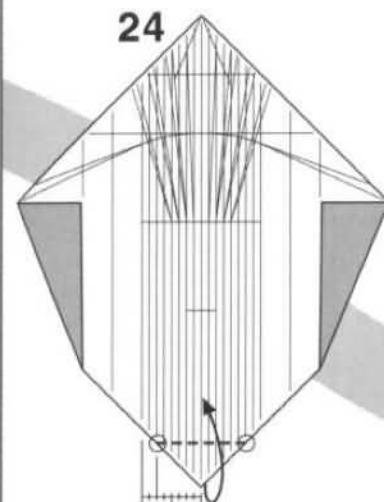
ついている折り筋でずらすように折る
Swivel the edge so the crease line reaches the corner.



縁をついている折り筋で反対側に折る
Fold the edge to the other side.

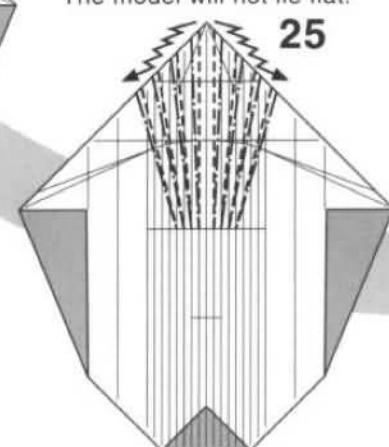


かるく半分に折る
Fold in half.

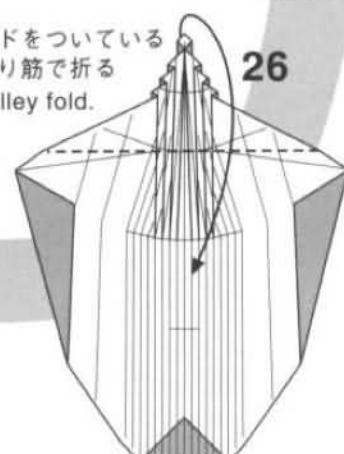


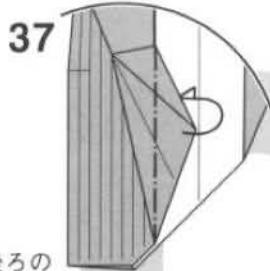
○を結ぶ線で折る
Valley fold along the line connecting circled points.

ついている折り筋で段折り
ここから先は平らにならない
Crimp using the existing crease lines.
The model will not lie flat.

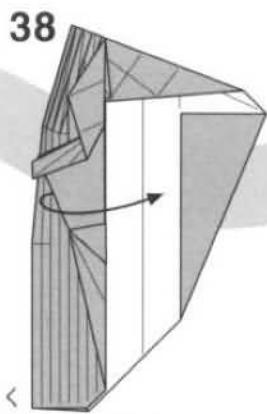


カドをついている折り筋で折る
Valley fold.

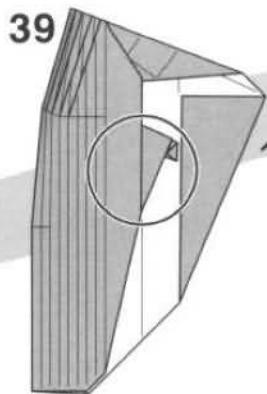




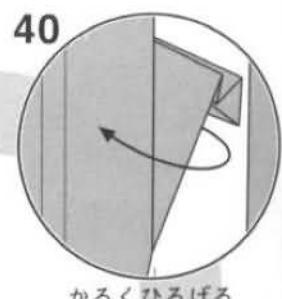
後ろの
縁にかぶせるように折る
Mountain fold along the
edge behind.



開く
Open the layers.

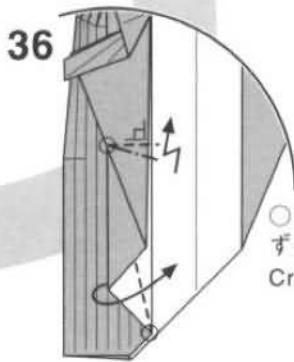


39

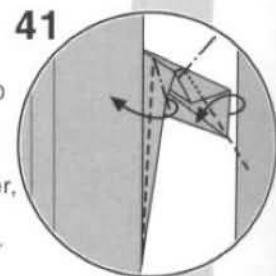


40

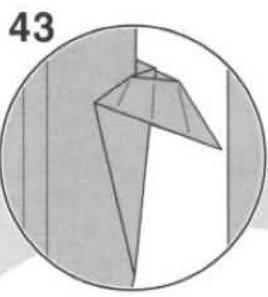
かるくひろげる
Open the edges.



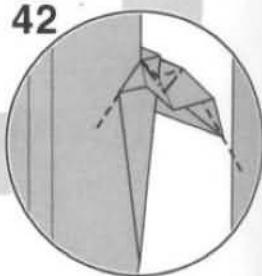
○を結ぶ線で
ずらすように段折り
Crimp and swivel.



ヒダをひろげてカドの
縁と縁を合わせて
平らに折りたたむ
Open the layer further,
fold the corner edge
to edge, and flatten...

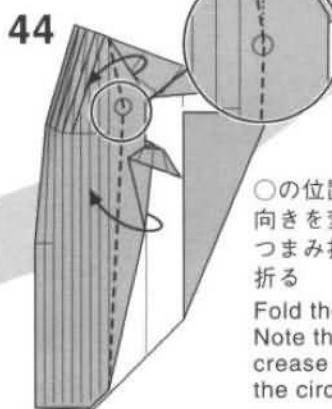
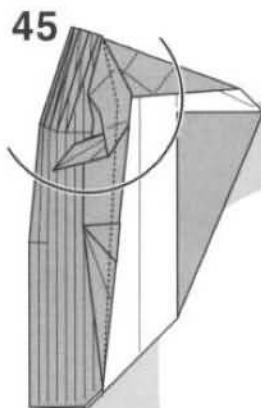


43

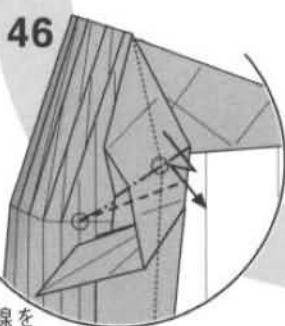
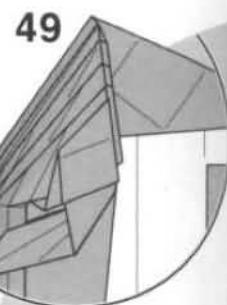


42

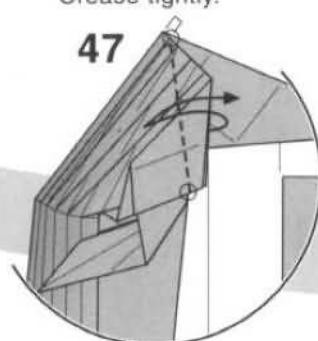
途中の図
like this.



○の位置で折り筋の
向きを変えて斜めに
つまみ折りするように
折る
Fold the edge.
Note the direction of the
crease line changing at
the circled point.

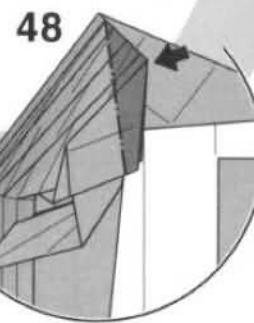


○を結ぶ線でしっかりと
折り筋をつける
Crease tightly.



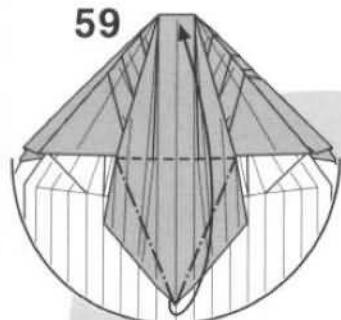
47

○を
結ぶ線を
使って折った部分が平らになる
ようにずらしながら段折り
Crimp and flatten using the line
connecting the circled points.

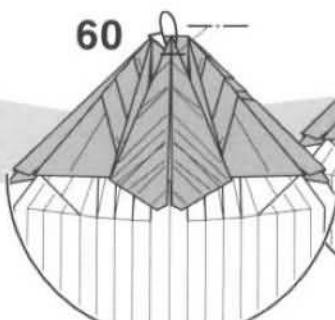


48

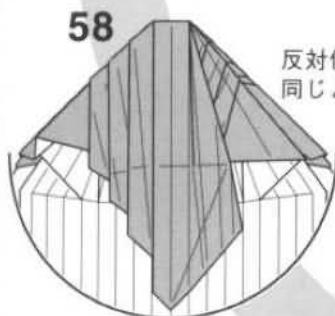
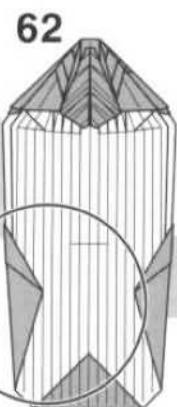
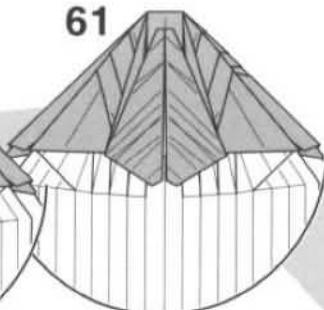
沈め折り
(Closed sink)
下の部分は
後ろの縁に
かぶせるように
折る
Closed Sink.
The lower portion
of the sink will be
wrapped around
the edge behind.



ついている折り筋を使って
内側をひろげてつぶすように折る
Petal fold.

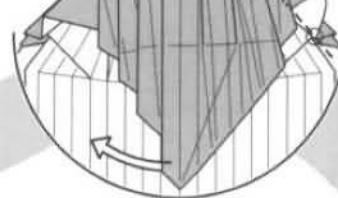
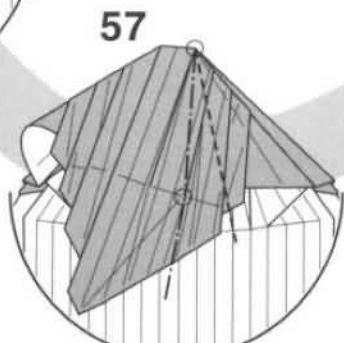


上のカドを
少し後ろへ折る
Mountain fold.

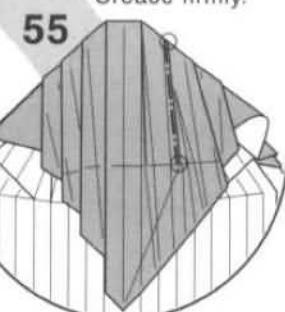


反対側も 52-57 と
同じように折る
Repeat 52-57
on the left.

○を結ぶ線で折る
Fold along the line
connecting the
circled points.

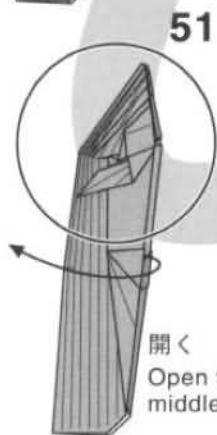


ひろげた部分を
しっかりと折る
Crease firmly.



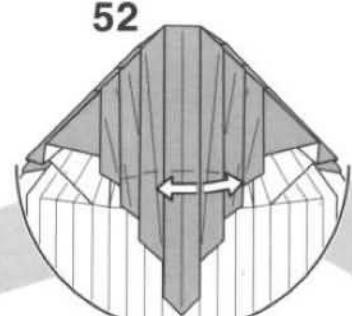
反対側も 28-49
と同じように折る
Repeat 28-49 on
the other side.

○を結ぶ線で
折った部分が平らに
なるように段折り
Crimp and flatten the
layers.

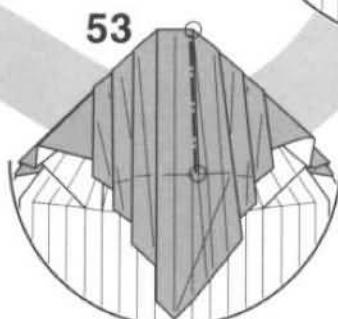


51

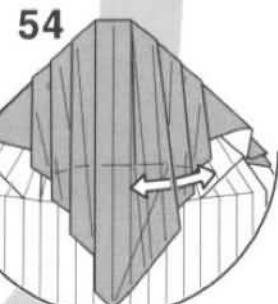
開く
Open the
middle layer.



ヒダをずらすように
ひろげる
Open the pleat and
shift the edge.



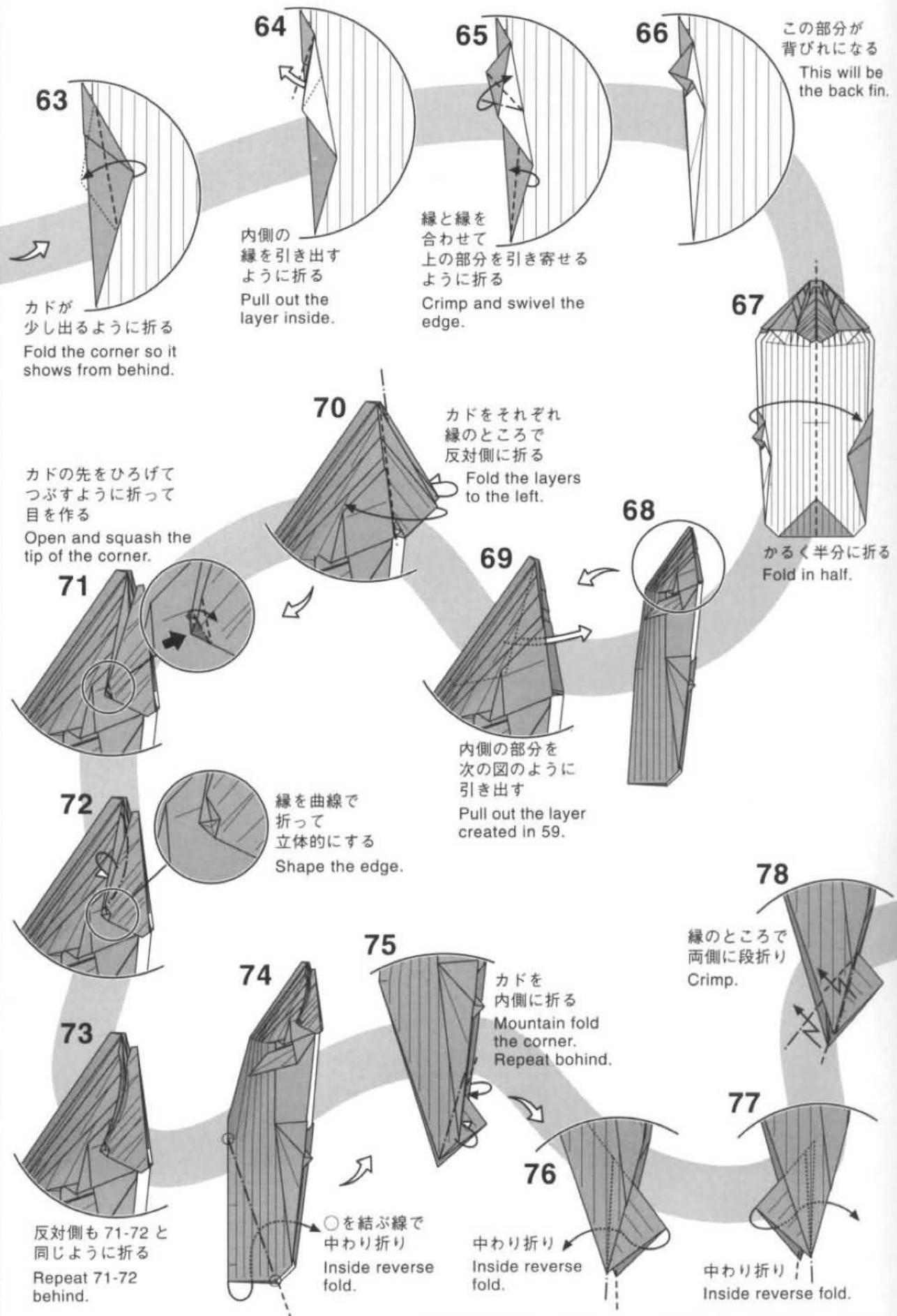
53

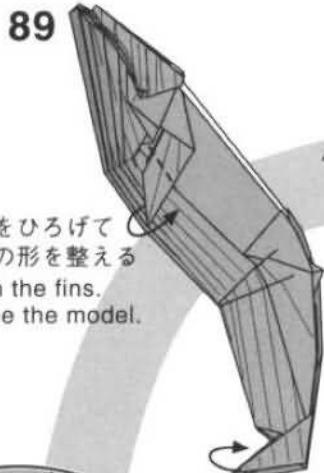


54

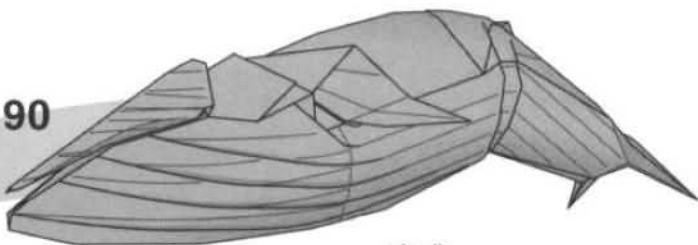
次のヒダも同じ
ようにひろげる
Open the pleat and
shift the edge.

ひろげた部分を
しっかりと折る
Crease firmly.

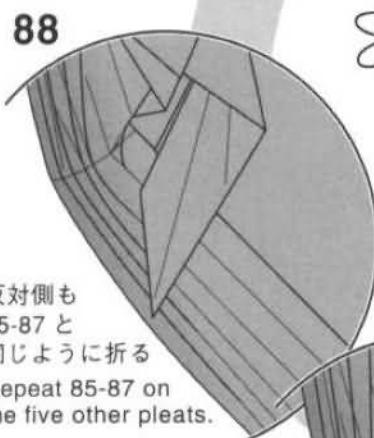




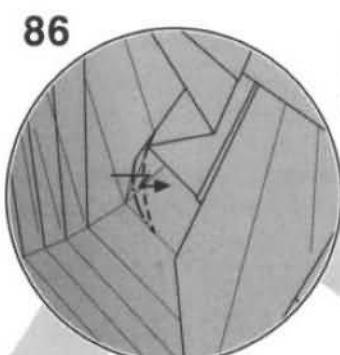
ひれをひろげて
全体の形を整える
Open the fins.
Shape the model.



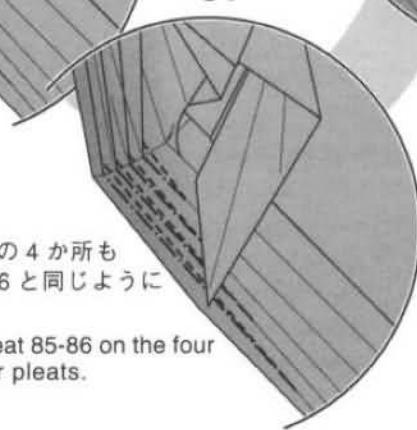
完成
Model completed.



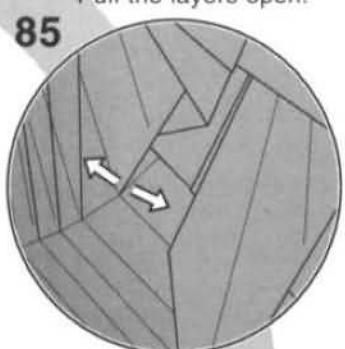
反対側も
85-87 と
同じように折る
Repeat 85-87 on
the five other pleats.



ひろげた部分を
ずらすようにして
曲線で折る
Crimp.



ヒダを少しひろげる
Pull the layers open.



ほかの 4 か所も
85-86 と同じように
折る
Repeat 85-86 on the four
other pleats.



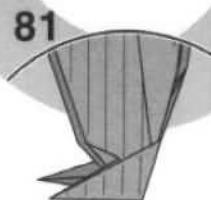
カドを
内側に折る
Inside reverse
fold.



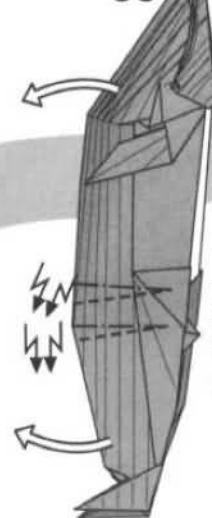
縁と縁を内側で
合わせて
中わり折りする
ように折る
反対側も同じ
Inside reverse fold
the inner edge.
Repeat behind.



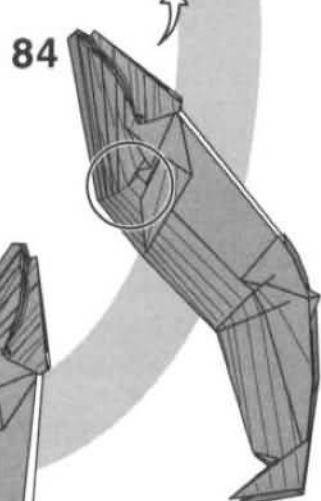
沈め折り
(Closed sink)
Closed sink.



83

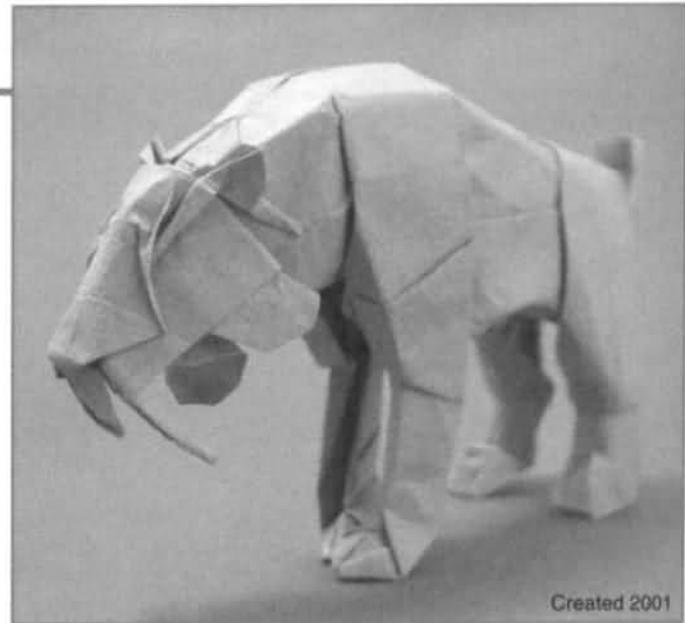
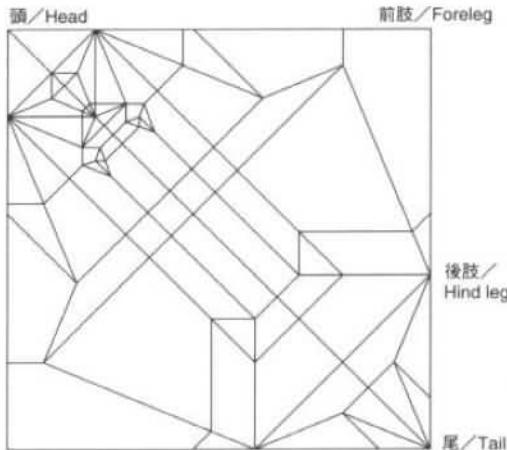


内側に
押し込むように
両側で段折り
Crimp.



スミロドン

Smilodon



Created 2001

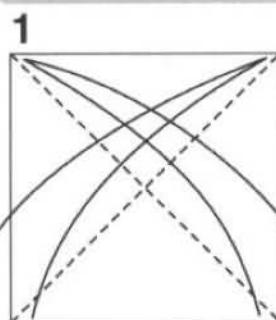
完成形を決める要素のひとつに「背割れ」「腹割れ」があります。どちらにも一長一短あるのですが、それぞれの特性上、設計的な作品では背割れ型が、立体的な胴体を持つ作品には腹割れ型が使われることが多いようです。

この作品では「毛皮のひらき」状の形を折り出してから、そこにヒダを入れてペーパークラフトのような感覚で立体的にしていくという、腹割れ型の作品でよく使われる手法を用いています。この利点は、まず背中に紙の縁を出さないスマーズな仕上がりと立体感を出せること、また背割れ型の構造では不可能な紙の使用効率を出せるのも大きなポイントです。ただ、腹割れである程度以上の効率を求めた場合、ほかの部分に比べて背中が薄くなってしまうことがあります。個人的にこれがあまり好きではないため、腹割れ型の構造はこれまであまり使っていませんでした。

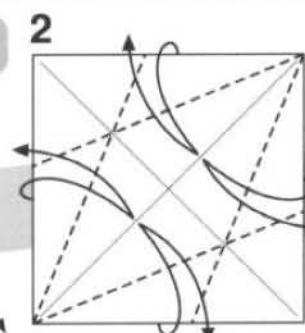
しかし、このスミロドンを作った考え方少し変わりました。本作では背中の部分に大きく縦方向のヒダを入れて頭部や後肢を折り出していますが、そのヒダで背中の部分の重なりが強化されています。これは嬉しい誤算で、最大の問題点であると考えていた背中の弱さが解決可能となりました。ある技法に関して「解決可能であることが分かる」というのは非常に重要で、これで私の中の選択肢に「腹割れ」が含まれるようになったのです。

*背割れ、腹割れ：動物などを折るときに、紙の端が背中側にくくする構成が背割れ、反対に腹側にくくするものが腹割れ。

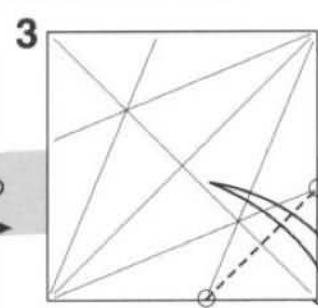
必要サイズ / Recommended Size of Sheet : 25×25cm



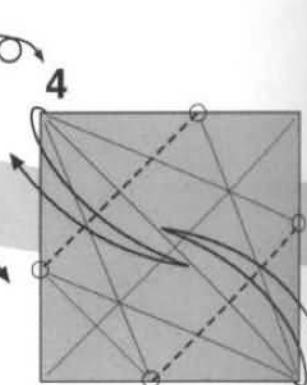
三角に折り筋をつける
White side up. Fold diagonals and unfold.



縁を中心に行わせて
折り筋をつける
Fold edges to the
diagonals and unfold.



○を結ぶ線で折り筋をつける
Crease along the line
connecting circled points.



○を結ぶ線で折り筋をつける
Crease along the line
connecting circled points.

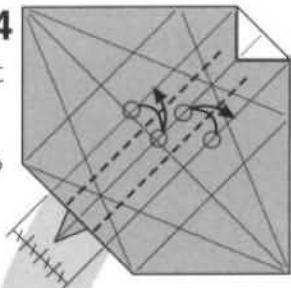
We always have a choice of designing a back-opening model or a belly-opening model. Usually, a back-opening model is created out of a planning with a crease pattern, and a belly-opening model is usually for a three-dimensional body.

This model is with an opening on the belly side, making the model three-dimensional by shaping up with pre-creased pleats. This allows the model to have thickness and three-dimensionality without the edge of the sheet on the back. A model with an opening on the belly usually gives us a thinness on the back, which has been the reason why I have not created a model with this structure until I create this one.

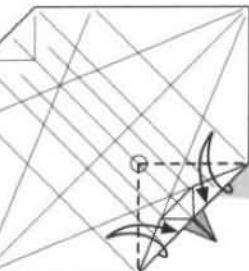
The pleats on the back in this model give it the necessary thickness which solves the weakness of belly-opening models. Finding solutions is very important in designing models, and this discovery gave me belly-opening models in my inventory.

14

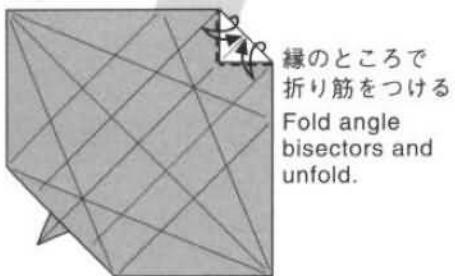
折り筋を中心
に合わせて
図のように
折り筋をつける
Pleat partially
and unfold.



15

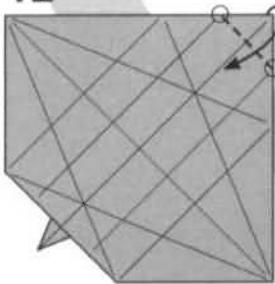


13



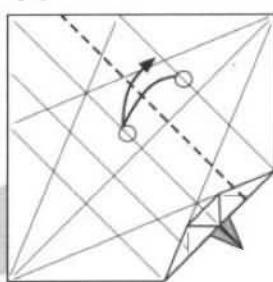
縁のところ
で折り筋をつける
Fold angle
bisectors and
unfold.

12



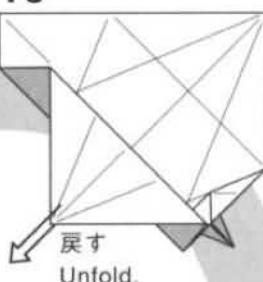
○を結ぶ線で折る
Fold along the line
connecting circled
points.

11



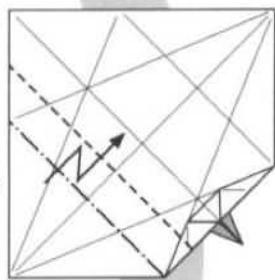
反対側も9-10と同
じように折り筋をつける
Crease like the other
side.

10



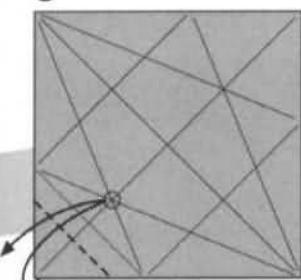
戻す
Unfold.

9



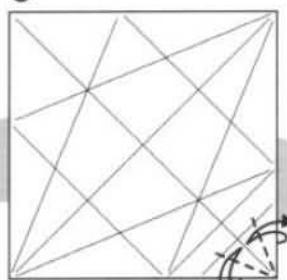
折り筋を中心
に合わせて段折り
Pleat so the edge
aligns with the
center.

5



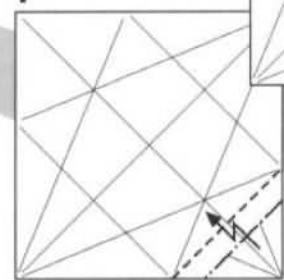
カドを折り筋の交点に
合わせて折り筋をつける
Fold the corner to the
circled intersection and
unfold.

6



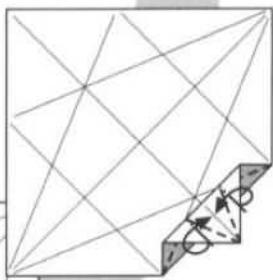
縁を中心に合
わせて折り筋のところまで
折り筋をつける
Fold angle bisectors
and unfold.

7



ついている折り筋で段折り
Pleat using the existing
crease lines.

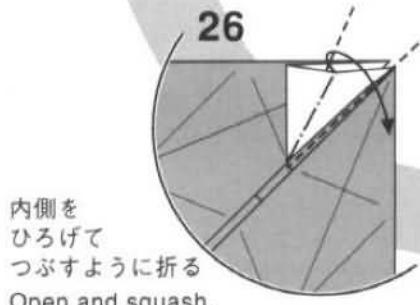
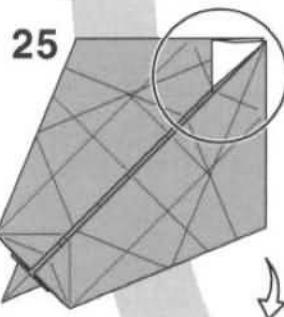
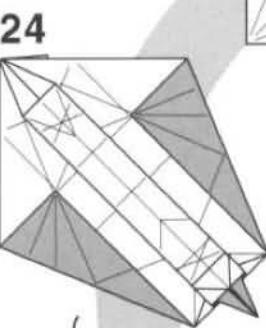
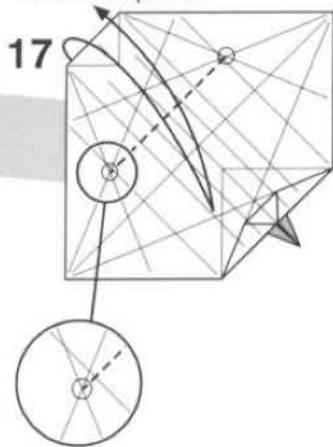
8



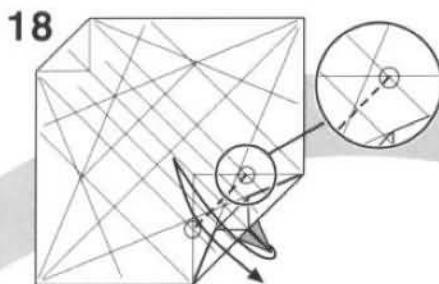
縁を中心に
合わせて
引き寄せる
ように折る
Swivel the
edges.

スミロドン

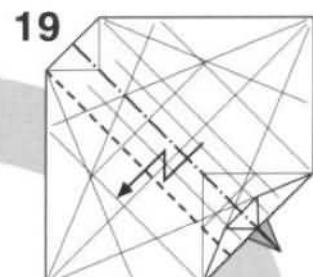
○を結ぶ線で折り筋をつける
細かい位置に注意
Crease and unfold. Note the reference points.



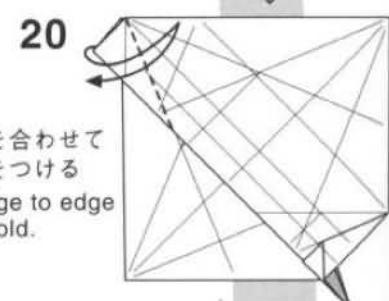
内側をひろげて
つぶすように折る
Open and squash.



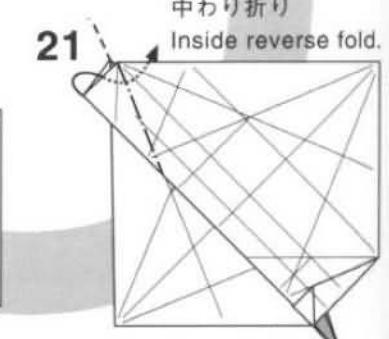
○を結ぶ線で折り筋をつける
細かい位置に注意
Crease and unfold. Note the reference points.



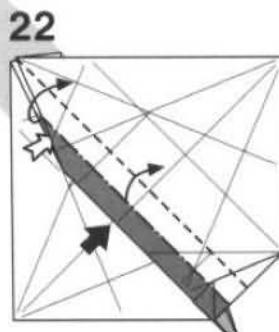
ついている折り筋で段折り
Pleat.



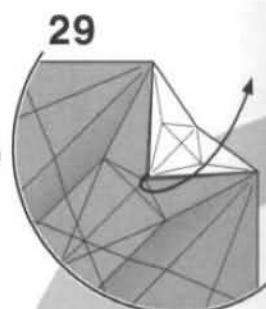
縁と縁を合わせて
折り筋をつける
Fold edge to edge
and unfold.



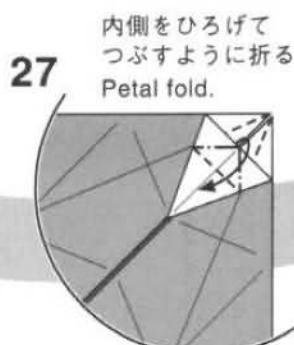
中わり折り
Inside reverse fold.



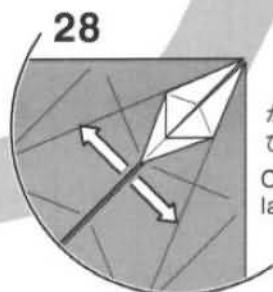
縁をひろげて
つぶすように折る
Open the layers and
squash.



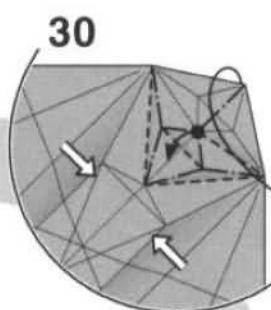
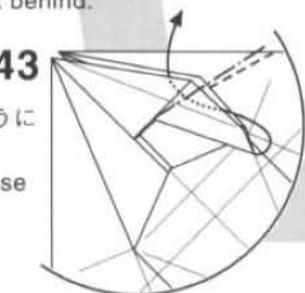
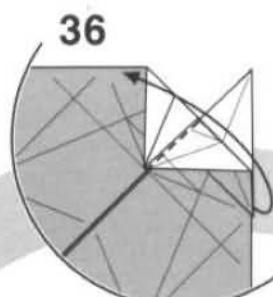
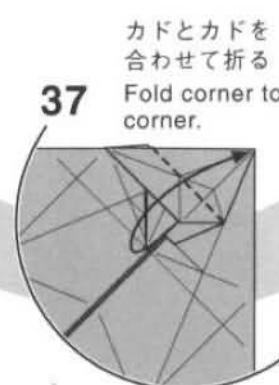
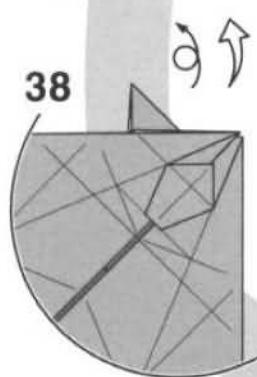
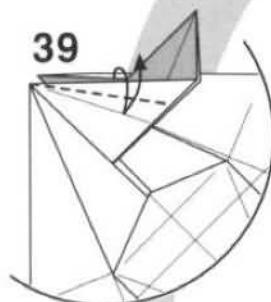
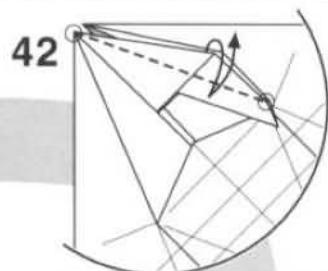
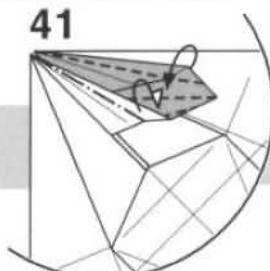
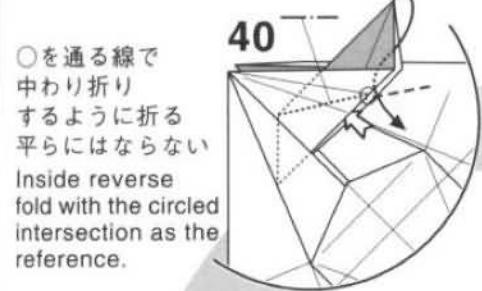
重なっている
部分の紙を開く
Detach the white
area.



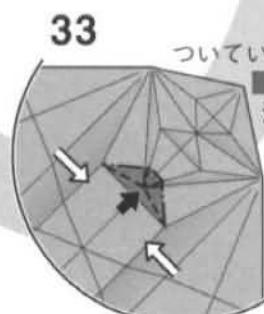
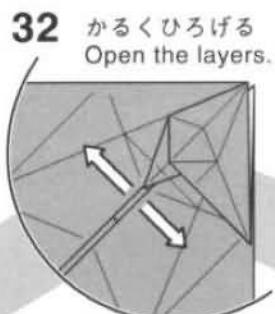
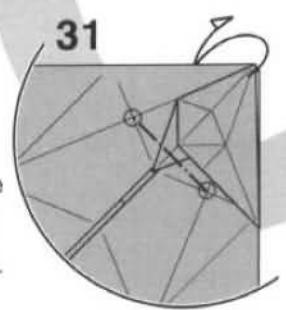
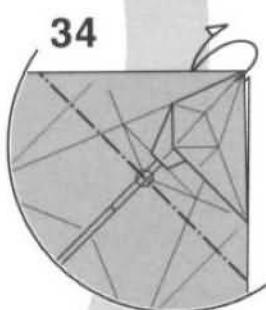
内側をひろげて
つぶすように折る
Petal fold.

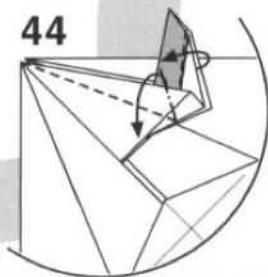
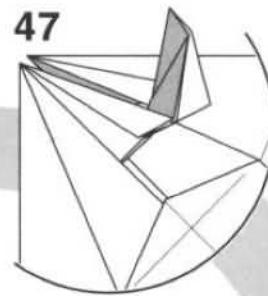
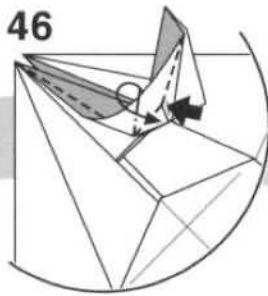
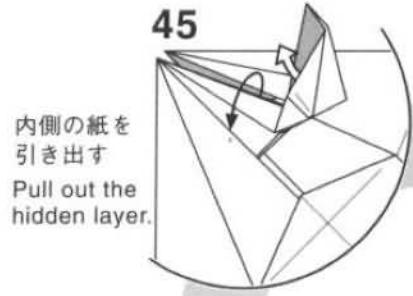


かるく
ひろげる
Open the
layers.

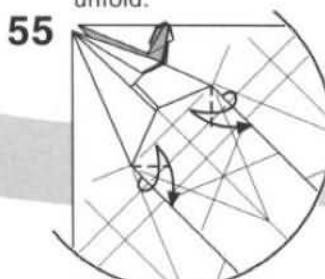
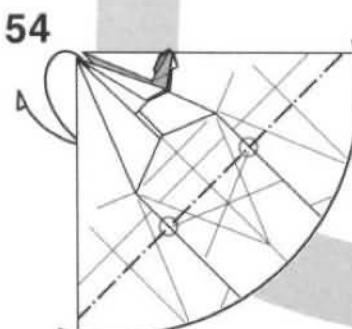
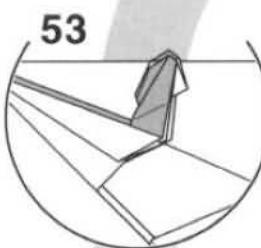
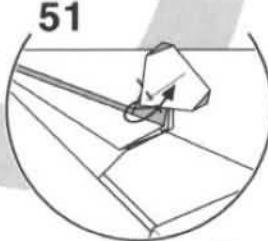
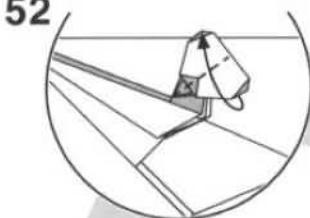
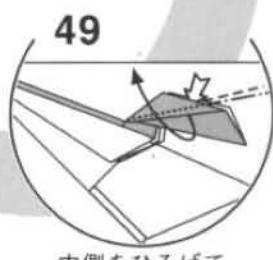
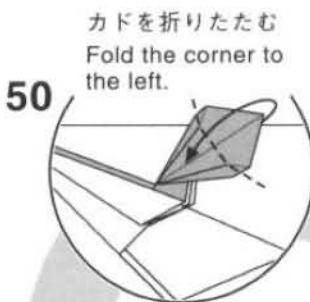
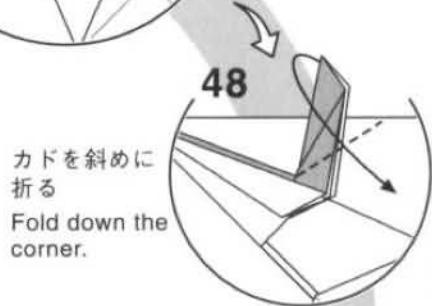


○を通る線で
折り筋をつける
Crease along
the line passing
through the
circled point.

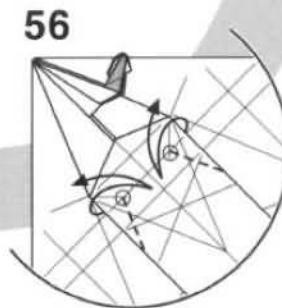
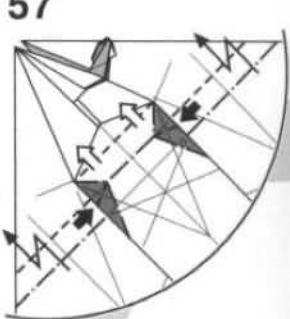




カドを押し込んでついている折り筋で折りたたむ
Push in the corner and flatten.



つけた折り筋で■の部分をつぶしながら折りたたむ
Pleat while pushing in the grayed edges.

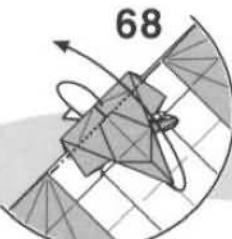


ついている折り筋を使って
縁を中わり折りするように
折りながらカドを下に折る

Fold down the corner while inside reverse folding the edges.



67

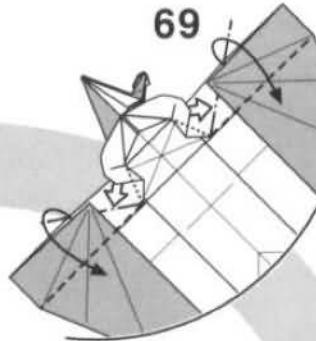


68

69

内側の縁を
引き出しながら
縁をついている
折り筋で折る
まだ平らには
ならない

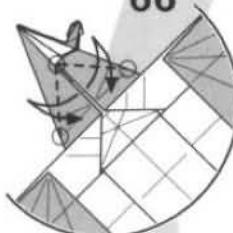
Fold the edge down while pulling out the hidden edge. The model will not lie flat.



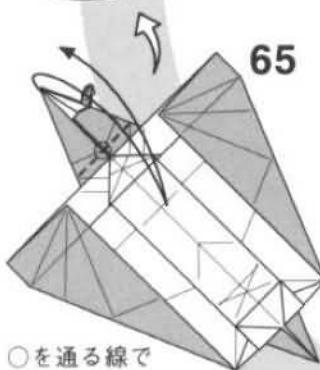
70

66

○を結ぶ線で
上の1枚だけ
折り筋をつける
Crease along the
lines connecting
the circled points.

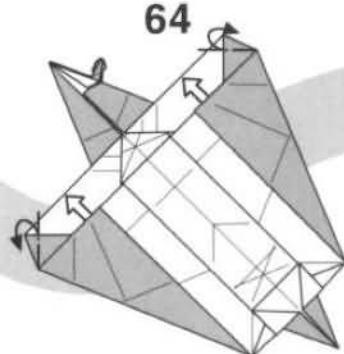


65

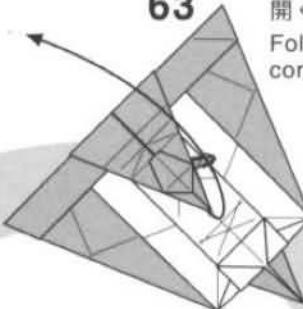


○を通る線で
折り筋をつける
Crease through the
circled intersection.

64

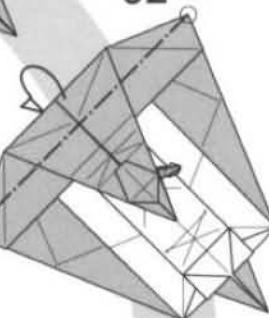


63



開く
Fold the
corner up.

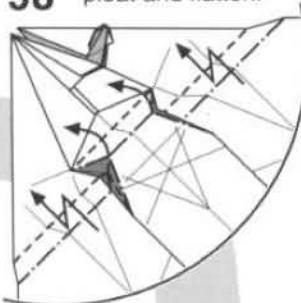
62



カドとカドを
結ぶ線で
後ろに折る
○
Mountain fold.

58

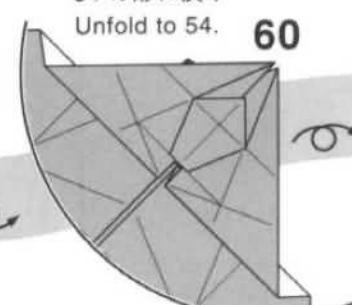
途中の図

Form another
pleat and flatten.

内側の紙を
引き出して折る
Pull out the hidden
layers.

59 を裏から見た図
しっかりと折り筋を
つけてから
54 の形に戻す
Unfold to 54.

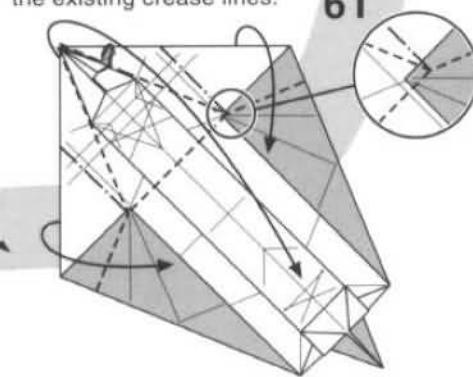
59



60



61

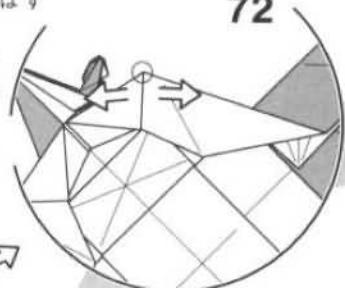


スミロドン

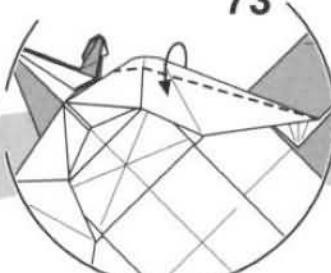
ヒダの先を少しのばす
ようにひろげる
平らにはならない

Pull open between
the layers. The
model will not lie
flat.

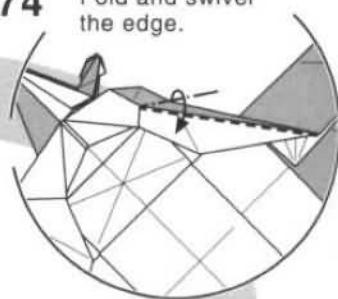
72



73



74



71



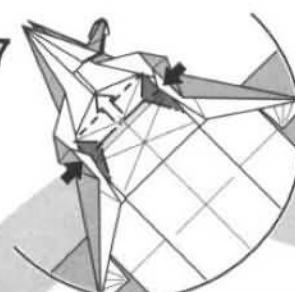
起き上がっている縁を
少し斜めに折る
まだ平らにはならない
Valley fold the edge.
The model will not lie
flat.

75

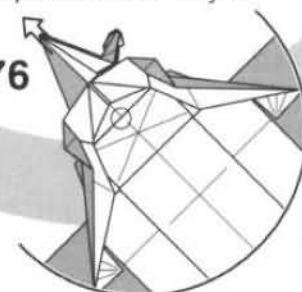


反対側も 72-74 と
同じように折る
Repeat 72-74
on the left.

77

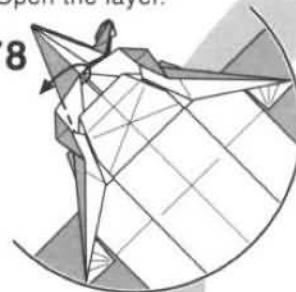


76



○のヒダを開くように
かるくひろげる
Open the circled layer.

78

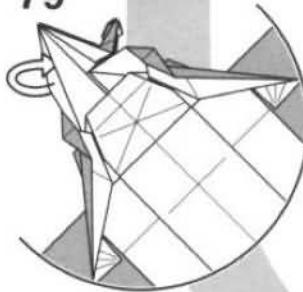


ついている折り筋で
中央の部分を
59の形に折りたたむ
Open sink the corners.

82

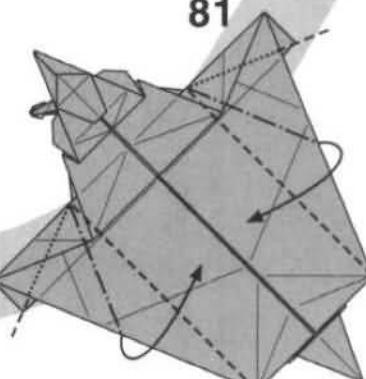


79



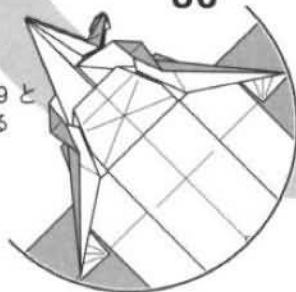
起こしたカドを
すき間に差し込む
Tuck the top layer
behind.

81



下の方をひろげる
Open the bottom
portion of the
middle layers.

80



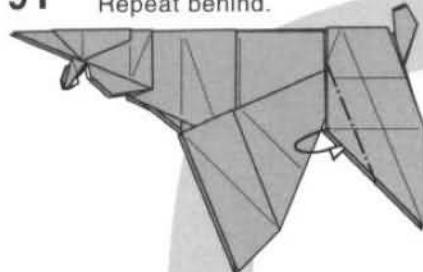
反対側も 78-79 と
同じように折る
Repeat 78-79
on the right.

ついている
折り筋を使って
中心に引き寄せる
ように折る
Fold the edge
and swivel.

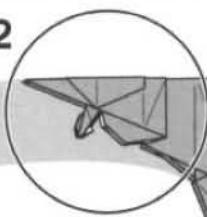
カドを後ろへ折り込む
反対側も同じ

91

Mountain fold the corner.
Repeat behind.

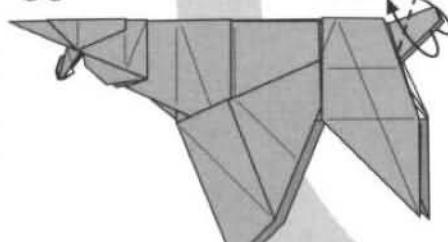


92



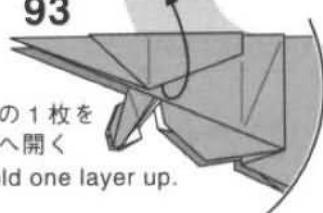
90

かぶせ折り
Outside reverse
fold.

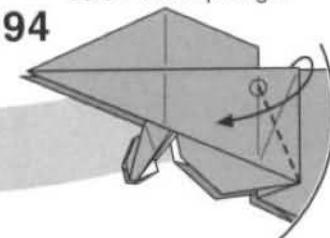


93

上の1枚を
上へ開く
Fold one layer up.



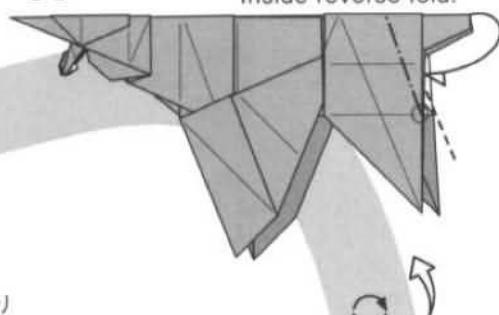
94



カドを斜めに折る
Fold the corner to the
left, but the end of the
crease line is slightly
below the top edge.

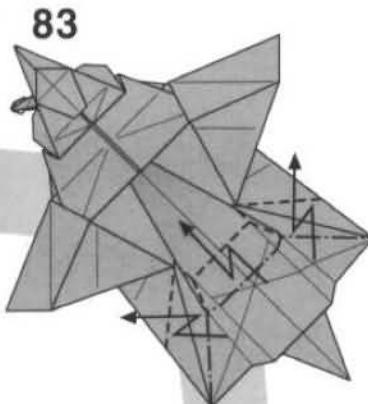
88

カドを内側に折る
Inside reverse fold.



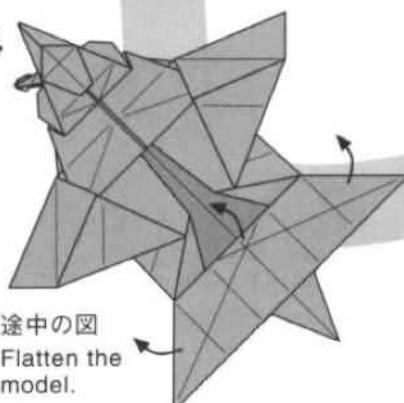
89

内側の
カドを中わり折り
Inside reverse fold
the hidden corner.



ついている折り筋を
使って段折りするよう
にして折りたたむ
Pleat using the
existing crease
lines.

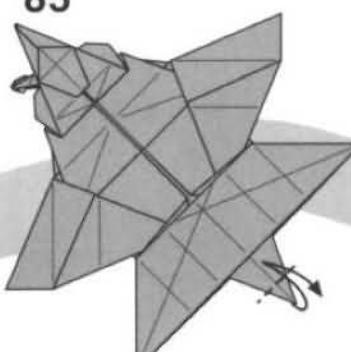
84



途中の図

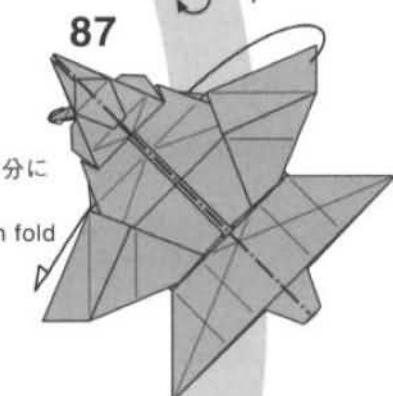
Flatten the
model.

85



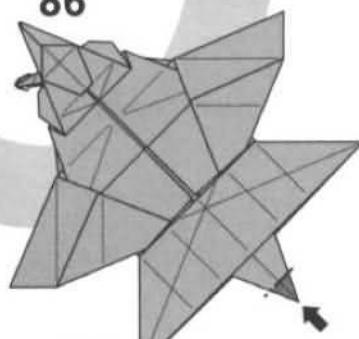
折り筋をつける
Fold the tip and unfold.

87



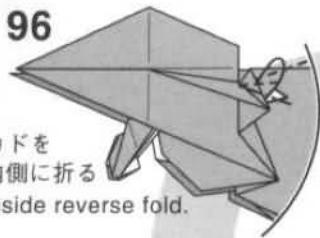
後ろへ半分に
折る
Mountain fold
in half.

86

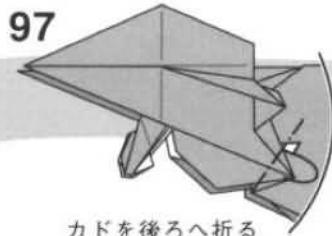


カドを
沈め折りするように折る
Push the tip inside.

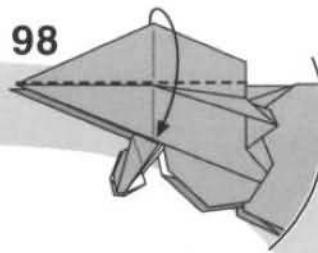
スミロドン



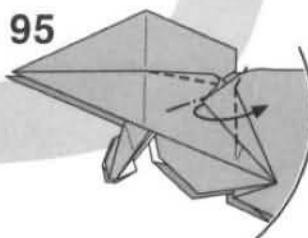
カドを内側に折る
Inside reverse fold.



カドを後ろへ折る
Mountain fold the corner.



カドを下に折る
Fold the layer back down.

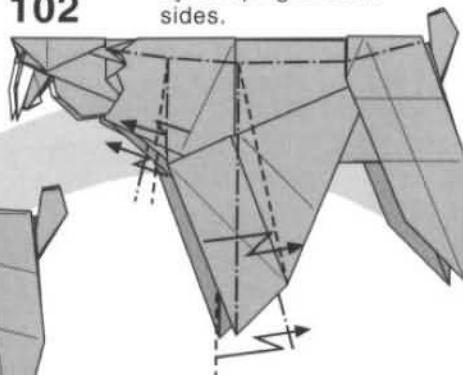


カドを反対側につまむようにして折りたたむ
Pinch the corner and swivel to the right.



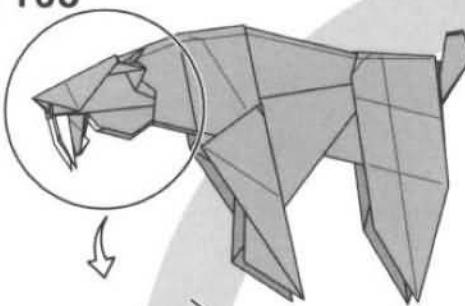
紙の裏側が
出るように
キバのカドを中わり折り
Inside reverse fold.

102



両側で段折りして
全体を立体的にする
Make the model 3-D
by crimping on both
sides.

103

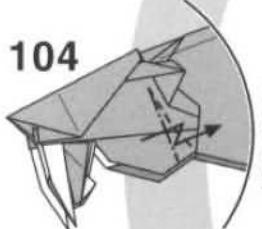


100



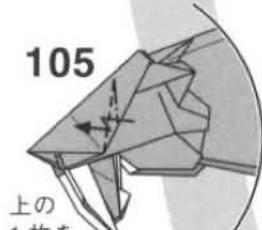
キバを
細くするように
両側を折り込む
Mountain fold the corner.

104



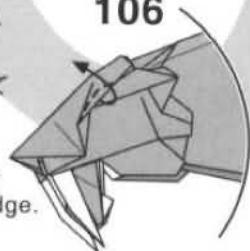
立体的に段折り
反対側も同じ
Crimp. Repeat
behind.

105



上の
1枚を
斜めに段折り
反対側も同じ
Crimp. Repeat behind.

106



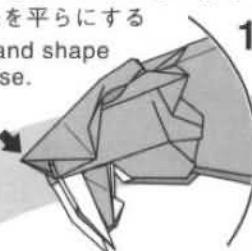
縁を曲線で折って
目を作る
反対側も同じ
Make the eye by
folding up the edge.
Repeat behind.

107



下側も
106と同じように折る
反対側も同じ
Open the eye by folding
down the edge. Repeat
behind.

108



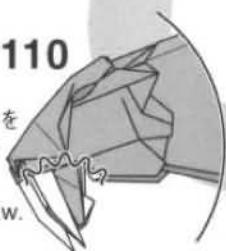
カドの先をつぶすように折って
鼻の先を平らにする
Push and shape
the nose.

109

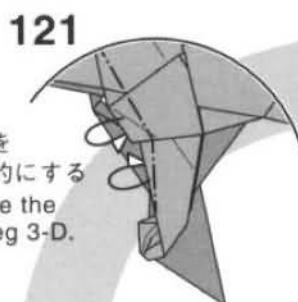


カドを
下に折る
Fold the corner down.

110



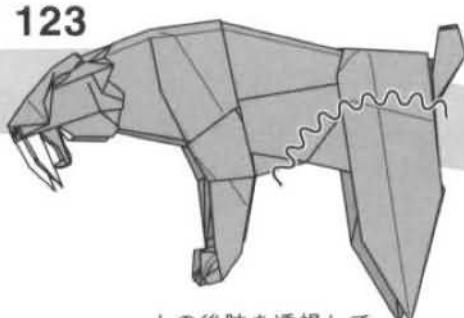
上のキバの部分を
透視して内側の
下あごを見る
Focus on the jaw.



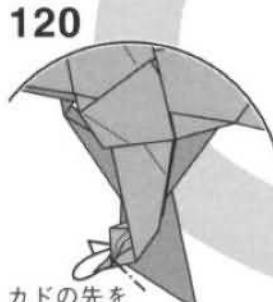
前肢を
立体的にする
Shape the
foreleg 3-D.



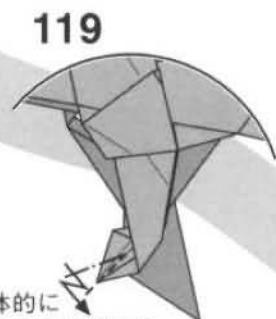
反対側も
114-121 と
同じように折る
Repeat 114-121 behind.



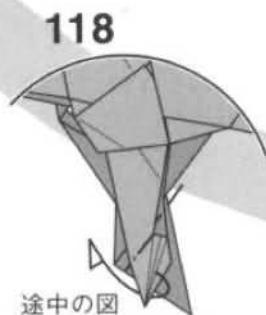
上の後肢を透視して
下の後肢の内側を見る
Focus on the hind legs.



カドの先を
後ろへ折ってとめる
Mountain fold the
corner.



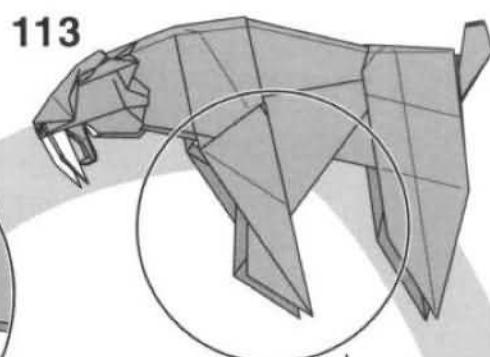
立体的に
なるように斜めに
段折り
Crimp and make
the foot three-
dimensional.



途中の図
後ろへ折りたたむ
Flatten by shifting
the corner behind.



右側のヒダをひろげながら
カドの先をつぶすように折る
Open the pocket behind
and inside reverse fold
the corner.



下あごを
開いて形を整える
Open the jaw by
valley folds.



段折り
Crimp behind.



縁を後ろへ
折りながら
ずらすように
段折り
Crimp and
swivel.



縁の
ところで
後ろへ折り込む
Mountain fold
along the edge.

スミロドン



縁を上に折って
起き上がってきた
縁を左に折る
下の部分は平らにならない
Swivel fold the inner
edge ...



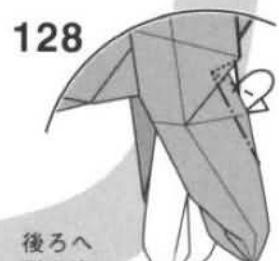
透視終わり
like this.



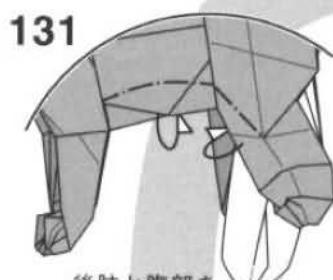
手前側も
124と同じように折る
Repeat 124 on the edge
in front.



斜めに段折り
Crimp.



後ろへ
引き寄せる
ように折って後肢を
細くする
Mountain fold the
edge and swivel.



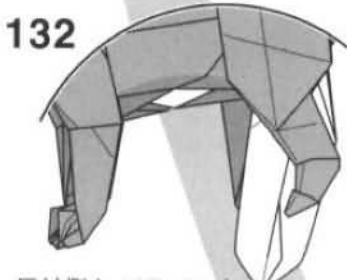
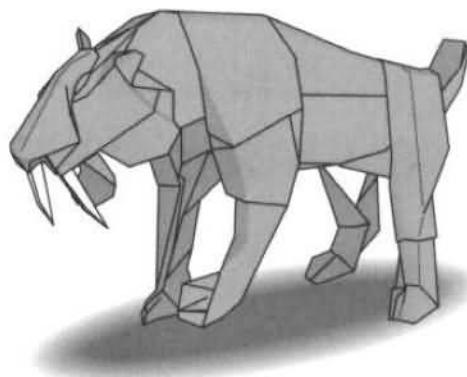
後肢と腹部を
同時に立体的にする
Shape the belly and
the hind leg 3-D.



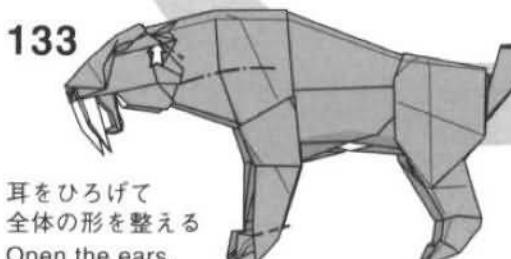
カドの
先を後ろへ折る
Mountain fold
the corner.



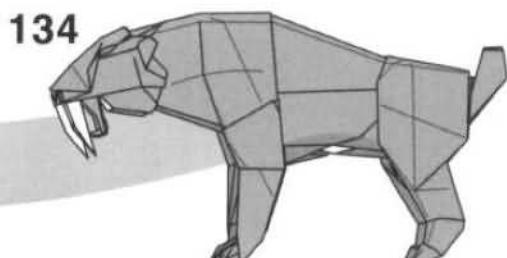
それぞれ立体的に段折り
Crimp.



反対側も 127-131 と
同じように折る
Repeat 127-131
behind.



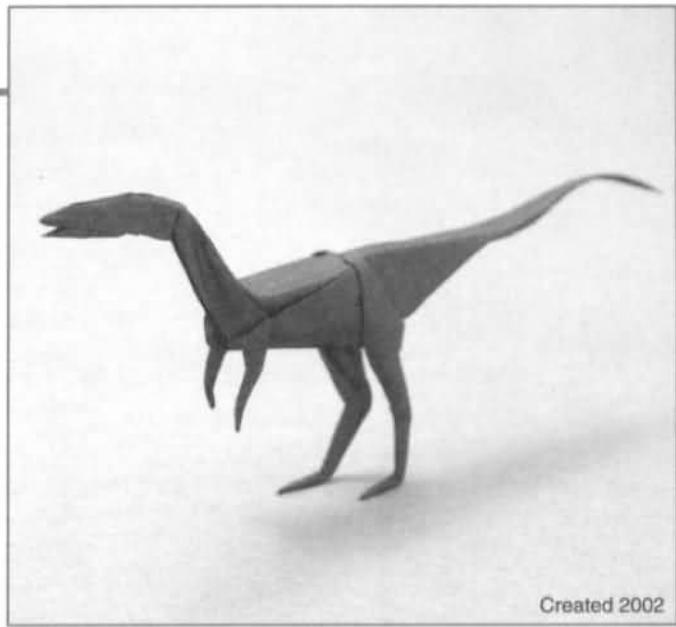
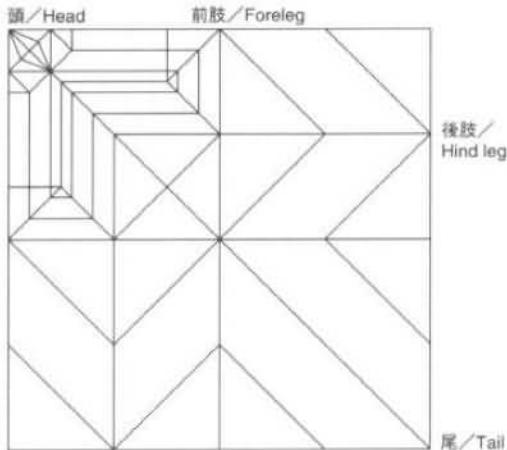
耳をひろげて
全体の形を整える
Open the ears.
Shape the details.



完成
Model completed.

コエロフィシス

Coelophysis



Created 2002

この作品は、昔作ったプロトタイプをリニューアルしたものです。プロトタイプ創作時期は、ちょうどカルノタウルスと同じ頃だったと記憶しています。基本構造や紙の使用効率は決して悪くはないと思えるのですが、造形的にはまだ荒削りな作品でした。数年前に古い作品を整理していたときにこのプロトタイプを見つけ、もし現在のスタイルで仕上げたらどういう形になるのか？と思ったのがリニューアルのきっかけとなりました。

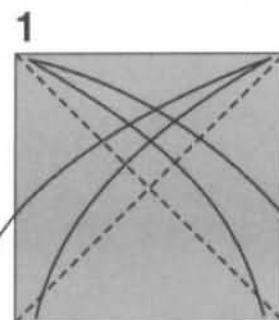
作品を改良する場合、まず気に入らない部分を探し出して、他の部分に影響が出ないように修正していきます。コエロフィシスの場合、旧作では後肢から尾の部分に造りの荒さが残っていたため、この部分の修正が主な作業になりました。そうしてできた新しいバージョンは、足の部分に15度を使用し、より効率の良い形にすることができました。その後、現在のスタイルで仕上げをして今回の完成に至ります。

古い作品や試作品などの「折りゴミ」を見直してみると、とても良い基本構造やアイディアを持ったものがいくつも見つかります。そのときは創作技術がまだ未熟でうまく生かしきれていないことも、時間が経つとこの作品のようにリニューアルしたり、他の作品に応用したりして、もう少し良いものができるかもしれません。やたらと折りゴミを量産するのも、決して無駄ではないようです。

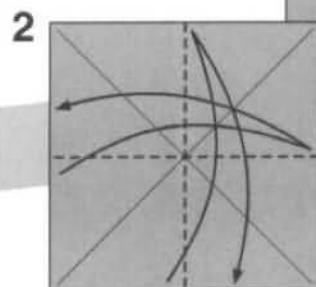
This model is a revised version of a prototypical one. Created at about the same time as Carnotaurus, but it was not brushed up yet. I decided on renewing it when I found it in my archives of old models.

The revision of an old model usually consists of renewal of malfunctioning parts without affecting the rest. With this model, the parts in question were hind legs and the tail. The hind legs now are folded with 15° flaps, which give it a better shape. You also should never forget your old models and even uncompleted ones. Revising them, you should get another interesting models.

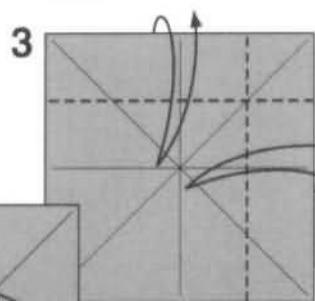
必要サイズ/Recommended Size of Sheet : 20×20cm



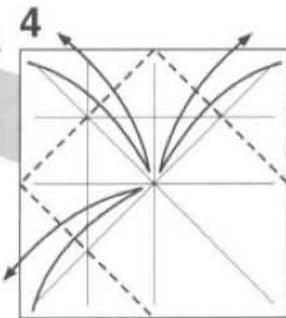
1
三角に折り筋をつける
Color side up. Fold diagonals and unfold.



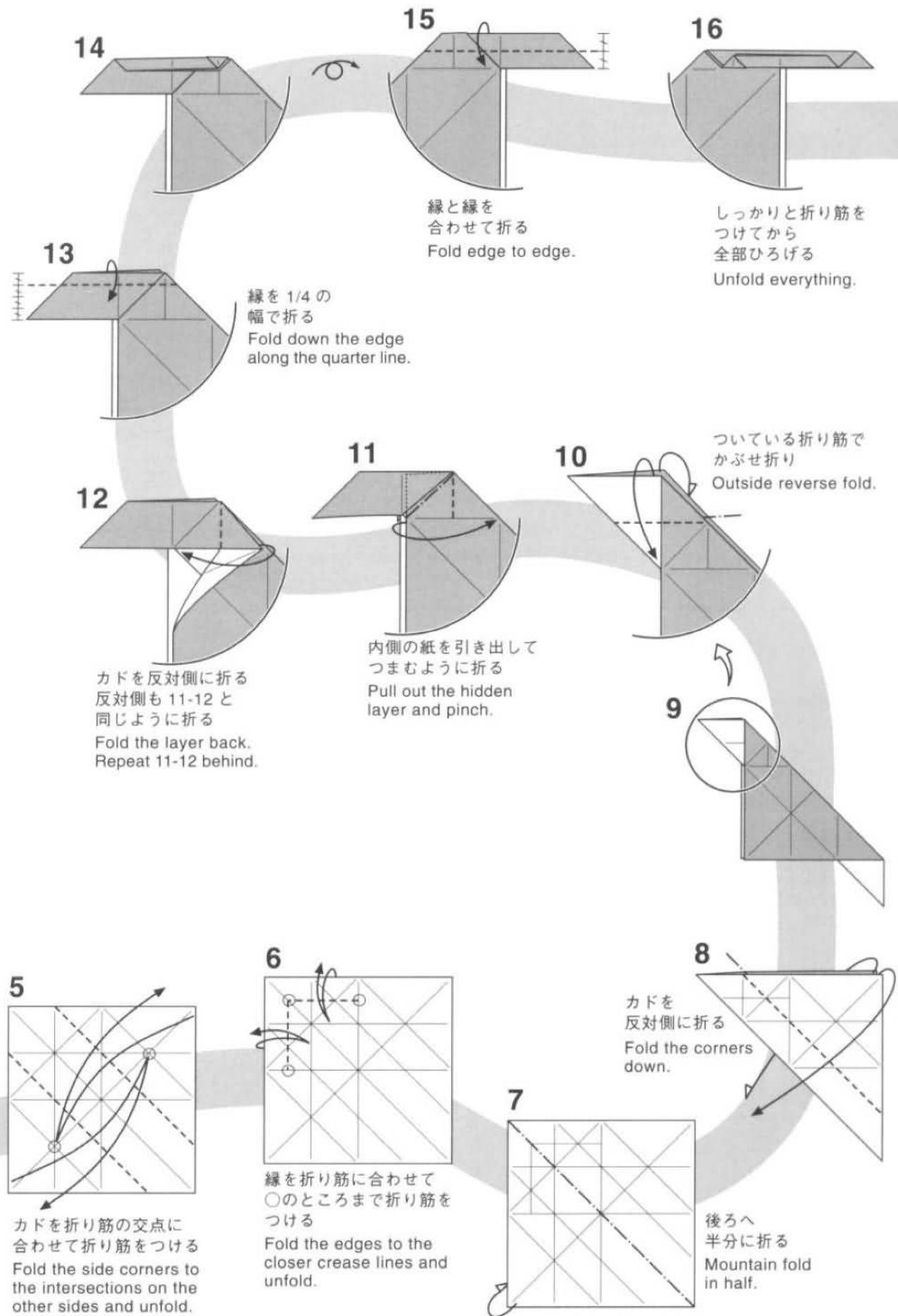
2
半分に折り筋をつける
Fold in half and unfold.



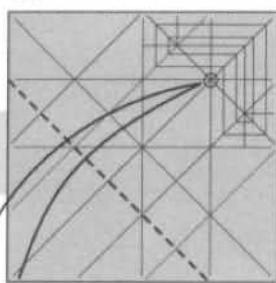
3
縁を折り筋に合わせて
折り筋をつける
Fold the two edges to the center lines and unfold.



4
カドを中心に合わせて
折り筋をつける
Fold three corners to the center and unfold.

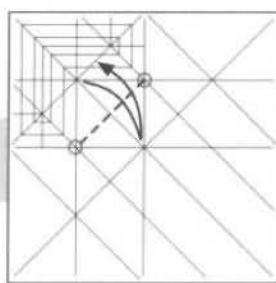


17



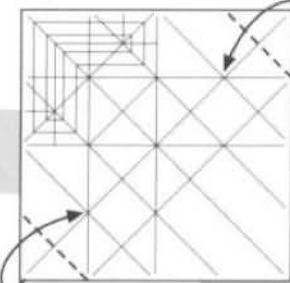
カドを折り筋の交点に合わせて折り筋をつける
Fold the corner to the upper intersection and unfold.

18



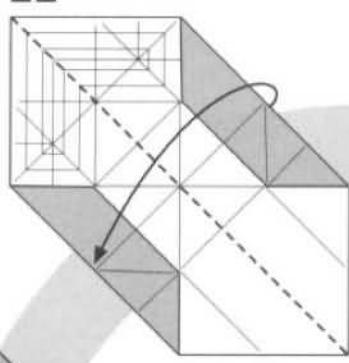
○を結ぶ線で折り筋をつける
Fold the line connecting the intersections and unfold.

19



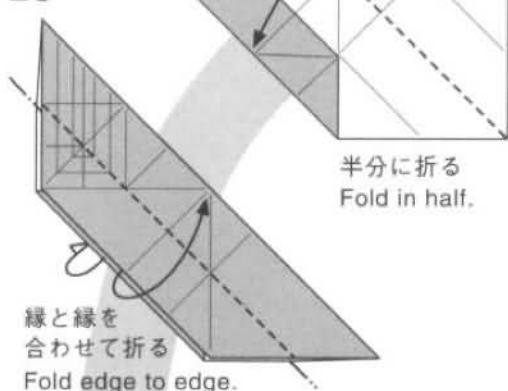
カドを折り筋に合わせて折る
Fold the side corners to the closest intersections.

22



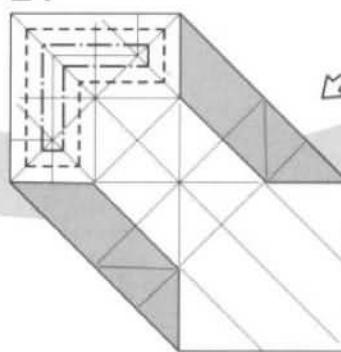
半分に折る
Fold in half.

23



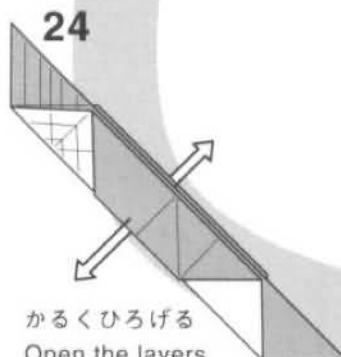
縁と縁を合わせて折る
Fold edge to edge.

21



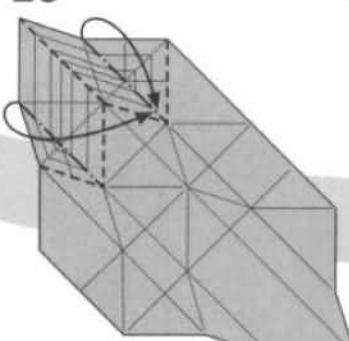
図のように折り筋をつけなおす
Fix the patterns of valley and mountain folds.

24



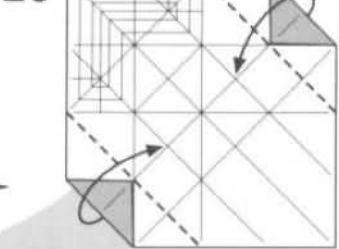
かるくひろげる
Open the layers lightly.

25



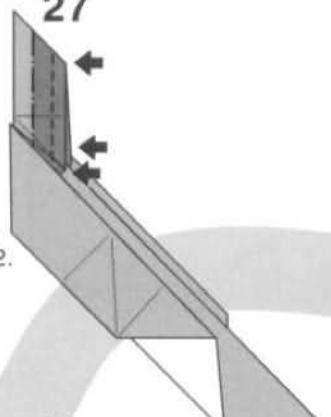
ついている折り筋でかぶせ折りするように折る
Make a series of reverse folds using the existing crease lines.

20



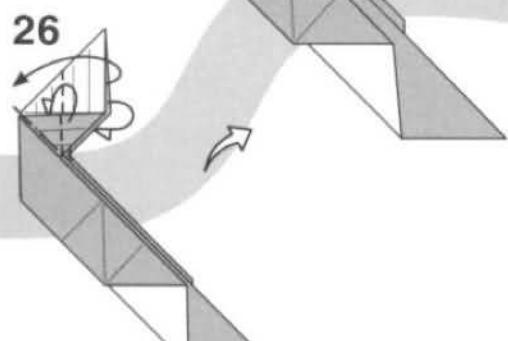
縁をついている線で折る
Fold the sides further using the existing crease lines.

27



ついている折り筋で沈めるように段折り
(Open sink)
28-32 で詳しく解説
Open sink in and out.
For details, see 28-32.

26

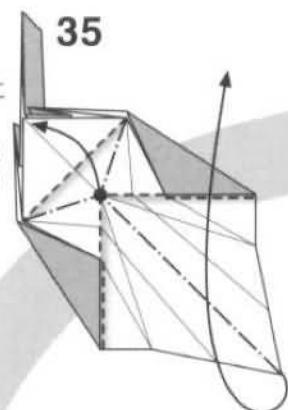


10-12と同じように折りたたむ
Assemble like 10-12.

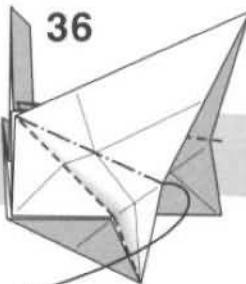
途中の図
中心の点をカドに
合わせて折る

The circled point
in 34 goes to the
corner above.

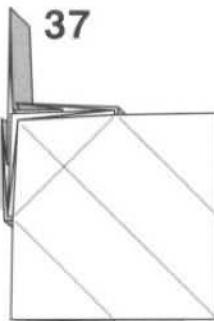
35



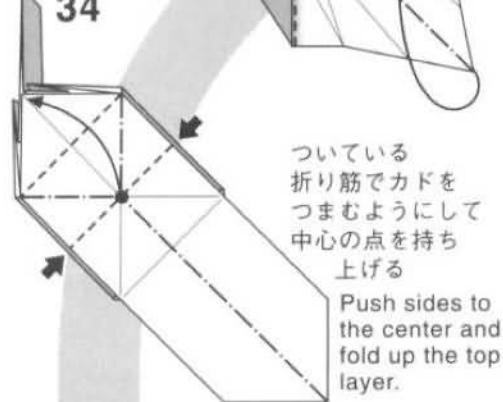
36



37

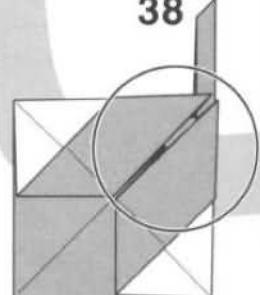


34

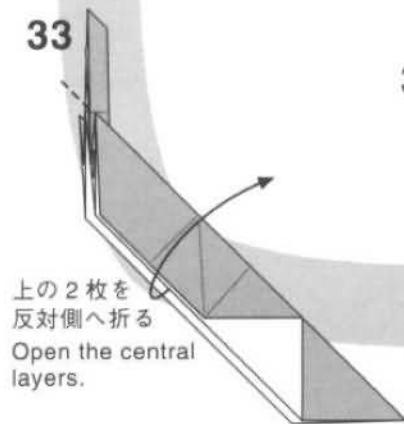


そのままつぶす
ように折る
Squash the top
layer.

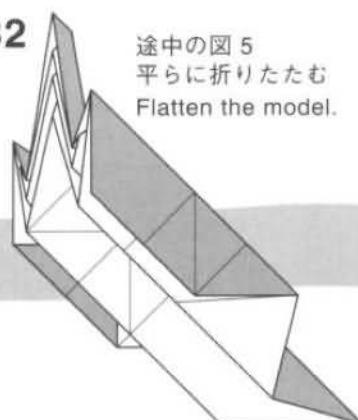
38



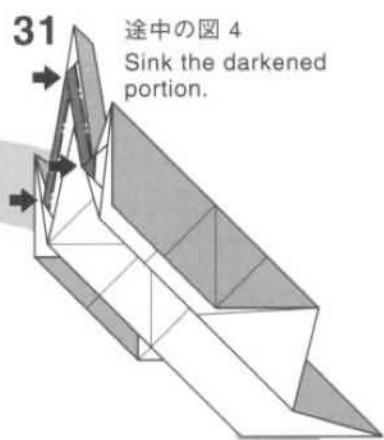
33



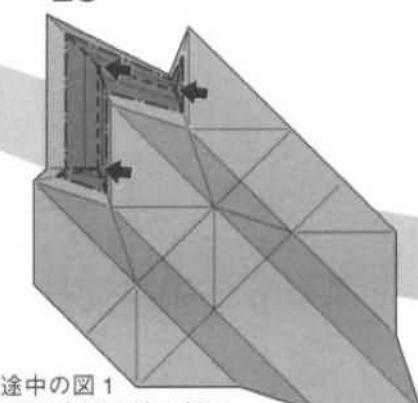
32



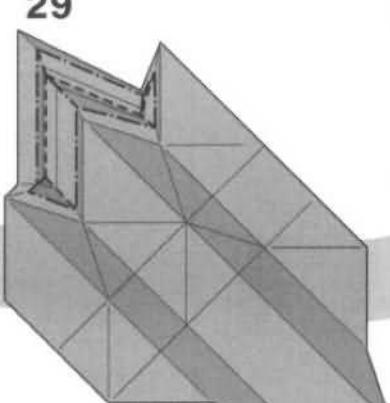
31



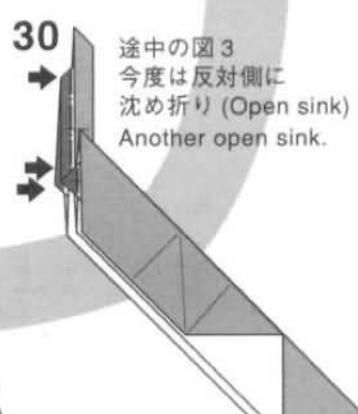
28

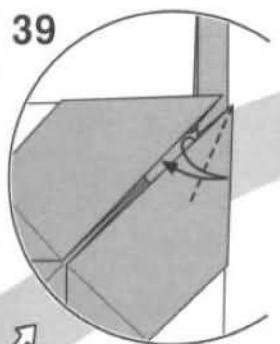


29

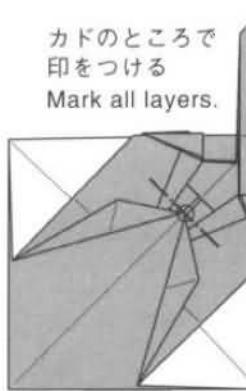


30

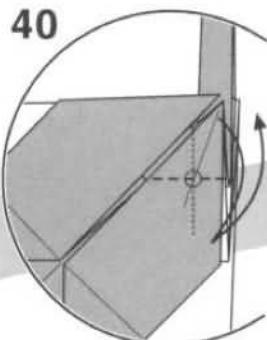




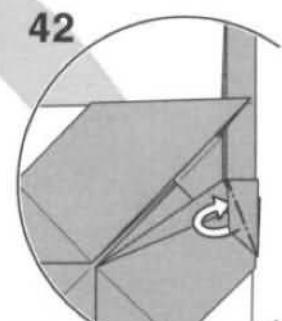
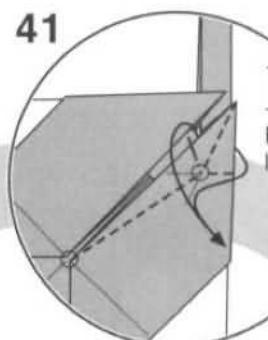
縁と縁を合わせて途中まで折り筋をつける
Fold edge to edge and unfold.



カドのところで印をつける
Mark all layers.

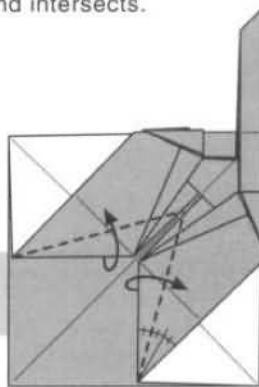


つけた折り筋を使って上の1枚をつまみ折り
Rabbit ear fold the top layer.



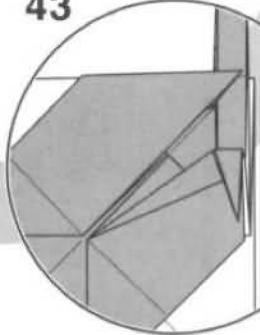
カドを後ろのすき間に折り込む
Fold the corner inside.

44



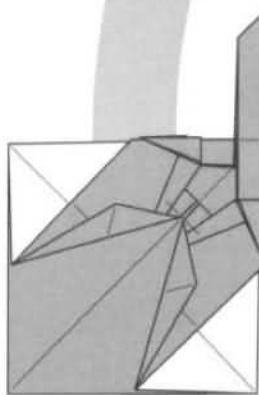
1/3 の角度で折る
Fold the angle trisectors.

43



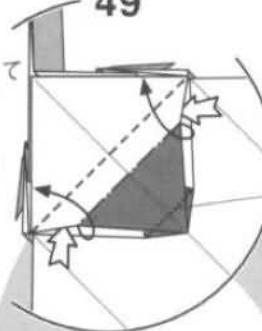
反対側も 39-42 と同じように折る
Repeat 39-42 on the left.

46



ついている折り筋を使ってカドを両側からひろげてつぶすように折る
Pleat the top layer. Open the side pockets ...

49

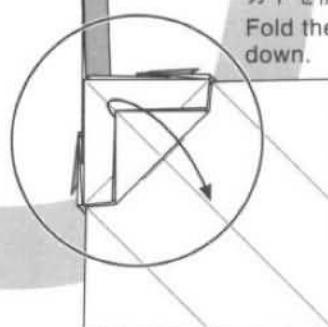


カドを開く
Fold the corner down.

47

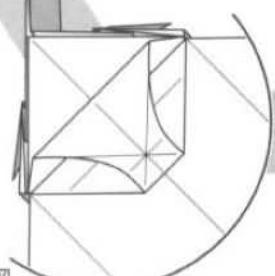
45 でつけた印に合わせてカドを段折り
Pleat so that the edge touches the mark made in 45.

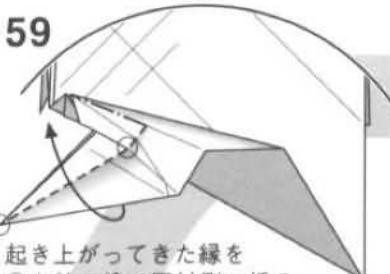
48



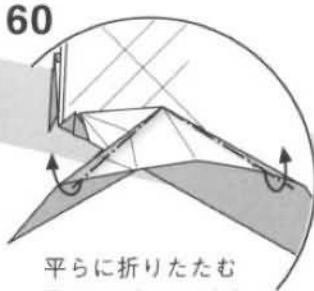
途中の図
まず上の縁を折ってから他の部分を合わせてつぶすように折る
Like this. Squash after folding the pleat.

50





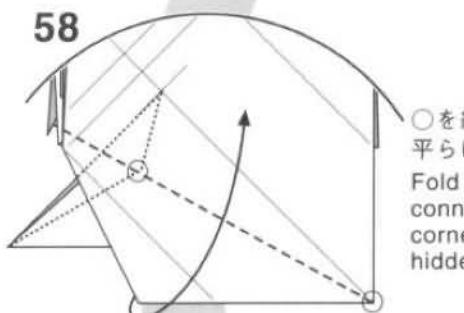
起き上がってきた縁を
○を結ぶ線で反対側へ折る
Fold along the edge.



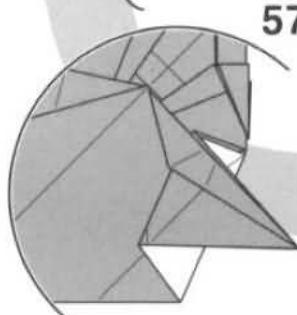
平らに折りたたむ
Flatten the model.



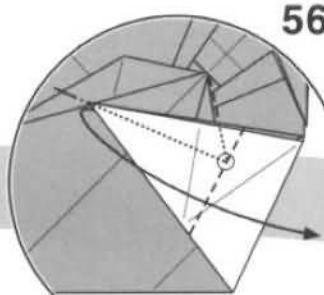
縁と縁を合わせて
後肢のカドを細く
するように折る
Fold edge to edge,
making the corner
sharper.



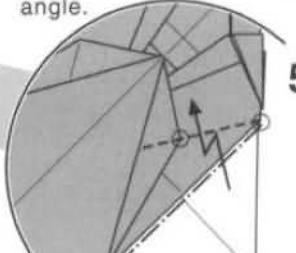
○を結ぶ線で折る
平らにはならない
Fold on the line
connecting the bottom
corner and the circled
hidden angle.



57

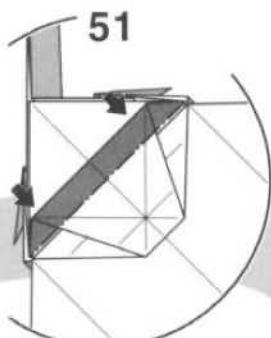


56

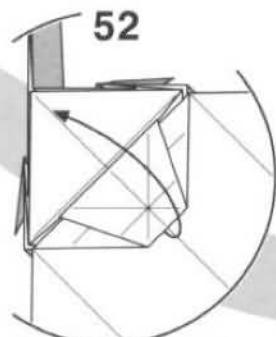


55

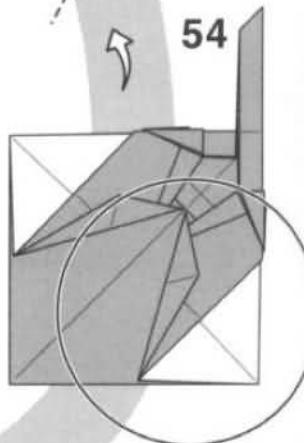
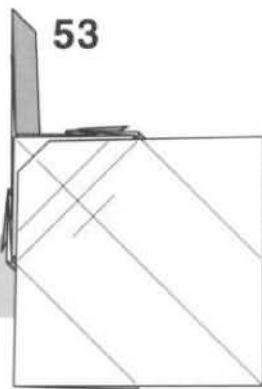
後ろの縁のところで
カドをつまむように折る
Fold the corner up and
form a rabbit ear
inside.



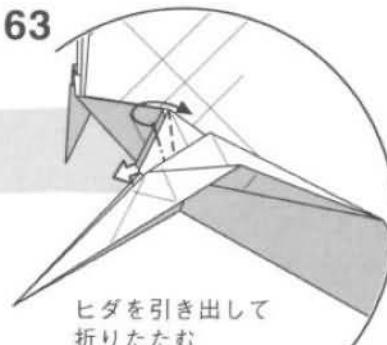
反対側に沈め折り
(Closed sink)
Closed sink.



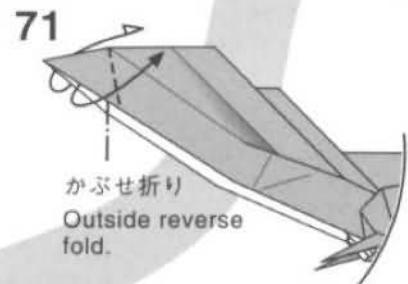
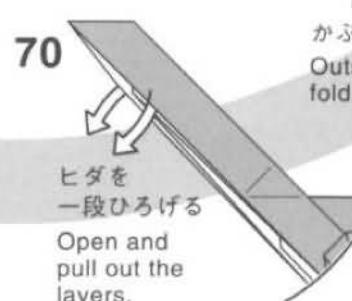
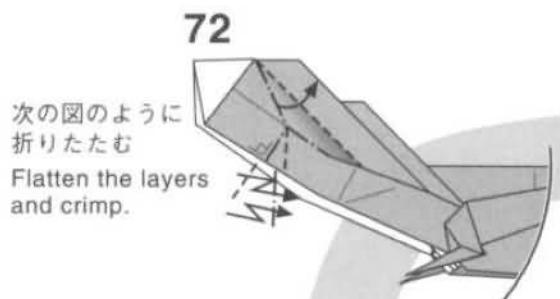
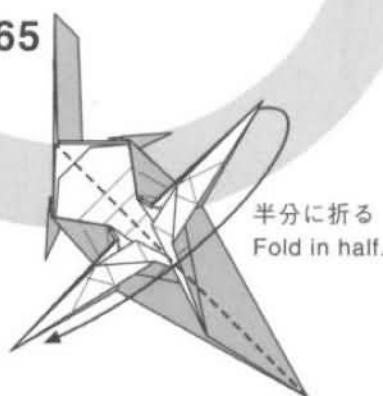
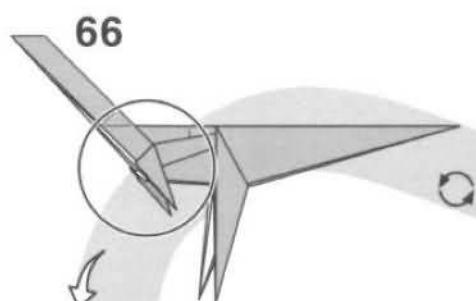
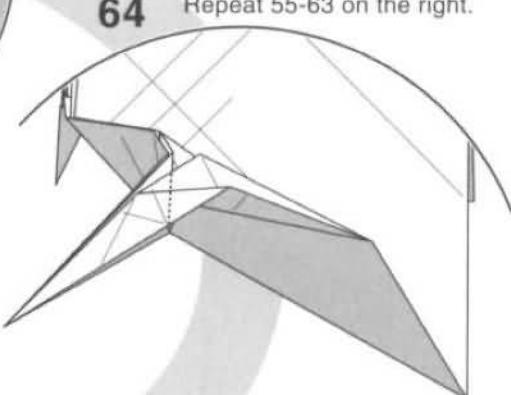
カドを反対側に倒す
Fold the corner up.



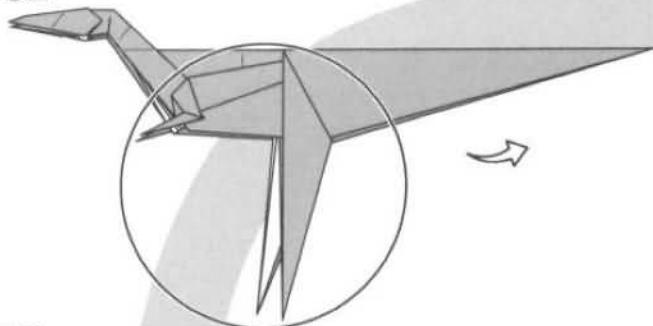
54



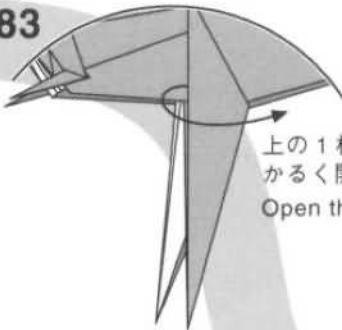
反対側も 55-63 と同じように折る
Repeat 55-63 on the right.



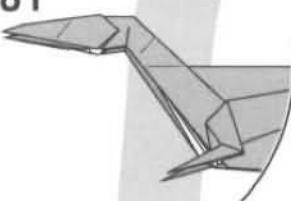
82



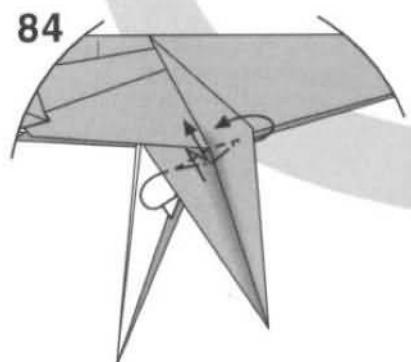
83



81



84



80

縁を内側へ
折り込んでとめるFold the edges
of the neck
inside.

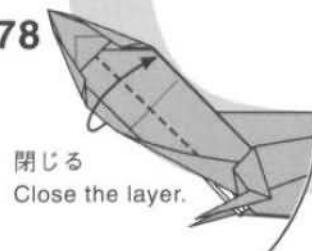
79

首を曲げるよう
に両側で立体的に段折り
Crimp on both layers.

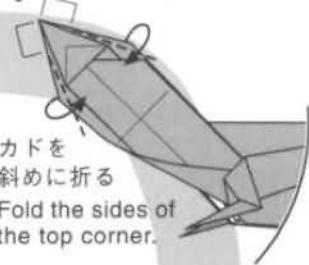
73

両側で
内側に段折り
Crimp inside.

78

閉じる
Close the layer.

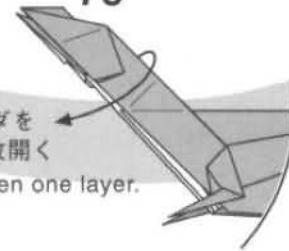
77

カドを
斜めに折る
Fold the sides of
the top corner.

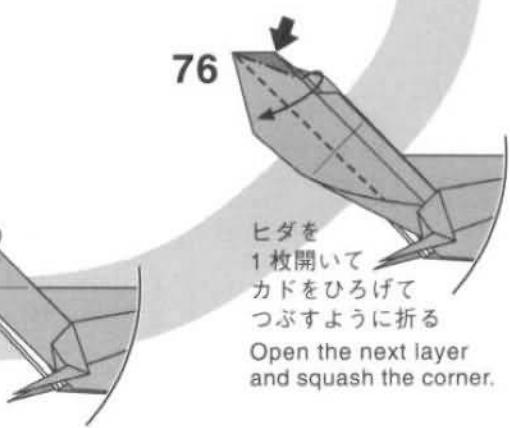
74

両側で
内側に段折り
Crimp inside.

75

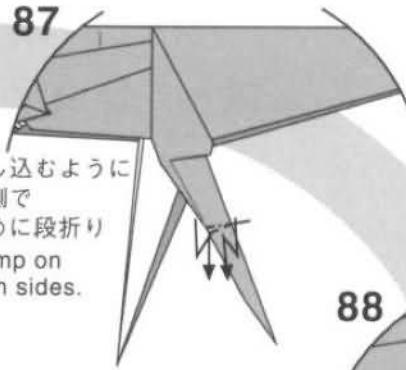
ヒダを
1枚開く
Open one layer.

76

ヒダを
1枚開いて
カドをひろげて
つぶすように折る
Open the next layer
and squash the corner.



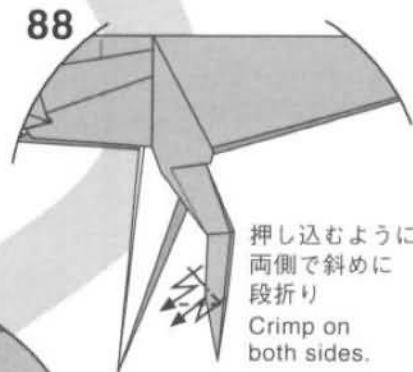
後肢を細く折る
Fold the edges of the leg.



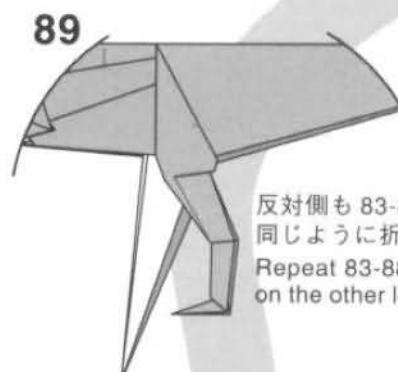
押し込むように
両側で
斜めに段折り
Crimp on both sides.



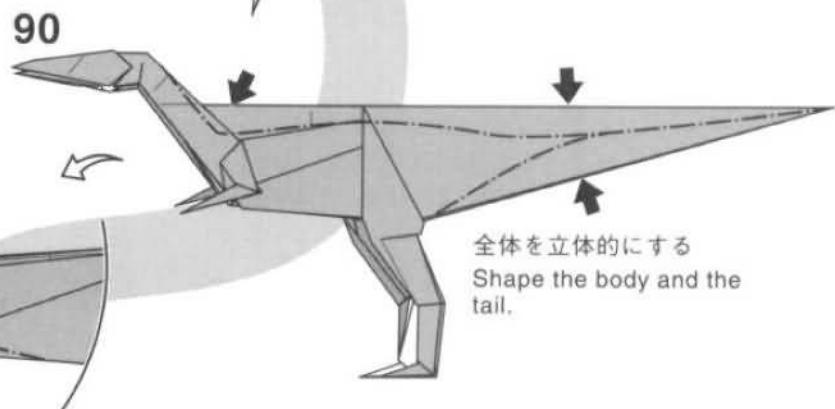
そのまま
開いた部分を
ぴったり合わせる
ように閉じる
Close the layers.



押し込むように
両側で斜めに
段折り
Crimp on both sides.

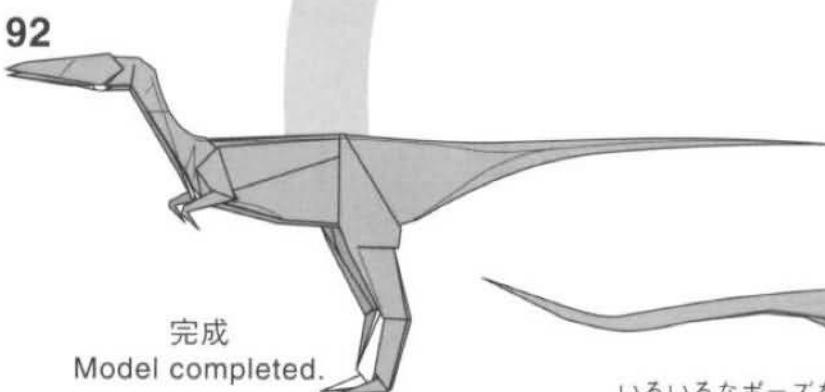


反対側も 83-88 と
同じように折る
Repeat 83-88
on the other leg.

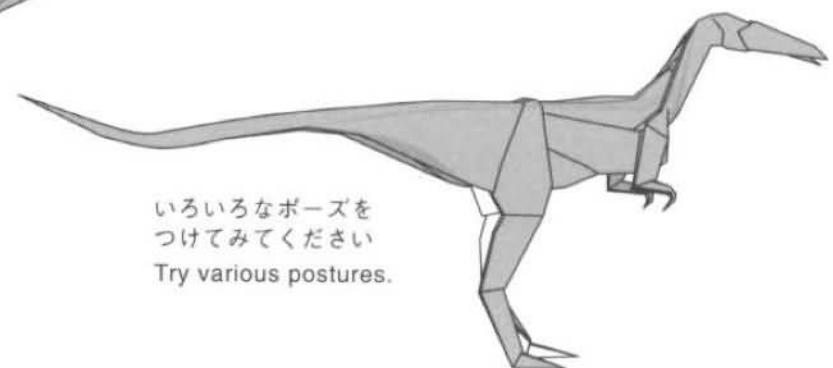


立体的にして
形を整える
Shape the head,
neck and the
front legs.

全体を立体的にする
Shape the body and the
tail.



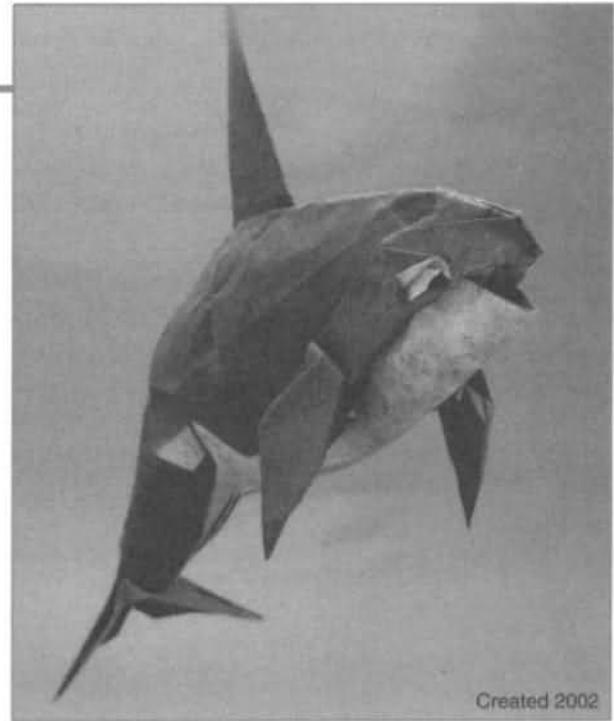
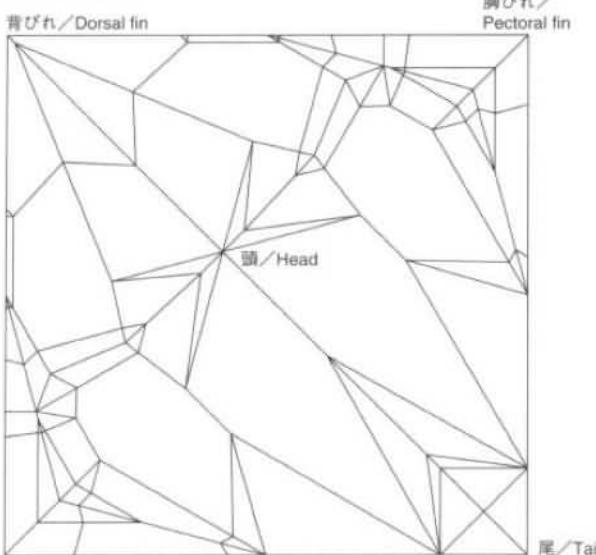
完成
Model completed.



いろいろなポーズを
つけてみてください
Try various postures.

シャチ

Orca



Created 2002

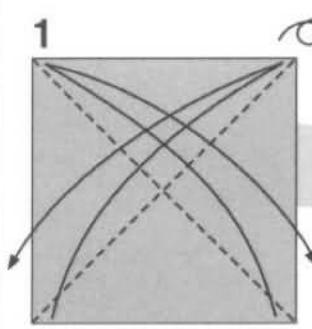
シ タチという題材には、過去に一度挑戦したことがあります。1995年に創作したもので、平面的でインサイドアウトの模様を折り出しただけのものですが、当時はかなり気に入っていて、手描きの折り図も存在します。そしてその頃から、下あごから腹へのラインがスムーズにつながった作品を作りたいと考えていたよう、古い作品を入れた箱を漁ると、当時の試作品が見つかります。

シロナガスクジラを作った後、上あごを背びれにすることで、同じような構造からシャチができそうだと気づきました。スムーズな腹の部分はもちろん、インサイドアウトで模様を折り出すのも難しくなさそうです。結果的に完成したものを比べてみると、上あごの折り出し方を変えてインサイドアウトを加えた以外はほぼ同じ構造になりました。このあたりは展開図、折り手順を比べてみると分かりやすいと思います。

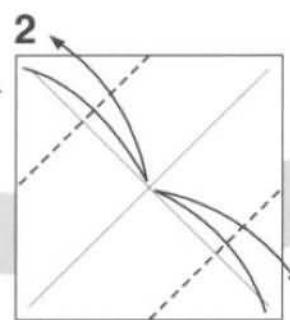
また、過去に作ったものと今回の作品に共通する部分として、高い背びれがあります。私の中にあるシャチのイメージが出せたのではないかと思います。

*インサイドアウト：紙の表裏の色の違いを使って、色分けされた作品を作る技法。

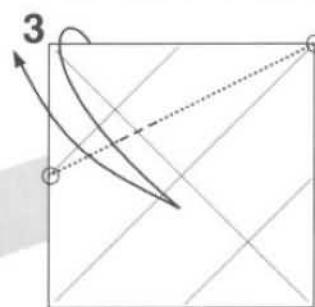
必要サイズ/Recommended Size of Sheet : 25×25cm



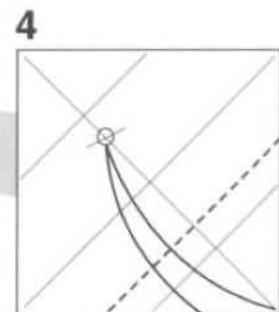
三角に折り筋をつける
Color side up.
Fold diagonally and unfold.



カドを中心に行わせて
折り筋をつける
Fold corners to the
center and unfold.



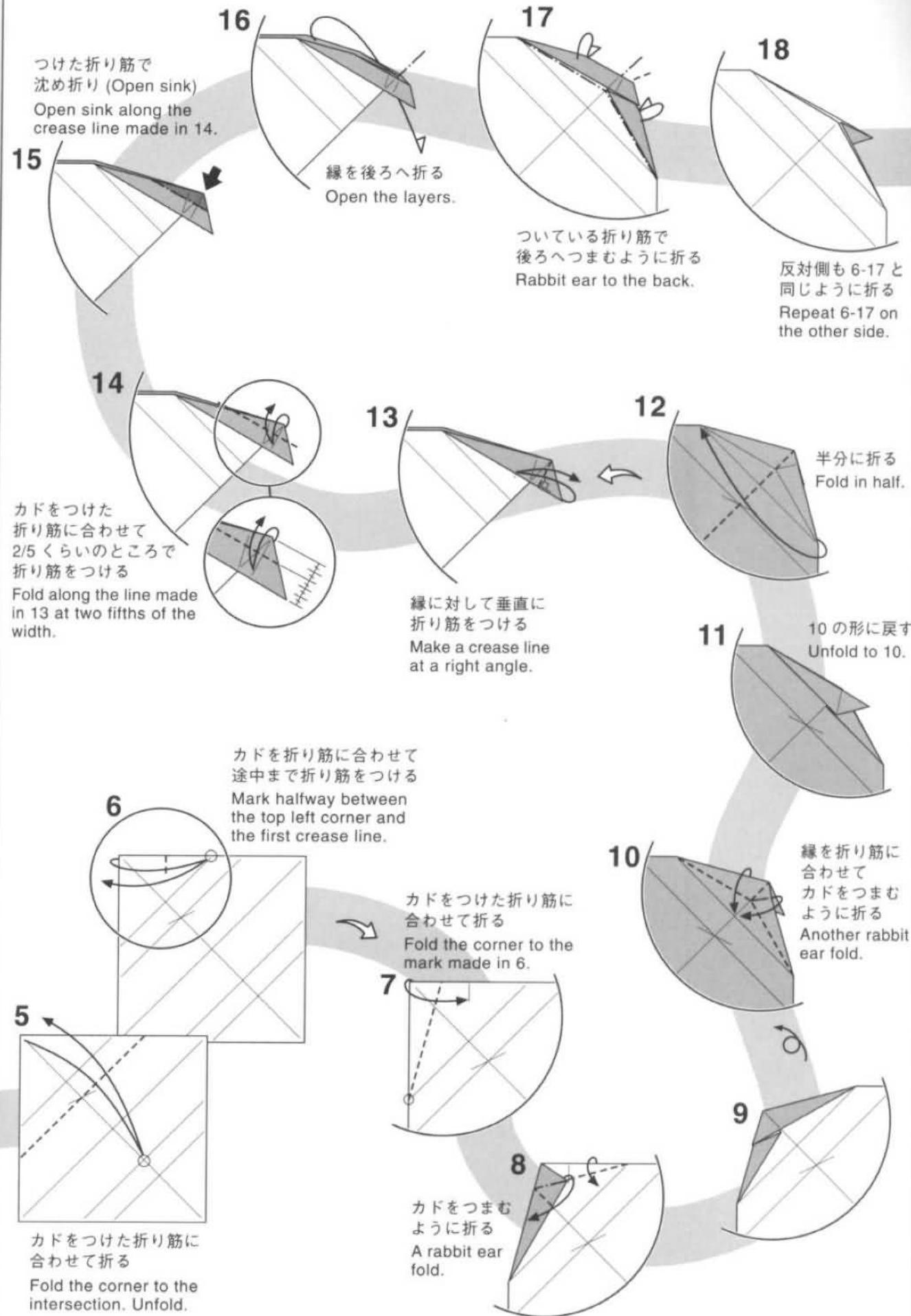
○を結ぶ線で折り筋の
部分に印をつける
Mark the intersection of the
line connecting the top right
corner and the other end of
the first crease line with the
diagonal.

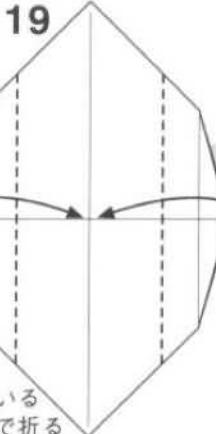


カドをつけた印に
合わせて折り筋をつける
Fold the corner to the
mark and unfold.

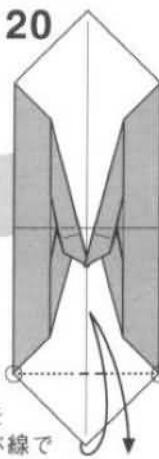
This is the second time I tried to create an orca. I created the first version in 1995, with an inside-out method picturing an orca's pattern. I liked that version so much that I made hand-written diagrams. I always wanted to create a model with natural shape in the area from the jaw to the belly, and actually I tried various versions which I can still find in my archive.

After I created the Blue Whale, I found out that by shifting the upper jaw to the dorsal fin I can create an orca. By doing this, not only the natural shape of the belly but also the patterning by the inside-out method is possible. I finally changed the procedure for folding the upper jaw a little, but the model is basically with the same structure, which can be easily seen in the crease pattern and diagrams. The tall dorsal fin matches my image of orcas.

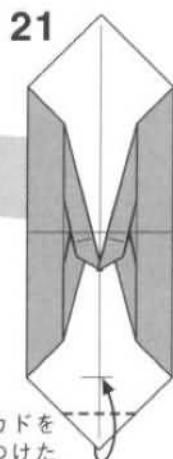




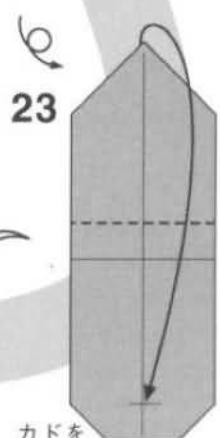
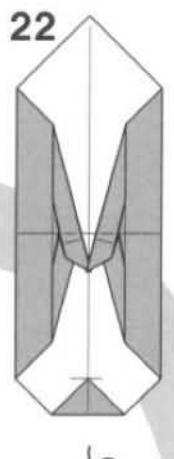
ついている
折り筋で折る
Fold along the existing
crease lines.



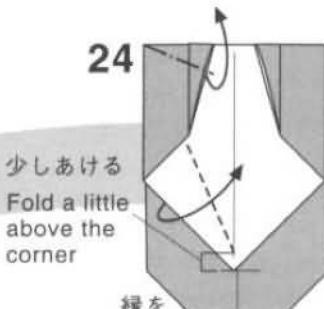
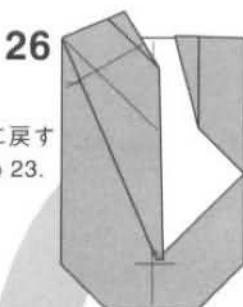
○を
結ぶ線で
折り筋の部分に印を
つける
Fold up the corner but
only mark the center.



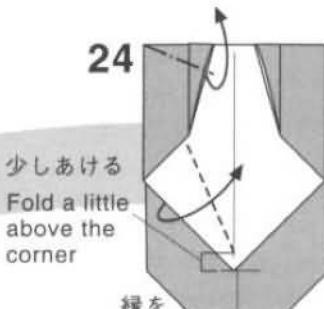
カドを
つけた
印に合わせて折る
Fold the corner to the
mark made in 20.



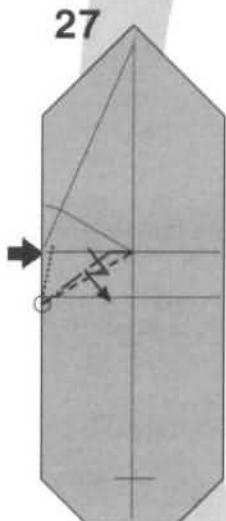
23



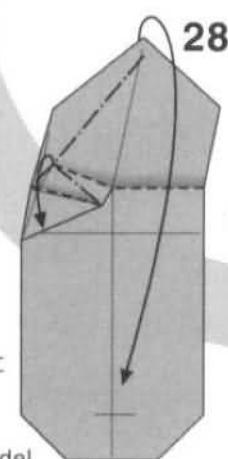
少しあげる
Fold a little
above the
corner
1/3
くらいの角度で
折り筋をつける
Fold and unfold at
a third of the angle.



カドを
印に合わせて折る
Fold the corner to
the mark.

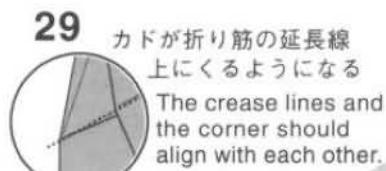


上の1枚だけ
ついている折り筋の
ところで少し
ずらすように折る
平らにはならない
Crimp only the top
layer. The model
will not lie flat.



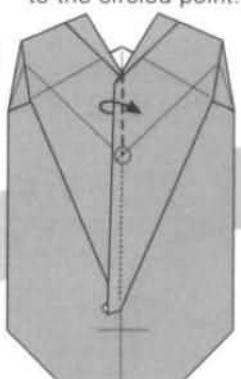
そのまま平らに
なるように
折りたたむ
Flatten the model.

28

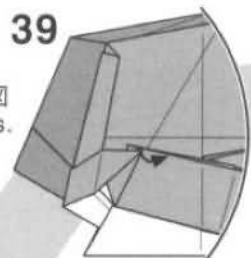


カドが折り筋の延長線
上にくるようになる
The crease lines and
the corner should
align with each other.

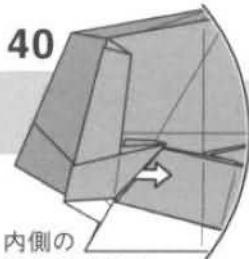
30



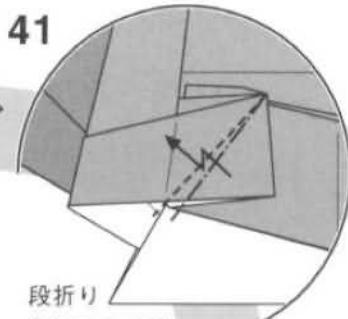
反対側も24-28と同じように
折る 左右の形が同じになる
ように気をつける
Repeat 24-28 on the right.
The shape of the model should
be symmetrical, except for the
central cluster of layers.



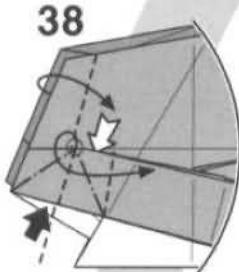
途中の図
Like this.



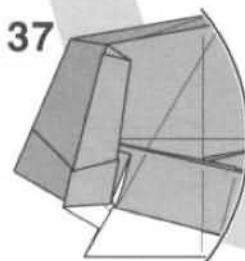
内側の紙を引き出す
Pull out the hidden layer.



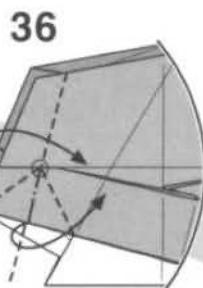
段折り
Crimp outside.



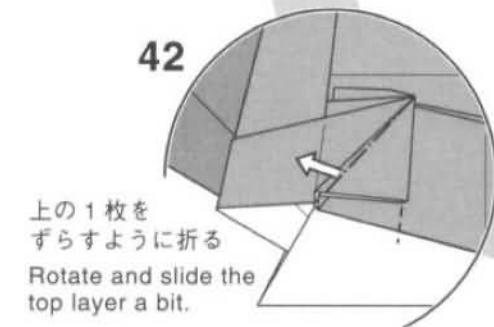
ついている折り筋を使って
カドを作るよう折りたたむ
Using the existing crease
lines, assemble the model
so that a new corner will be
made.



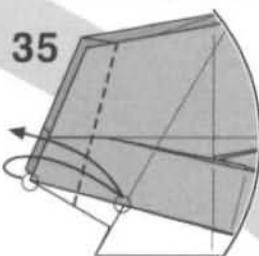
36 の形に戻す
Unfold.



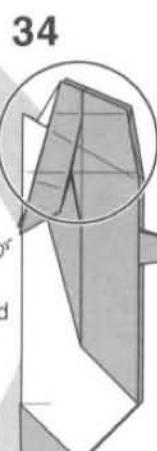
縁を
2枚まとめて中わり折り
するように折りながら
35 でつけた折り筋で
折りたたむ
Fold on the existing
crease lines, while inside
reversing as shown.



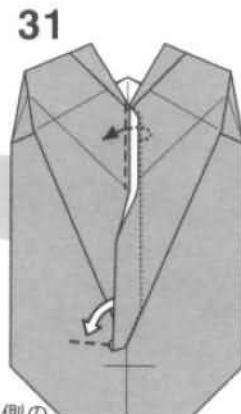
上の1枚を
ずらすように折る
Rotate and slide the
top layer a bit.



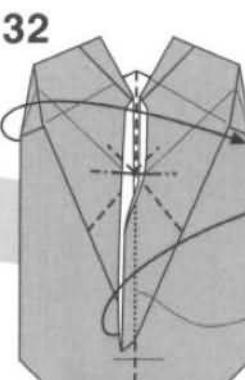
○を合わせて
折り筋をつける
Fold and unfold aligning
the circled points.



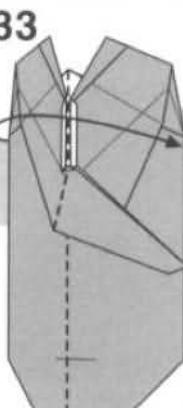
32 で折ったカドが
背びれになる
The corner folded
in 32 will be the
dorsal fin.



内側の
縁を引き出し 30 と
同じように折って
下のカドを尖らせる
Pull the hidden layer to
the left and fold like 30.
The corner at the
bottom of the top layer
should now be sharp.

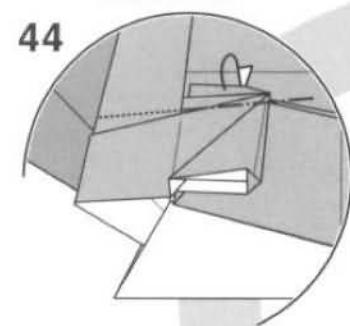


カドを
中わり折りするように
折りながら全体を半分に折る
Fold in half and inside
reverse fold the flap.



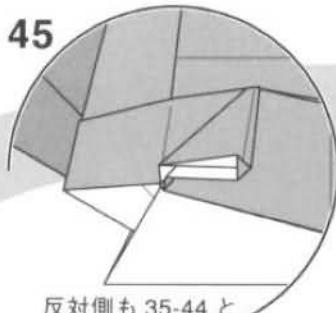
途中の図
カドのつけ根の
部分は段に折る
Like this.
Crimp at the root
of the corner.

44



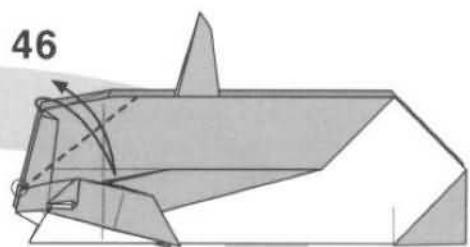
後ろへ折り込む
Fold behind.

45



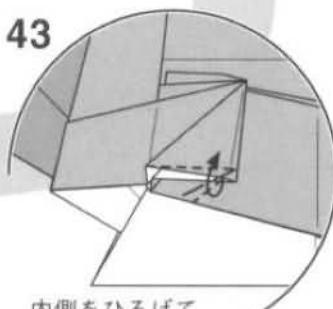
反対側も 35-44 と同じように折る
Repeat 35-44 behind.

46



上の 1 枚だけ斜めに
折り筋をつける
Fold and unfold.

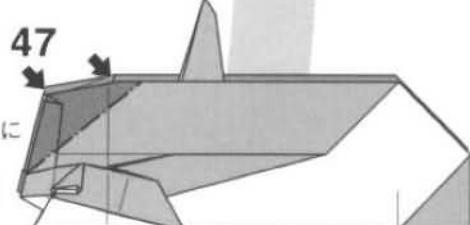
43



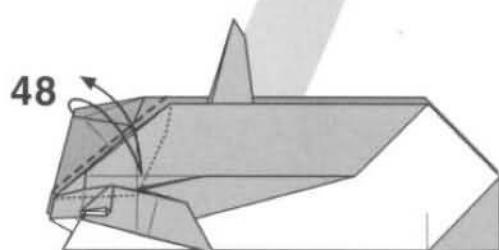
内側をひろげて
つぶすように折る
Open the top layer a
little, and squash the
right end.

内側に
押し込むように
沈め折り
(Closed sink)
Closed sink.

47

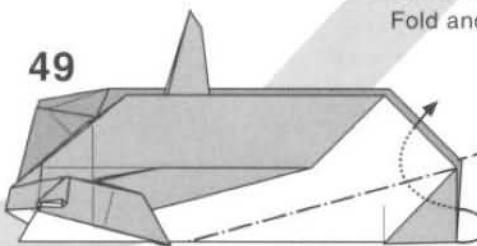


48



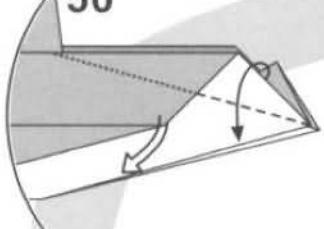
縁のところで折り筋をつける
Fold and unfold.

49



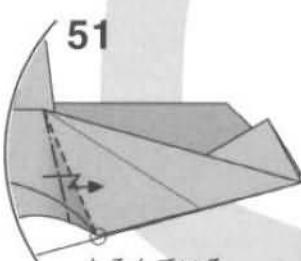
カドのところから
斜めに中わり折り
Inside reverse
fold.

50



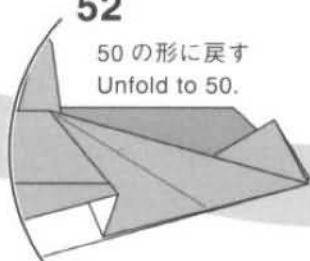
縁と縁を合わせて
ずらすように折る
Fold edge to edge
and swivel the corner.

51



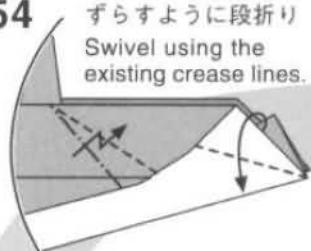
たるんでいる
部分を段折り
Crimp excess
paper.

52



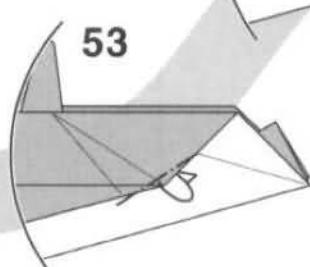
50 の形に戻す
Unfold to 50.

54

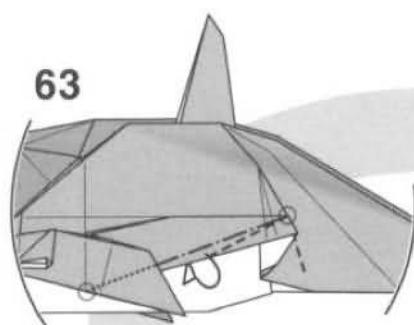


ついている折り筋で
ずらすように段折り
Swivel using the
existing crease lines.

53

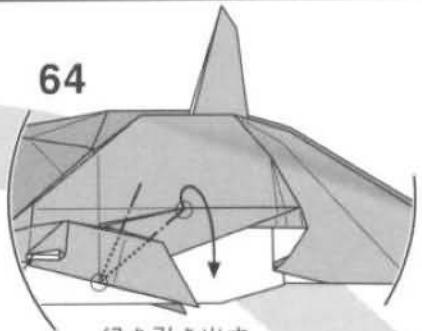


カドを少し
後ろへ折る
Fold the corner
behind.



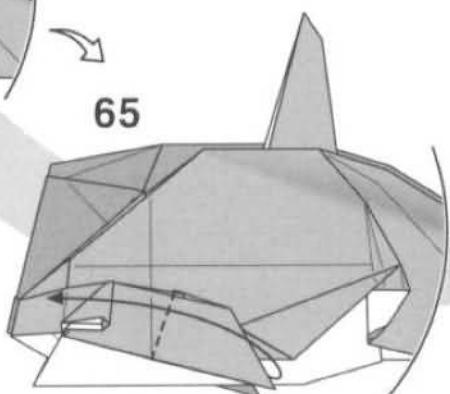
63

縁を後ろへずらすように
○を結ぶ線で折り込む
Fold the edge inside.



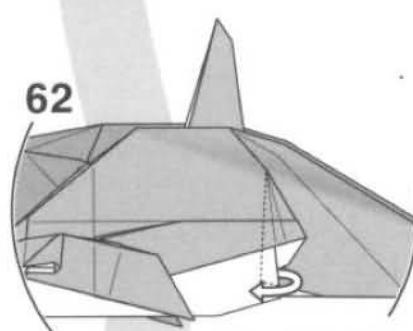
64

縁を引き出す
ように折る
Pull down the
inner layer.



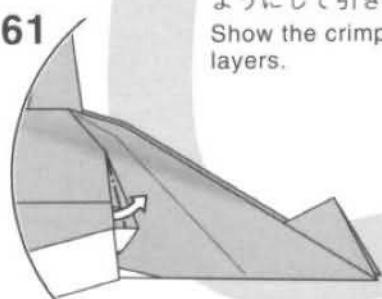
65

カドを開くところで
反対側に折る
Fold the corner to the
other side.



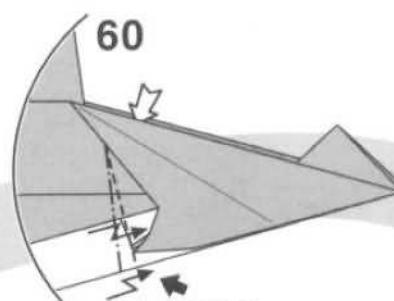
62

内側の部分を外す
ようにして引き出す
Show the crimped
layers.



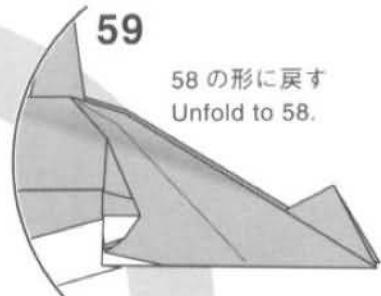
61

内側の紙を引き出して折る
Pull out the inner layer.



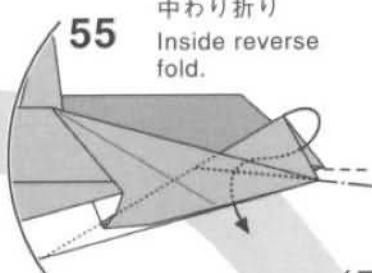
60

つけた折り筋で
押し込むように
両側に段折りして
体を立体的にする
Crimp inside so the
model will become
3-D.



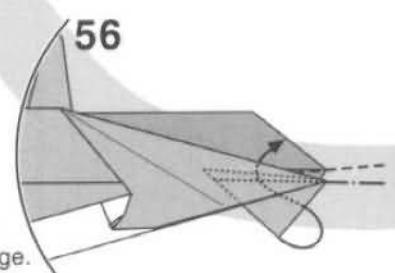
59

58 の形に戻す
Unfold to 58.



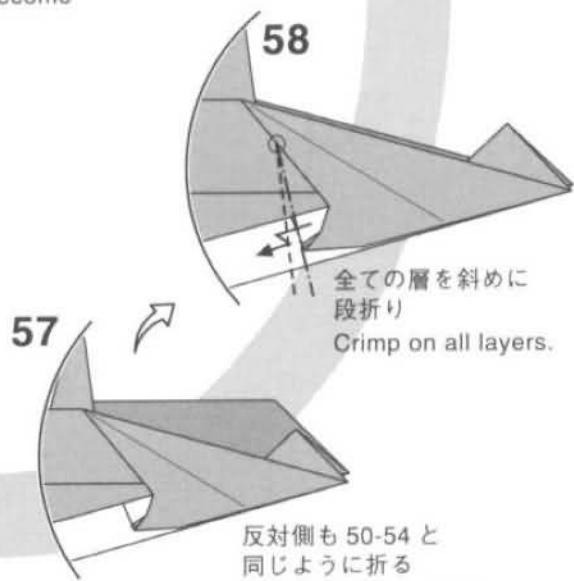
55

中わり折り
Inside reverse
fold.



56

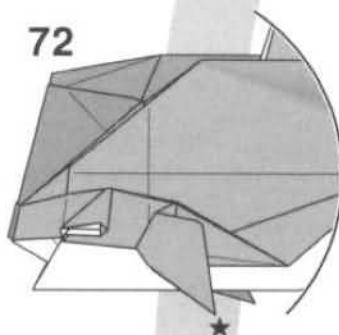
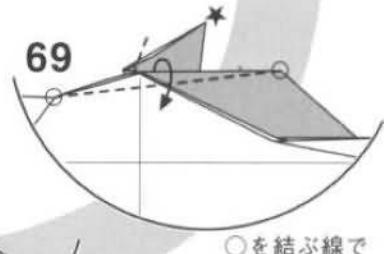
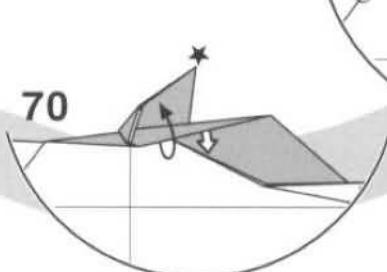
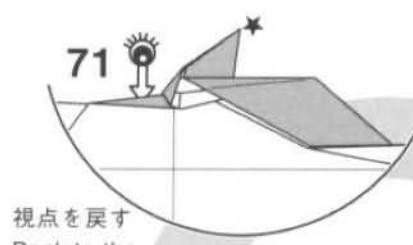
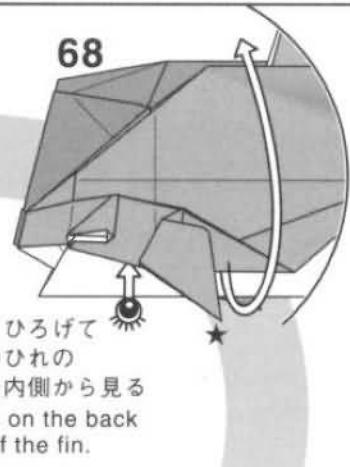
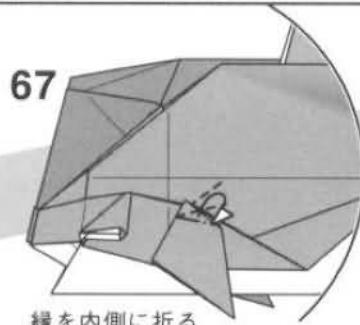
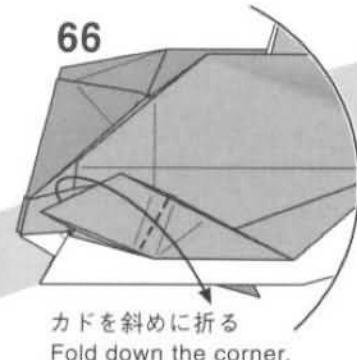
縁と縁を
合わせて
中わり折り
Inside reverse
fold edge to edge.



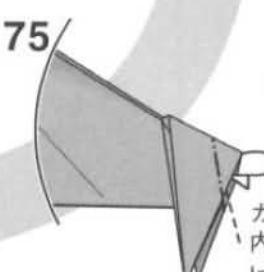
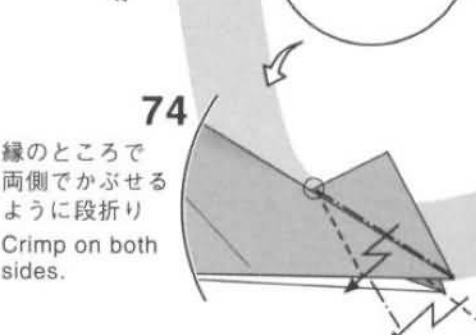
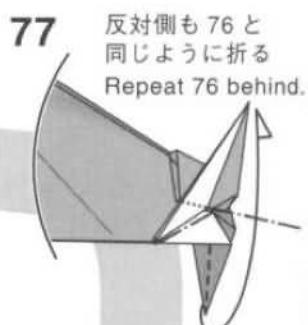
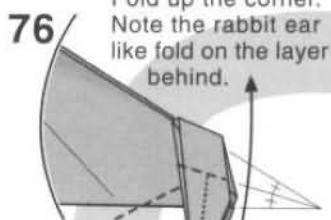
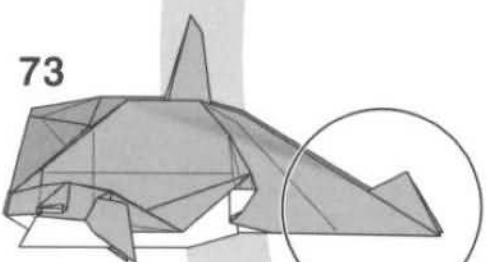
57

全ての層を斜めに
段折り
Crimp on all layers.

反対側も 50-54 と
同じように折る
Repeat 50-54 behind.

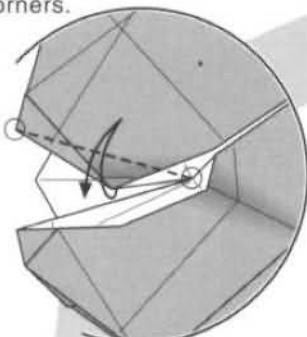


図のような角度で
カドを上に折って
つぶすように折る
Fold up the corner.
Note the rabbit ear
like fold on the layer
behind.

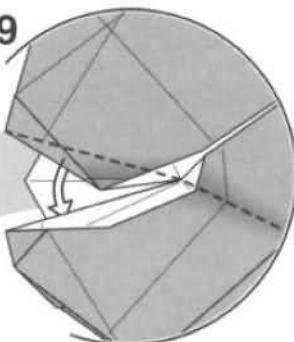


○を結ぶ線で折り筋をつける
Crease along the line connecting the circled corners.

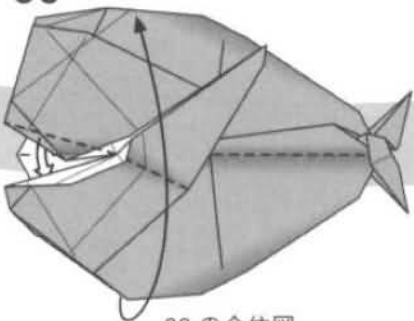
88



89



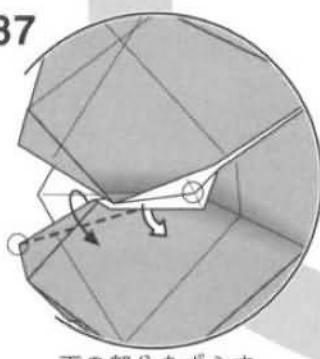
90



88 の全体図

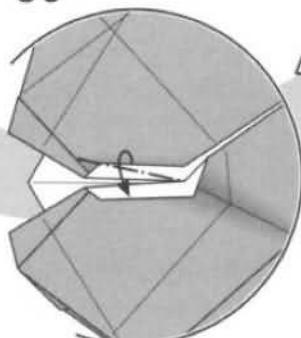
The whole picture will be as shown.

87



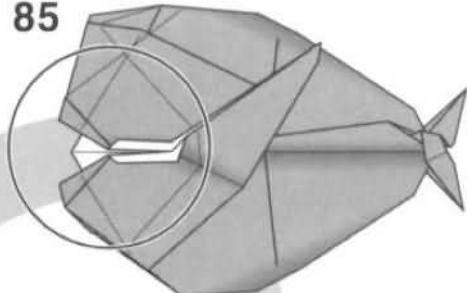
下の部分をずらす
ように折る
Swivel the second layer.

86

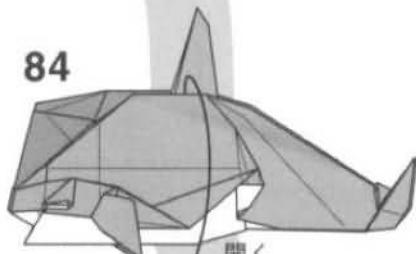


上の部分をずらすように折る
Fold down the top layer.

85



84

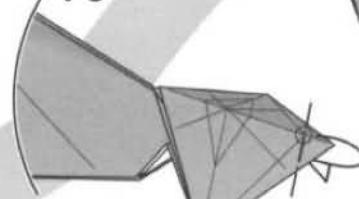


開く
Open the body.

80

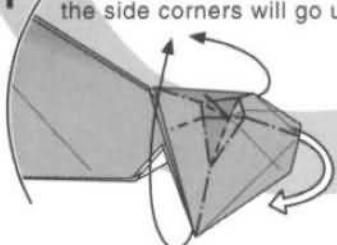
ついている折り筋を使って
へこませるように折る
Sink using the crease lines at the center.

79



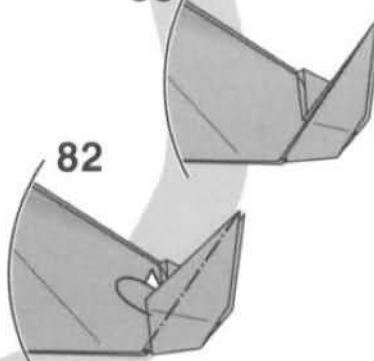
カドを
○のところで
後ろへ折る
Fold the corner beneath.

81

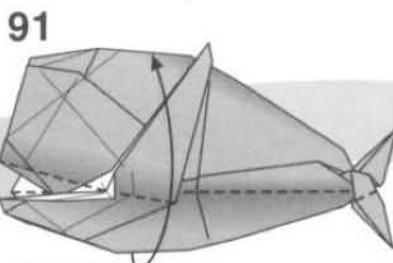


ついている折り筋で
両側のカドを上に折って
全体を平らに折りたたむ
Assemble using the existing crease lines. Note that the right end of the layer goes under the left portion and the side corners will go up.

83

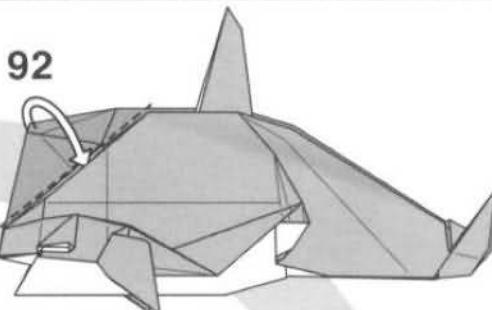


カドを内側の縁に
かぶせるように
折り込んでとめる
反対側も同じ
Fold the corner behind.
Repeat behind.



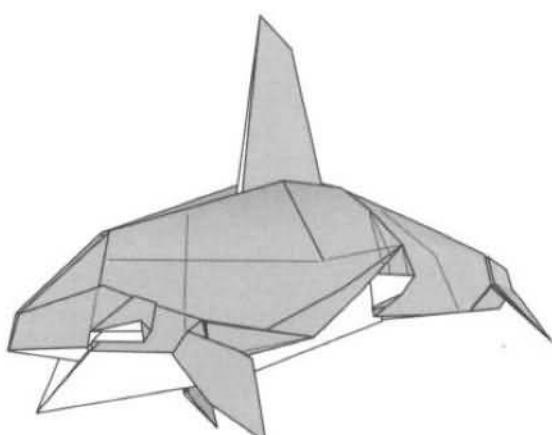
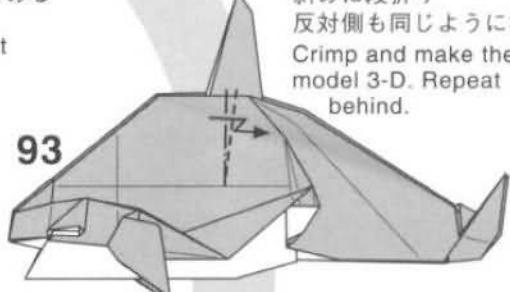
途中の図

Assembly of the body in progress.

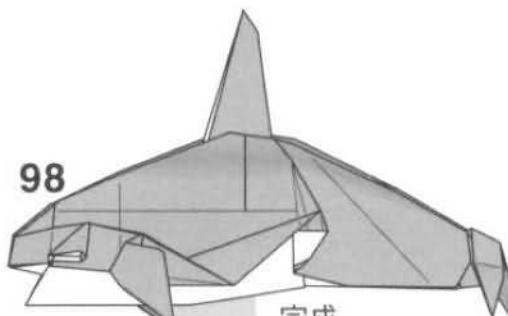
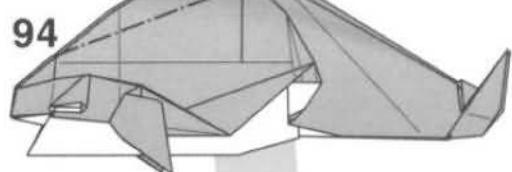


カドを沈め折りした部分のすき間に折り込んでとめる
Insert the corner behind into the pocket made by the closed sink.

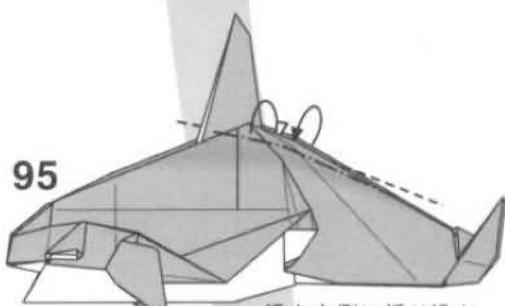
斜めに段折り
反対側も同じように折る
Crimp and make the model 3-D. Repeat behind.



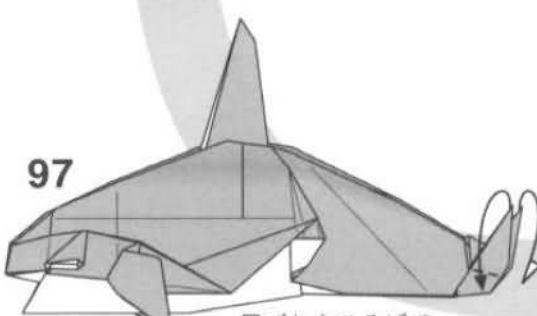
押し込むように内側に折る
Inside reverse fold.



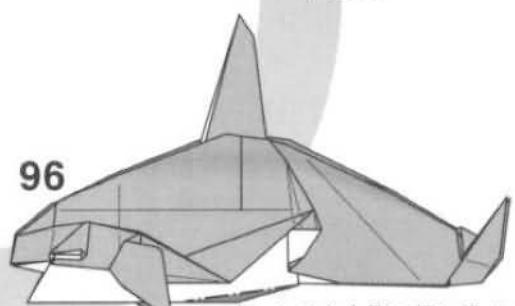
完成
Model completed.



縁を内側に折り込む
Fold the edges inside.



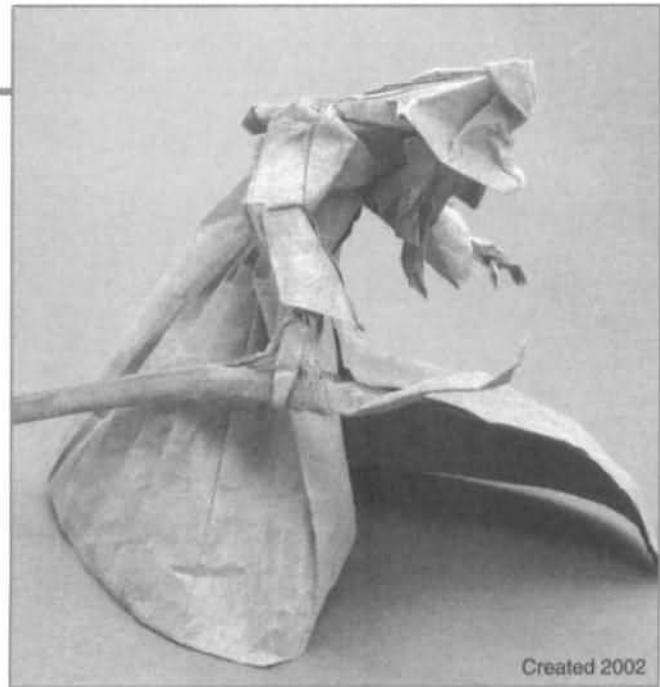
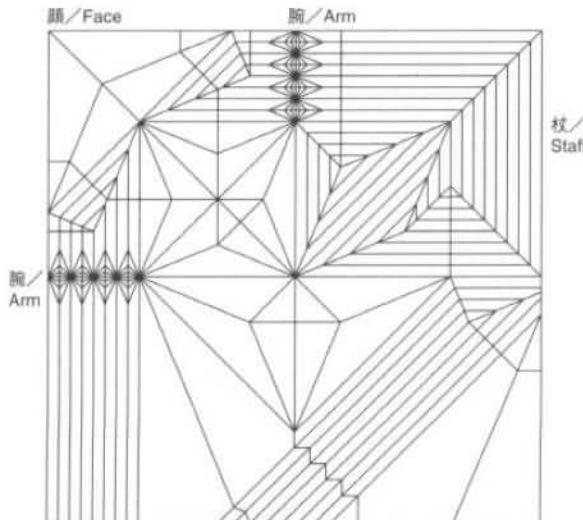
尾びれをひろげて
全体の形を整える
Open the tail fins and
shape the model.



カドを内側に押し込む
Push in and shape the body.

ウィザード

Wizard



Created 2002

この作品の特徴のひとつに、左右非対称の構造が挙げられます。現在、数えきれないほどの創作作品が生み出されていますが、完全に非対称な作品というのは意外と少ないようです。もちろん、ほとんどの生物は左右対称ですので、非対称の構造を使う機会はあまりないのですが、だからこそ非対称な造形をもつ作品はおもしろいと感じます。この作品では、カドをひとつ片側へ持っていくというシンプルな方法を使っていますが、それなりに効果を出すことができます。

非対称な構造を作るのは意外と難しいものです。理由としては、単純に構造を考える手間が増えるということだけではなく、対称性という大きな制約がなくなるという点にあるのではないかと思います。変な話ですが、折り紙で創作をする場合、ある程度の制約があった方が作業しやすいのです。

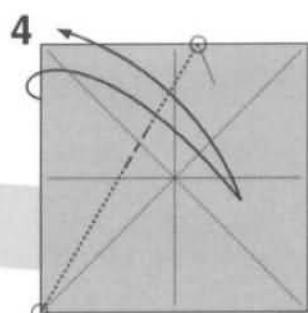
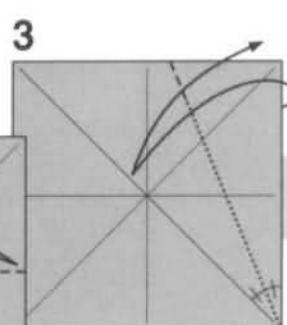
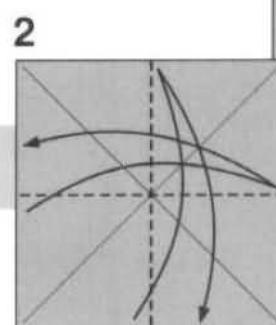
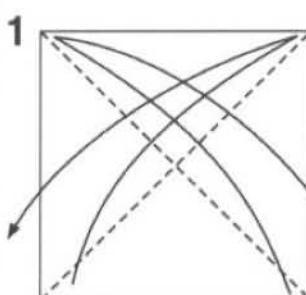
もうひとつの特徴は、外側を取り巻いている蛇腹状のヒダです。本来の目的は頭部を作るための余裕を持たせることなのですが、指を出したり杖をより長くしたりとさまざまな部分に役立っています。また、これはただ周りを取り巻いているだけでなく、内部の構造とつながっています。この作品のように22.5度の構造に蛇腹的なヒダを追加して使う場合、ヒダの高さを内側の構造の分子と合わせておくと、必要に応じて内側の構造と接続することができるようになります。

The rare feature of this model is its asymmetry. As most living creatures are more or less symmetrical, it is rare to design an asymmetrical model. The method used in this model, setting of one flap on one side, is simple but effective enough.

However, it is just tough to design such a model, perhaps because the symmetrical and square starting sheet puts severe constraints on designing and folding a model, which makes your life significantly easier.

The asymmetrical part is well linked to the internal structure of the model, adding pleats to the basic 22.5° structure. You can establish this by adjusting the height of the pleat to that of internal molecules.

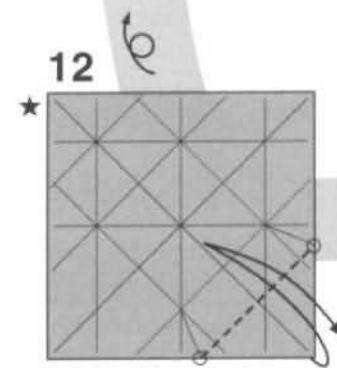
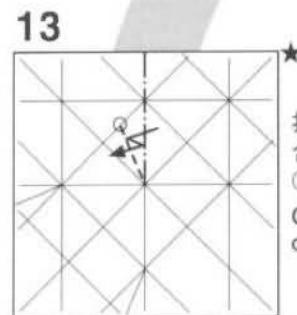
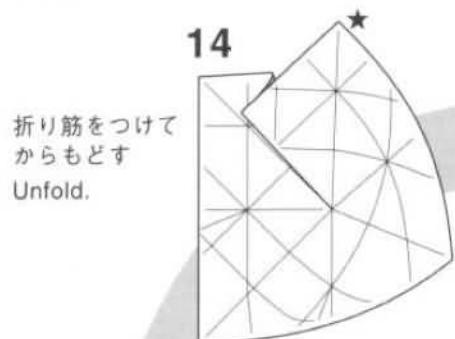
必要サイズ / Recommended Size of Sheet : 35×35cm



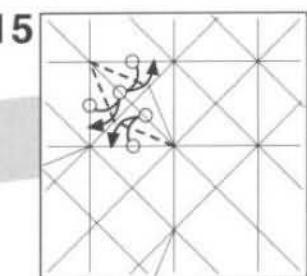
Mark the edge along the angle bisector.
Mark the intersection of a diagonal and the line connecting the bottom left corner and the mark made in 3.

三角に折り筋をつける
White side up. Fold diagonals and unfold.

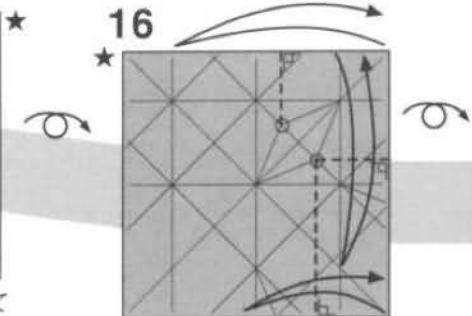
半分に折り筋をつける
Fold in half and unfold.



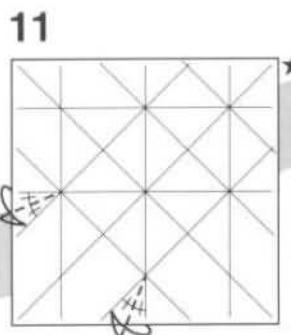
○を結ぶ線で折り筋をつける
Fold and unfold along the line connecting the edge points marked in 11.



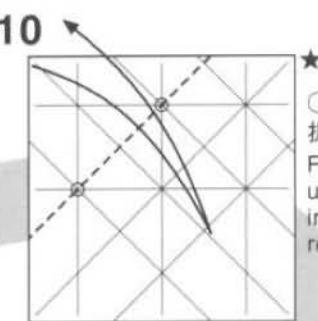
13-14と同じようにして
折り筋と折り筋を
合わせて折り筋をつける
Repeat folding angle
bisectors (like 13-14)
as shown.



○のところから縁に対して
垂直に折り筋をつける
Fold and unfold starting from
the circled intersections
created in 15.



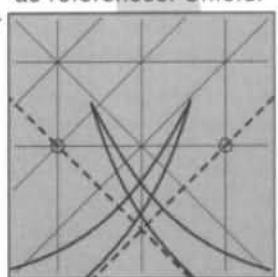
半分の角度で折り筋を
つける
Fold angle bisectors
and unfold.



○を結ぶ線で
折り筋をつける
Fold and unfold
using the circled
intersections as
references.

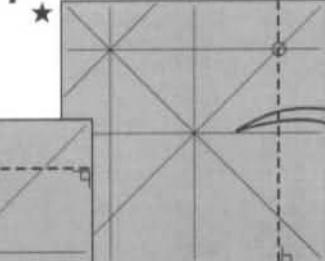
○を通る線で折り筋を
つける
Fold diagonally, using
the circled intersections
as references.

9

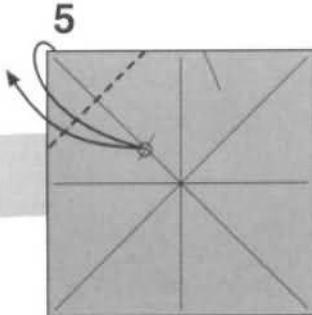


★

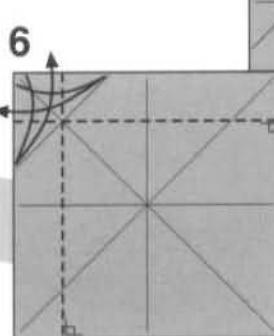
7



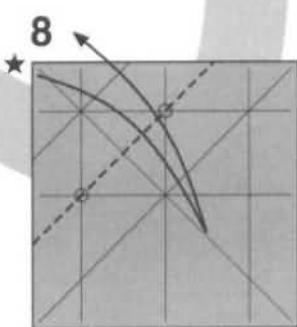
○を通る線で縁に対して
垂直に折り筋をつける
Fold at a right angle
through a circled
intersection. Unfold.



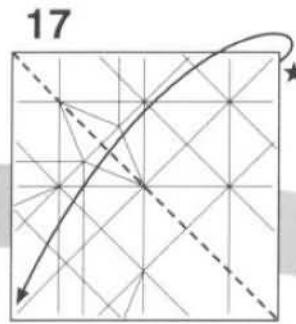
カドをつけた印に合わせて
折り筋をつける
Fold the corner to the
intersection marked in 4.
Unfold.



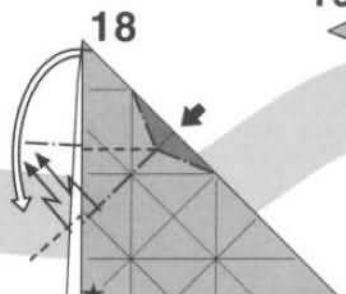
カドを折り筋に合わせて
縁に対して垂直に折り筋をつける
Fold edges at a right angle so the
intersection of the crease lines
crosses the crease line made in 5.
Unfold.



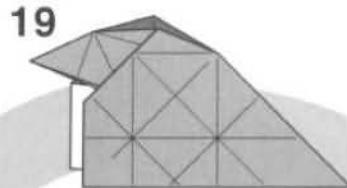
○を結ぶ線で折り筋をつける
Fold and unfold using the
circled intersections as
references.



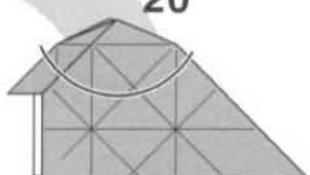
半分に折る
Fold in half.



ついている折り筋で■の部分を
つぶしながら両側で段折り
Crimp using the existing
crease lines.

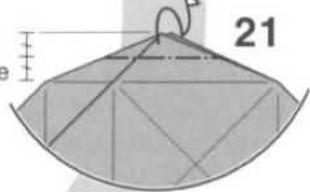


途中の図
Flatten the
model.



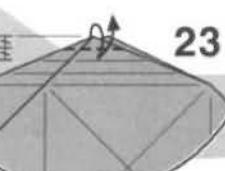
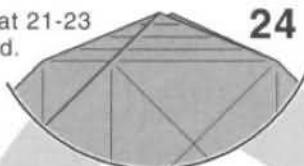
20

1/2 の幅で山折りの
折り筋をつける
Fold the corner to the
crease line, dividing
the height into two.
Unfold.



21

反対側も 21-23 と
同じように折る
Repeat 21-23
behind.



23

カドを折り筋に合わせて
1/2 の幅で折り筋をつける
Fold the corner to the
crease line, dividing the
height into two. Unfold.

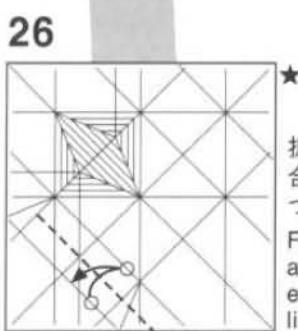


22

折り筋と折り筋を合わせて
折り筋をつける
Fold so the crease lines
align with each other.
Unfold.



全部ひろげる
Unfold everything.



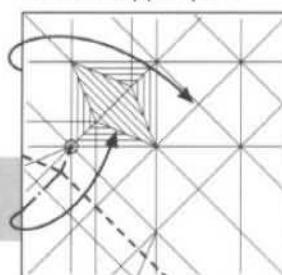
折り筋と折り筋を
合わせて折り筋を
つける
Fold and unfold
aligning the
existing crease
lines.



折り筋と折り筋を
合わせて折り筋を
つける
Fold and unfold
aligning the
existing crease
lines.

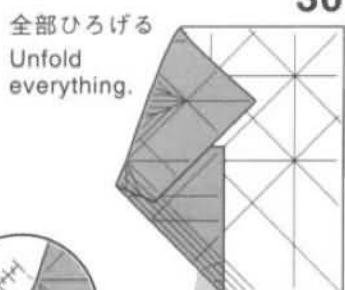
27

つけた折り筋を
使って折りたたむ
上の部分は折らない
ようする
Assemble and flatten
using the existing
crease lines. Do not
fold the upper part.



28

21-23 と
同じように
して 1/4 の幅で折り筋をつける
Divide the width in fourths as
in 21-23.

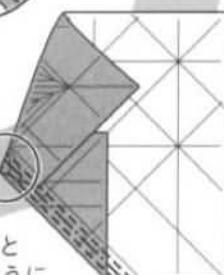


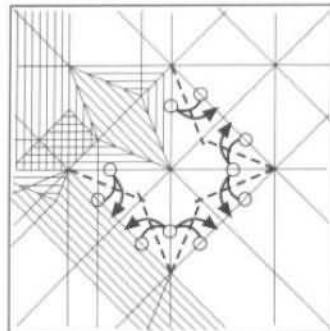
30

全部ひろげる
Unfold
everything.



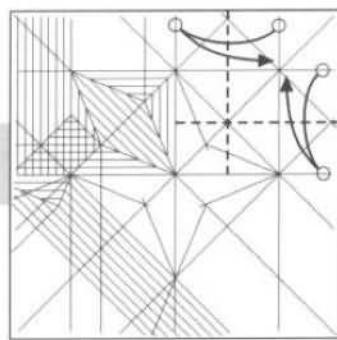
29





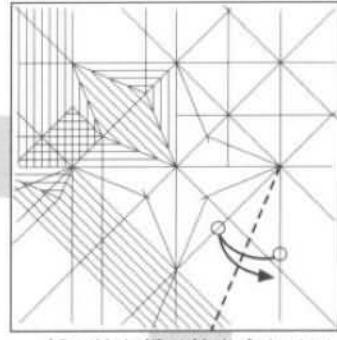
折り筋と折り筋を合わせて
折り筋をつける
Fold angle bisectors and unfold.

39



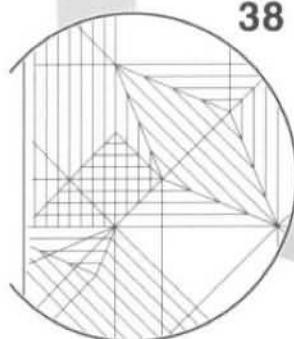
折り筋と折り筋を合わせて
折り筋をつける
Fold aligning crease
lines and unfold.

40



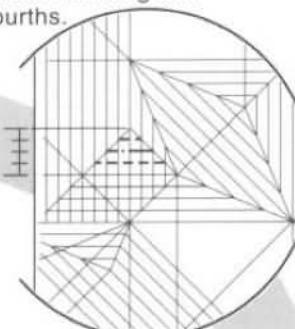
折り筋と折り筋を合わせて
折り筋をつける
Fold an angle bisector and
unfold.

41

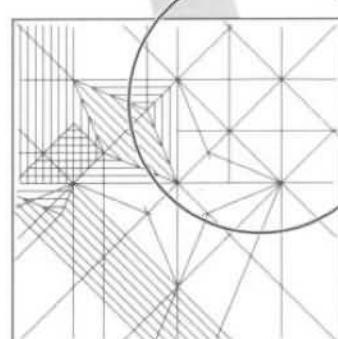


38

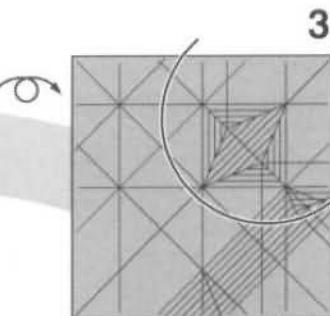
図のように $1/4$ の幅で
折り筋をつける
Divide the height in
fourths.



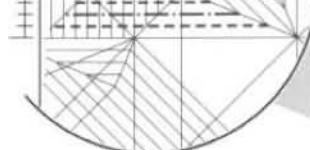
37



42



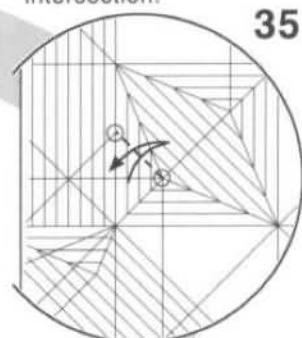
31



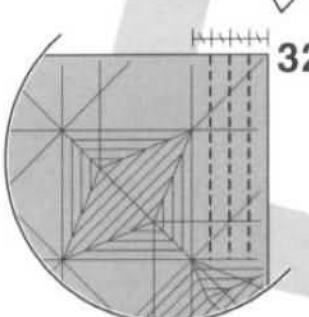
36

○を結ぶ線で折り筋を
つける
Crease along the line
connecting the circled
intersection.

35

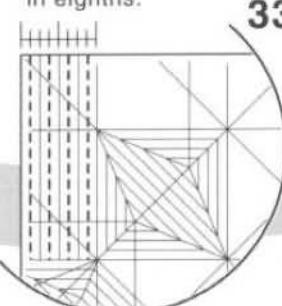


ついている折り筋を
延長して折り筋をつける
Crease extending the
existing crease lines.



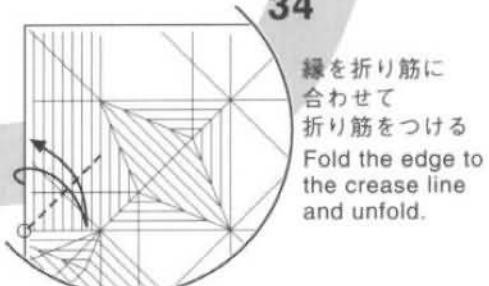
32

さらに半分の幅で
折り筋をつける
Divide the width
in eighths.



33

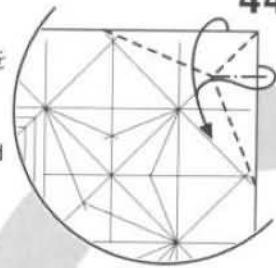
$1/4$ の幅で折り筋をつける
Divide the width in fourths.



34

縁を折り筋に
合わせて
折り筋をつける
Fold the edge to
the crease line
and unfold.

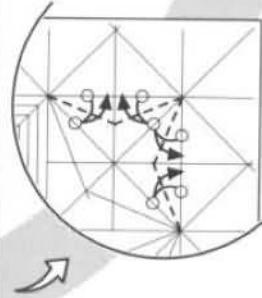
縁を折り筋に
合わせてカドを
つまむように
折る
Rabbit ear fold
the corner.



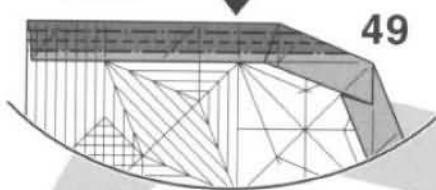
44

43

折り筋と折り筋を
合わせて折り筋を
つける
Fold angle bisectors
and unfold.



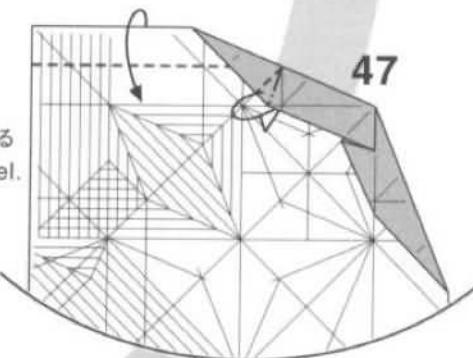
つけた折り筋で沈める
ように段折り
Sink in and out forming
pleats.



49

半分の
角度で折り筋をつける
Fold and unfold angle
bisectors.

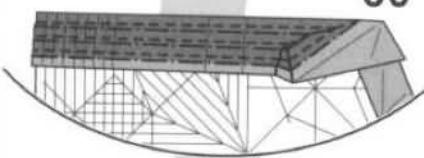
縁を折り筋に
合わせて右の
部分を内側に折る
Crimp and swivel.



47

48

途中の図
The view
while sinking
and pleating.



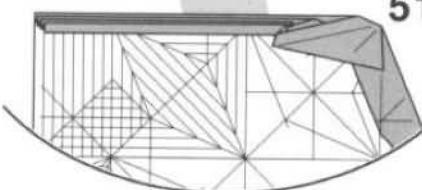
50

55

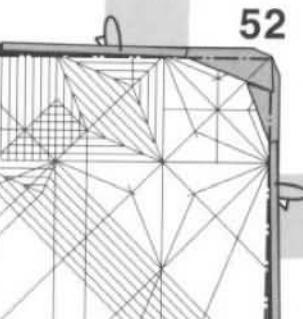
21-23と同じようにして
1/4の幅で折り筋をつける
Divide the height into
fourths.

51

反対側も47-50と同じように折る
Repeat 47-50 on
the other side.

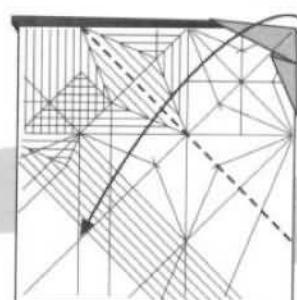


52



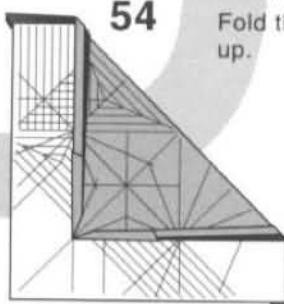
縁を後ろへ折る
Mountain fold the edges.

53



カドをついている線で折る
Fold the corner down.

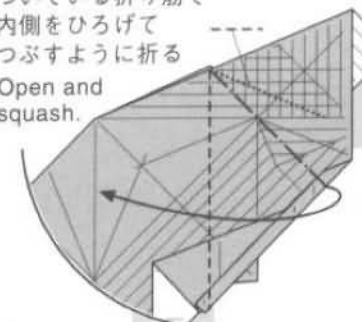
54



カドをついて
いる線で折る
Fold the corner up.

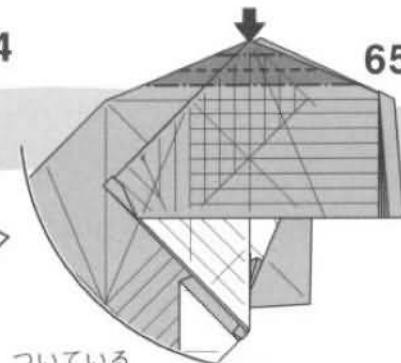
ウィザード

ついている折り筋で
内側をひろげて
つぶすように折る
Open and squash.



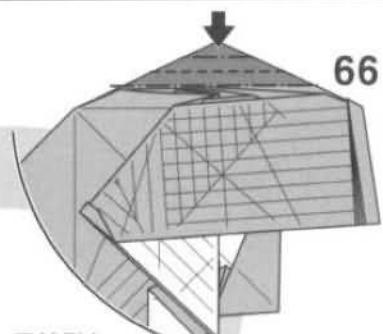
63

64



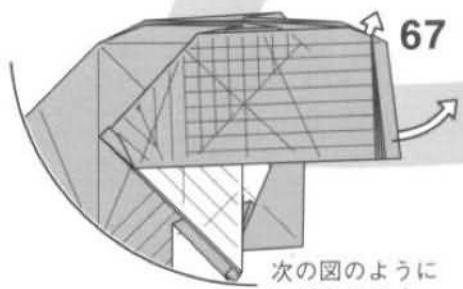
65

ついている
折り筋で手前のカドを
沈めるように段折り
Repeat open sinks in and out.



反対側も
65と同じように折る
Repeat 65 behind.

66

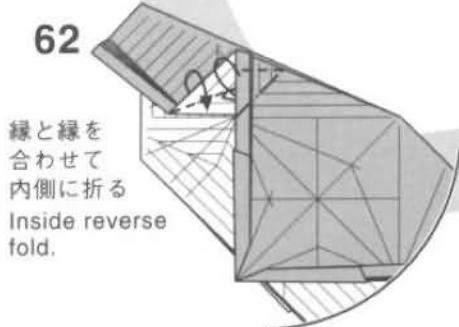


67

次の図のように
ヒダをかるく
ひろげる
Open the pleat
structures.

62

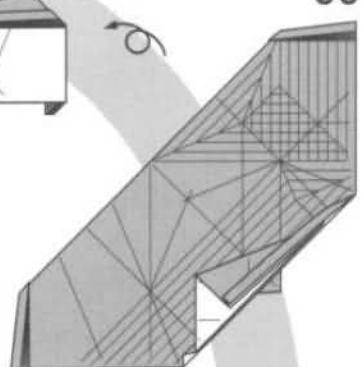
縁と縁を
合わせて
内側に折る
Inside reverse
fold.



61

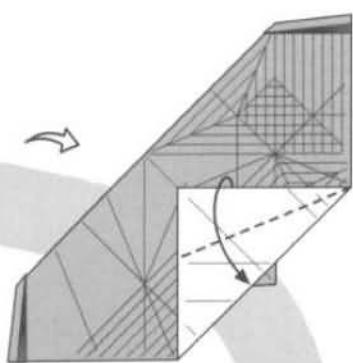
ついている
折り筋を使って
中わり折り
Inside reverse fold.

60



56

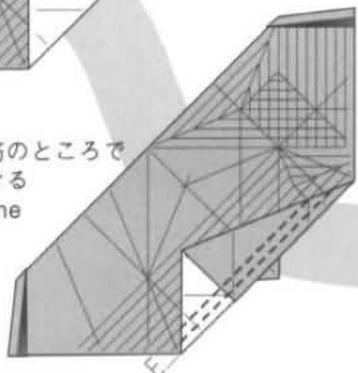
縁と縁を
合わせて折る
Fold edge to
edge.



後ろの折り筋のところで
折り筋をつける
Fold along the
crease line
behind.

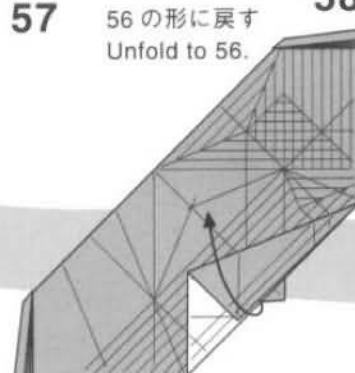
57

56 の形に戻す
Unfold to 56.

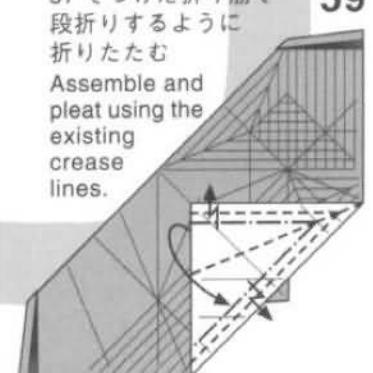


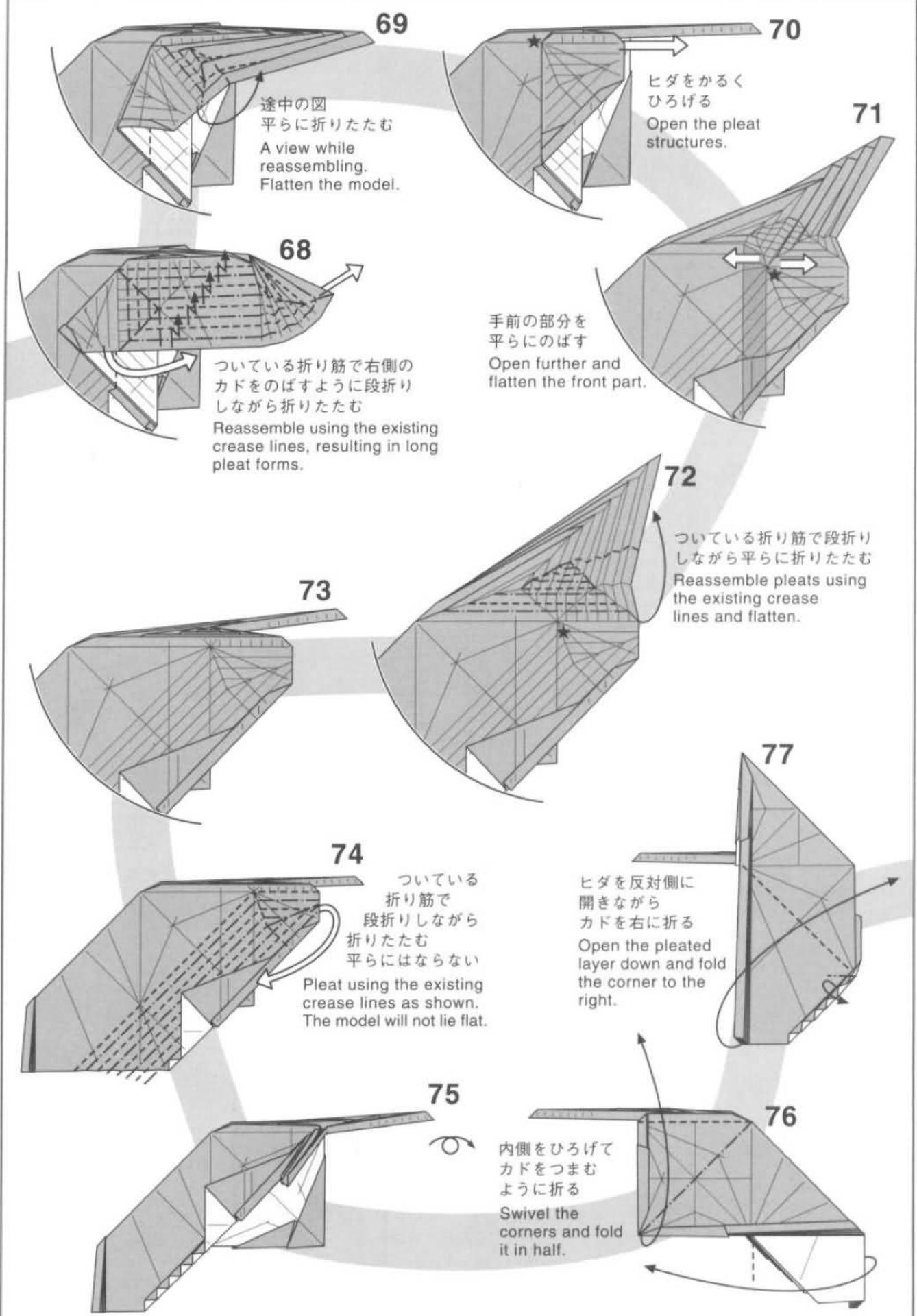
58

57 でつけた折り筋で
段折りするように
折りたたむ
Assemble and
pleat using the
existing
crease
lines.



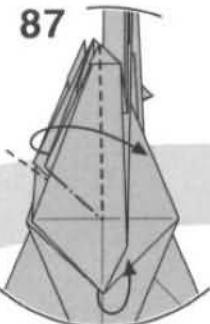
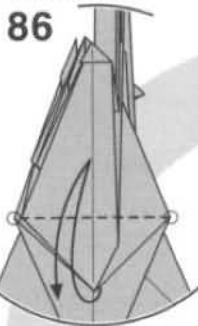
59



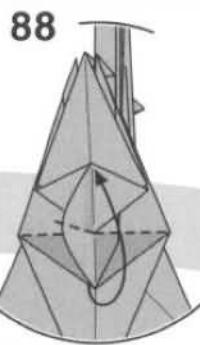


ウィザード

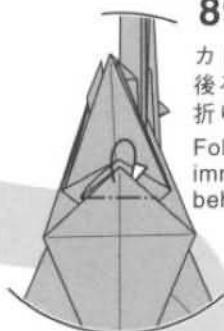
カドを結ぶ線で
折り筋をつける
Fold and unfold
the corner.



真ん中のすき間を
ひろげてつぶす
ように折る
下のカドは
起き上がってくる
Open the middle
layer. The lower
corner will rise.

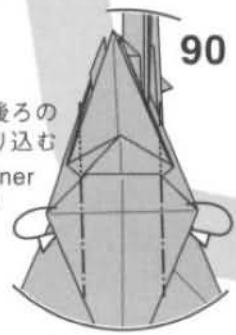


起き上がってきた
カドを上に折り
たたむ
Fold up corner to
corner.

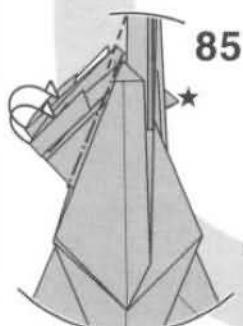


カドをすぐ
後ろへ
折り込む
Fold the corner
immediately
behind.

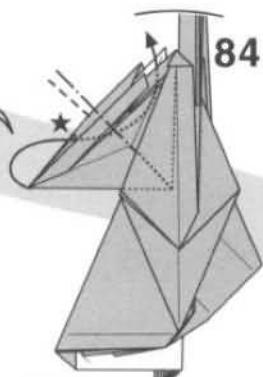
90



カドをすぐ後ろの
すき間へ折り込む
Fold the corner
immediately
behind.



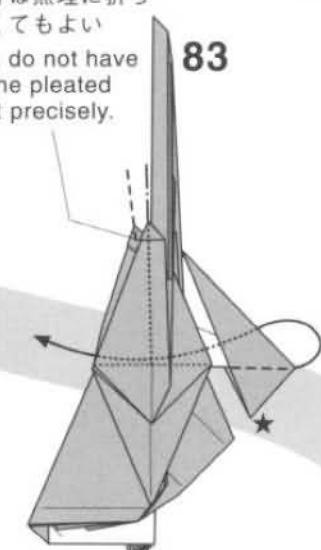
ついている折り筋で
カドを内側に折る
Inside reverse fold.



ついている
折り筋で中わり折り
Inside reverse fold.

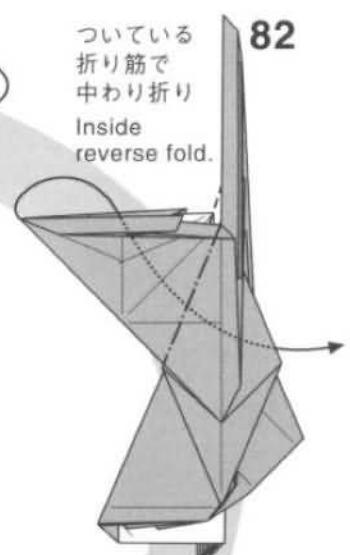
カドの先のヒダの
部分は無理に折ら
なくてもよい
You do not have
to fold the pleated
part precisely.

83



ついている
折り筋で中わり折り
Inside reverse fold using
the existing crease lines.

82



ついている
折り筋で
中わり折り
Inside
reverse fold.

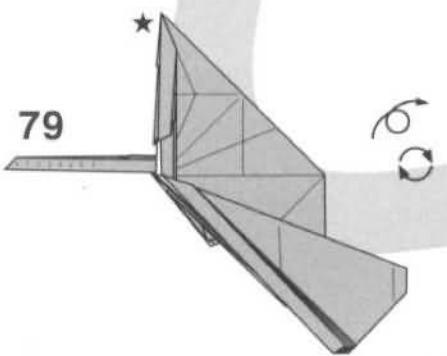
78



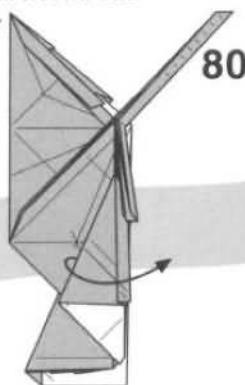
縁と縁を合わせて
ついている折り筋で折る
Fold edge to edge.

ヒダの後ろのすき間を開く
下の部分は平らにならない
Open the layer behind
pleats. The lower part
will not lie flat.

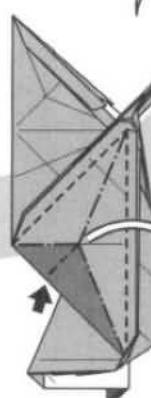
79



★

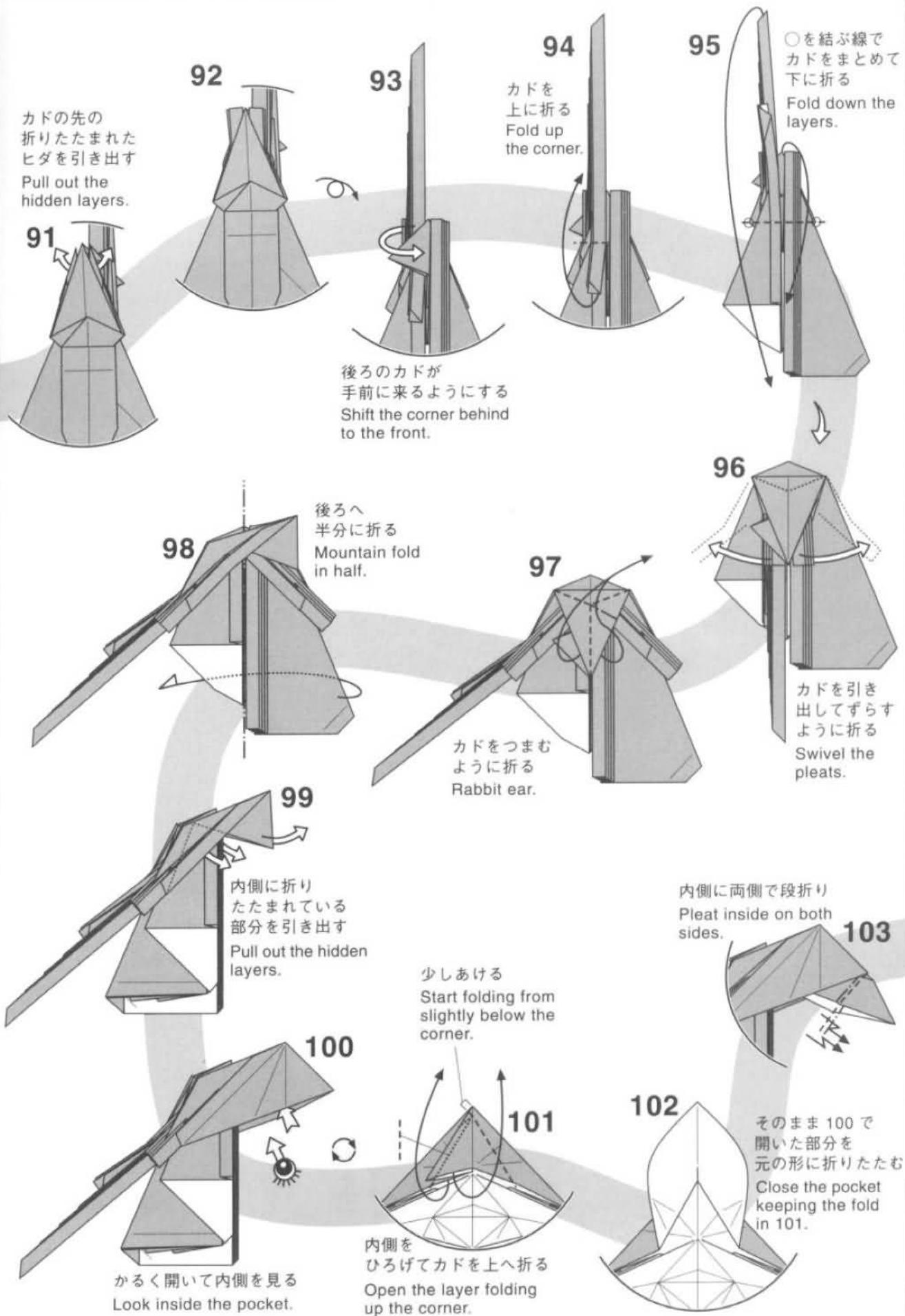


80



81

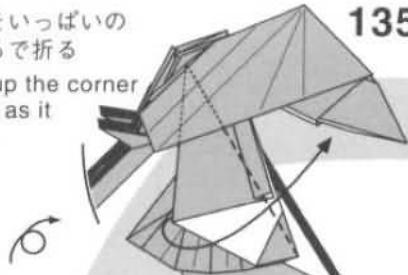
ついている折り筋を
使って■の部分を
両側にひろげて
つぶすように折る
Assemble into a
bird-base-like form
by pushing the
grayed part in.



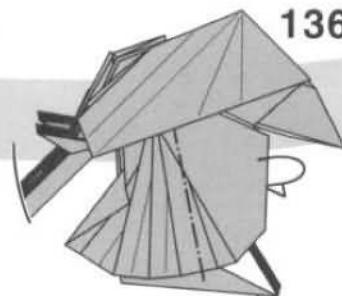
ウィザード

カドをいっぱいのところで折る
Fold up the corner as far as it goes.

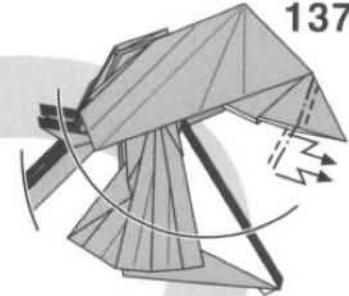
135



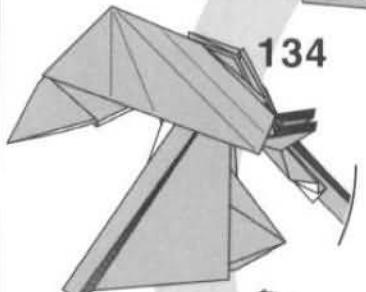
136



137

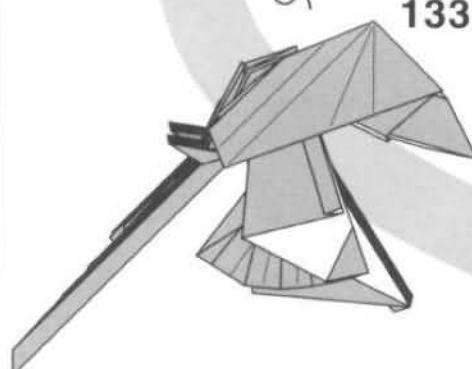


134



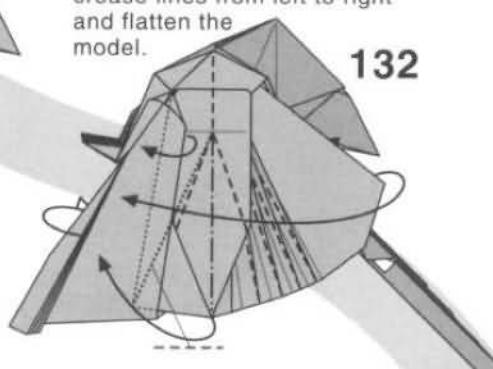
133 を裏から見た図
The backside view of 133.

133



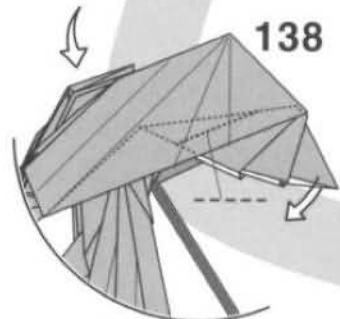
つけた折り筋を使って左から順番に平らになるように折りたたむ
Fold along the indicated crease lines from left to right and flatten the model.

132



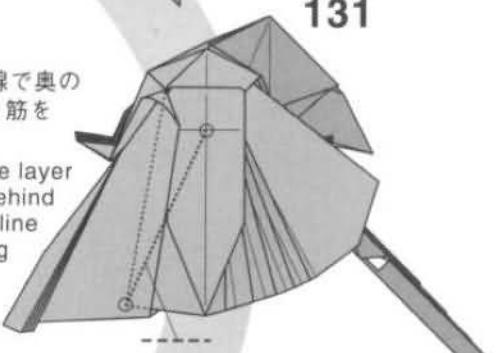
内側に両側で段折り
Pleat inside.

138



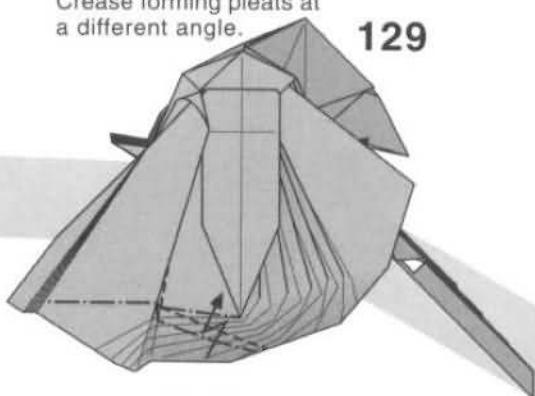
内側の部分をずらす
ようすに折る
立体的になる
反対側も同じ
Swivel the inner layer. The model will now be 3-D. Repeat behind.

131



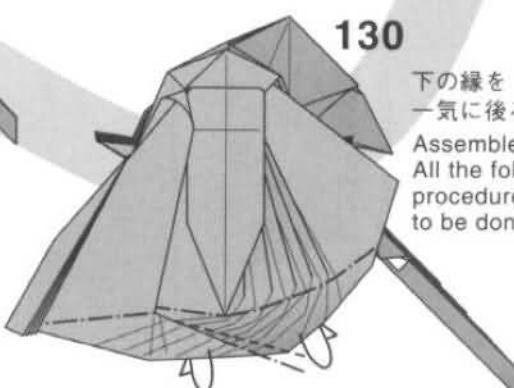
段折りの角度を変えるように
斜めに折り筋をつける
Crease forming pleats at a different angle.

129

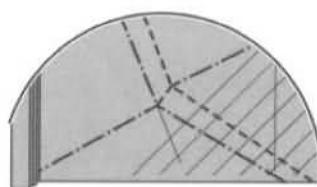


○を結ぶ線で奥の
1枚に折り筋を
つける
Crease the layer farthest behind along the line connecting circles.

130



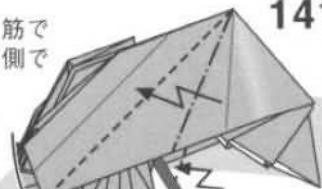
下の縁を
一気に後ろへ折る
Assemble as shown.
All the folding procedures have to be done at once.



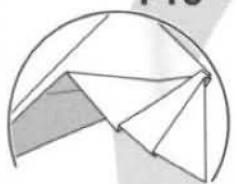
129 をひろげて見た図
Flattened crease pattern of 129.

ついている折り筋で
立体的なまま両側で
段折り
Crimp on both
sides.

141

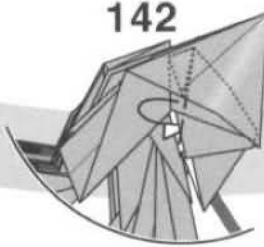


140



立体的になる
The model will
be 3-D.

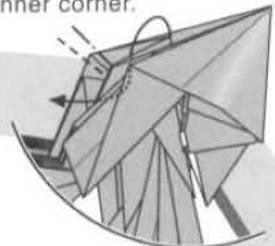
142



縁を内側へ折り込む
反対側も同じ
Mountain fold the edge.
Repeat behind.

真ん中のカドを中わり折り
Inside reverse fold the
inner corner.

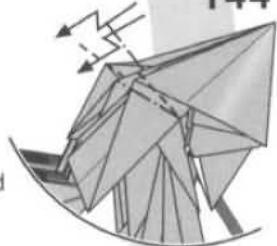
143



139

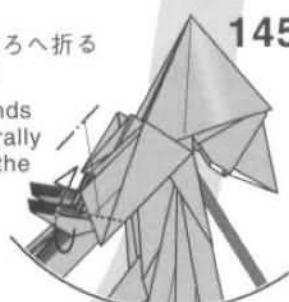
138 の
内側を見た図
The inside view
of 138.

144



中わり折りした
ところで内側に
両側で段折り
Crimp inside and
raise the head.

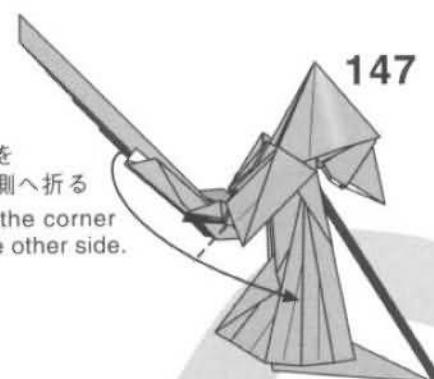
145



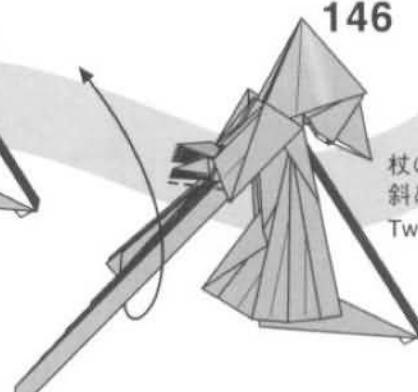
手の部分を後ろへ折る
反対側も同じ
Twist the hands
so they naturally
come out of the
sleeves.

カドを
反対側へ折る
Fold the corner
to the other side.

147



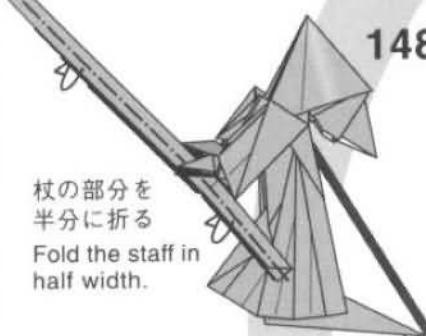
146



杖の部分を
斜めに折る
Twist the staff.

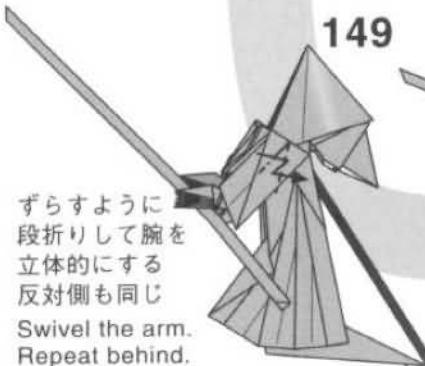
杖の部分を
半分に折る
Fold the staff in
half width.

148

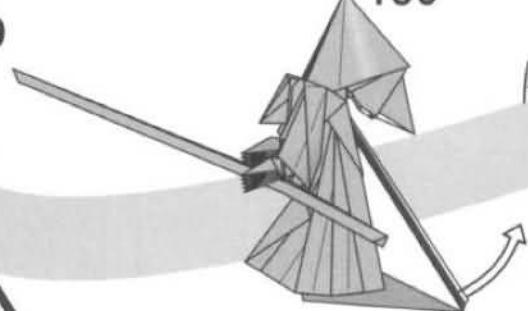


ずらすように
段折りして腕を
立体的にする
反対側も同じ
Swivel the arm.
Repeat behind.

149

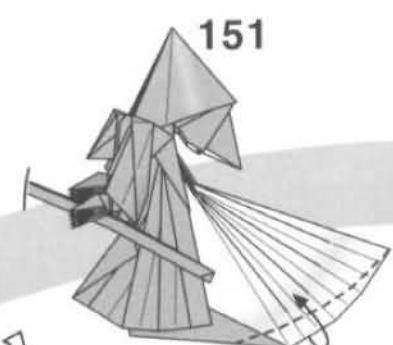


150



ヒダをひろげる
Open the pleats.

151



縁を斜めに折る
Fold up the edge.

ウィザード



写真を参考に
仕上げてください
For the final shaping,
refer to the picture here
as an example.

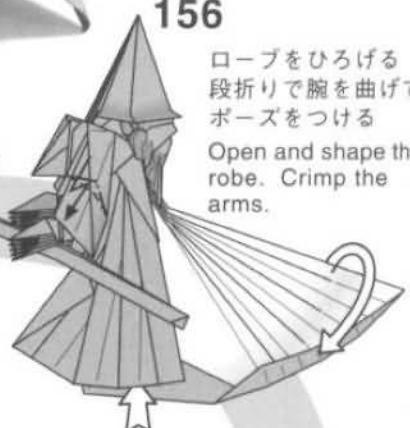


完成
Model completed.

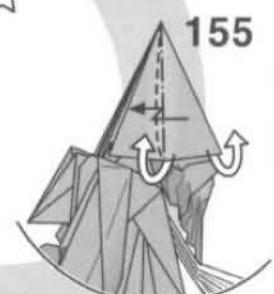


156

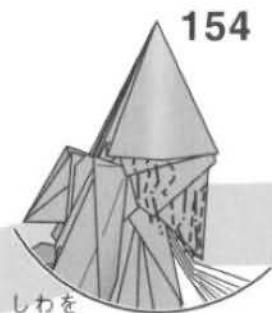
ローブをひろげる
段折りで腕を曲げて
ポーズをつける
Open and shape the
robe. Crimp the
arms.



155



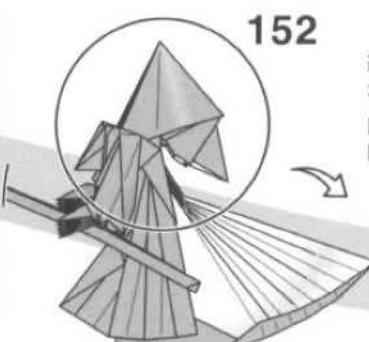
154



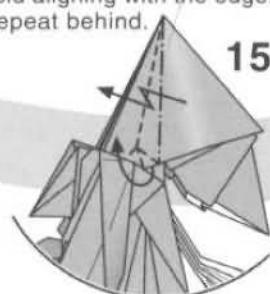
しわを
いれてひげを作る
反対側も同じ
Wrinkle the beard.
Repeat behind.

152

縁を合わせるようにして
折りたたむ 反対側も同じ
Fold aligning with the edge.
Repeat behind.



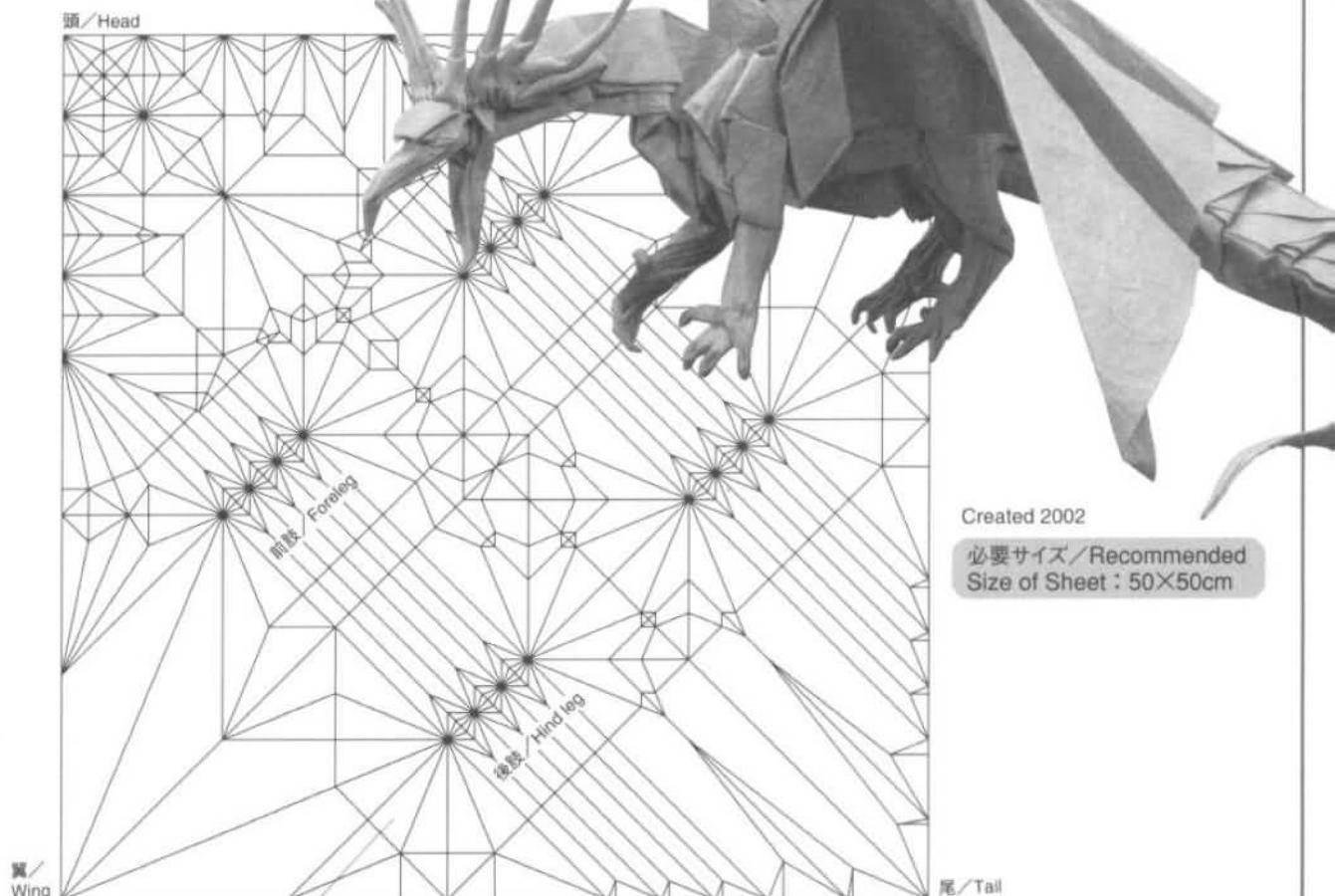
153



曲線で段折りして
帽子を立体的にする
反対側も同じ
Crimp the hat. The
crease lines will not
be straight.
Repeat behind.

エンシェントドラゴン

Ancient Dragon



TVチャンピオン第3回折り紙王選手権（1999年2月放送）の決勝戦で発表した作品で、名実ともに私の代表作のひとつとなってしまっています。当時出場が決まり、決勝戦でジオラマを作ると聞いて、怖いを残さないためには、自分らしいもの、自分の折りたいものを創ることだと思い、すぐにドラゴンをメインにしようと決めました。

構造自体は複雑ですが、鶴ドラゴン[®]型のカド配置で縦方向に指のヒダを入れるというアイディアは、とてもシンプルなものです。ただしヒダの入れ方の都合上、折りにくいという問題点はあります…。これに昔作ったドラゴンの頭部を組み合わせてこのドラゴンはできあがりました。このように、しっかりととしたアイディアが揃っていると、その創作はとてもスムーズに進みます。もちろん小さな問題はいくつも出てきますが、骨格となる部分がここまで揃っていれば、どうにかなってしまうものです。

今回、折り図化にあたって構造・造形の整理を行い、いくつかオリジナルと違う部分があります。一番の変更点は指の折り出し方で、オリジナルはディバインドラゴンと同じような方法で作りましたが、このバージョンではウィザードと同じ折り方を使っています。また、オリジナルで腹の部分に折り出していたヒダを、今回は工程が長くなりすぎるので省略しています。猪神と同様の手法ですので、腕に自信のある方は試してみてはいかがでしょうか。

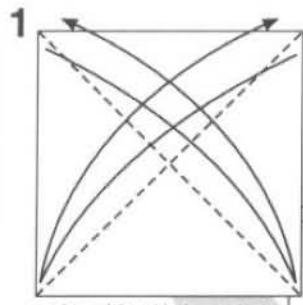
*鶴ドラゴン：鶴の基本形の内部の4つのカドから四肢を、頂点の4つのカドから頭・尾・翼などを折り出すという、ドラゴンなどによく使われるカド配置のこと。

This is the model I created for the 3rd Origami Tournament for the TV program "TV Champion" (TV Tokyo). In the final round of the tournament, I had to make an arrangement of models with a panoramic view, and creating a dragon was my immediate and natural conclusion.

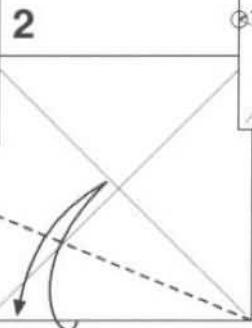
Although the structure is complex, the basic distribution of flaps is very simple, namely that of a dragon out of the bird base with pleats for toes and fingers. The head is the head of a dragon I had once created. So, the procedures of creation was natural and smooth.

Diagramming the model, I did some rearrangements of the structure and shaping, in particular on the fingers. The original model had fingers of my Divine Dragon, but this time the fingers are those of my Wizard. Pleats on the belly in the original model were abridged because the folding procedures would become too long. The method for folding out the pleats is the same as that of my Inoshishigami, so you can always try one.

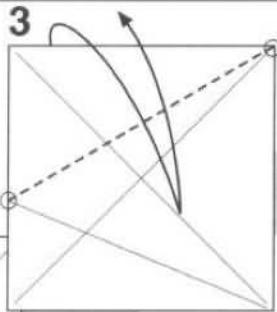
エンシェントドラゴン



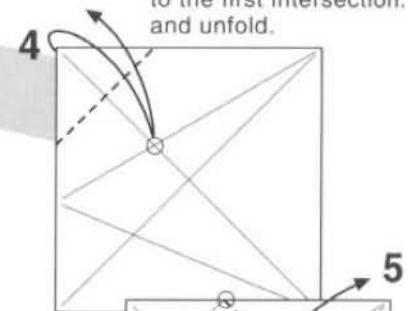
△に折り筋をつける
White side up. Fold and unfold diagonals.



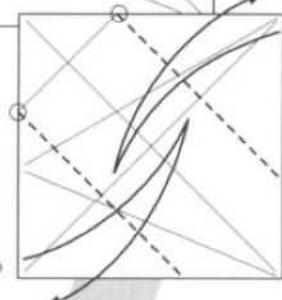
縁を折り筋に合わせて
折り筋をつける
Fold the edge to the diagonal and unfold.



○を結ぶ線で折り筋をつける
Fold along the line connecting the end of the crease line made in 2 and the top right corner. Unfold.

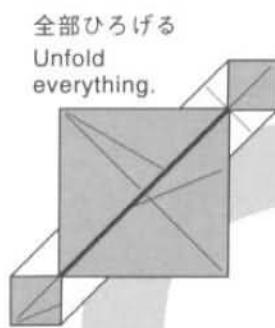


カドを折り筋の交点に
合わせて折り筋をつける
Fold the top left corner to the first intersection, and unfold.



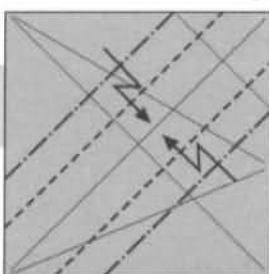
○のところで
折り筋をつける

Fold the top right and bottom left corners along the diagonal. The crease line should start from the circled ends. Unfold.



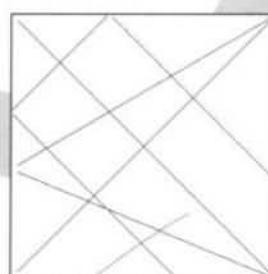
全部ひろげる
Unfold everything.

8



7

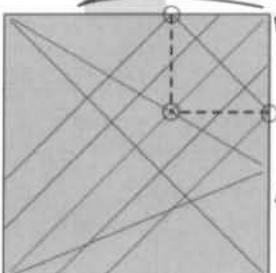
折り筋を中心^に合わせて
段折り
Pleat.



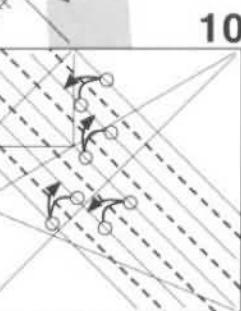
6

9

○を結ぶ線で
折り筋をつける
Make crease lines connecting the circled points.



6

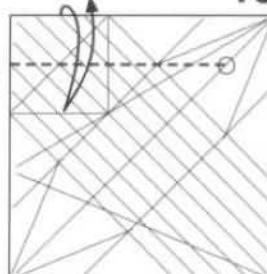


10

折り筋と折り筋を合わせて
折り筋をつける
Make crease lines with the half width by pleat folds.

縁を折り筋に
合わせて図のよう^に
折り筋をつける
Fold the edge to the crease line. Unfold.

13



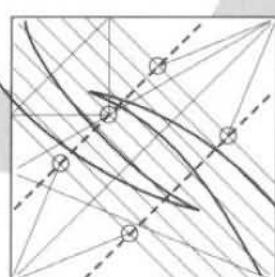
11

縁を中心^に合わせて
折り筋をつける
Fold the edges to the diagonal.



12

○を結ぶ線で
折り筋をつける
Make crease lines connecting the circled points.



26

折り筋を
つけてから
全部ひろげる
Unfold
everything.

25

1/3 の幅で
段折り
Make trisecting
crease lines.

ついている
折り筋で中わり折り
Inside reverse fold.

23

内側を
ひろげて
■の部分を
つぶすように折る
Open the edge and
squash.

22

折り筋と折り筋を合わせて
折り筋をつける
Make crease lines aligning
two crease lines.

19

全部ひろげる
Unfold.

21

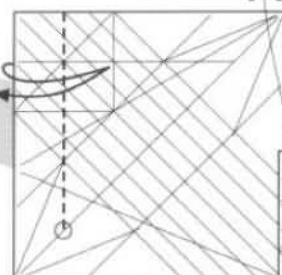
20

折り筋と折り筋を合わせて
折り筋をつける
Make crease lines aligning
two crease lines.

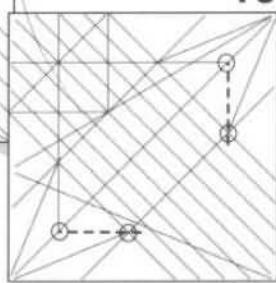
18

○を通る線で
図のように
折り筋をつける
Make crease lines
at a right angle
through circled
intersections.

14

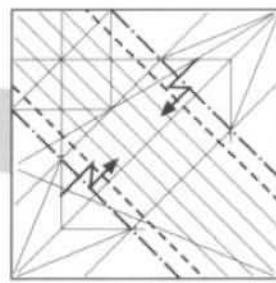


縁を折り筋に合わせて
折り筋をつける
Fold the edge to the
crease line. Unfold.



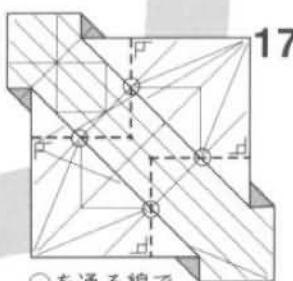
○を結ぶ線で折り筋を
つける
Make crease lines
connecting the circled
points.

15



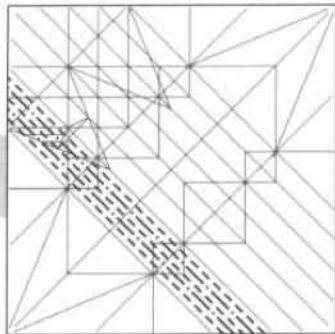
ついている折り筋で段折り
Pleat using the existing
crease lines.

16



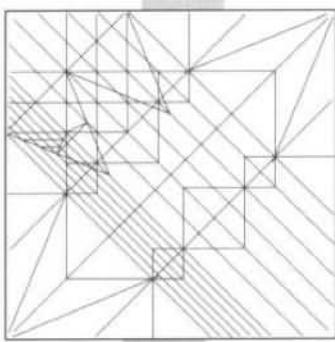
○を通る線で
縁に対して垂直に
折り筋をつける
Make crease lines at a
right angle through
circled intersections.

17



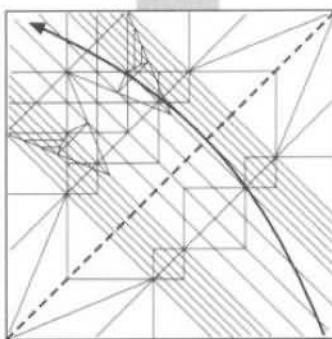
27

ついている折り筋を延長して
図のように折り筋をつける
Extend the crease lines.



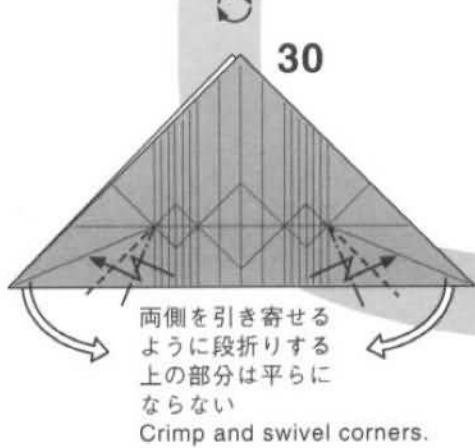
28

反対側も 22-27 と同じように
折り筋をつける
Repeat 22-27 on the right.



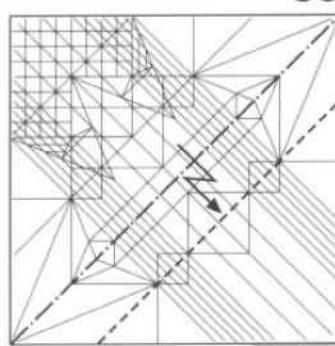
29

半分に折る
Fold in half.



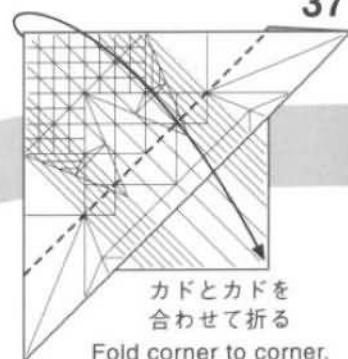
30

両側を引き寄せる
ように段折りする
上の部分は平らに
ならない
Crimp and swivel corners.



36

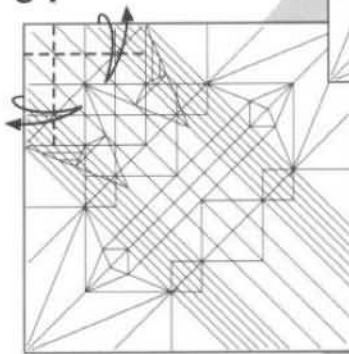
ついている折り筋で段折り
Pleat along the existing
crease lines.



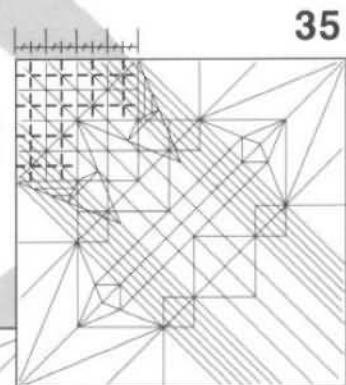
37

カドとカドを
合わせて折る
Fold corner to corner.

34



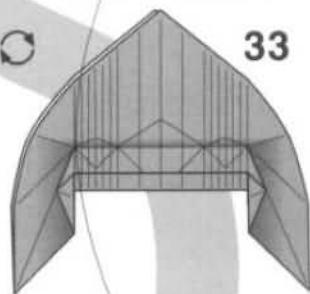
縁を折り筋に合わせて
図のように折り筋をつける
Fold edges to
crease lines and unfold.



35

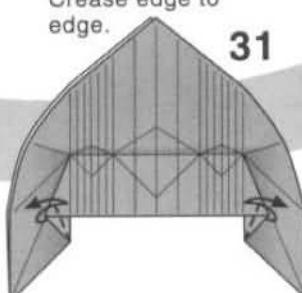
全部ひろげる
Unfold everything.

33



縁と縁を合わせて
折り筋をつける
Crease edge to
edge.

31

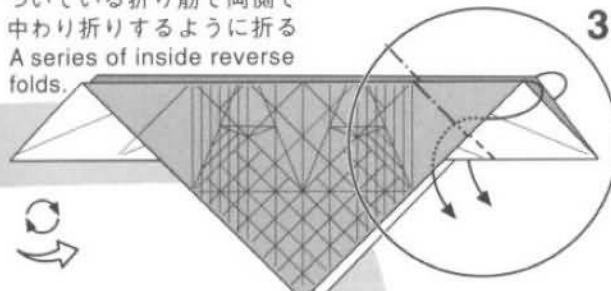


32

○を結ぶ線で折って
起き上がってきた部分を
つぶすように折る
Fold like a petal fold.

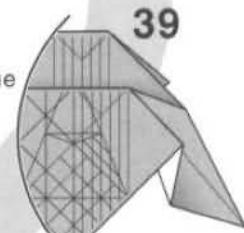
ついている折り筋で両側で
中わり折りするように折る
A series of inside reverse
folds.

38

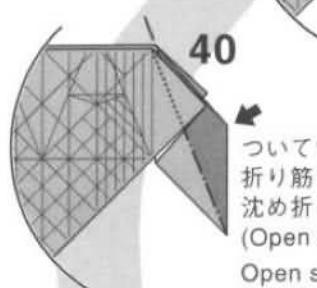


途中の図
Flatten the
model.

39

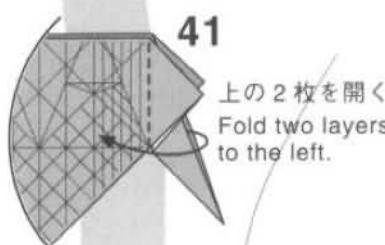


40



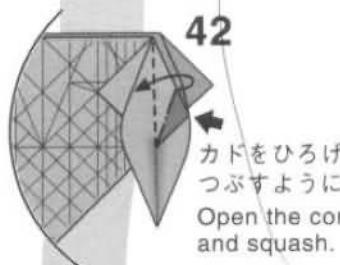
ついている
折り筋で
沈め折り
(Open sink)
Open sink the
darkened part.

41



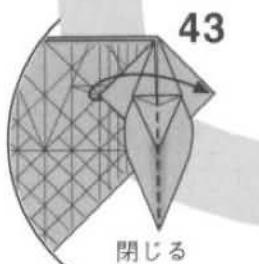
上の2枚を開く
Fold two layers
to the left.

42



カドをひろげて
つぶすように折る
Open the corner
and squash.

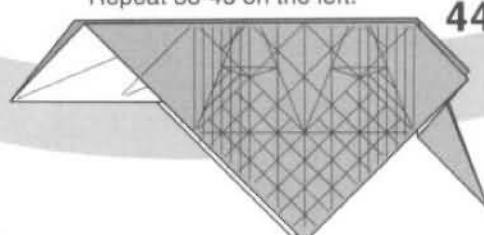
43



閉じる
Close the
layers again.

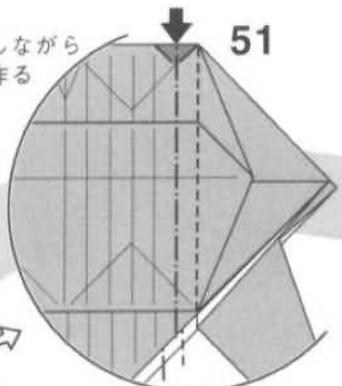
反対側も 38-43 と同じように折る
Repeat 38-43 on the left.

44

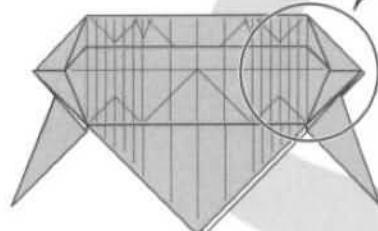


上の縁をつぶしながら
両側にひだを作る
ように折る
Pleat while
squashing the
top portion.

51

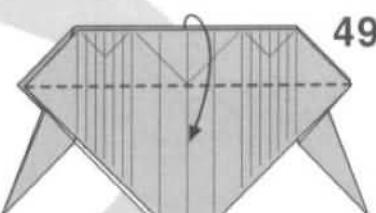


50



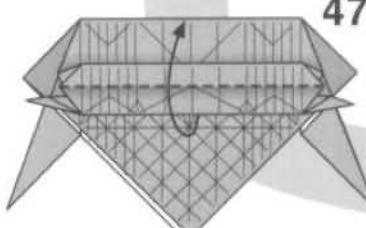
48

6



縁をカドとカドを
結ぶ線で下へ折る
Fold the edge down.

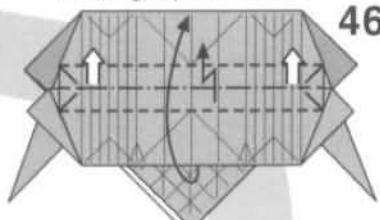
47



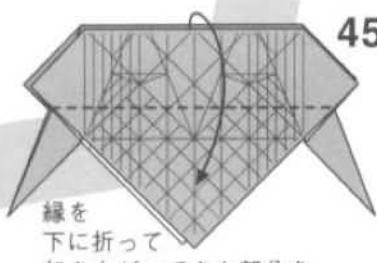
途中の図
Flatten the model.

ついている折り筋で
紙を内側から押し出すようにして
段折りするように折りたたむ
Fold the edge up again,
forming a pleat inside.

46



45

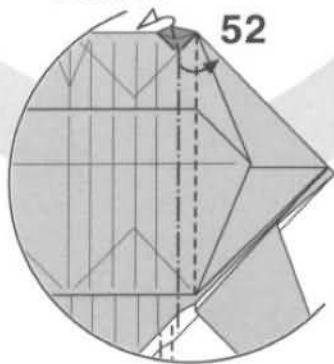


縁を
下に折って
起き上がってきた部分を
つぶすように折る
Fold the edge down.

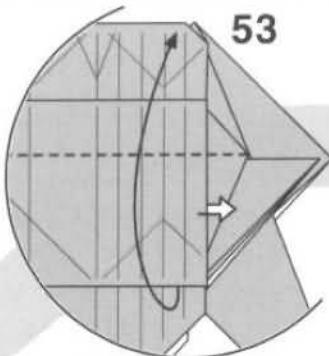
エンシェントドラゴン

途中の図

手前の部分を右へ
奥の部分は左へ折って
平らにする
Lay the near and far
layers to different
directions.

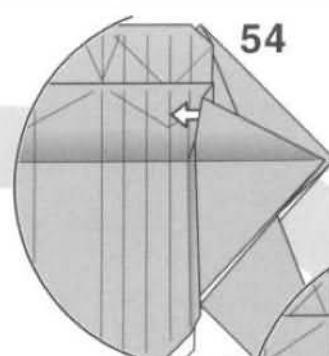


52



53

手前の縁をヒダを
引き出しながら起こす
Fold the edge up and
pull out the edge
beneath.

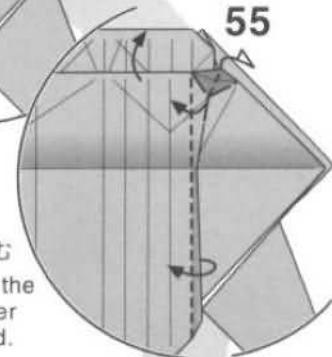


54

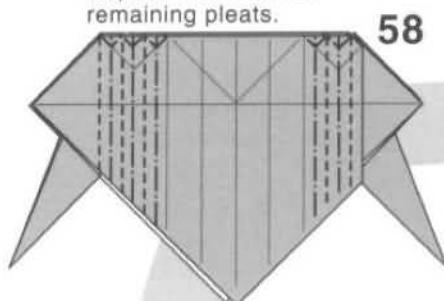
内側のヒダを
引き出す
Pulling out the
edge

55

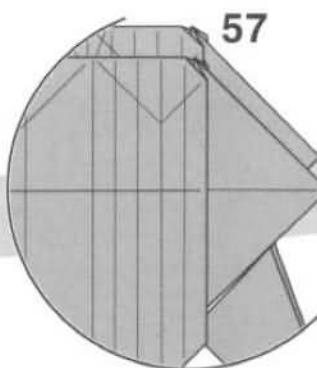
■の部分を
つぶしながら
平らに折りたたむ
Fold the edge to the
left. The top layer
will be squashed.



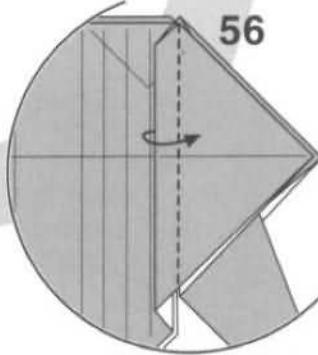
残り 5 か所も
49-56 と同じように折る
Repeat 49-56 on the
remaining pleats.



58

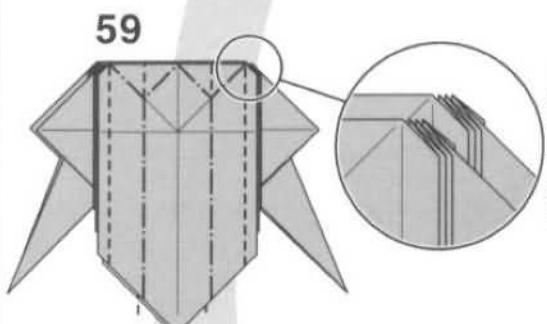


57



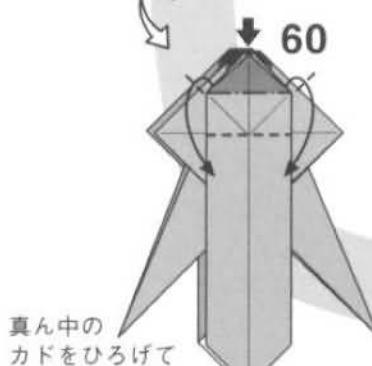
56

ヒダを反対側に折る
反対側も同じ
Fold the edge to the right.
Repeat behind.



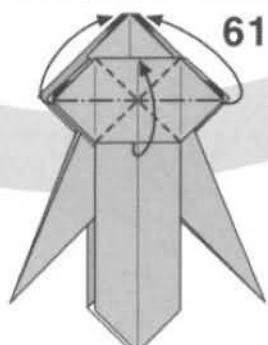
59

さらに中央の
2 か所も 49-56 と
同じように折る
The center layers
should also be
folded like 49-56.



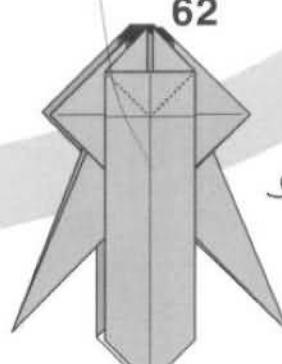
60

カドを上に折りたたむ
Fold up the side corners.



61

真ん中の
カドをひろげて
つぶすように折る
Fold down the corner,
squashing the top corner.



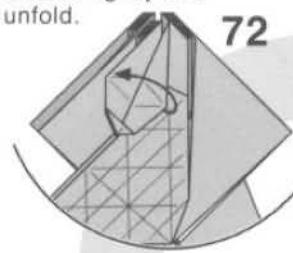
62

こちら側も 60-61 と
同じように折る
Repeat 60-61
on this side.

63

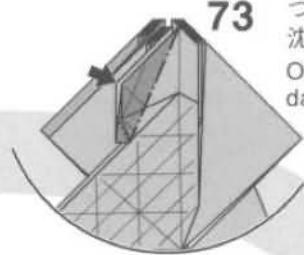
こちら側も 60-61 と
同じように折る
Repeat 60-61
on this side.

しっかりと折り筋を
つけてから戻す
Crease tightly and
unfold.

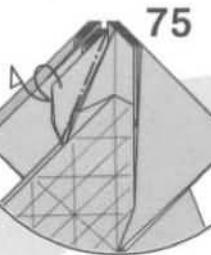


72

つけた折り筋で
沈め折り (Open sink)
Open sink the
darkened part.

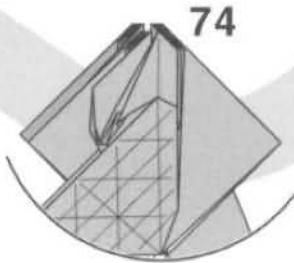


73



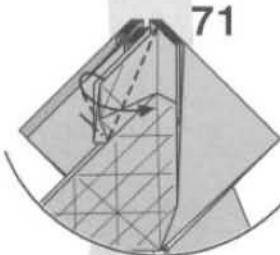
75

縁のところで後ろに
折り筋をつける
Crease by a
mountain fold along
the edge.



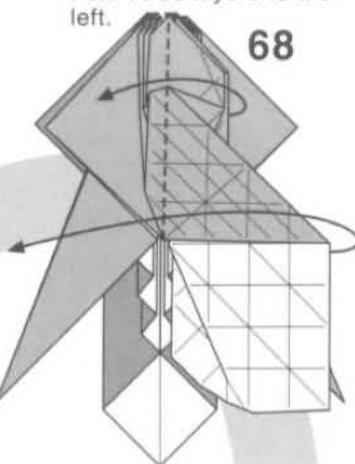
74

縁を折り筋に合わせて折り
起き上がってきた部分を
後ろの縁のところで
つぶすように折る
Fold the edge to the
crease line and squash
the raised bottom layers.



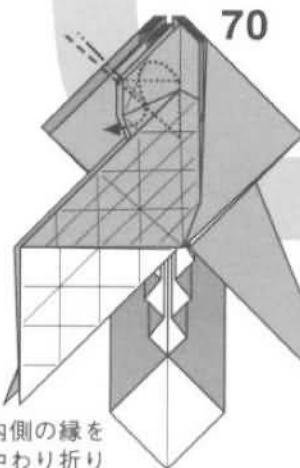
71

そのまま3枚を
反対側に折る
Fold three layers to the
left.



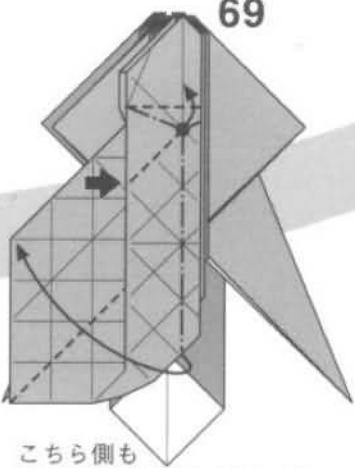
68

69



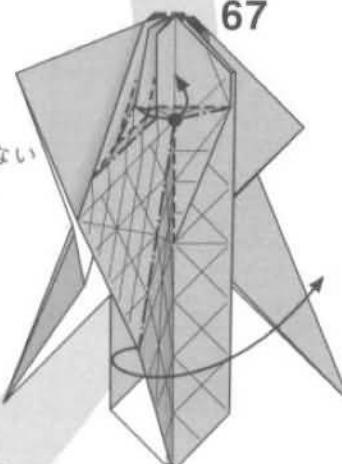
70

内側の縁を
中わり折り
Inside reverse
fold.



こちら側も
65-67と同じように折って
平らに折りたたむ
Repeat 65-67 on the
right side.

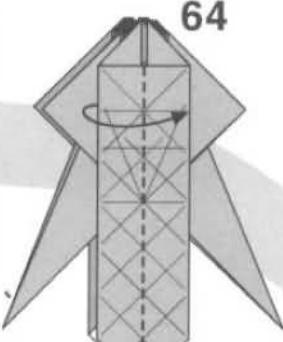
途中の図
下の部分は
平らにならない
Flatten the
model.



67

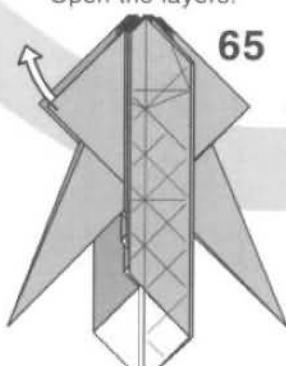
64

次の図のように
ヒダをひろげる
Open the layers.

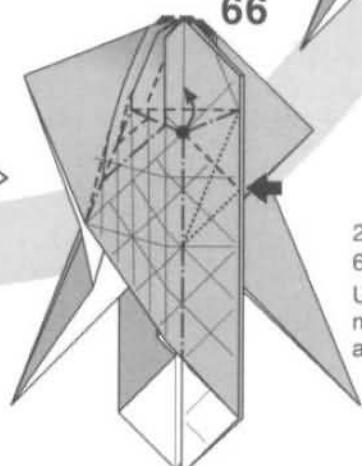


上の
1枚を反対側に折る
Fold the edge to the
right.

65



66

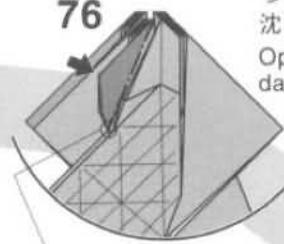


25でつけた折り筋で
68の形に折りたたむ
Using crease lines
made in 25, sink in
and out the layers.

エンシェントドラゴン

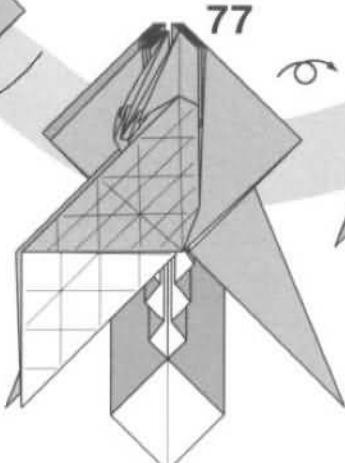
76

つけた折り筋で
沈め折り (Open sink)
Open sink the
darkened part.



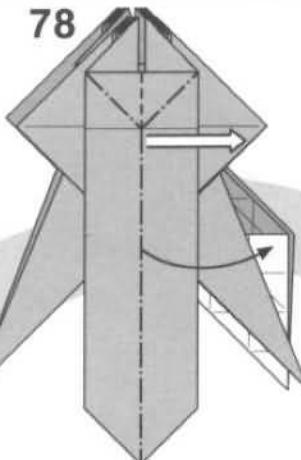
中心の部分は
沈め折りが
少し重なる
The middle
layers will be
sunk twice.

77

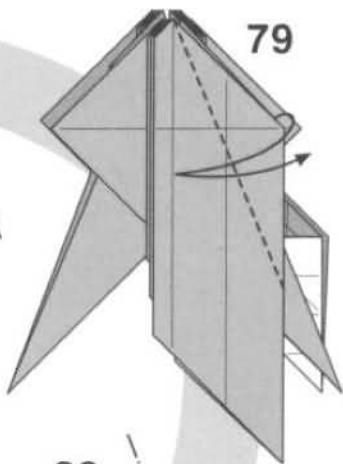


78

縁を折り筋に合わせて
折り筋をつける
Fold the edge to the crease
line in the center. Unfold.

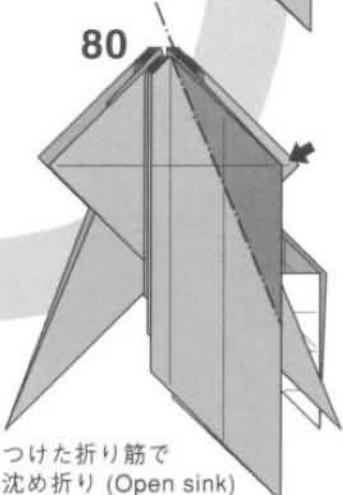


79



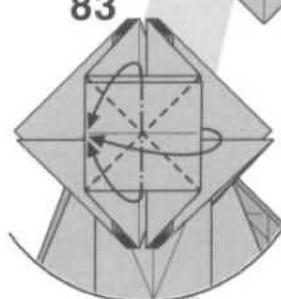
中心線を後ろから
押し出すように折る
Sink the top edge and
pull out the corner to
the right.

80



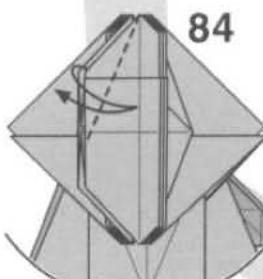
83

縁と縁を合わせて
折りたたむ
Close the layers.
inside reverse folding
the top and bottom
edges.

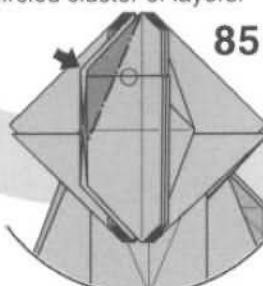


84

○のヒダは開かない
ままつけた折り筋で
沈め折り (Open sink)
Open sink the darkened
part. Do not open the
circled cluster of layers.



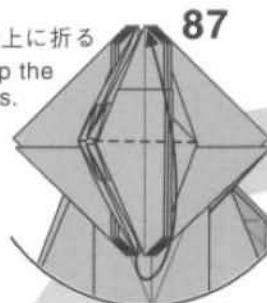
縁を折り筋に合わせて
折り筋をつける
Fold the edge to the
crease line. Unfold.

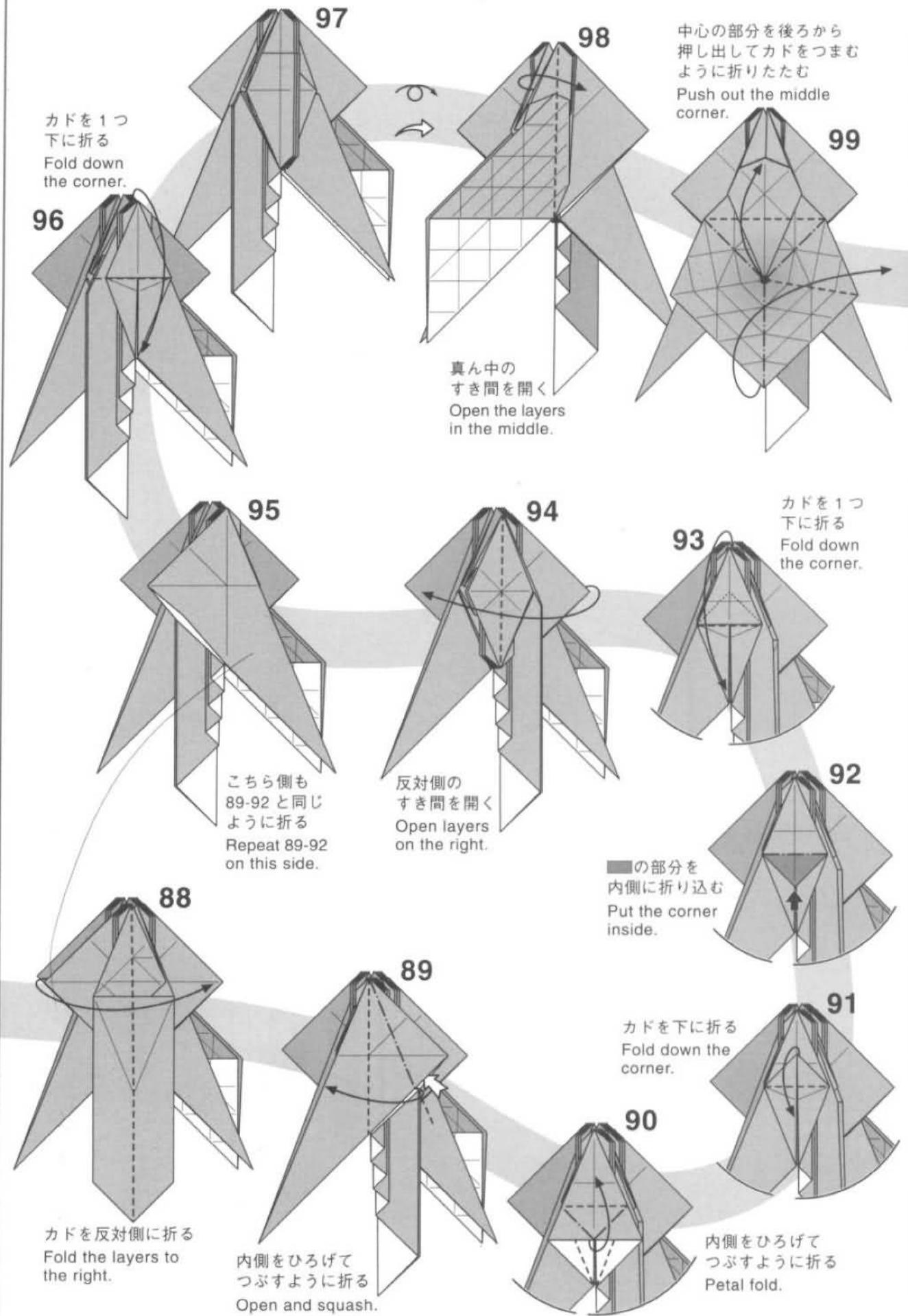


中心の部分は
沈め折りが
少し重なる
The middle
layers will be
sunk twice.

86

残り3か所も
同じように
沈め折り
Repeat open
sinking on the
three other
edges.

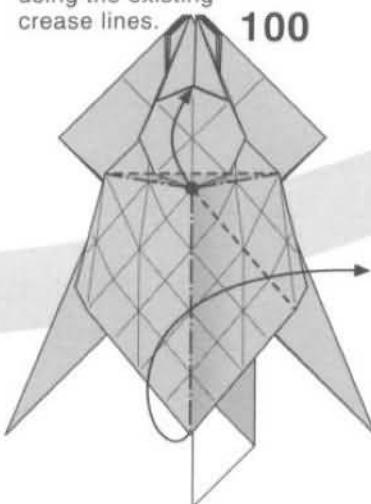




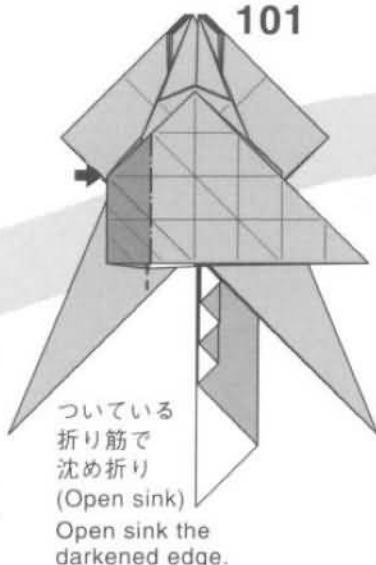
エンシェントドラゴン

途中の図

Flatten the model using the existing crease lines.

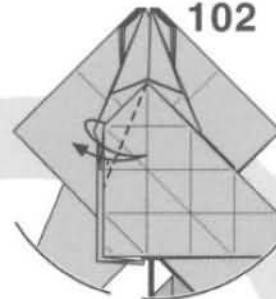


100



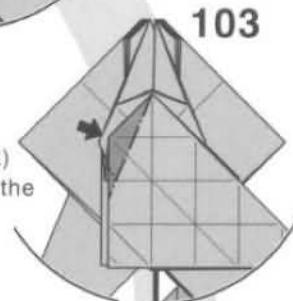
101

ついている
折り筋で
沈め折り
(Open sink)
Open sink the
darkened edge.



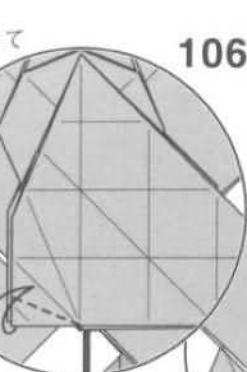
102

縁を折り筋に
合わせて折り筋を
つける
Fold the edge to
the crease line in
the middle. Unfold.



103

沈め折り
(Open sink)
Open sink the
darkened corner.

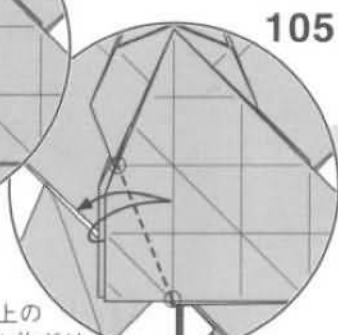


104

中心の部分は沈め折りが
少し重なる
The middle layers
will be sunk twice.

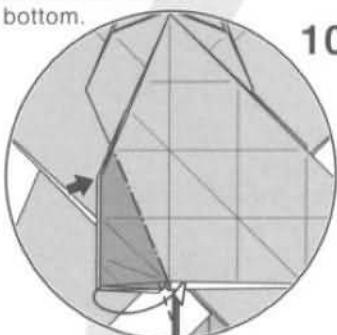
105

奥のカドも 102-103 と
同じように沈め折り
(Open sink)
Repeat the sink behind.

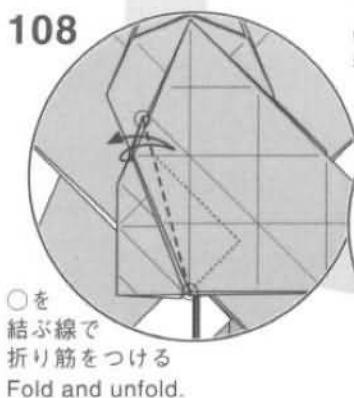


107

上の
1枚だけ
折り筋と折り筋を合わせて
折り筋をつける
Fold an angle bisector on
the top layer and unfold.



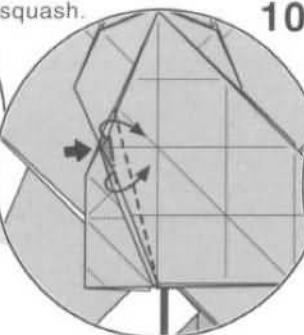
108



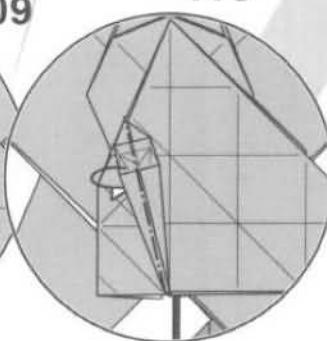
○を
結ぶ線で
折り筋をつける
Fold and unfold.

■の部分を
ひろげてつぶすように折る
Open the corner and
squash.

109

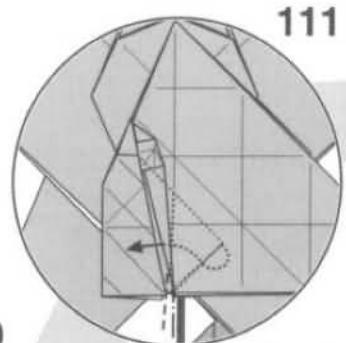


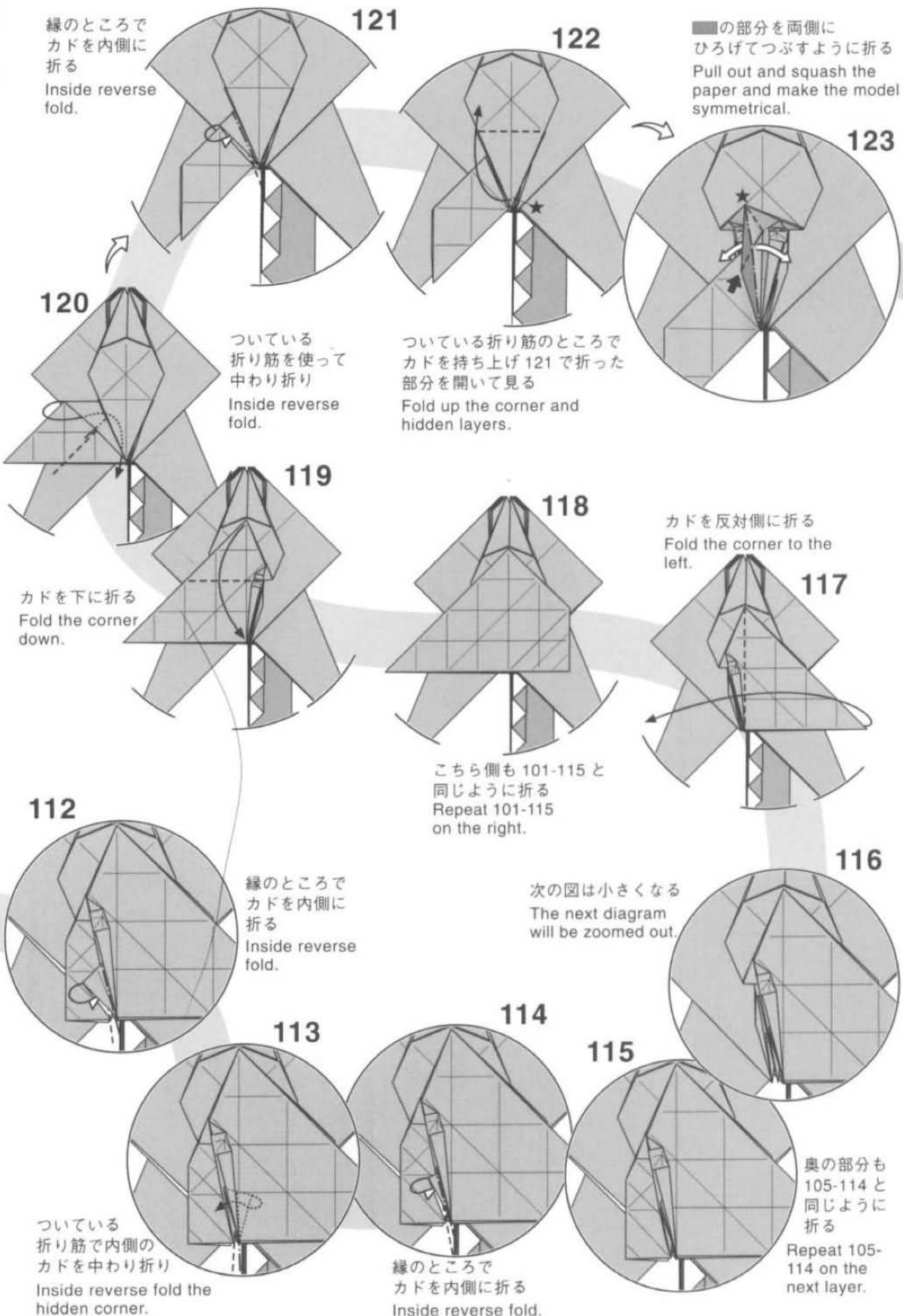
110

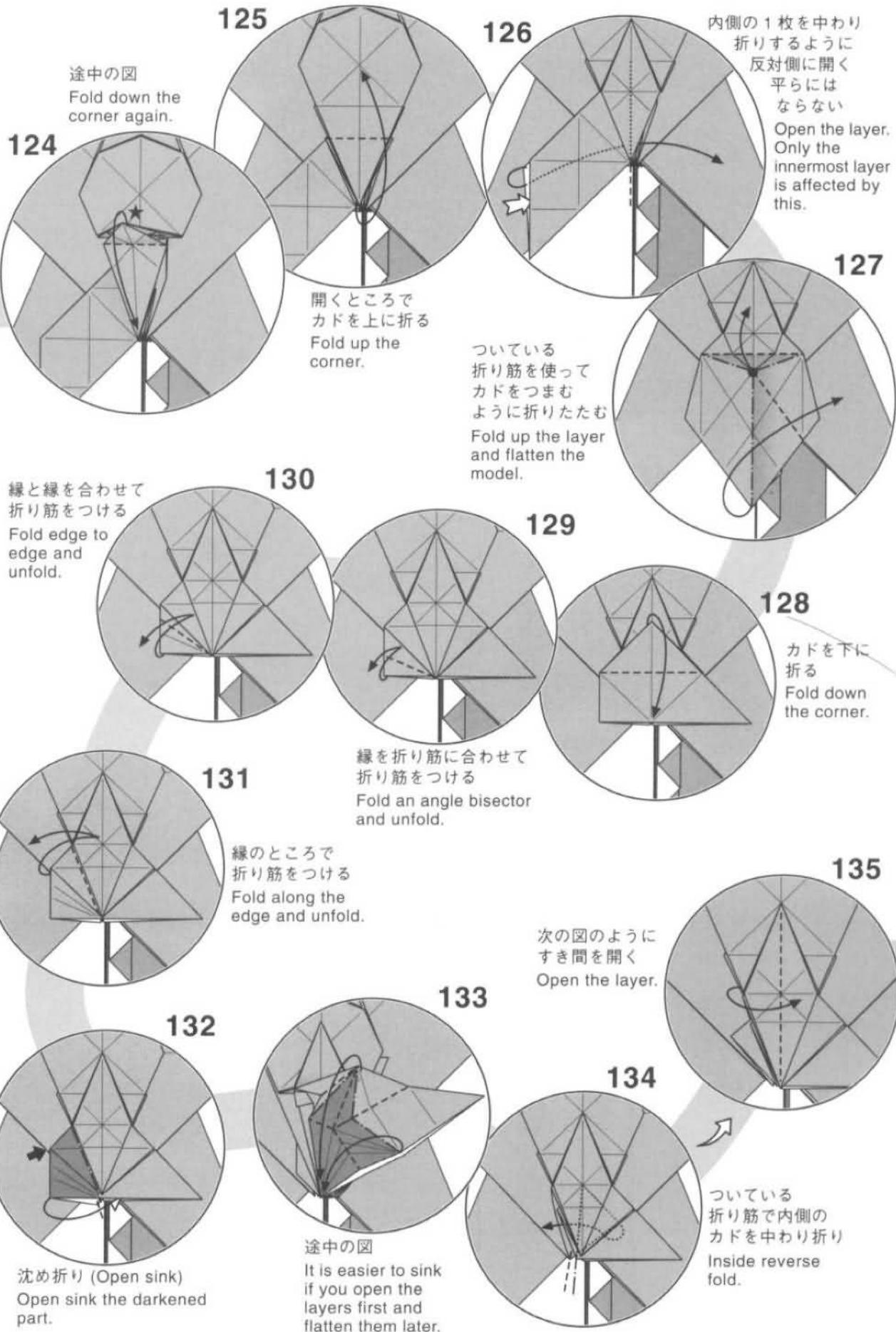


ついている折り筋で
内側のカドを
中わり折り
Inside reverse fold the
hidden corner.

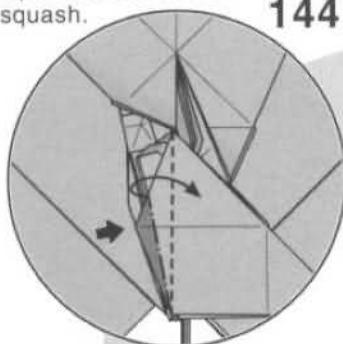
縁のところで
後ろへ折り込む
Mountain fold the
corner behind.







カドをひろげて
つぶすように折る
Open the corner and
squash.

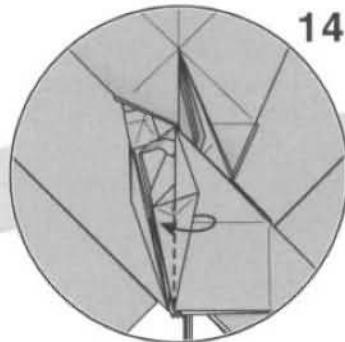


144

145

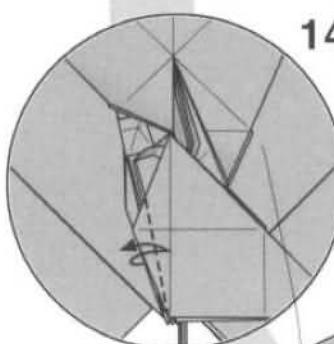
146

カドを反対側に折る
Fold the corner to
the left.



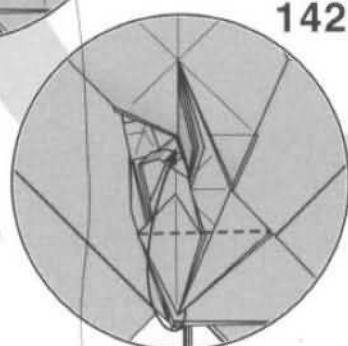
147

閉じる
次の図は
小さくなる
Close the layer.
The next diagram
will be zoomed out.



143

縁を折り筋に
合わせて
折り筋をつける
Fold along the
edge behind and
unfold.

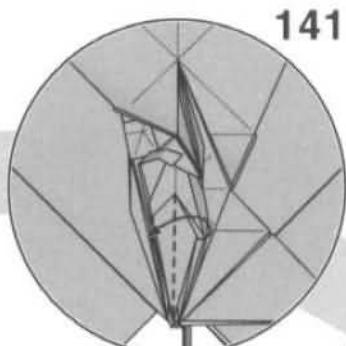


142

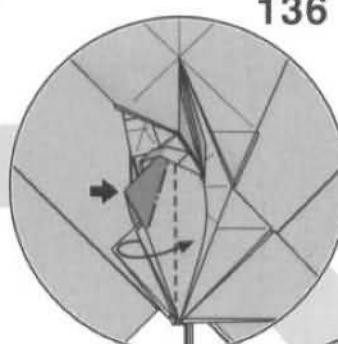
立体的な
ままカドを
上に折る
Fold up the
corner.

141

カドをすぐ後ろへ
折り込む
Fold the excess
layer behind.



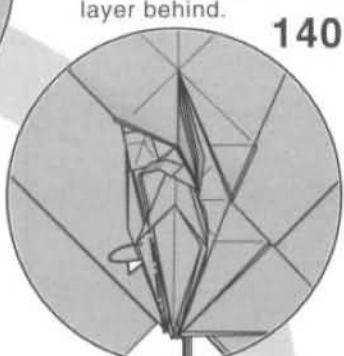
140



136

カドをひろげて
つぶすように折る
Open and squash
the edge.

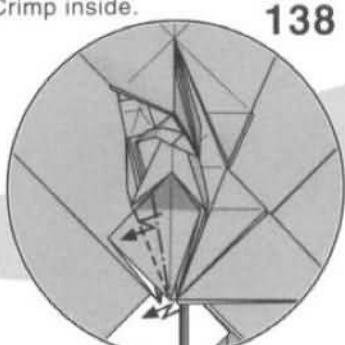
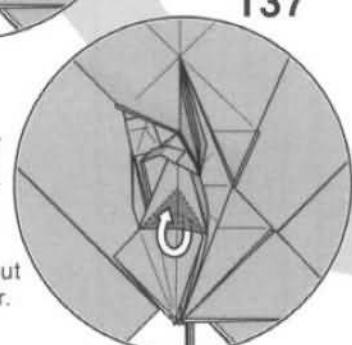
1枚を反対側に折る
Fold one layer to
the left.



139

137

ついている折り筋で
両側で内側に段折り
Crimp inside.



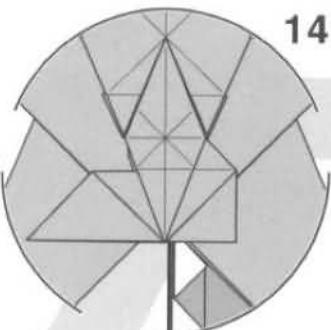
138

隠れているカドが
外側になるように
引き出して
まとめなおす
Unsink and pull out
the hidden corner.

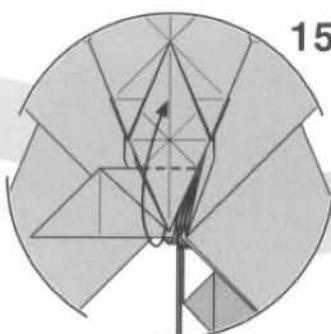
縁のところで
カドを内側に折る
Inside reverse fold
along the edge.

エンシェントドラゴン

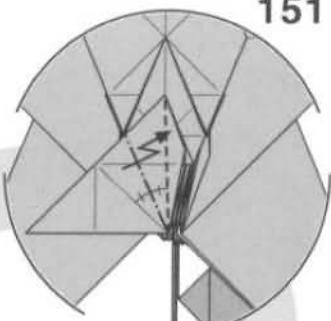
こちら側も
129-147と
同じように
折る
Repeat 129-
147 on the
right.



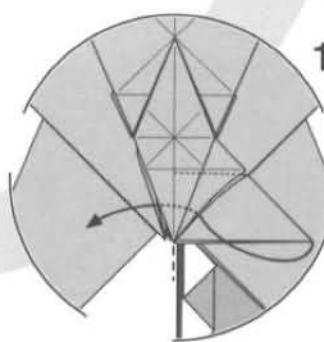
149



150



151



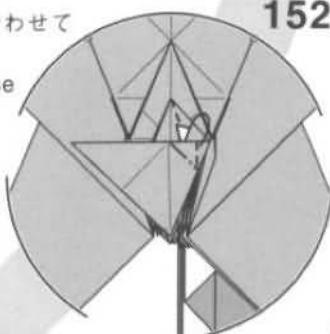
148

カドを反対側に
中わり折り
Inside reverse
fold to the left.

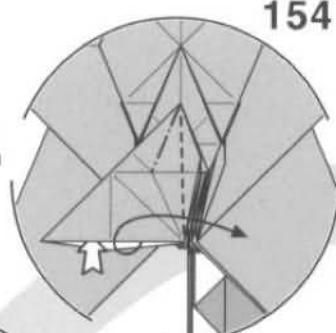
カドを上に折る
Fold up the corner.

半分の角度で段折り
Crimp.

152

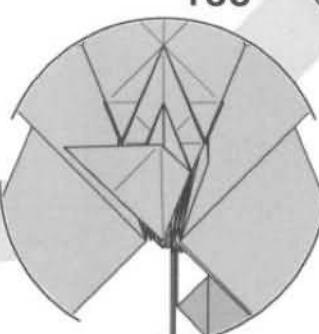


153



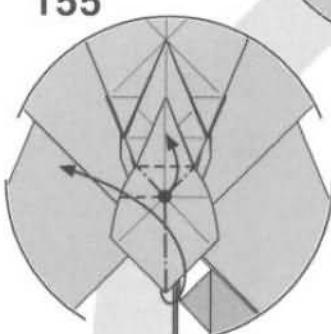
154

内側をひろげて
上の部分だけ
つぶすように折る
Open and squash
the top part.



151 の形に戻す
Unfold.

155

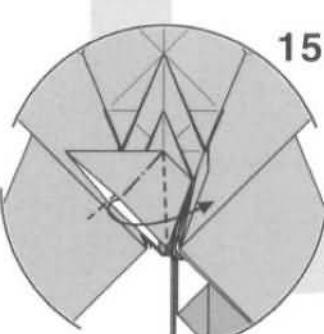


ついている折り筋で
カドをつまむように
して折りたたむ
Petal fold. Lay the
excess layers to the
left.

159

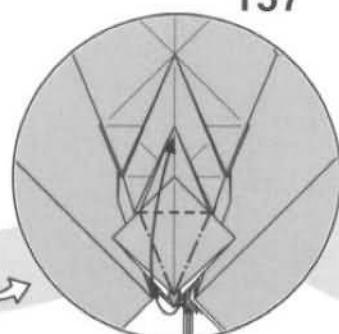
カドをひろげて
つぶすように
折る
Open and
squash the
corner.

157



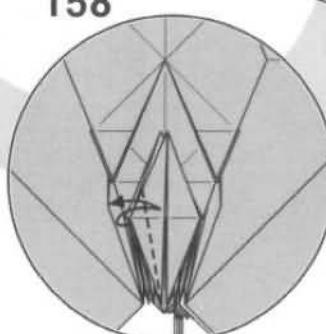
156

内側をひろげて
つぶすように折る
Open and squash.



内側をひろげて
つぶすように折る
Petal fold.

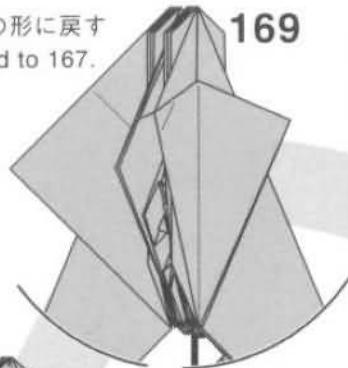
158



縁を中心には
わせて折り筋を
つける
Fold the edge to
the center and
unfold.

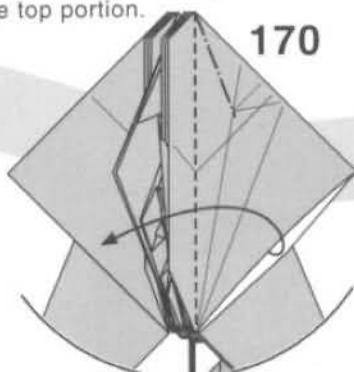
167 の形に戻す
Unfold to 167.

169

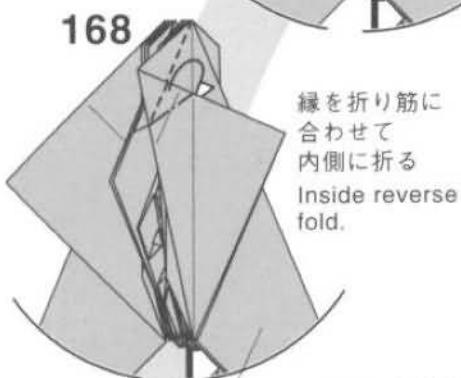


上の部分だけ内側を
ひろげてつぶすように折る
Open the edge and squash
the top portion.

170



168



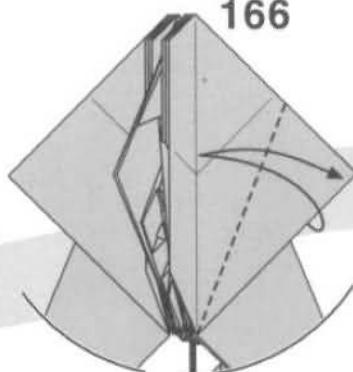
縁を折り筋に
合わせて
内側に折る
Inside reverse
fold.

ついている折り筋で
中心線をつまむようにして
折りたたむ
Petal fold and lay the
excess layers to the right.

細いヒダの後ろの
すき間を開く

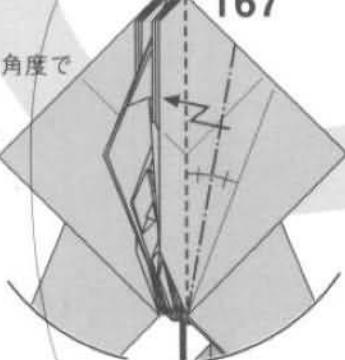
Open along with the
narrow layers
behind.

166



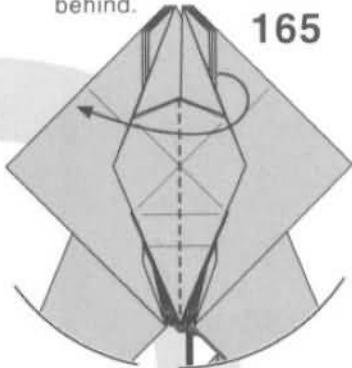
半分の角度で
段折り
Crimp.

167

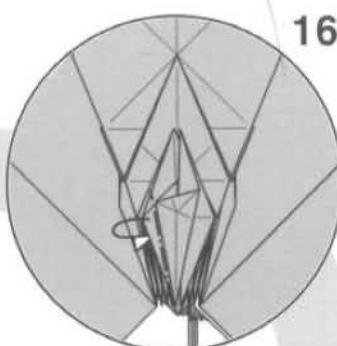


縁を中心にはわせて
折り筋をつける
Fold the edge to the
center.

165



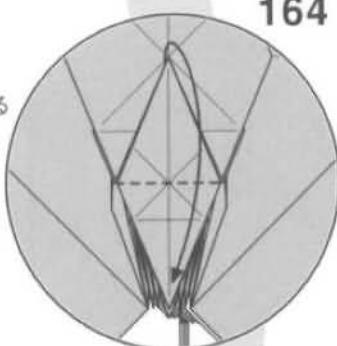
160



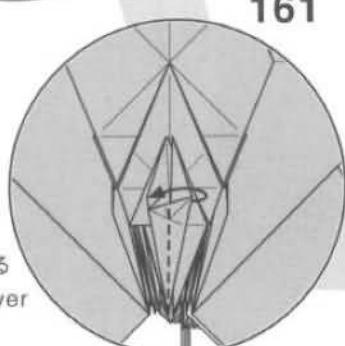
縁のところで
カドをすぐ後ろに
折りこむ
Fold the corner
behind.

カドを下に折る
次の図は小さくなる
Fold another
corner down.
The next diagram
will be zoomed out.

164



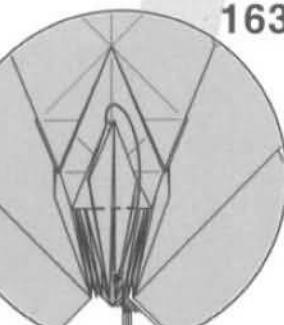
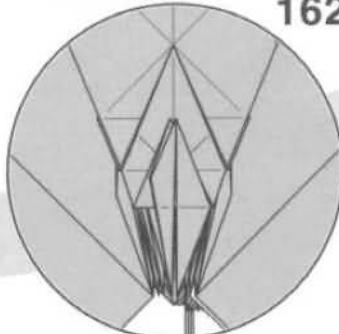
161



上の1枚を
反対側へ折る
Fold one layer
to the left.

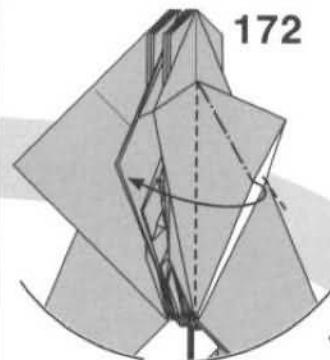
反対側も 158-161 と
同じように折る
Repeat 158-161
on the right.

162



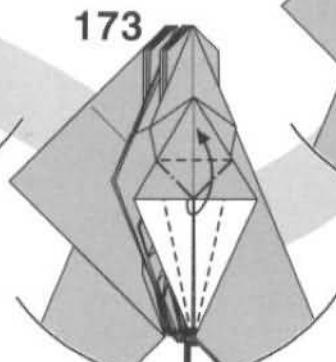
カド 2 つを下に折る
Fold two corners down.

エンシェントドラゴン



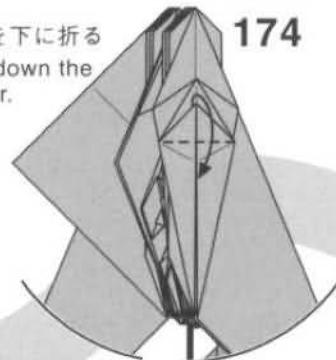
172

内側をひろげて
つぶすように折る
Open and squash.



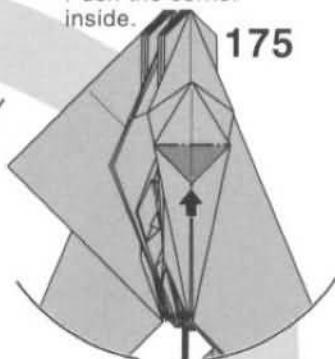
173

内側をひろげて
つぶすように折る
Petal fold.



174

■の部分を内側に
折り込む
Push the corner
inside.

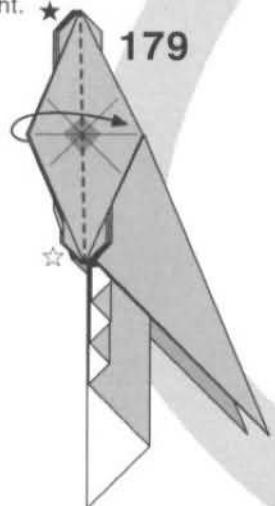


175

裏側も 166-175 と
同じように折る
Repeat 166-
175 behind.

178

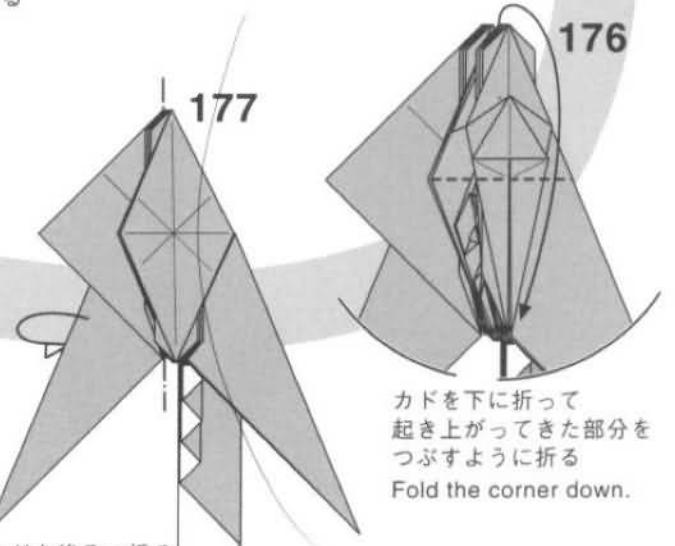
全ての層をまとめて
反対側に折る
Fold all layers to the
right. ★



179

177

カドを後ろへ折る
Fold the corner to
the right behind.



176

カドを下に折って
起き上がってきた部分を
つぶすように折る
Fold the corner down.

182

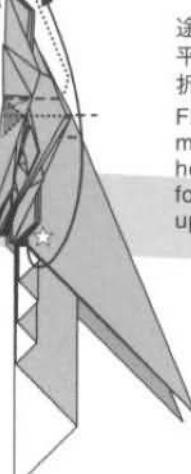
181

途中の図
平らに
折りたたむ
Flatten the
model so the
head and
forelegs head
upwards.

179 の ■ の部分を
つぶしながら 175 で
折り込んだ縁のところで
カドを上に折って
起き上がってきたカドを
上に折りたたむ

Sink and squash the
grayed part in 179 and
fold up the corners along
the edge created in 175.

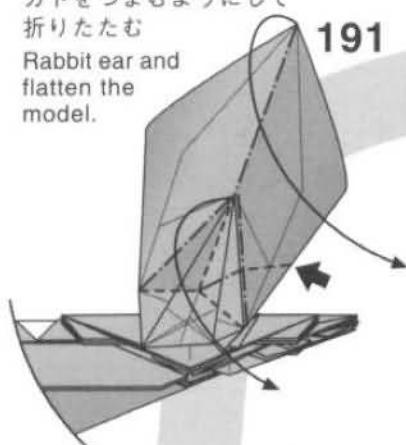
180



頭部 (◆のカド) が前肢
より上に出ていれば良い
Note that the head
corner is above the
forelegs.

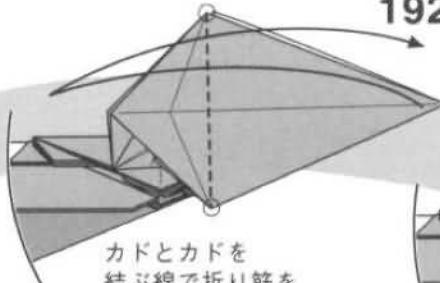
ついている折り筋を使って
カドをつまむようにして
折りたたむ
Rabbit ear and
flatten the
model.

191



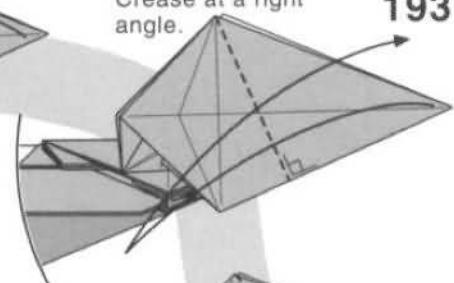
カドとカドを
結ぶ線で折り筋を
つける
Fold along the line
connecting the
corners and unfold.

192

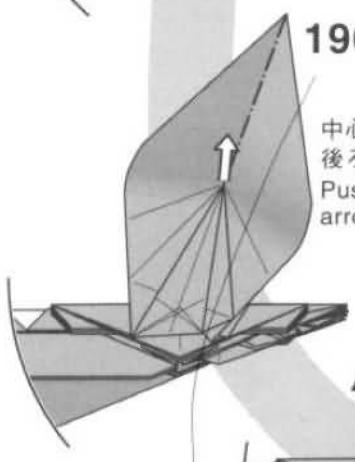


縁に対して垂直に
折り筋をつける
Crease at a right
angle.

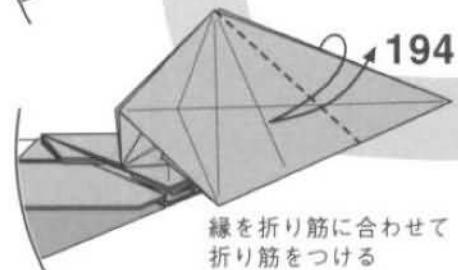
193



190

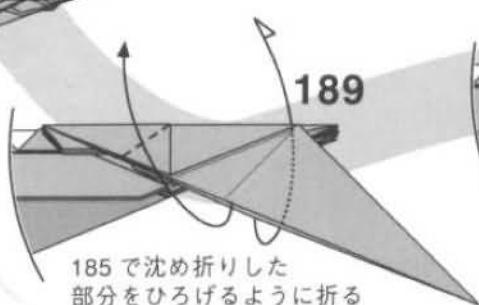


中心の部分を
後ろから押し出す
Push out the
arrowed corner.



縁を折り筋に合わせて
折り筋をつける
Fold angle bisectors
and unfold.

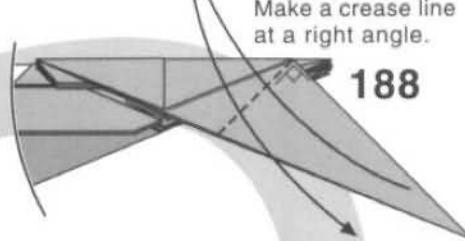
189



185で沈め折りした
部分をひろげるよう
に折る
Open and spread the
darkened part in 185.

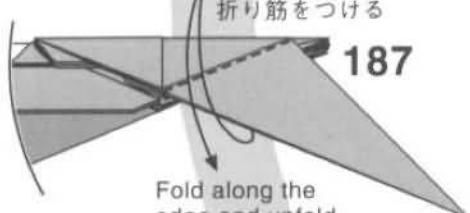
縁に対して垂直に
折り筋をつける
Make a crease line
at a right angle.

188

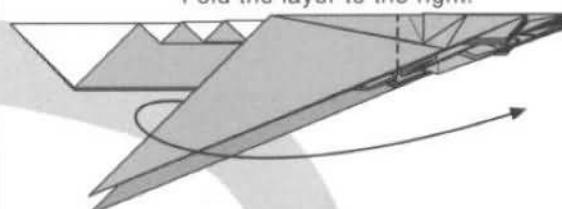


縁のところで
折り筋をつける
Fold along the
edge and unfold.

187

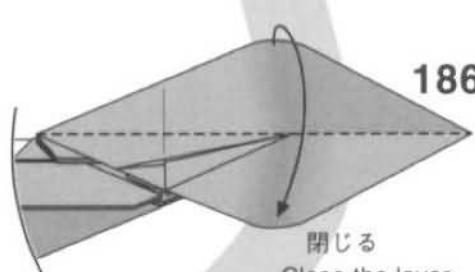


カドを反対側に折る
Fold the layer to the right. 183



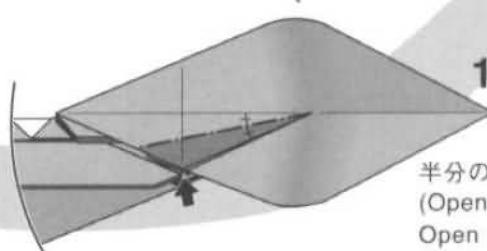
Fold along the
edge and unfold.

186



閉じる
Close the layer.

185

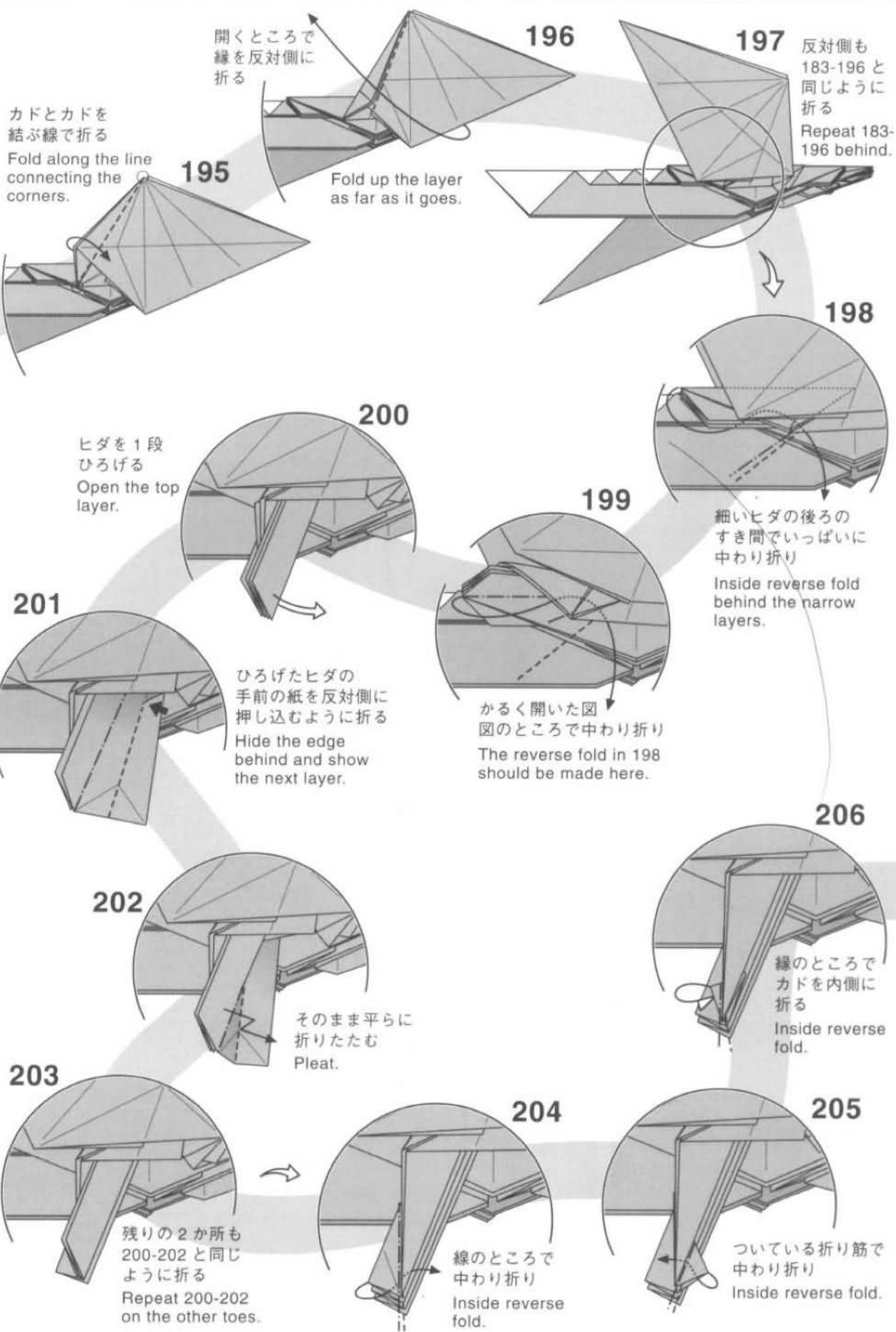


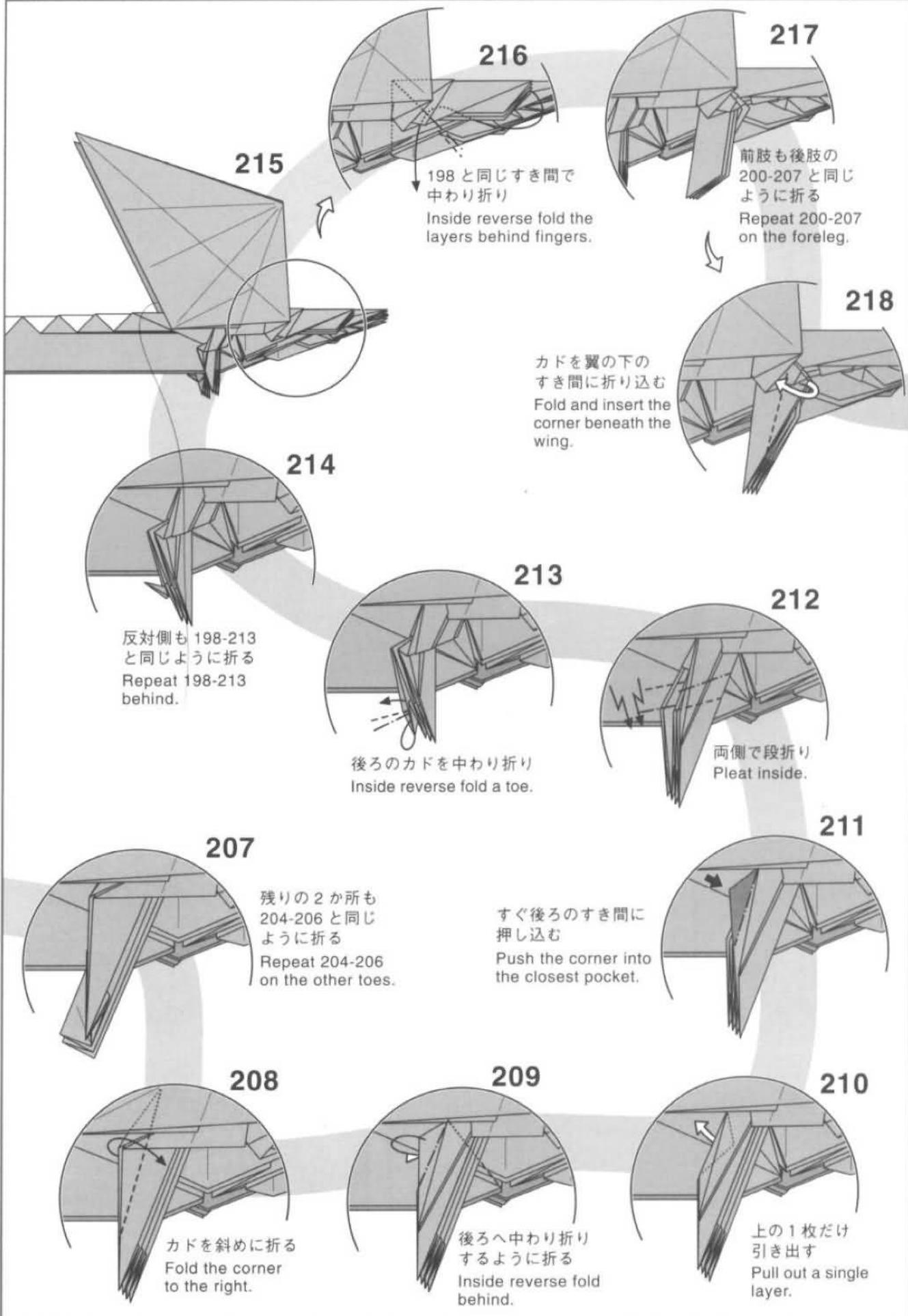
半分の角度で沈め折り
(Open sink)
Open sink the corner.

すき間を開く
Open the layer.



エンシェントドラゴン



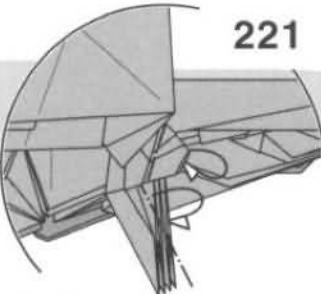


エンシェントドラゴン



220

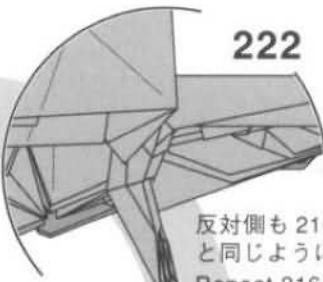
後ろへ段折り
Crimp behind.



221

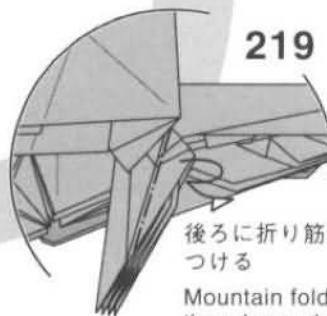
縁を後ろへ折り込む
上の部分は中わり折り
するように折る

Mountain fold the edges.
Inside reverse fold the
end of the top edge.



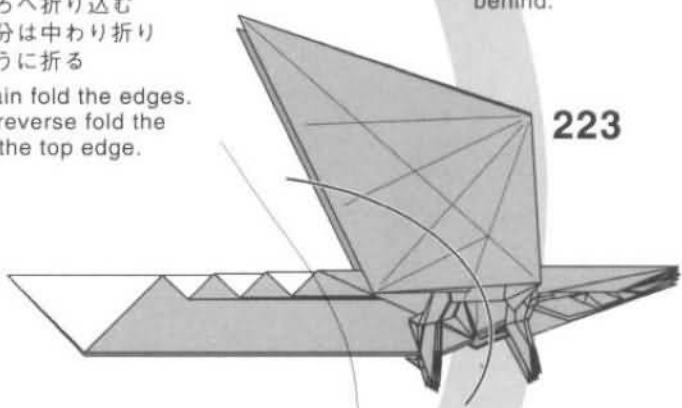
222

反対側も 216-221
と同じように折る
Repeat 216-221
behind.



219

後ろに折り筋を
つける
Mountain fold along
the edge and unfold.



223

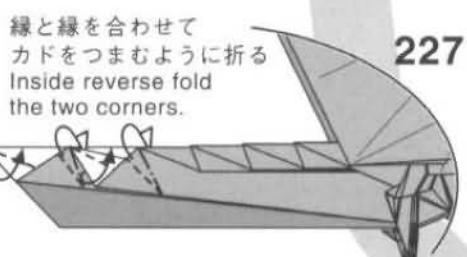
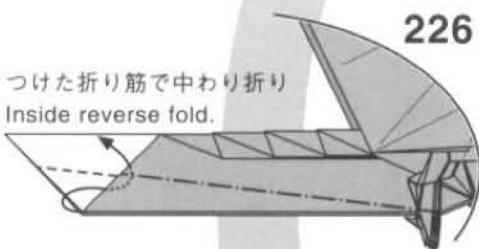
カドを上の縁に合わせて
折り筋をつける
Fold the corner to the
top edge and unfold.

225



226

つけた折り筋で中わり折り
Inside reverse fold.



227

縁と縁を合わせて
カドをつまむように折る
Inside reverse fold
the two corners.

224

縁と縁を合わせて
カドをつまむように折る
Inside reverse
fold the three
corners.



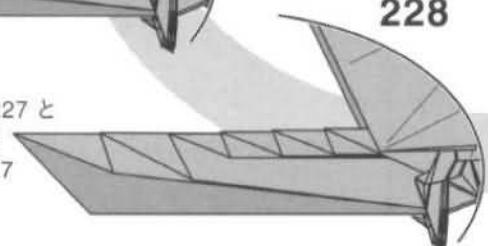
230

同じように
3 か所を両側で段折り
Repeat 229 as
designated.



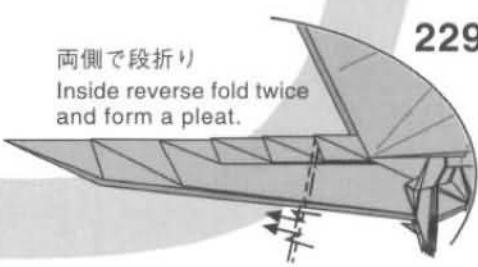
228

両側で段折り
Inside reverse fold twice
and form a pleat.

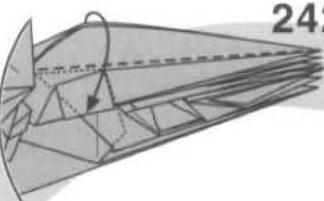


229

反対側も 224-227 と
同じように折る
Repeat 224-227
behind.



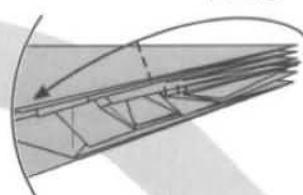
閉じる
反対側も 234-242
と同じように折る
Close the layers.
Repeat 234-242
behind.



242

4 本のツノを反対側に折る
この時カドを少しづつずらして
紙の厚みを分散させる
反対側も同じ

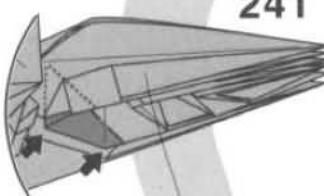
Fold the corners to the left.
The tip of the corners should
be shifted from each other a
little, to absorb the thickness
of the layers. Repeat behind.



243

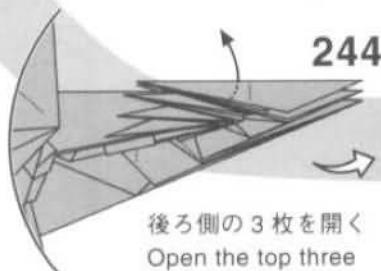
241

つけた折り筋で沈め折り
(下のカドは Closed sink
上のカドは open と closed
の両方を含む) 253 で内側に
折れるようにする
Sink, half-open on the top
and closed on the bottom.
This is necessary to fold
253 below stresslessly.



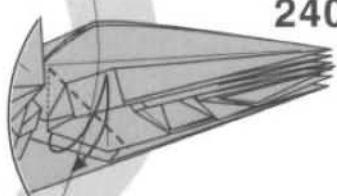
244

後ろ側の 3 枚を開く
Open the top three
layers from behind.

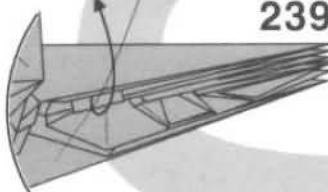


240

いっぱいのところで
折り筋をつける
Fold and unfold
the edge as far
as it goes.

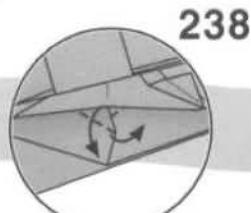


239

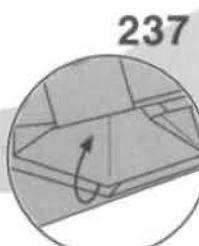


上の 2 枚をひろげて
内側を見る

Open two layers and
look inside.

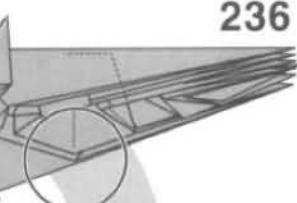


縁を右に倒して
折りたたむ
Fold the edges
down to the right.



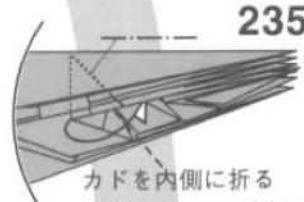
上の 1 枚をかるく
ひろげて内側を見る
カドのあいだの部分が
折り込まれている
場合は引き出す

Look inside and pull out
the layer between the
corners if necessary.



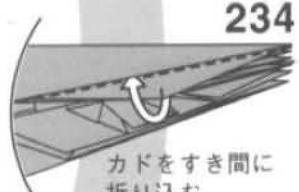
236

235



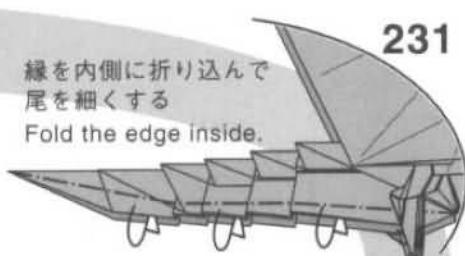
カドを内側に折る
Inside reverse fold.

234



カドをすき間に
折り込む
Insert the corner
into the slot.

231

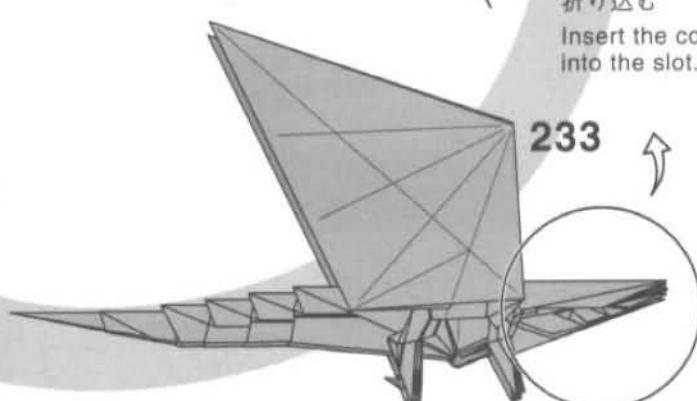


縁を内側に折り込んで
尾を細くする
Fold the edge inside.

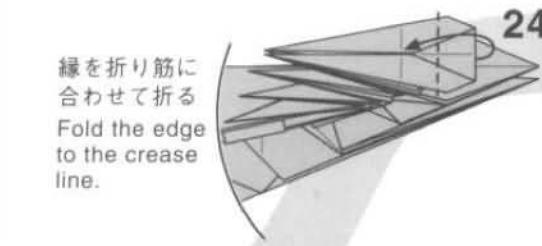
232



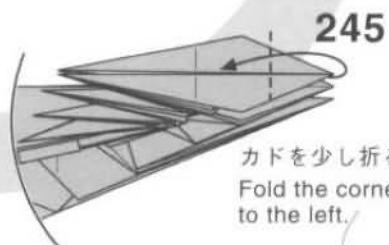
反対側も 231 と
同じように折る
Repeat behind.



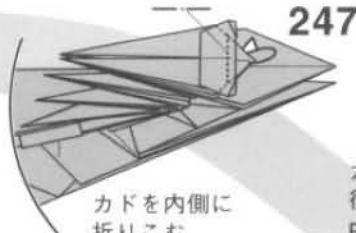
233



246



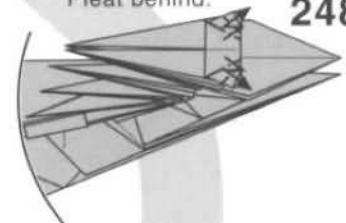
245



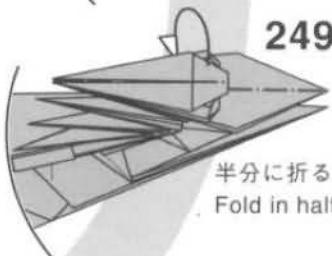
247

カドの先が少し出るように
後ろに段折りして目を作る
Pleat behind.

248



249



251



252



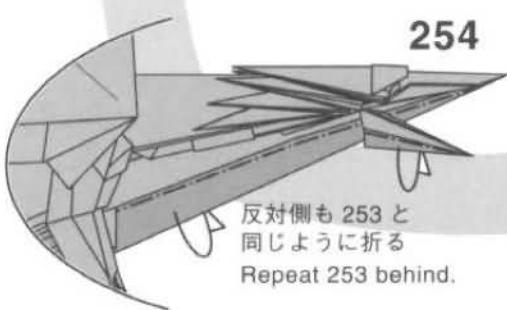
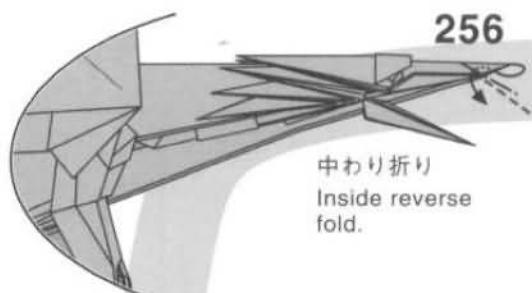
250



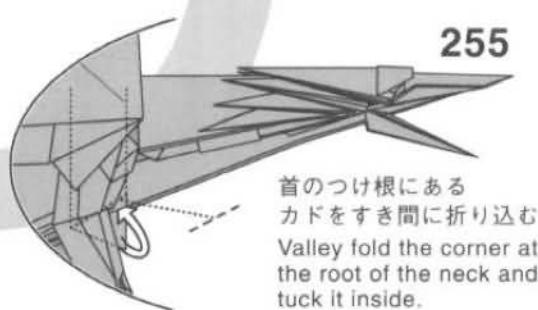
253

Valley fold the edge and put it into the slit. Fold up the edge of the jaw at the same time.

256

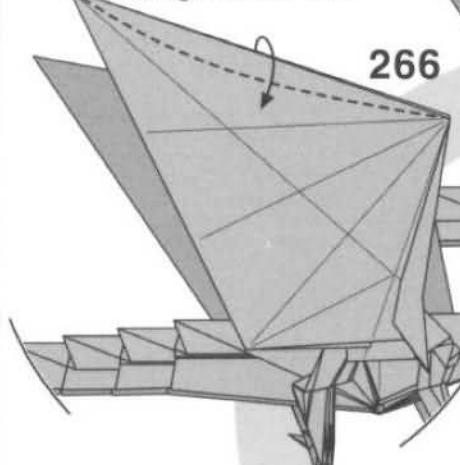


254



255

縁を曲線で折る
Fold the edge down along a curved line.

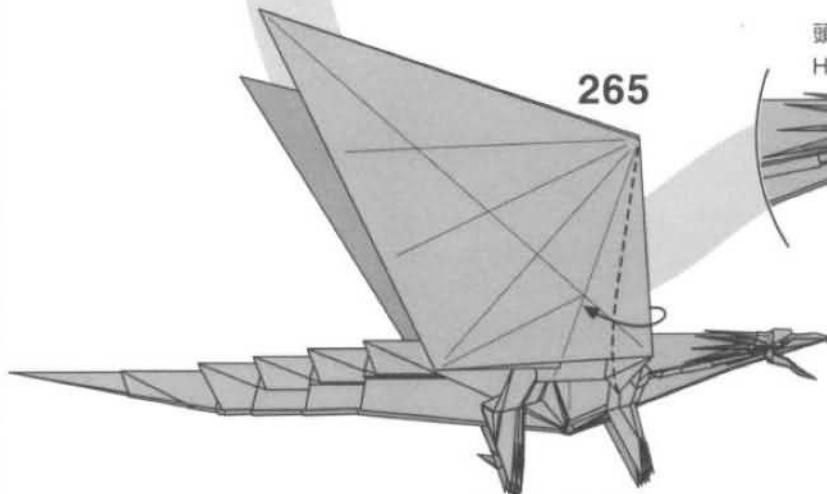


266

267

268

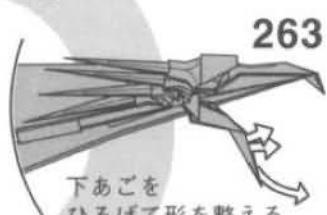
翼を曲線で段折り
Crimp the wing along curved lines.



265

頭部完成

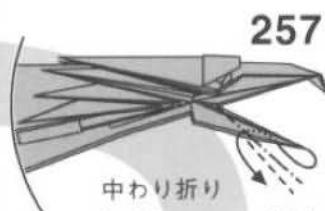
Head completed. 264



263

下あごをひろげて形を整える
Open the lower jaw and shape.

翼の縁を折り筋に合わせて曲線で折る
Fold and form the edge of the wing.



257

中わり折り
Inside reverse fold.

262

上あごをつぶして立体的にする
Push the surface of the upper jaw down and shape.

261

残りの7本も
259-260と
同じように折る
Repeat 259-260
on the other
seven horns.



258

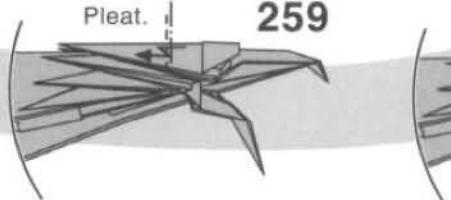
内側の小さい
カドを中わり折り
反対側も同じ
Inside reverse fold the
short cornered flap
inside. Repeat behind.

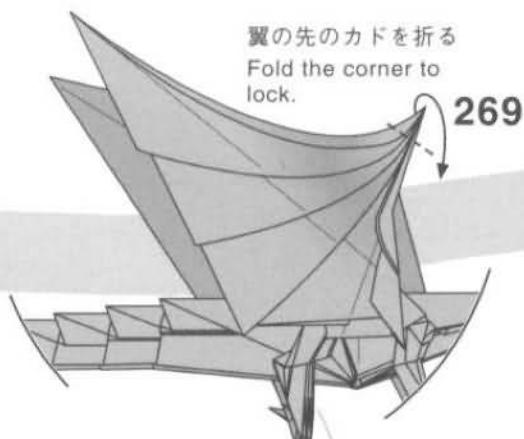
段折り
Pleat.

259

ツノをつまむように折る
Pinch and shape the horn.

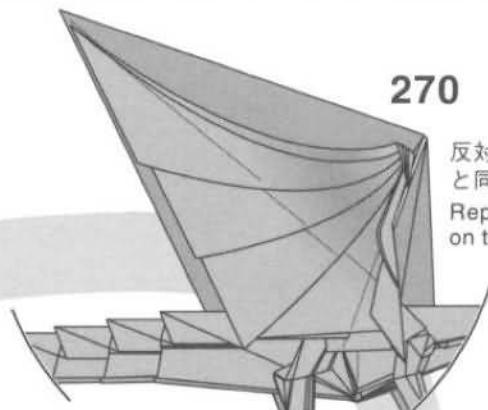
260





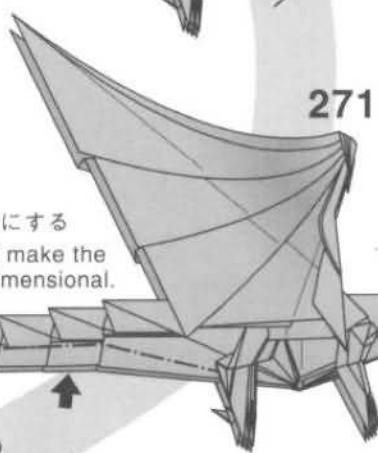
269

翼の先のカドを折る
Fold the corner to lock.



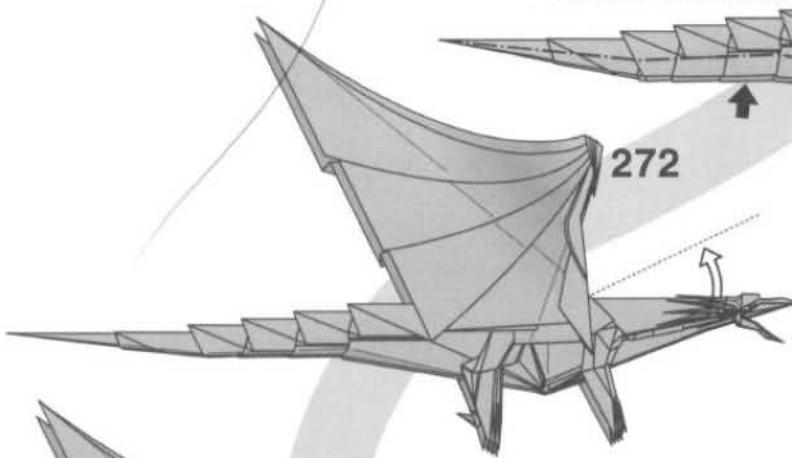
270

反対側も 265-269
と同じように折る
Repeat 265-269
on the other wing.



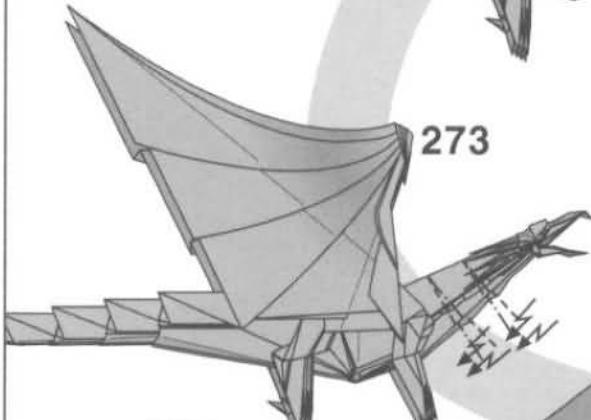
271

尾を立体的にする
Shape and make the
tail three dimensional.



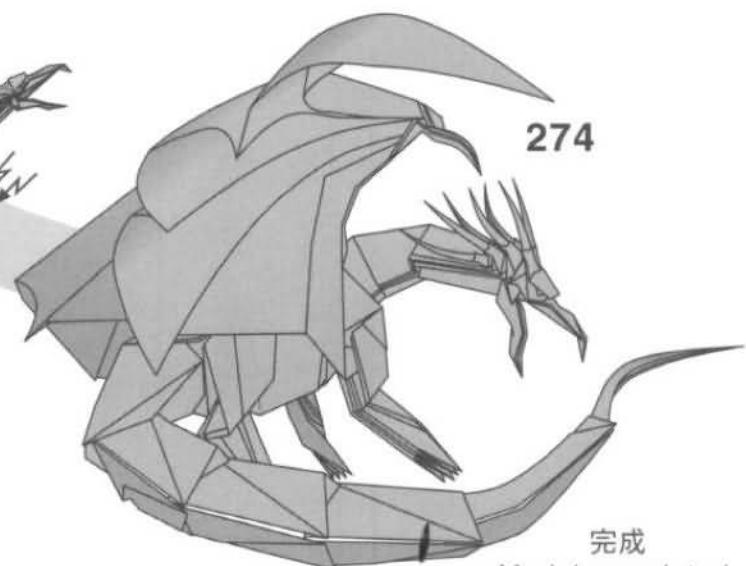
272

首を上にすらす
ように折る
Swivel the neck.



273

両側で
段折りして首を曲げる
ポーズをつけて
全体の形を整える
Crimp the neck twice.

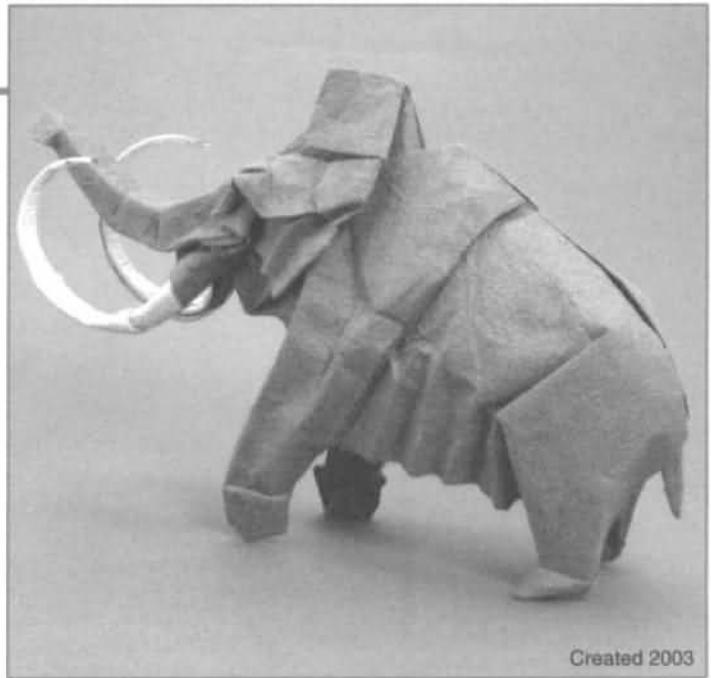
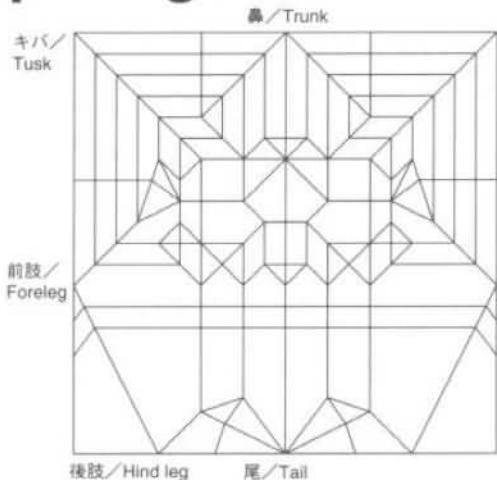


274

完成
Model completed.

マンモス

Mammuthus primigenius



Created 2003

第 5回TVチャンピオンで、新しくいくつかの古生物を作ることが必要になりました。その1つがこのマンモスです。実は当時、ゾウを偶然試作中で、幸運にもすでにいくつかのアイディアを持っていました。そのため、大きな問題もなく一気に完成させることができました。

体の作り方はスマリドンと同じくヒダ脊椎[®]ですが、構造にいくつかの違いがあります。まず、スマリドンでは22.5度を基本にしていましたが、この作品では基本構造に蛇腹を採用しています。またそれにともない、対称軸を変更しています。ゾウの方は対角線対称で22.5度ベースだったのですが、作っている段階で「長いキバを自然な形に折り出すのには蛇腹のほうに向いている」ということに気がつきました。そこでマンモスでは蛇腹をベースにしたわけです。また、仕上げの方法などもいろいろとゾウから流用していますが、おもしろいのは、基本構造が違うのに仕上げの段階ではほとんど同じ感覚で作れてしまうことです。似た形さえ出ていれば、角度はあまり関係ないようです。

折り紙の創作では、過去の作品はもちろん、未完成の作品や失敗作も、その一部を次の作品に生かすことができます。創作で一番頼りになるのは、たくさん折る・創作するという経験なのだと思います。

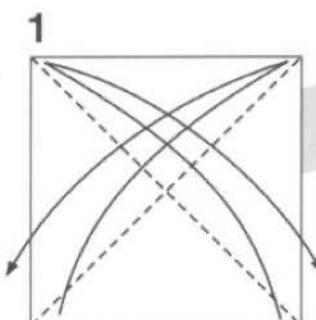
*ヒダ脊椎:動物の脊骨にあたる部分を段折りした構造。

This model is one of the models I had to design for the program "TV Champion". I had to design ancient creatures, and I could design this model without significant problems because I was, luckily, trying to design an elephant.

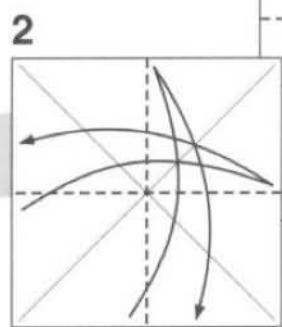
The model is designed with a pleated structure along spines, but, unlike Smilodon with a 22.5° basic structure, it has a pleated basic structure with a different axis. The original elephant was based on 22.5°, but I found out that box pleats fit the design of long tusks. Interestingly, the process of final shaping up goes just like an original elephant.

Even an uncompleted model can give us inspirations to a new design, just like past completed models. Folding many models perhaps is the best way to achieve effective designing of models.

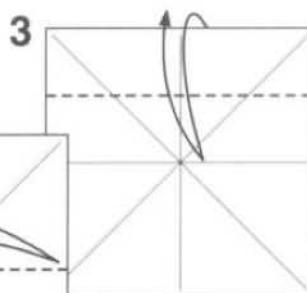
必要サイズ/Recommended
Size of Sheet : 25×25cm



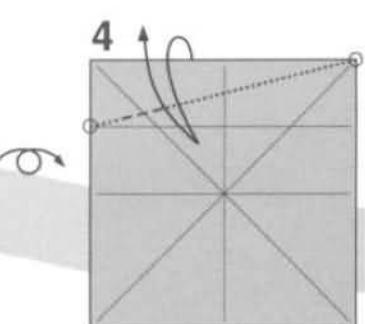
三角に折り筋をつける
White side up. Fold and unfold diagonally.



半分に折り筋をつける
Fold and unfold in half.



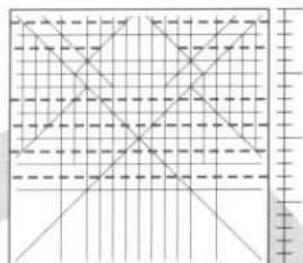
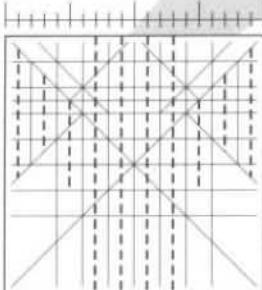
縁を折り筋に合わせて
折り筋をつける
Fold edge to the center
and unfold.



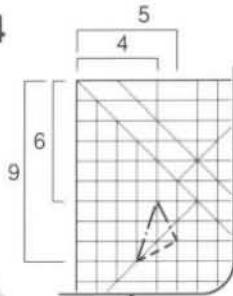
○を結ぶ線で
折り筋の部分に印をつける
Mark a point on the
diagonal where it crosses
the line connecting circled
points.

図のように
1/20のところで
折り筋をつける
Add horizontal
crease lines at
twentieths.

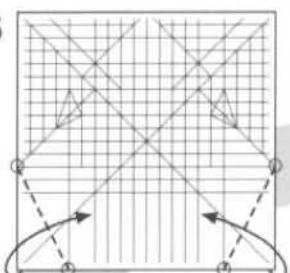
13



14



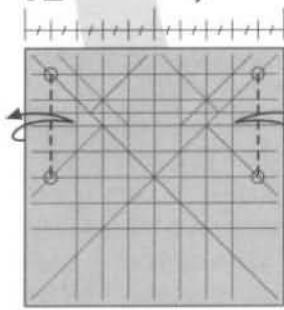
16



○を結ぶ線で折る
Fold the corner along
the line connecting the
circled points.

図のように
1/20のところで
折り筋をつける
Add vertical
crease lines at
twentieths.

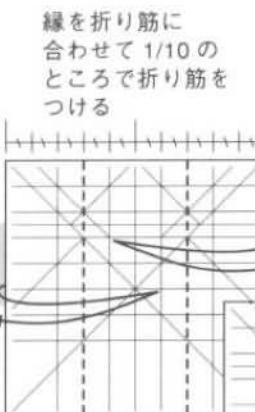
12



縁を折り筋に合わせて
1/10のところで折り筋を
つける

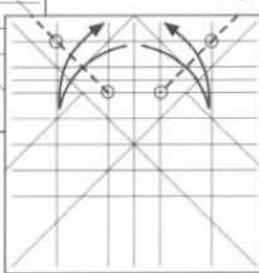
Add two more crease
lines at tenths as shown.

11



Add two additional
crease lines at
tenths of the width.

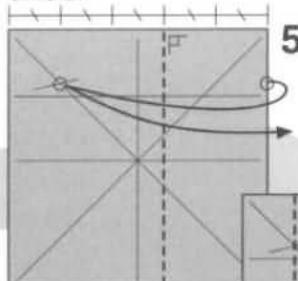
10



○を結ぶ線で折り筋をつける
Crease connecting the circled
points.

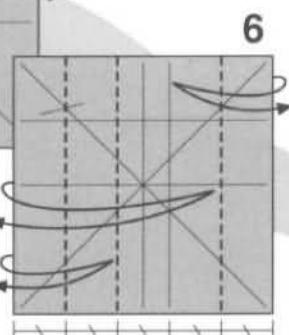
縁をつけた印に合わせて
2/5のところで折り筋を
つける

Fold the right edge to the
mark made in 4 and
unfold.



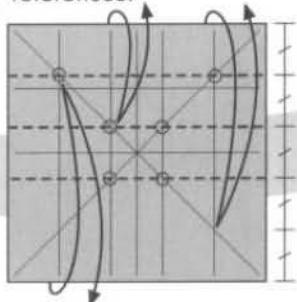
5

1/5のところで
折り筋をつける
Divide the area
of square into
fifths.



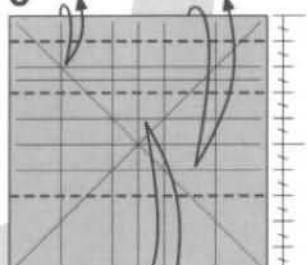
6

7



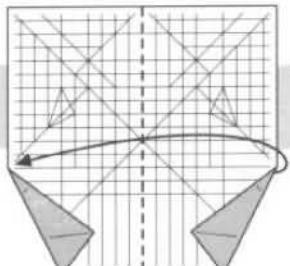
○を結ぶ線で
1/5のところで折り筋を
つける
Make crease lines at the
one to three fifths of the
width from the top, using
circled intersections as
references.

8



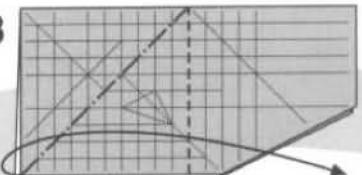
縁を折り筋に合わせて 1/10 の
ところで折り筋をつける
Make three additional
crease lines at tenths of
the height.

17



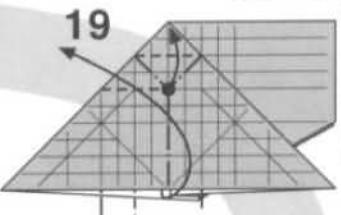
半分に折る
Fold in half.

18



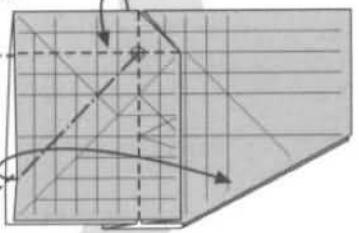
内側をひろげて
つぶすように折る
Open and squash.

19



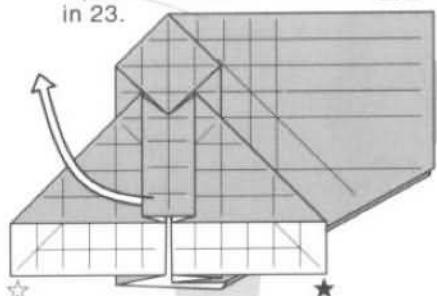
○をカドに合わせて折り
起き上がってきた部分を
折りたたむ
Fold the circled point to the top corner, and flatten the raised layers.

20



ついている折り筋で
内側をひろげてつぶす
ように折る
上の縁は起き上がった
ままになる
Open and squash using
the crease lines as
shown. Excess layers
will rise.

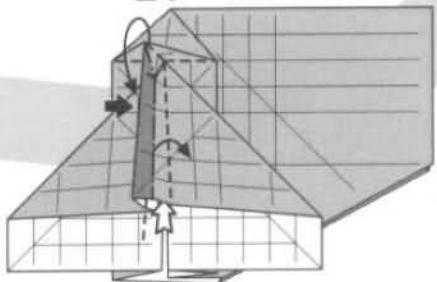
22



次の図のようにかるく
ひろげる

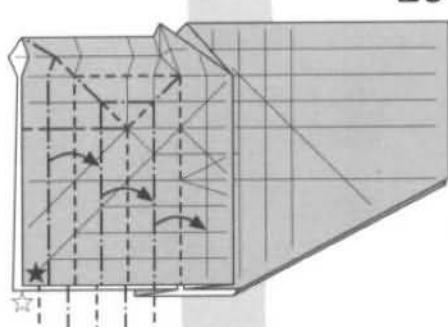
Open as shown
in 23.

21



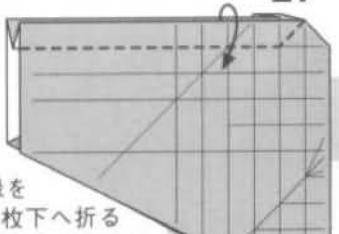
起き上がっている
部分の内側をひろげて
■の部分を
つぶすように折る
Squash the excess
layer.

23



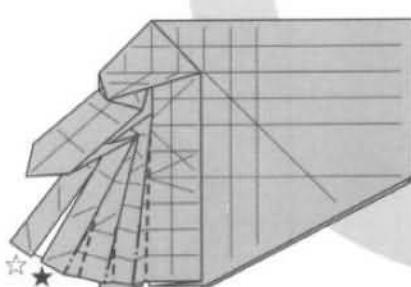
ついている折り筋を
使ってカドの方から
順番に折りたたむ
反対側も同じ
Form a series of
pleats using the
existing crease
lines as shown.

27



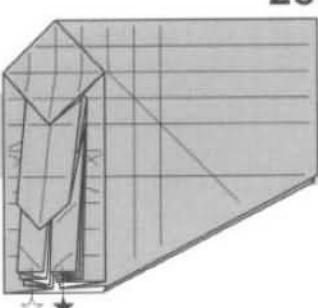
縁を
1枚下へ折る
平らにはならない
Open the top layer.
The model will not lie flat.

24



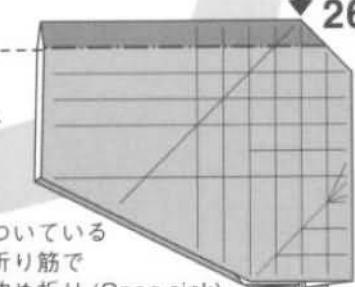
途中の図
Flatten the
model.

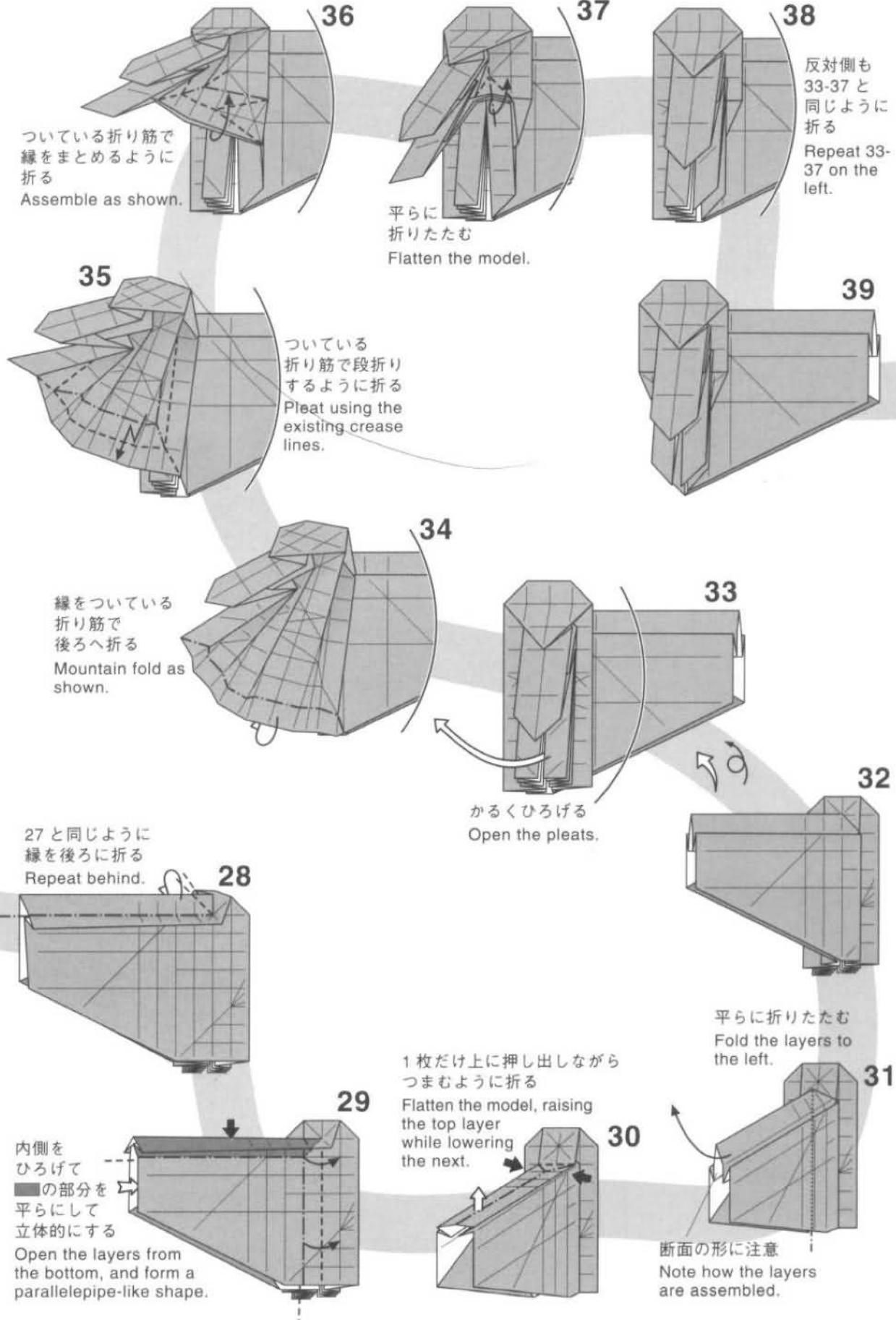
25



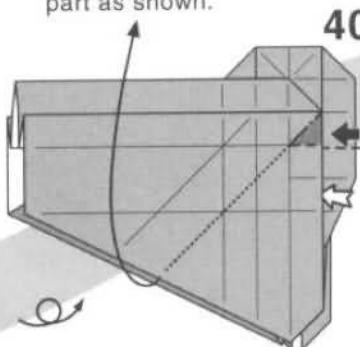
ついている
折り筋で
沈め折り (Open sink)
Open sink the
top edge.

26

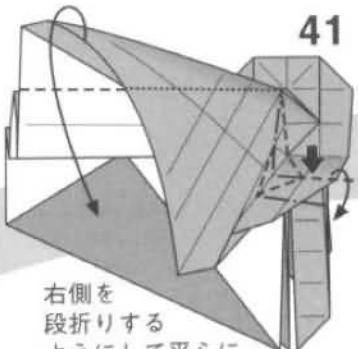




内側をひろげて
■の部分を
つぶすように折る
Open the top layer,
squashing the grayed
part as shown.

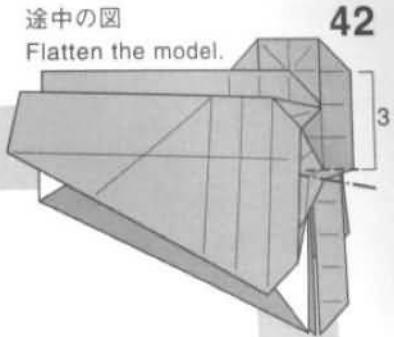


40



41

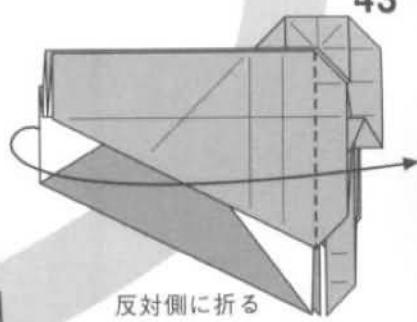
途中の図
Flatten the model.



42

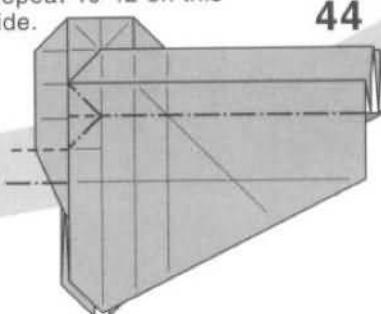
右側を
段折りする
ようにして平らに
折りたたむ
Fold down along the edge,
while forming pleats on the
right.

43



43

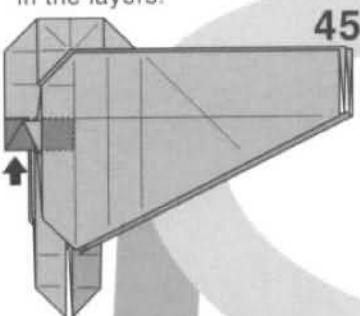
こちら側も 40-42 と
同じように折る
Repeat 40-42 on this
side.



44

反対側に折る
Fold the layers to the
right.

沈め折り (Closed sink)
ひろげて折りたたむ方法と
押し込む方法がある
Partially-closed sink.
You can either open the
layers and sink, or just push
in the layers.



45

カドを縁に
合わせて折る
Fold the corner
to the edge.

46

押し込む
Pushing in.

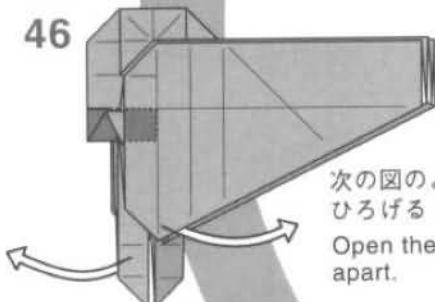
47

カドを 1 枚上に
折って内側を見る
Fold up one layer
and look inside.

46

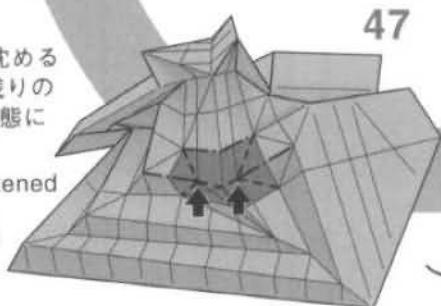
ひろげて折りたたむ
Opening the layers first

次の図のように
ひろげる
Open the layers
apart.



■の部分を沈める
ように折り残りの
部分を元の状態に
折りたたむ

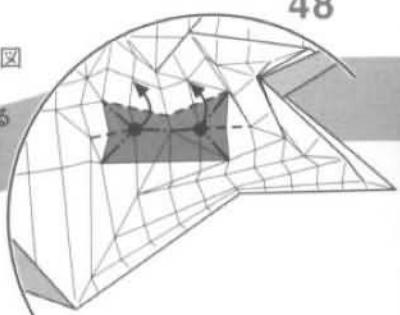
Sink the darkened
part. Flatten
back the rest
of the model.

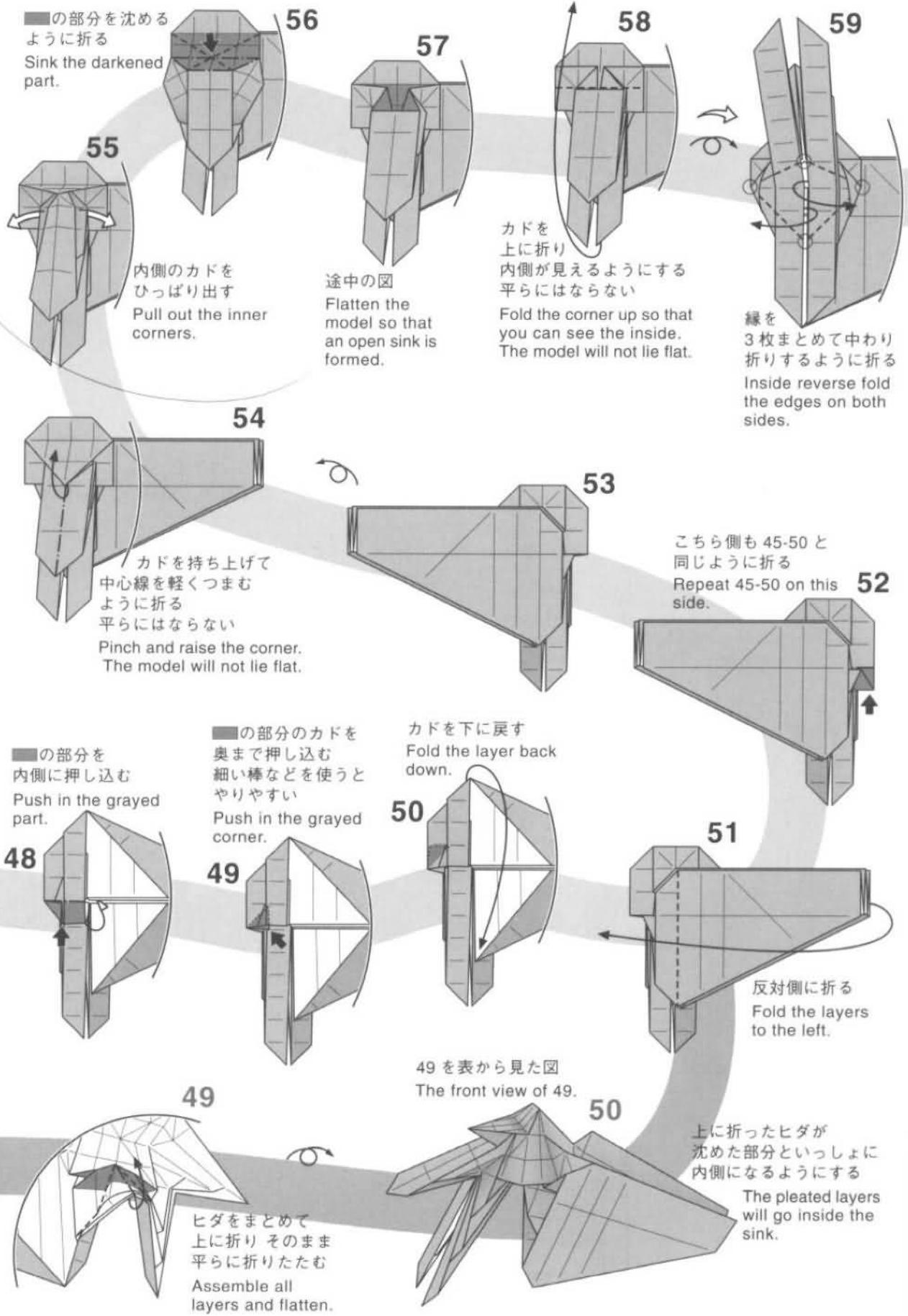


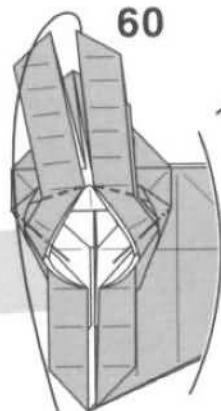
47

47 を裏から見た図
■の部分を
たたんで上に折る
The back view of
47. Assemble
the grayed part
and fold up the
circled corners.

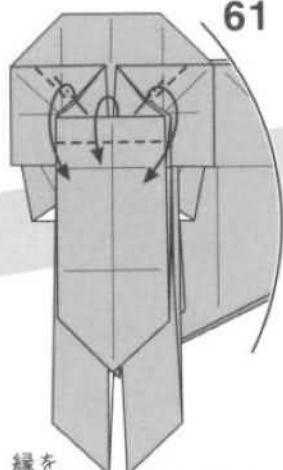
48



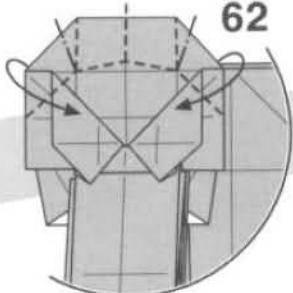




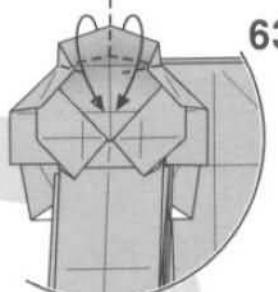
そのままカドを
下に戻して平らに
折りたたむ
Fold down the corner and flatten
the model.



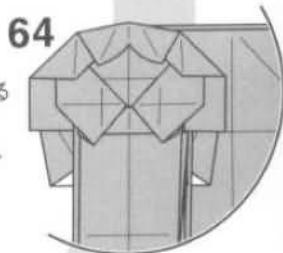
縁を
折り筋に合わせて下に
折り起きてきた
部分をつぶすように折る
Fold the edge down to
the crease line and
squash the corners.



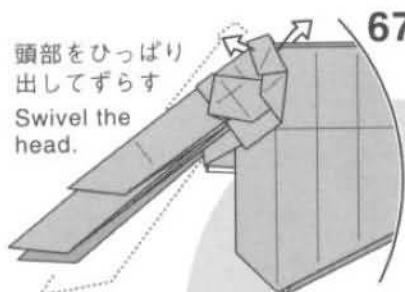
図のような折り筋で
折りたたんで頭の形を作る
Fold down the edges in
a round shape, crimping
the top corners.



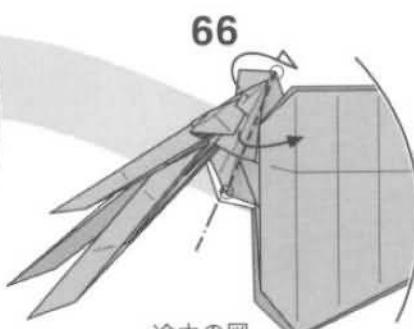
途中の図
中心の部分は平らに
ならない
Fold until the model will
become (only) nearly flat.



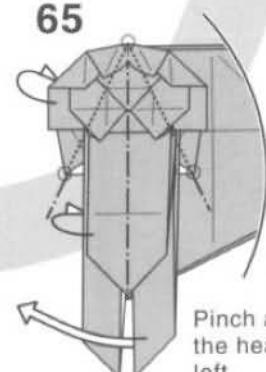
次の図は小さくなる
The next diagram
will be zoomed out.



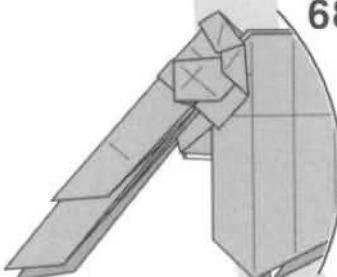
頭部をひっ張り
出してずらす
Swivel the
head.



途中の図
耳の部分を右側に倒して
平らに折りたたむ
Flatten folding the layers
of the head to the right.



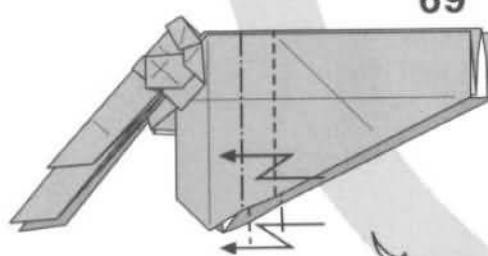
頭部を半分に
折りながら
○を結ぶ線で
折りたたむ
Pinch and raise
the head to the
left.



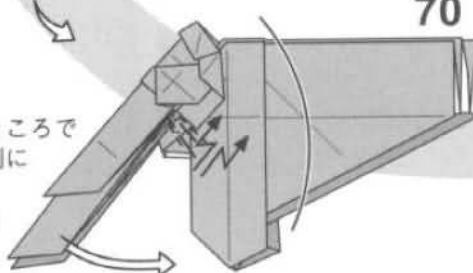
68

69

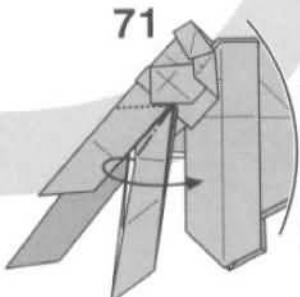
ついている
折り筋で
内側に段折り
Pleat inside.



カドをつけ根のところで
ずらすように両側に
段折り
Crimp inside and
swivel the tusk.



70

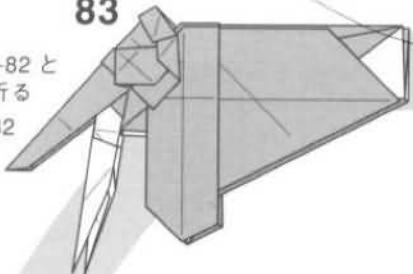


71

上の1枚を
引き出して
反対側に開く
Open the top
layer around,
showing the
white side.

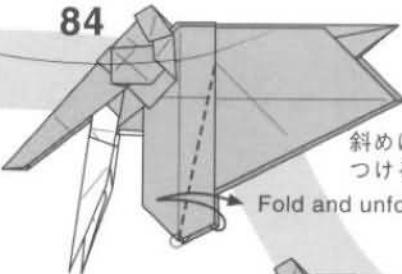
83

反対側も 78-82 と
同じように折る
Repeat 78-82
behind.



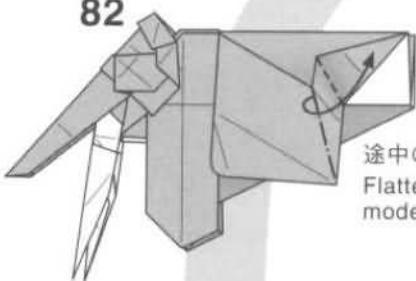
84

斜めに折り筋を
つける
Fold and unfold.



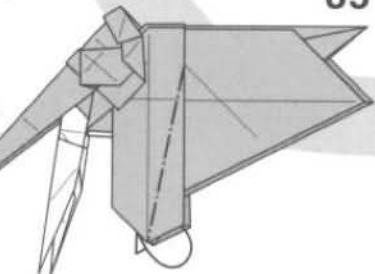
82

途中の図
Flatten the
model.



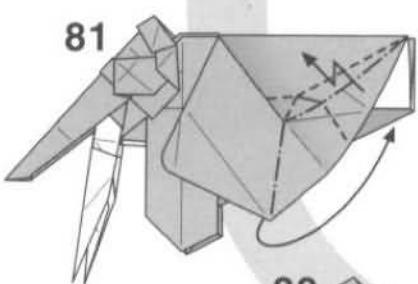
85

つけた折り筋で
カドを内側に
折る
Inside reverse
fold.



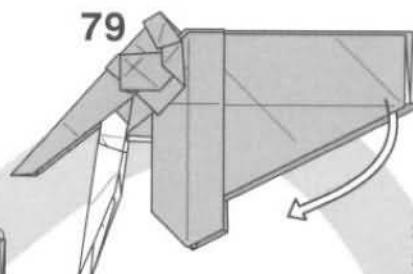
81

平らに
折りたたむ
Crimp and
flatten.



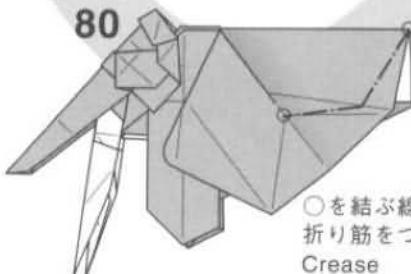
79

かるくひろげる
Open the layers.



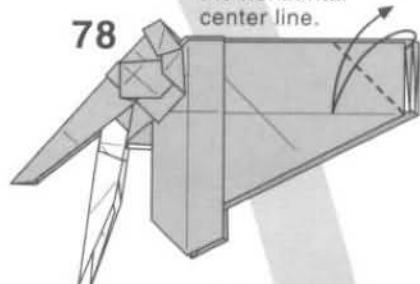
80

○を結ぶ線で
折り筋をつける
Crease
connecting the
circled corners.



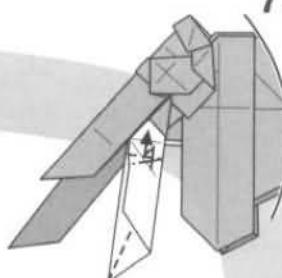
78

上の1枚だけ縁を
折り筋に合わせて
折り筋をつける
Fold the edge to
the horizontal
center line.



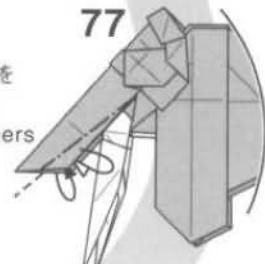
73

ずらすように
段折り
Crimp the top
layer and swivel
it, so the tusk
will become
sharper.



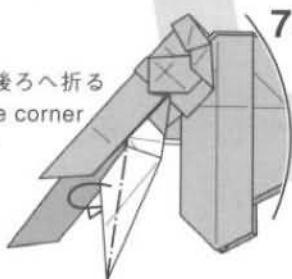
77

鼻のカドを
細く折る
Fold corners
in.



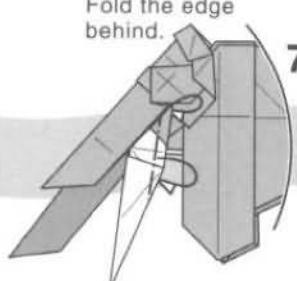
74

カドを後ろへ折る
Fold the corner
behind.



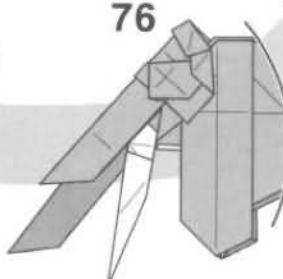
75

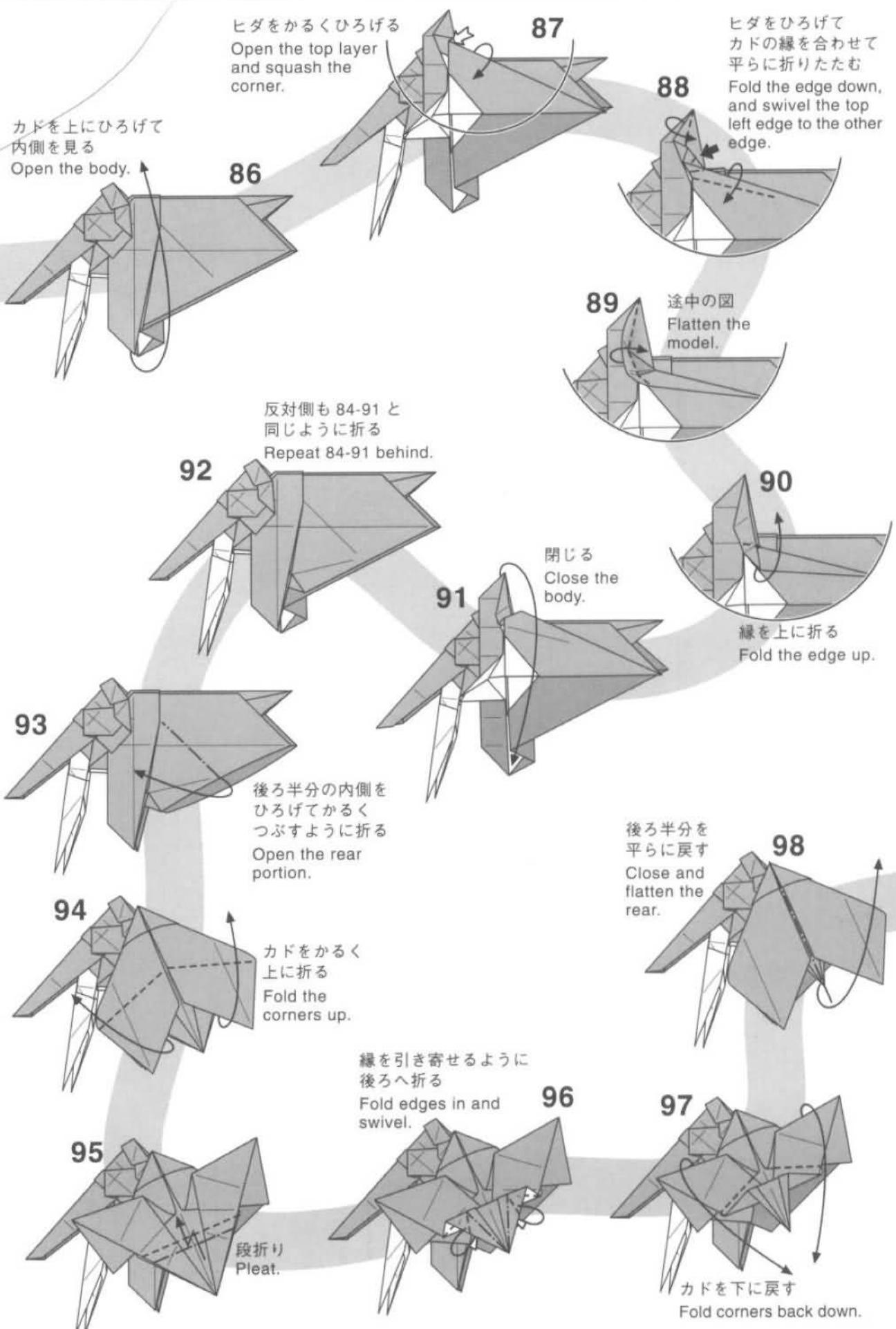
縁を少し後ろへ折る
つけ根の部分は
内側に折り込む
Fold the edge
behind.



76

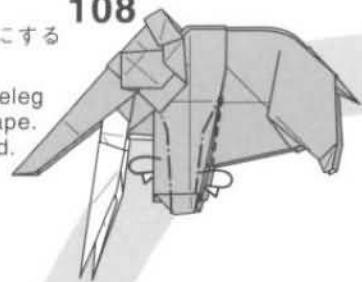
反対側も
70-75 と
同じように折る
Repeat 70-75 on
the other tusk.



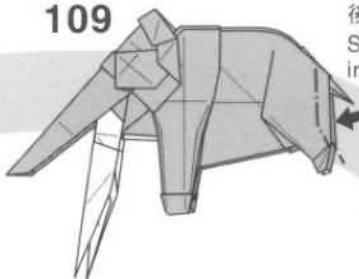


前肢を立体的にする
反対側も同じ
Shape the foreleg
into a 3-D shape.
Repeat behind.

108

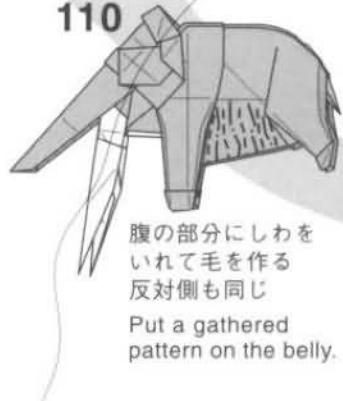


109



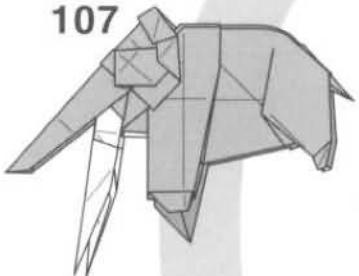
後肢を立体的にする
Shape the hind legs
into a 3-D shape.

110



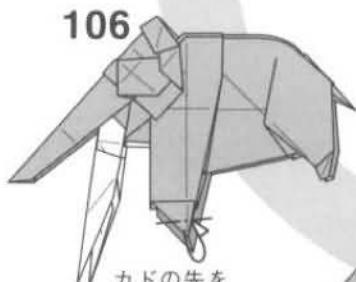
腹の部分にしわを
いれて毛を作る
反対側も同じ
Put a gathered
pattern on the belly.

107



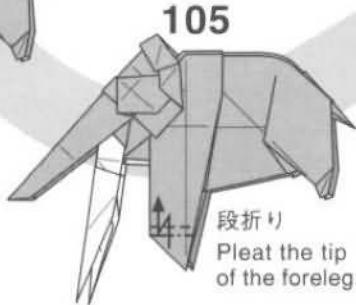
反対側も
105-106 と
同じように
折る
Repeat 105-106
behind.

106



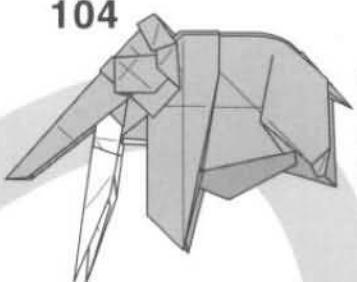
カドの先を
後ろへ折る
Fold the tip in.

105



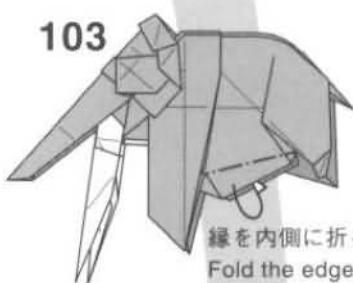
段折り
Pleat the tip
of the foreleg.

104



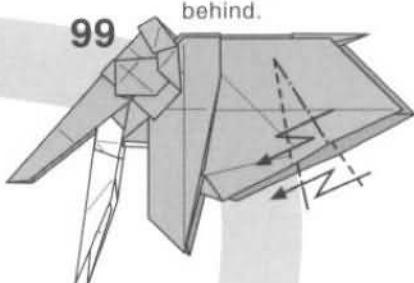
反対側も 100-
103 と同じ
ように折る
Repeat 100-
103 behind.

103



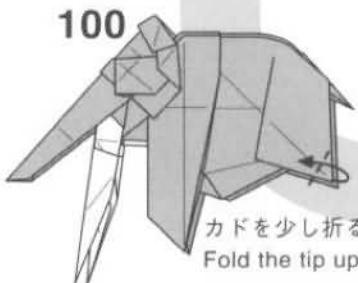
縁を内側に折る
Fold the edge in.

99



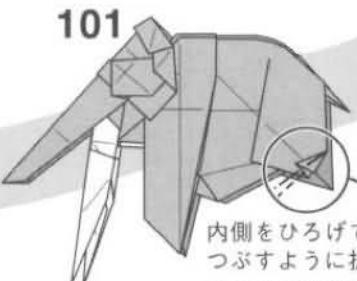
両側で段折り
体が立体的になる
Crimp in front and
behind.

100



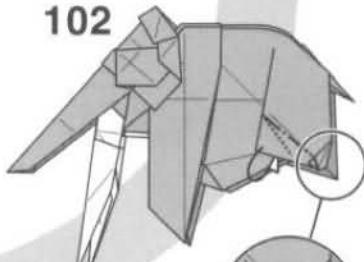
カドを少し折る
Fold the tip up.

101

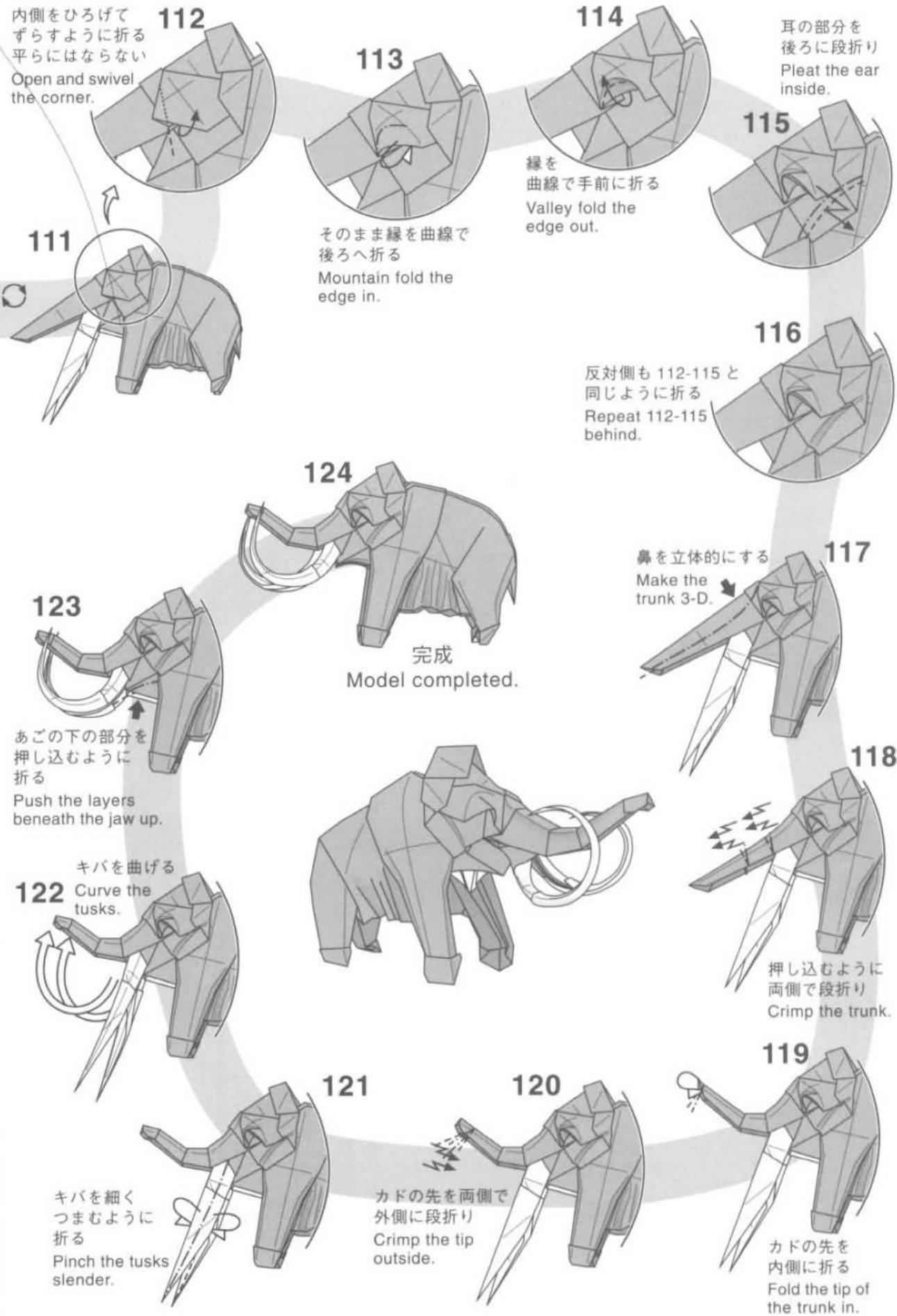


内側をひろげて
つぶすように折る
Open and squash.

102



カドを内側に折る
Inside reverse
fold.



紙と仕上げについて For Finer Completion of the Models

最後まで折れるようになったら、質感や厚みの違う紙を探して挑戦してみましょう。作品に適した紙質や厚みは、仕上がりの大きさやその人それぞれの折りの個性によって異なってきます。自分や作品に合った紙を探して取り組むのも、折り紙の楽しみ方の1つです。

仕上げの練習にはホイル紙（おりがみの金や銀など）も使いやすい紙の1つです。折った形が決まるので、複雑で厚みの出る作品に向いています。また先を細く折る形や、立体的な形を作るのにも適しています。

折り図で解説している工程の後に、仕上げ・アレンジを加えて作品は完成します。写真や完成図を参考に、使う紙に合った仕上げを工夫してみてください。

折り上がった作品は、そのまま放置しておくと、作品自身の重みや紙の反発などで形がくずれてくれることがあります。作品を長期間飾ったり保存したい場合は、糊づけたり、針金を入れるなどをして形を保つ工夫が必要です。

紙のお店 Paper Shop

◆伊東屋 ITO-YA◆

日本一の品揃えを誇る老舗の文房具店。本館6階洋紙コーナーは、あらゆる紙が揃う。地下1階は包装紙が豊富。

銀座本店 東京都中央区銀座2-7-15

営業時間 平日 AM10:00～PM7:00

日・祝 AM10:30～AM7:00

<http://www.ito-ya.co.jp/>

The largest stationery shop in Japan. The 6th floor has all kinds of paper you want. The first basement floor has lots of wrapping papers.

Ginza ITO-YA | 2-7-15 Ginza, Chuo-Ku, Tokyo Japan
Store Hours: Weekdays 10am-7pm Weekends and Holidays 10:30am-7pm

◆株式会社竹尾 Takeo, Co.◆

洋紙販売を行っている会社。アンテナショップでは特殊紙を豊富に揃えており、注文・購入が可能。サイトでは竹尾の紙が購入できる全国のお店一覧が掲載されており、通信販売の情報もある。

見本帳本店 東京都千代田区神田錦町3-18-3

営業時間 平日 AM10:00～PM7:00 土・日・祝日定休

<http://www.takeo.co.jp/>

Once you are sure you can complete folding a model, try paper with difference quality and/or thickness. Every folder has his/her own best paper, so you also have to find one. This is another aspect of paper folding, and you will enjoy this.

For practice, using foil sheets is a good idea. The foil allows for fine folding, so it fits complex models. The foil also allows for making round and/or opened figures.

The pictures in this book are only examples of the final models. You can arrange the models as you like.

The model will eventually get out of shape, due to the strength and thickness of the paper. If you want to display your model long and retain its shape, use glue, wire or any other tools to strengthen it.

Takeo sells Yo-shi (Western style paper). Their shops has a catalog/list of various kinds of paper for various purpose, and you can choose, order and buy it. Their web site lists shops where you can buy Takeo papers, and they have a kind of on-line shopping, too. The Takeo-Mihonochi Shop : 3-18-3 Kanda-Nishiki-Cho, Chiyoda-Ku, Tokyo, Japan
Store Hours: Weekdays 10am-7pm (closed on weekends and holidays)

◆The Origamido Studio◆

ボストン郊外在住の折り紙作家マイケル・ラフォース氏が経営する折り紙専門の店。本人が折り紙のために運営している「フロッグ・ペーパー」をはじめとする手漉きの紙は、コンプレックス折り紙ファンに人気で、本書に掲載の作例にも使用されている。サイトには通信販売の案内もある。

<http://www.origamido.com/>

The origami shop run by folder/creator Michael LaFosse in the suburb of Boston, USA. "The Frog Paper", which he manufactures for his own origami models is popular among fans of complex origami models. Some of the models in this book uses this paper, too. His site gives you information on the on-line shopping.

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営業時間／10:00～18:00(日・祝休)

ホームページ = <http://www.origamihouse.jp/> e-mail = info@origamihouse.jp

Printed in Japan

神谷哲史作品集 2005年1月20日発行

著 者 神谷哲史 ©Satoshi Kamiya 2005

編 者 山口 真

発行者 山口 真

発行所 おりがみはうす ℡113-0001 東京都文京区白山1-33-8-216
Tel : 03-5684-6040 Fax : 03-5684-6080

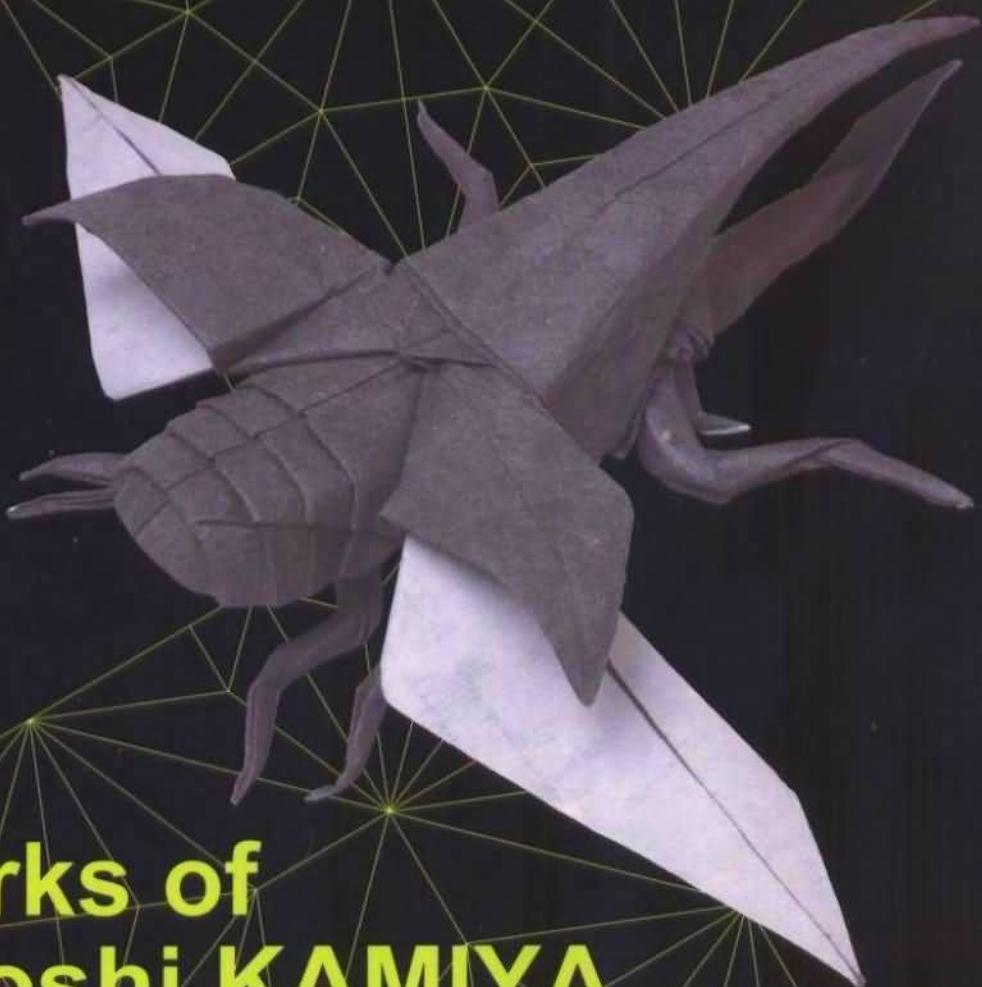
■作品制作=神谷哲史 ■編集=山口 真 ■折り図=神谷哲史 ■デザイン=おりがみはうす(松浦英子)

■翻訳=立石浩一 ■口絵写真=おりがみはうす(松浦英子、神谷哲史)

●Works of Satoshi Kamiya / Published on 20, January, 2005 by ORIGAMI HOUSE, 1-33-8-216 Hakusan Bunkyo-ku 113-0001 Tokyo JAPAN / Model Design and Diagrams : Satoshi Kamiya / Publisher : Makoto Yamaguchi / Editor : Makoto Yamaguchi / Translator : Koichi Tateishi / Editorial Design : ORIGAMI HOUSE / Photograph : ORIGAMI HOUSE

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Works of Satoshi KAMIYA

神谷哲史作品集 1995—2003

Model Design & Diagrams by Satoshi Kamiya

Editor: Makoto Yamaguchi

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