

# Croatian chess

and other variants



**Mario Mlačak**



Dedicated to Miranda.

*Mario Mlačak*  
**Croatian chess**  
and other variants

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*Source*  
<https://github.com/mmlacak/crochess>  
Version: 20240514.045357

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*Third, revised edition*  
2024-05-14  
Zagreb, Croatia



# **Croatian chess**

and other variants

3rd, revised edition

**Mario Mlačak**

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My most sincere gratitude to:

Valentina Štefanić  
Kristina Mlačak  
Ana Mlačak

and many, many others.

Thank you all.



# Introduction

*Life's too short for chess.*

... Henry James Byron

I was in my aunt's house, on the border of a small village. Through window, walled garden was visible just behind the house. Behind the garden, a tiny brook. And hills behind the brook. Afternoon Sun was casting its orange rays into warm room. It was frosty outside.

My cousin approached me with some nifty gizmo. He was a few years older than me and was already going to school.

"Here, look at what I got."

"What's that?"

"Chess set. Wanna try? Lemme show you."

"Sure."

It was small, plasticky, fiddly thing designed to fit into winter's coat pocket, to be used on the go. Folding board was also used to hold all pieces in it. Each piece was as small as humANELY usable. Each field had a hole in the middle. At the bottom of each piece there was small rod fitting into those holes. It was colored all in red and ivory.

Short lesson revealed it's not that difficult to grasp what's going on. Within minutes I picked it up. First match was, predictably, a complete disaster. On the second go my cousin forgot about a piece, and I grabbed his Queen gleefully. He surrendered.

After he left me with a new widget, I was intrigued. I wasn't about playing the game, though. I was more into re-design it. Could it be made better, more challenging, or just different?

'Why not make Knight jump longer, say 3 by 1 fields?'

'Hmmmm...'

'Nah, that would make jump too long for such a small board.'

Outside, the setting Sun was shining red.

*late November, 1975  
Bednja, Croatia*

# Prerequisites

*It does not matter how slowly you go as long  
as you do not stop.*

... Confucius

This book describes new variants of chess, new pieces and rules. I'm assuming you have complete prior knowledge of classical chess pieces and rules. If not, please visit Wikipedia entry on the subject:

[https://en.wikipedia.org/wiki/Rules\\_of\\_chess](https://en.wikipedia.org/wiki/Rules_of_chess).

For official reference FIDE handbook is used, current date of publication is 2023-01-01:

<https://handbook.fide.com/chapter/E012023>.

Point in FIDE handbook is a code under which definition can be found on above website, e.g. FIDE C.9.3.



# Classical Chess

*A great war leaves the country with three armies -  
an army of cripples, an army of mourners, and an  
army of thieves.*

... German proverb

About Classical Chess is written really everything already, and I have nothing to add, except to use it as an example on how to read the book.

# Pieces

Lets introduce renderings of classical pieces by showing chess-board with initial setup:

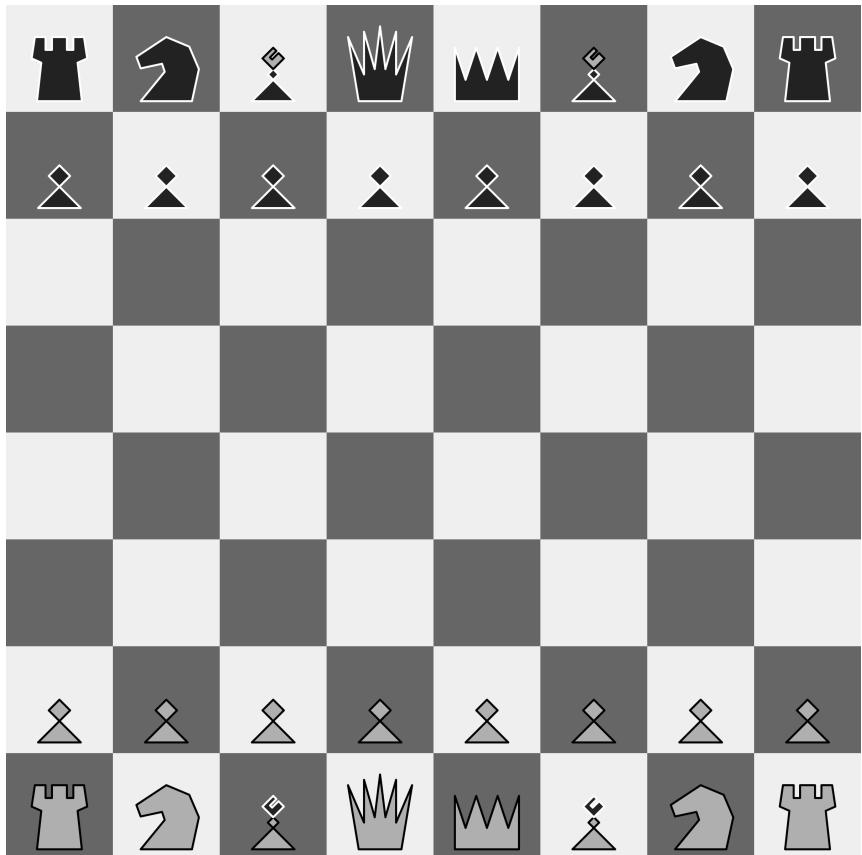


Figure 1: Classical Chess, initial setup

You can compare this with official rendering at FIDE 2.3.

## Bishop

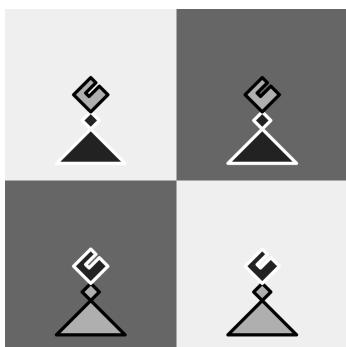


Figure 2: Bishop

New pieces are introduced with zoomed-in image, on a  $2 \times 2$  board. Light pieces are rendered on a lower row, dark pieces are on an upper row, regardless of actual colors used in a particular variant.

Light fields are always in lower-right and upper-left corner, while dark fields are always in lower-left and upper-right corner, regardless which actual colors are used to paint the board.

## Chessboard

As seen on the chessboard on previous page, light player starts from bottom of a chessboard, while dark player starts from top. This arrangement is used by FIDE (see FIDE 2.3), and also for all examples in this book, and for all new variants.

In such a setup, color of lower-right (and upper-left) corner are determined by FIDE to be light colored, see FIDE 2.1; this also applies to all new variants, regardless which actual colors are used to paint chessboards.

In FIDE handbook, and elsewhere, chessboard is said to be made of  $8 \times 8$  grid of squares; in this book squares are referred to as fields.

## Examples

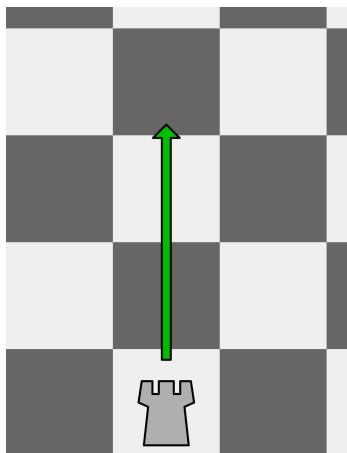


Figure 3: Rook not blocked

Some examples are not showing whole chessboard; often, those examples also feature partial fields around sides to convey which part of chessboard is shown.

Here, we have hints of fields on top and to the right, so example shows lower-left corner of a chessboard.

Green arrow is used in cases where move is legal, but there is nothing special about it.

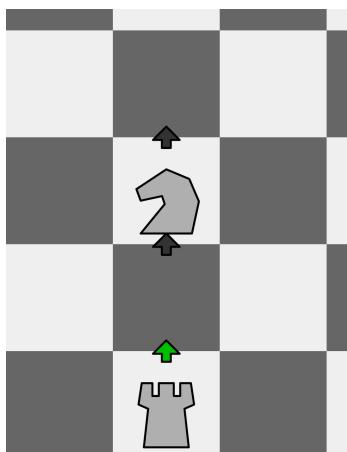


Figure 4: Rook blocked  
piece cannot move since it's e.g. blocked by other piece.

In previous example, light Rook simply going forward (towards opponent's initial positions) was shown with only a single arrow, as it would be in FIDE handbook and elsewhere.

In this book all examples show individual steps as arrows, as movement can be blocked at any field which a piece visits. All fields that can be visited are called step-fields.

Grey arrows are used when movement is otherwise legal, but a

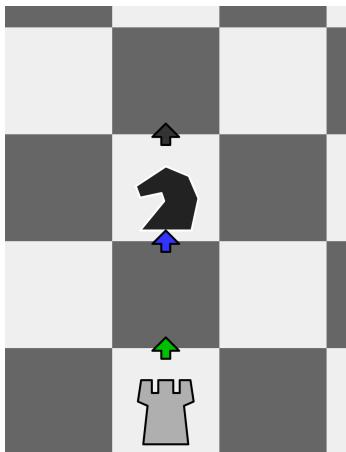


Figure 5: Rook capturing

Fields where a piece can capture opponent's piece are called capture-fields; these are often the same as step-fields.

Blue arrows are used mostly when some action is performed by a piece beside just moving, like e.g. capturing opponent's piece.

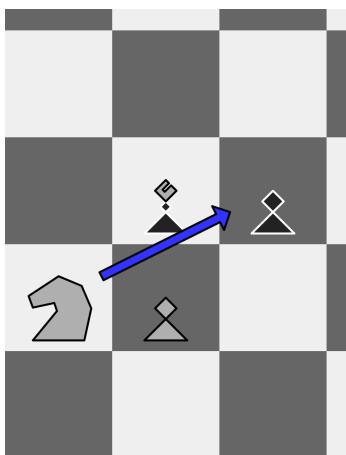


Figure 6: Knight stepping

Most pieces, most of the time, can capture or be blocked only at their step- or capture-fields. One common counter-example is en passant, where capturing Pawn is stepping onto empty capture-field, and captured Pawn is somewhere else.

Most newly introduced pieces have their step-fields distant to each other. Having arrows in examples represent an individual steps helps distinguish at which fields interactions can take place, and which are merely passed over by a moving piece.

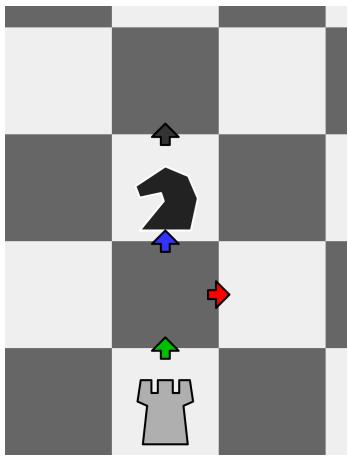


Figure 7: Illegal movement

Red arrows are used for movement that is illegal depending on context, either in all cases, or just in a current example.

Here, light Rook cannot make step to the right after it has already taken step upwards.

Colors of arrows are not tied to a singular purpose, there are occasions when colors are used just to draw attention to a particular step, or (rarely) just to differentiate between each other.

## Texts

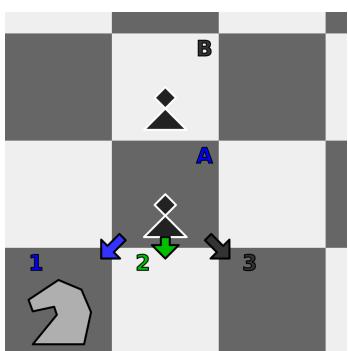


Figure 8: Pawns labeled

Texts are usually used to label pieces of the same kind, and enumerate fields. Text colors are the same as colors of arrows, and have the same intent.

Here, dark Pawns are labeled A and B. Potential destinations for dark Pawn A are enumerated 1, 2, and 3.

## Markers

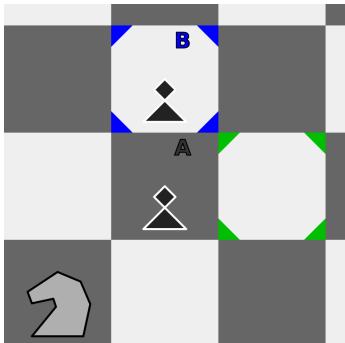


Figure 9: Knight destinations

Markers are used to emphasize a fields, without cluttering an image with arrows.

Marker colors are the same as colors of arrows, and have the same intent.

## Ownership

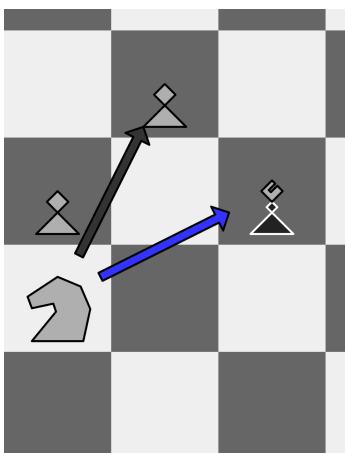


Figure 10: Ownership

Ownership is just a shortcut for color. In this book it's mostly used relative to color of a piece which is about to move, or is already moving.

For instance, instead of writing "light Knight is blocked by light Pawn, but can capture dark Bishop", it would say "Knight is blocked by own Pawn, but can capture opponent's Bishop". While both statements are true, the latter still works even when colors are reversed. This becomes more important as players in later variants get an option to also move opponent's pieces.

## Tags

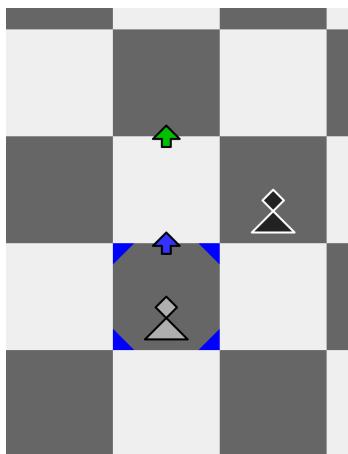


Figure 11: Rushing Pawn

Tag is a link between a field and a piece occupying it. Tag represents opportunity to perform alternative movement. Tag is lost when tagged piece moves, or is captured.

For instance, rush is the first move of a Pawn, for two fields forward. So, all Pawns are tagged for rushing at the beginning of a game. Similarly, all Rooks and Kings are tagged for castling at the start of a match.

Markers are also used to convey the existence of a tag; colors still correspond to intent of a marker, and not to the type of a tag.

Here, light Pawn is losing its tag for rushing as soon as it makes its first step, regardless if it's moving for only one field, or if it's rushing.

## Variants

In this book, each new variant brings one (or more) new pieces and interactions on top of what was inherited from all previous variants. Often, new interactions introduce exceptions to previously established rules, including those inherited from Classical Chess.

For instance, all pieces block each other from moving any further, until a new piece is introduced, to which all other

pieces are transparent. Until, that is, an even newer piece is introduced, which is opaque to all previously introduced pieces.

So, every rule, interaction is described in the current context; that is, for current variant, chessboard, with current pieces, and rules that has been described thus far.

## Terms

Here are a few terms as used for Classical Chess. Some of terms might be redefined in the dictionary at the end of this book because of all the newly introduced interactions, exceptions to the rules.

### Step-field

Step-field is any field at which a piece can end its movement.

### Capture-field

Capture-field is any field at which a piece can capture opponent's piece.

### Step

Step is a movement of a piece from one step-field to next.

## **Forward**

Forward movement is towards opponent's initial positions.

## **Backward**

Backward movement is towards own initial positions.

## **Rush**

Rush is first move of a Pawn, for two fields forward.

## **Tag**

Tag is an opportunity link between a piece and a field it occupies.

## **Figure**

Figure is any piece, except Pawn.

# Croatian Ties

*Secrecy is the first essential in affairs of the State.*

... *De Richelieu*

Croatian Ties is chess variant which is played on 10 x 10 board, with light grey and red fields and dark gray and dark red pieces. A new piece is introduced, Pegasus.

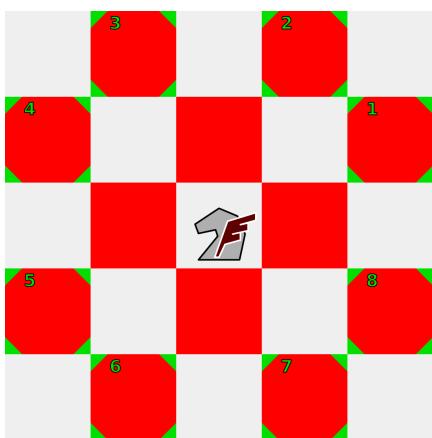
# Pegasus



Pegasus moves similarly to Knight, but it can continue its jumpy movement until another piece is encountered, or it runs out of board. Note that once in movement, Pegasus cannot change its heading.

Figure 12: Pegasus

## Movement



In the example on the left we have Pegasus with all valid initial moves marked. These all are the same as valid moves for Knight.

Pegasus' movement is not hampered by a piece placed on any unmarked field. Pegasus can "jump" over it just as Knight would.

Figure 13: Pegasus initial step

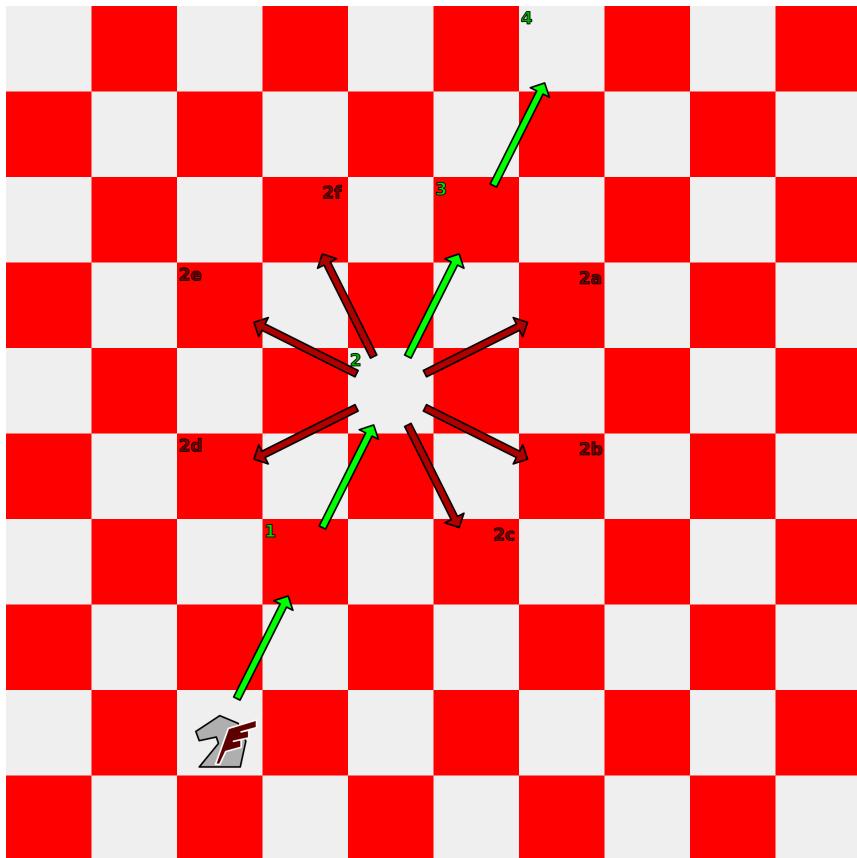


Figure 14: Pegasus move direction

Once direction is chosen Pegasus can continue its movement performing one jump after another in order from nearest field to furthest. Here, this is marked with green arrows. Accessible fields are marked 1 to 4, in order of accessibility, from nearest to furthest. Again, once direction is chosen it can't be changed anymore. For instance, after reaching field 2 it's illegal to change direction to 2f (or any other red arrow).

## Steps, step-fields, capture-fields, ply

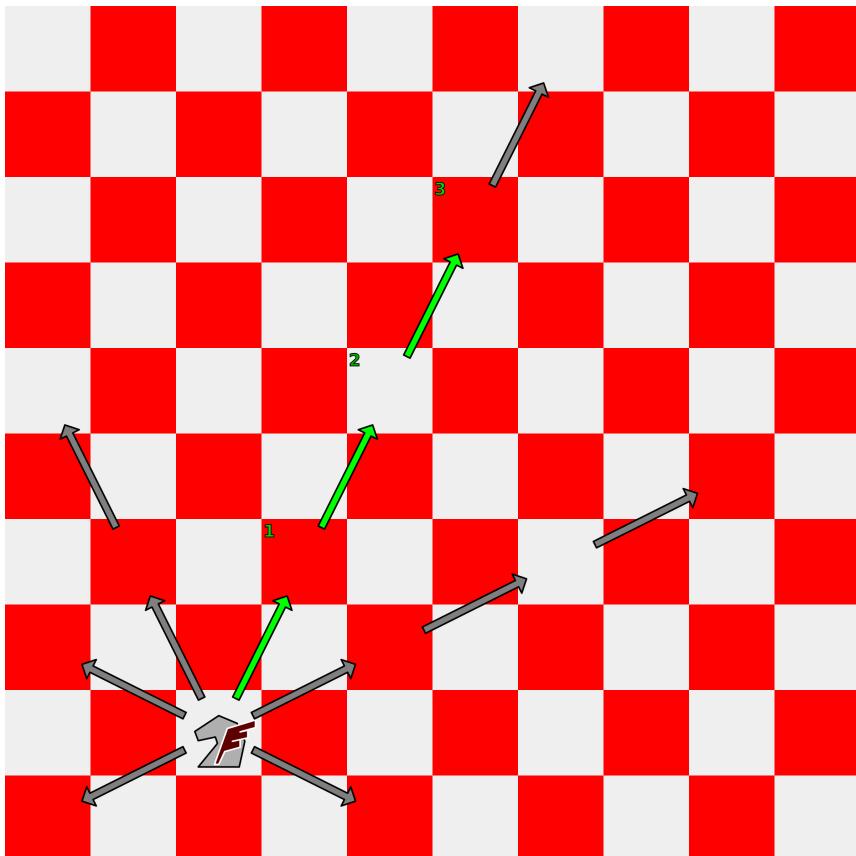


Figure 15: Step-fields, capture-fields, ply

Above, field 3 is chosen as destination for Pegasus' movement. Move along arrow is a step. Field at which arrow points to is a step-field. Here, each step-field is also capture-field, Pegasus would be able to capture opponent's piece on it. Completed movement of Pegasus, from its starting position to its destination field 3 is a ply.

## Movement (cont.)

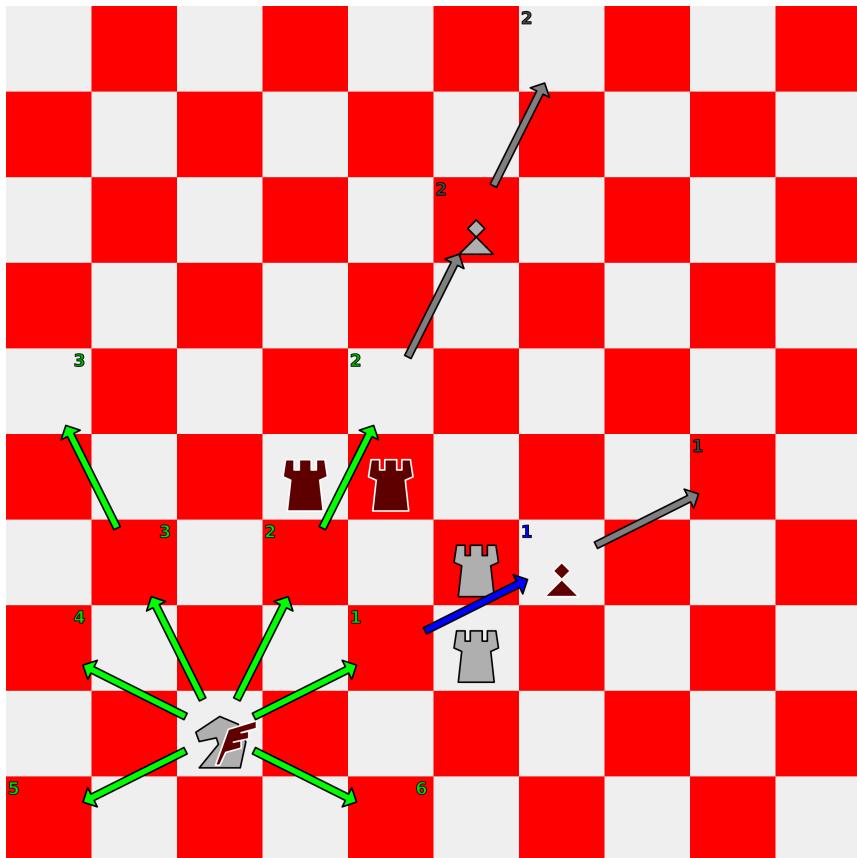


Figure 16: Pegasus moves

Pegasus can "jump" over pieces on non-step-fields, Rooks in example above. Numbers here enumerate directions of movement. Own piece on step-field stops Pegasus at preceding step-field, see direction 2. Opponent's piece on step-field can be captured (blue arrow). Just as with any other piece that would finish the move, meaning Pegasus would have to stop at captured field, see direction 1.

## Rush, en passant

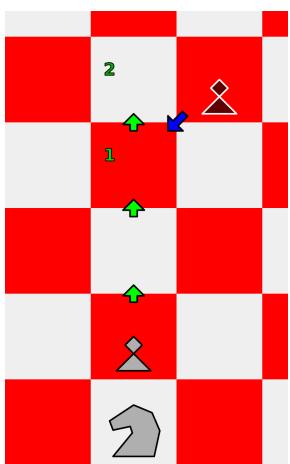


Figure 17: En passant

Rush is Pawn's longer initial movement, i.e. from its starting position, for at least 2 fields forward.

Rush and en passant are identical to those in Classic Chess, only difference is that Pawn can now move longer on initial turn, up to 3 fields in this instance.

In the example on the left, rush fields are numbered. Longer rush also opens more opportunity for opponent to perform en passant or block it, entirely or partially. For discussion on the topic see:

[https://en.wikipedia.org/wiki/En\\_passant](https://en.wikipedia.org/wiki/En_passant).

# Castling

Castling is the same as in Classical Chess, only difference is that King can move either 2 or 3 fields across. All other constraints from Classical Chess still applies, described in detail here: <https://en.wikipedia.org/wiki/Castling>.



Figure 18: Castling

In example above, all valid King's castling moves are numbered. Regardless if castling is long or short, Rook always ends up on the opposite side of King on the field immediately next to it, i.e. one field closer to center.



Figure 19: Castling long left

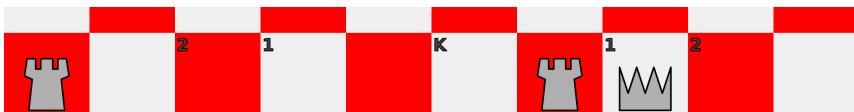


Figure 20: Castling short right

In examples above initial King's position is marked with "K". In both cases, Rook ends up at the inside field, immediately next to the King.

## Initial setup

Compared to initial setup of Classical Chess, Pegasus is inserted between Rook and Knight symmetrically, on both sides of chessboard. This can be seen in the image below:



Figure 21: Croatian Ties board

# Mayan Ascendancy

*The world has achieved brilliance without wisdom,  
power without conscience. Our is a world of nuclear  
giants and ethical infants.*

... *Omar Nelson Bradley*

Mayan Ascendancy is chess variant which is played on 12 x 12 board with yellow and blue fields and with dark yellow and dark blue pieces. A new piece is introduced, Pyramid.

# Pyramid

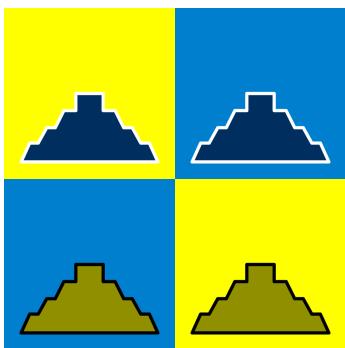


Figure 22: Pyramid

Pyramid is passive piece, meaning it can't move on its own, it has to be activated first. This is done by capturing a field at which Pyramid stands with own other piece and then move Pyramid further.

Once activated, Pyramid moves similar to Rook, only real difference is that it can move for only so many fields as piece activating it has moved, i.e. for at most as momentum received.

# Momentum

Momentum is count of fields traveled over by a piece. Pyramid receives momentum from piece which activates it. Momentum is spent by Pyramid when moving, one for each field traveled. So Pyramid can't move for more fields than received momentum, i.e. for more than activating piece has traveled. Momentum can't be saved for later, it is wasted when Pyramid moves for less than received momentum.

## Non-negative

Piece has momentum if it's equal to or greater than 1. Piece has no momentum if it's 0. In all cases, momentum cannot be

come negative, it's not possible to "borrow" momentum from activating piece to activated piece (Pyramid).

## Fields counting

Momentum accumulated (or spent) is always count of traveled fields, regardless if special move has a step crossing two fields at once. For instance, **rushing Pawn's** first step is always across 2 fields; still, both fields are counted towards momentum, since rushing Pawn can be blocked by a piece on both fields.

## Pyramid (cont.)

Pyramid can't check opponent's King, and consequently can't contribute to checkmate. Pyramid can capture all the other opponent's pieces after it has been activated, even if it has no remaining momentum, i.e. can't move any further.

Pyramid can also promote own Pawns on **opponent's side of the board**. It can also convert any opponent's piece, except King, on **own side of the board**. To do either of these things, Pyramid does not have to have any remaining momentum, it's enough if piece in question is within reach.

Pyramid can also activate other Pyramid, and transfer remaining momentum to it. There has to be remaining momentum, it must be greater than 0 for cascading to be permitted. Pyramid cannot activate any other piece, neither own nor opponent's.

## Activation

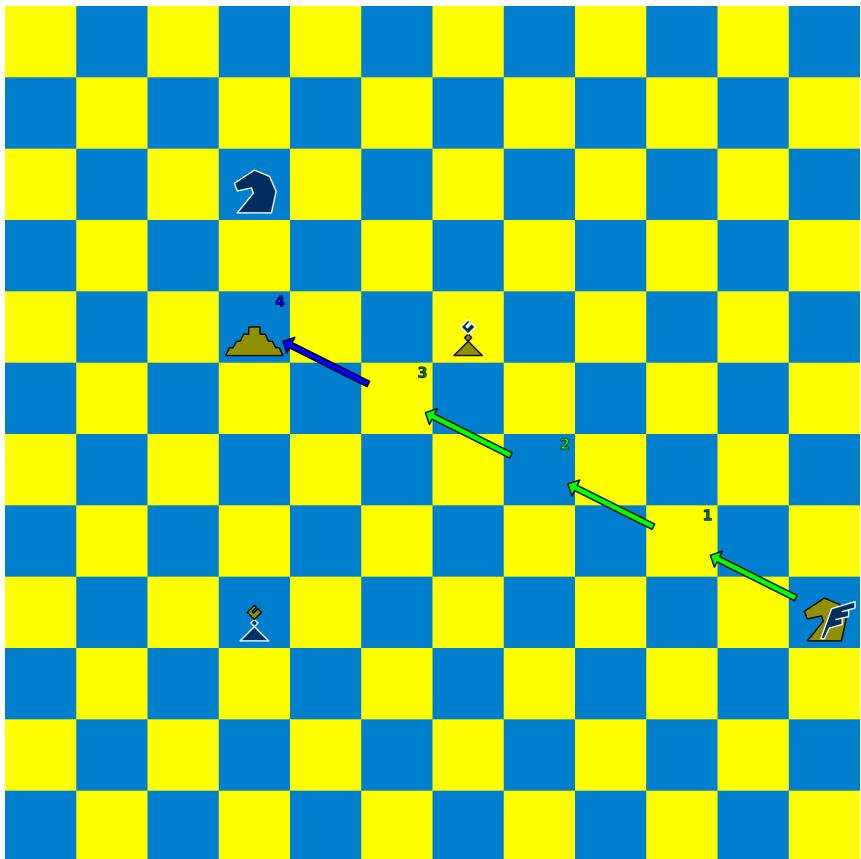


Figure 23: Pyramid activation

Here Pegasus is about to capture field on which Pyramid stands. Note, only step-fields are counted towards momentum. After activation Pyramid would be limited to move at most 4 fields across, i.e. at most the momentum it received from Pegasus.

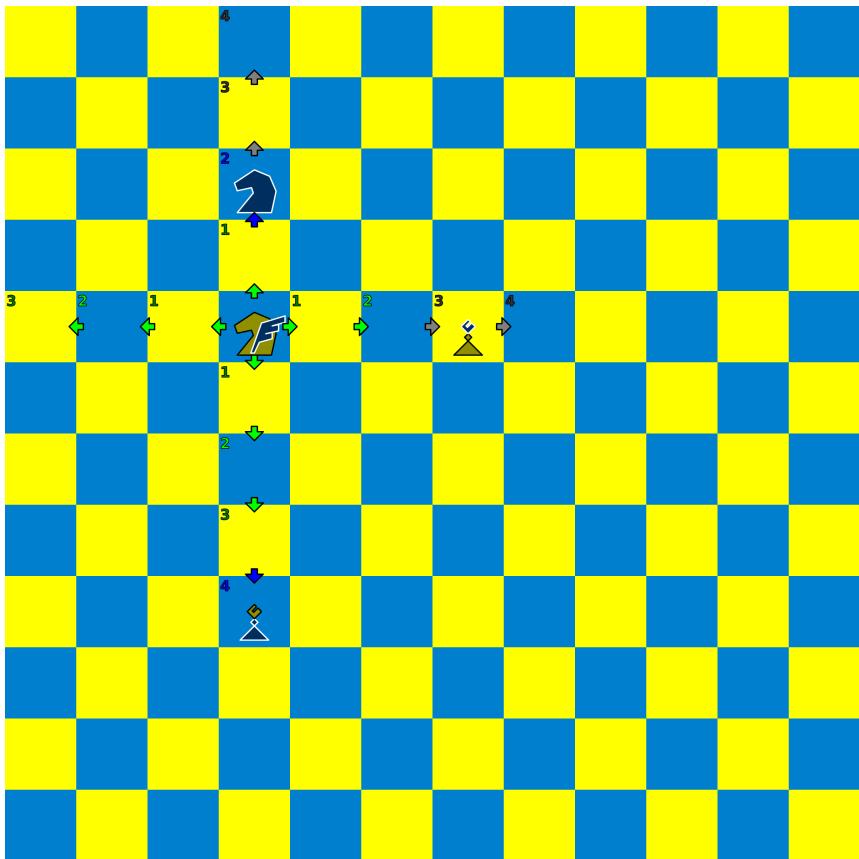


Figure 24: Pyramid activated

Above, arrows show all possible moves by Pyramid. Just like Rook, Pyramid has to stop before own Bishop. Pyramid can capture opponent's Knight, but can't move any further after capture. Pyramid can also capture opponent's Bishop, despite being barely reachable.

## Promotion

Pyramid can promote own Pawns, but only on opponent's side of the board. Promotion is done by activating Pyramid which then marks Pawn for promotion by touching either Pawn or field at which it stands. Pyramid then leaves board as if captured by the opponent, and Pawn is replaced by desired piece, for instance Queen.

Both Pyramid and Pawn in question has to reside on opponent's side of the board before promotion can take place. Piece which activates Pyramid need not to be on opponent's side of the board.

Piece which Pawn can be promoted to is from the set of all starting pieces, except King. This promoting-to piece is not limited to pieces already being captured.

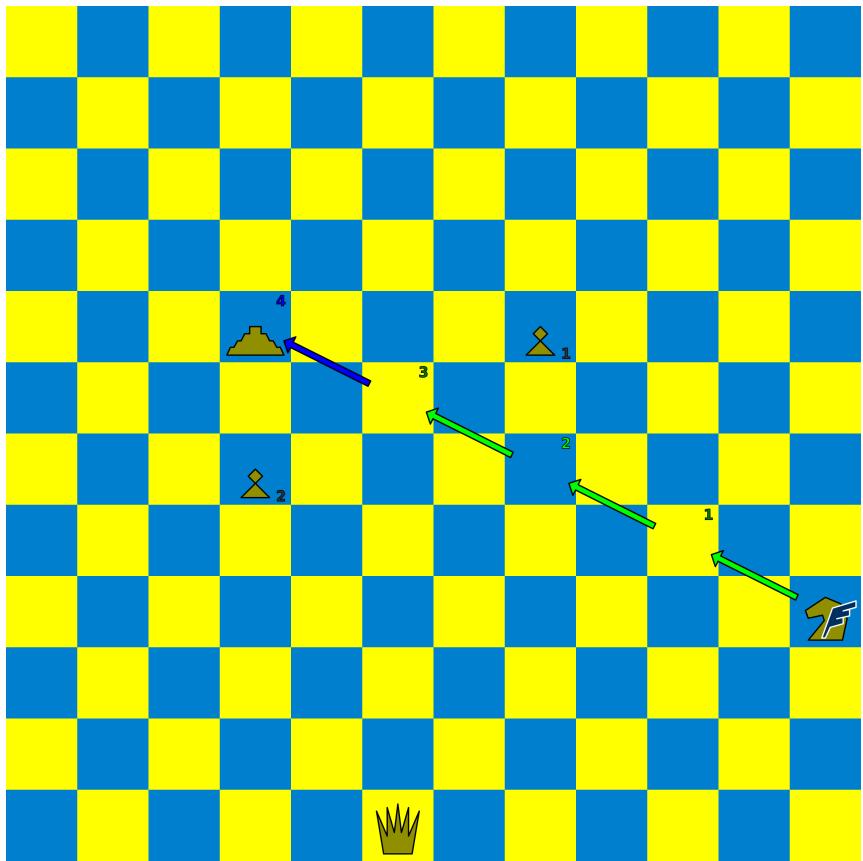


Figure 25: Promotion start

Here, Pegasus is accumulating momentum while travelling over step-fields. After activation Pyramid would be limited to move at most 4 fields across, i.e. at most the momentum it received from Pegasus.

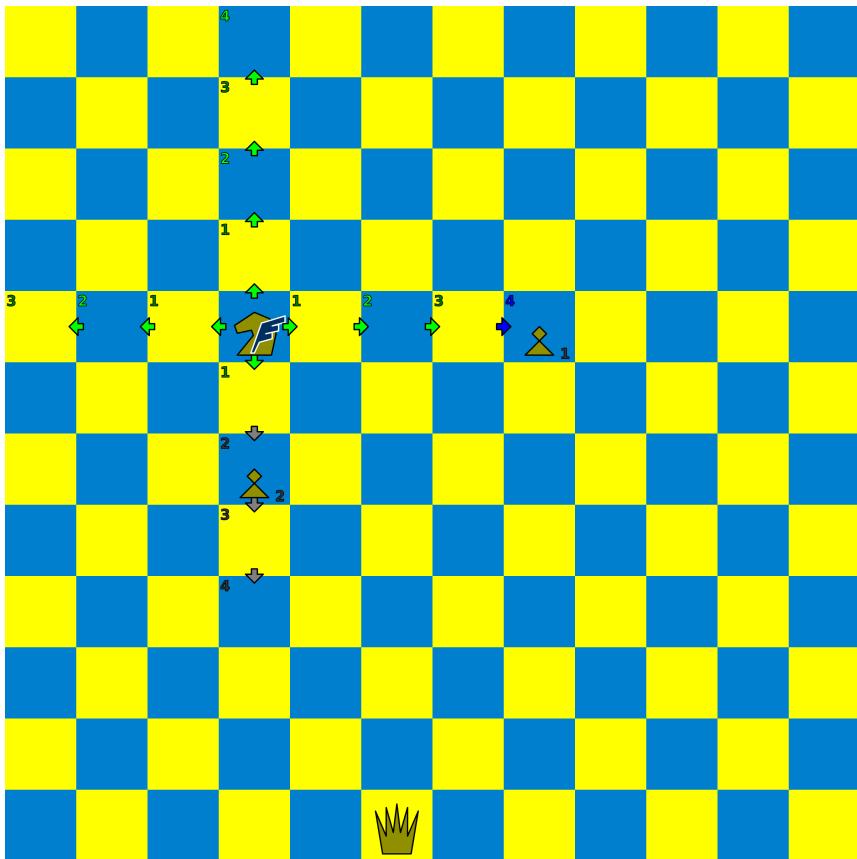


Figure 26: Promotion, Pyramid activated

Above, Pegasus captured field at which Pyramid was situated, arrows now show all possible moves by Pyramid. Pyramid can't promote Pawn 2, as it is still located on own half of the chessboard. Just as Rook, Pyramid can't advance past Pawn 2. Only full movement to the right leads to promotion of Pawn 1, shown in blue.

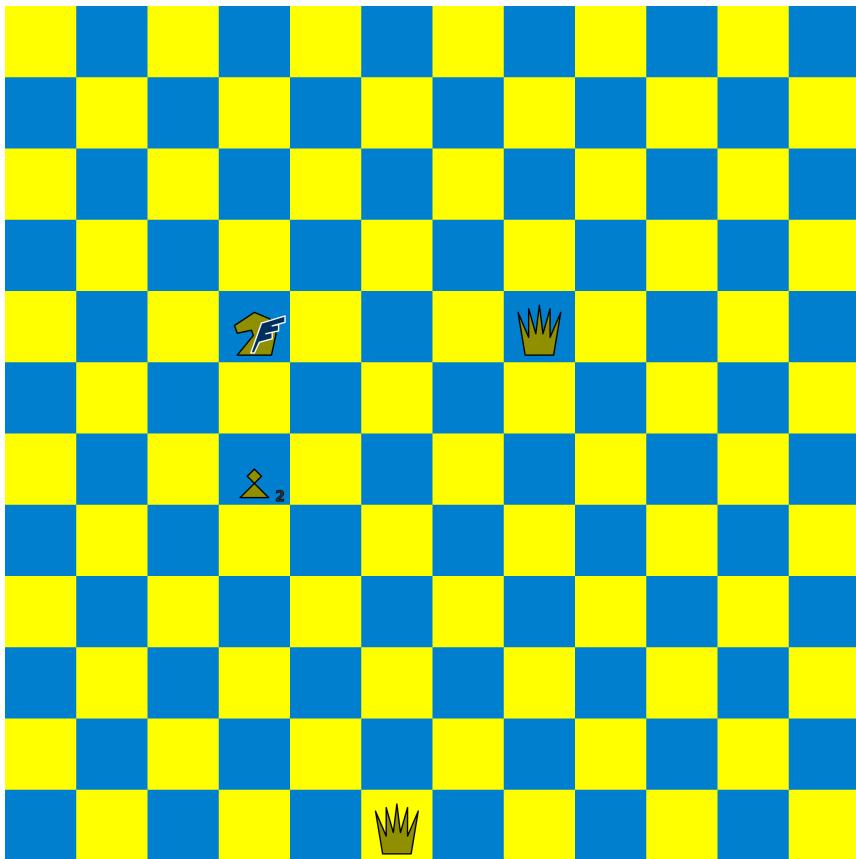


Figure 27: Promotion end

Now that Pyramid has reached Pawn 1, it is removed from the board and piece of choice, in this instance Queen, replaces Pawn. Just as with ordinary promotion, this can take place regardless of which pieces has been captured, e.g. even if own Queen is still present on chessboard.

## Conversion

Pyramid can convert opponent's pieces, except King, but only on own side of the board. Conversion is done by activating Pyramid which then marks opponent's piece for conversion by touching either piece or field at which it stands. Now Pyramid leaves the board as if captured by the opponent, and opponent's piece is replaced by own piece of the same type.

Both Pyramid and opponent's piece has to reside on own side of the board before conversion can take place. Piece which activates Pyramid need not to be on own side of the board. Conversion is not limited to pieces which has been captured.

Note that Pyramid might just as well capture opponent's piece. Differences are what leaves chessboard, and what remains on captured field. Capture itself with Pyramid is in no way different than that with Rook. In either case, converting or capturing, it is enough if Pyramid can reach opponent's piece, i.e. has enough momentum.

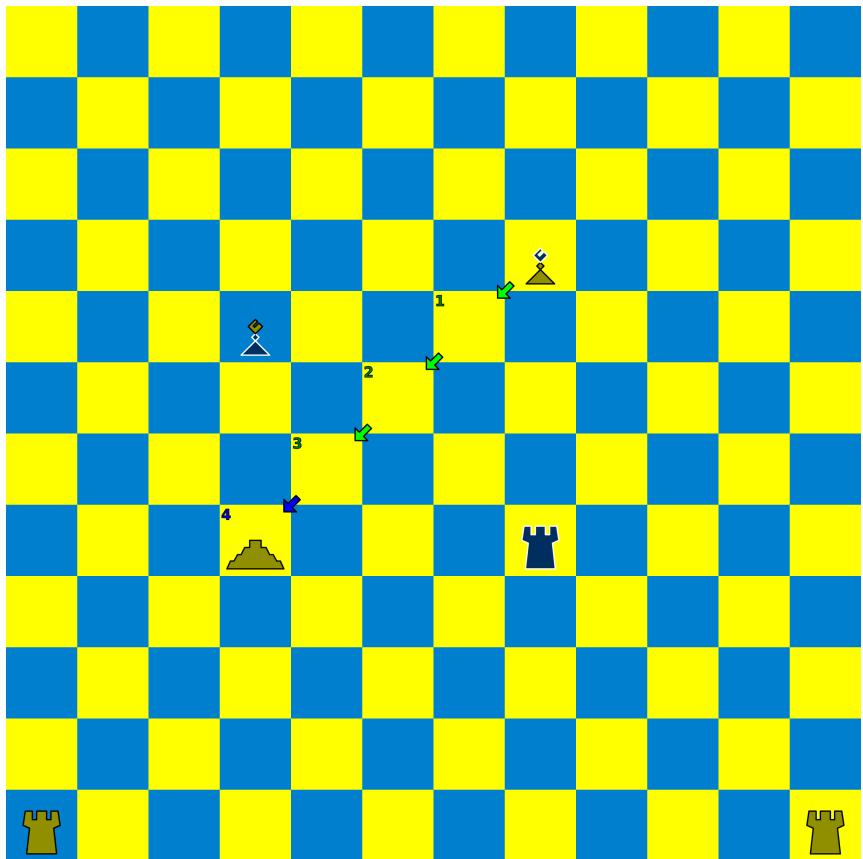


Figure 28: Conversion start

In example above, Bishop is travelling over 4 step-fields to reach for Pyramid, and so that is momentum Pyramid will receive when activated by the Bishop. This is also limit how far Pyramid could move after being activated.

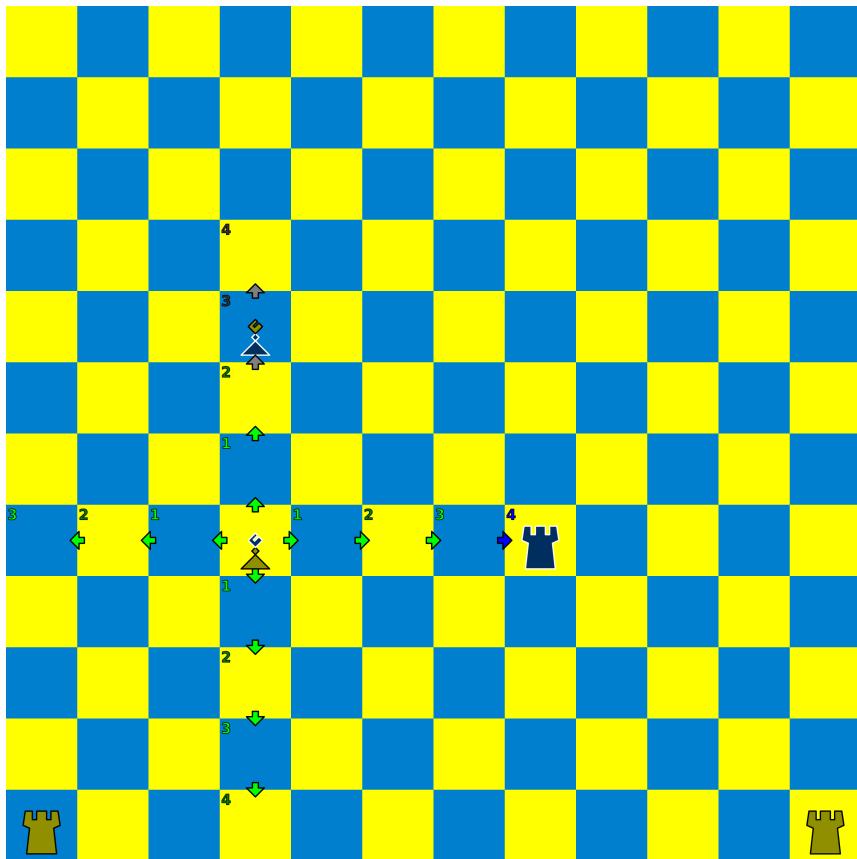


Figure 29: Conversion, Pyramid activated

Above, Bishop captured field at which Pyramid was situated, arrows now show all possible moves by Pyramid. Pyramid can't convert opponent's Bishop, as it is still located on opponent's side of chessboard. Pyramid could capture opponent's Bishop. Again, just like Rook, Pyramid can't advance past opponent's Bishop. Only full movement to the right leads to conversion of opponent's Rook, shown in blue.

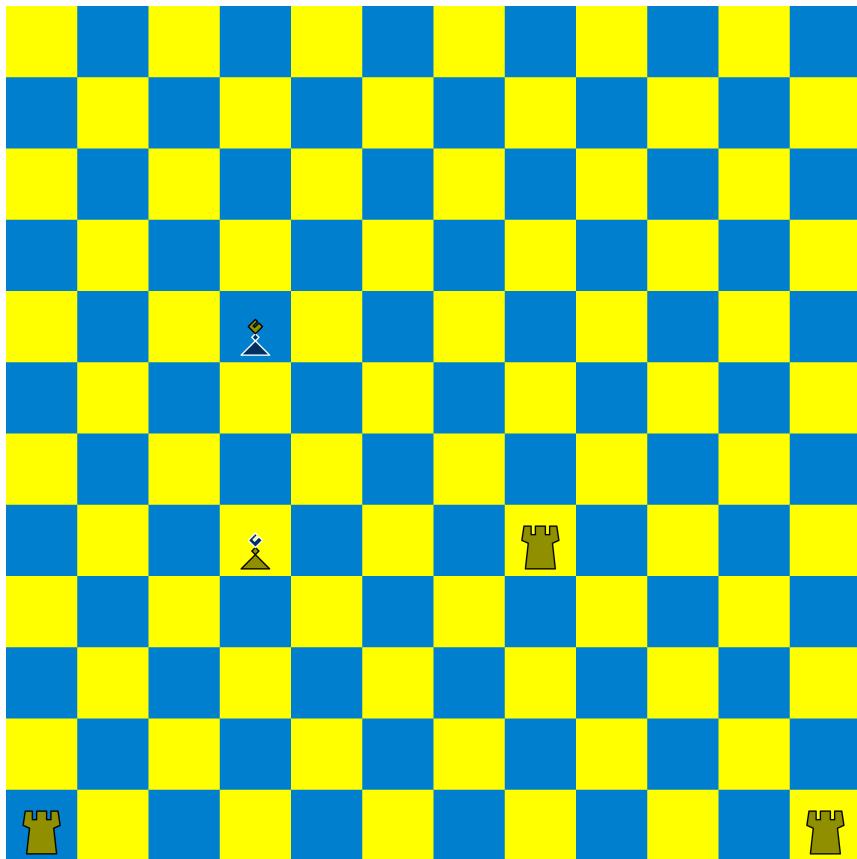


Figure 30: Conversion end

Now that Pyramid has reached opponent's Rook, it is removed from the board and own Rook replaces opponent's Rook. This conversion can still take place, regardless if any light Rook has been captured or not, i.e. even with both light Rooks still present on chessboard. Capturing opponent's Rook would simply leave Pyramid in place of it.

## Converting Rooks

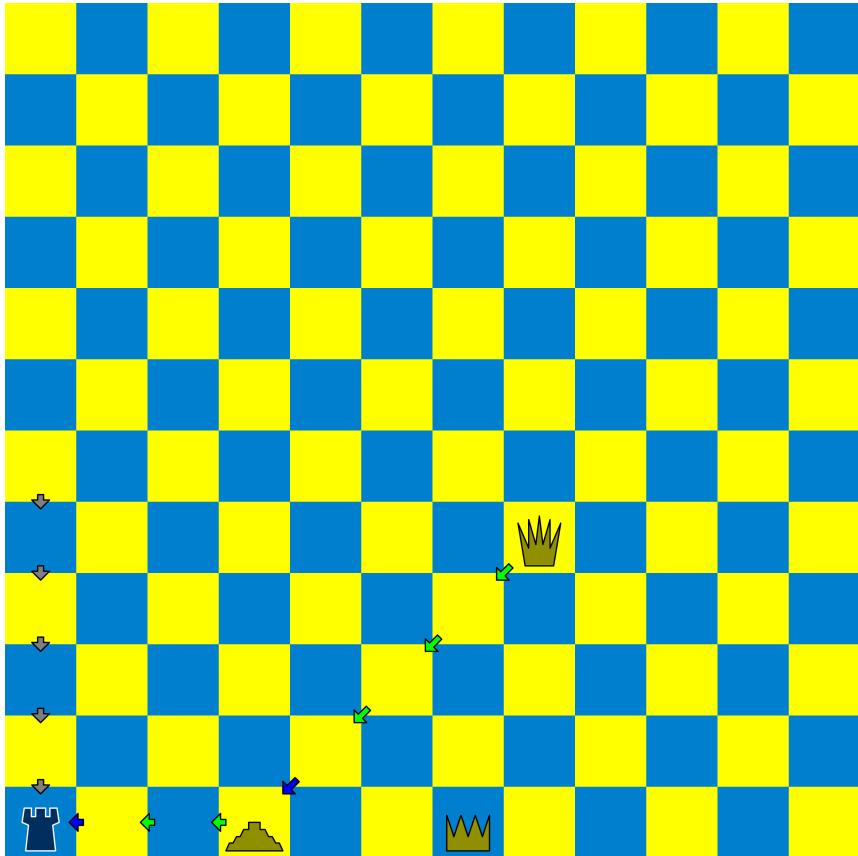


Figure 31: Converting Rook start

Converting opponent's Rook does not grant it an option to castle, even if it's converted at initial position of own Rook, and hasn't moved yet.

Here, dark Rook moved into initial position of light Rook on previous move (grey arrows); light player is about to convert dark Rook.

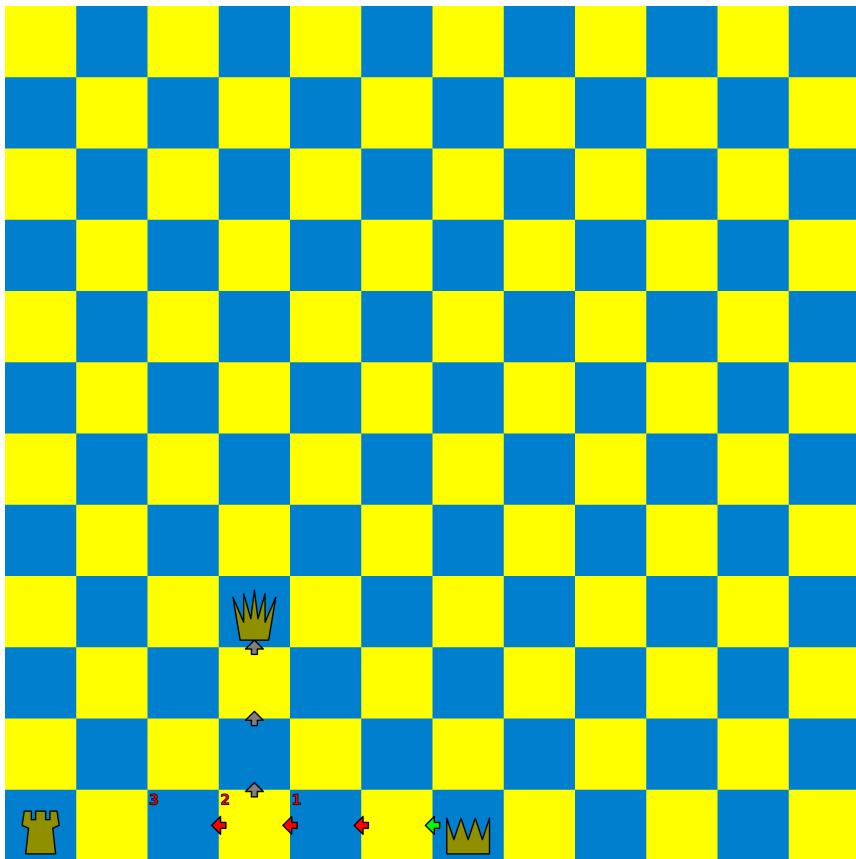


Figure 32: Converting Rook end

Here, light Queen moved out of the way after conversion. Dark Rook has been converted at light Rook's initial position, and hasn't been moved; still, light King can't castle with converted Rook.

## Converting Pawns

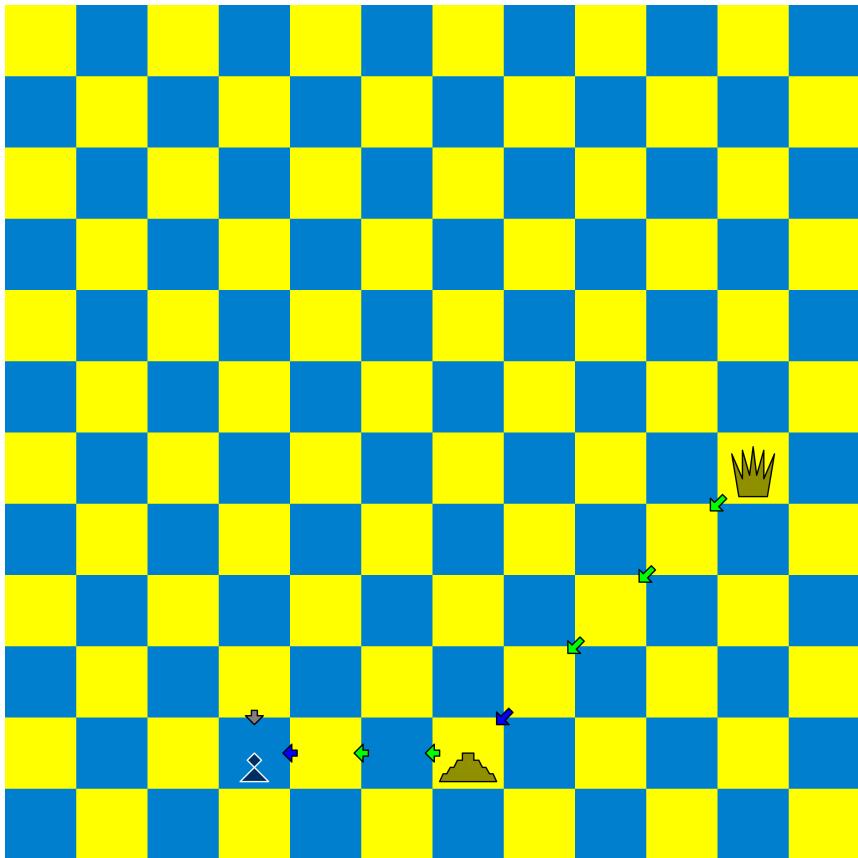


Figure 33: Converting Pawn start

Converting opponent's Pawn does not grant it an option to rush, even if it's converted at initial position of own Pawn, and hasn't moved yet.

Here, dark Pawn moved into initial position of light Pawn on previous move (grey arrow); light player is about to convert dark Pawn.

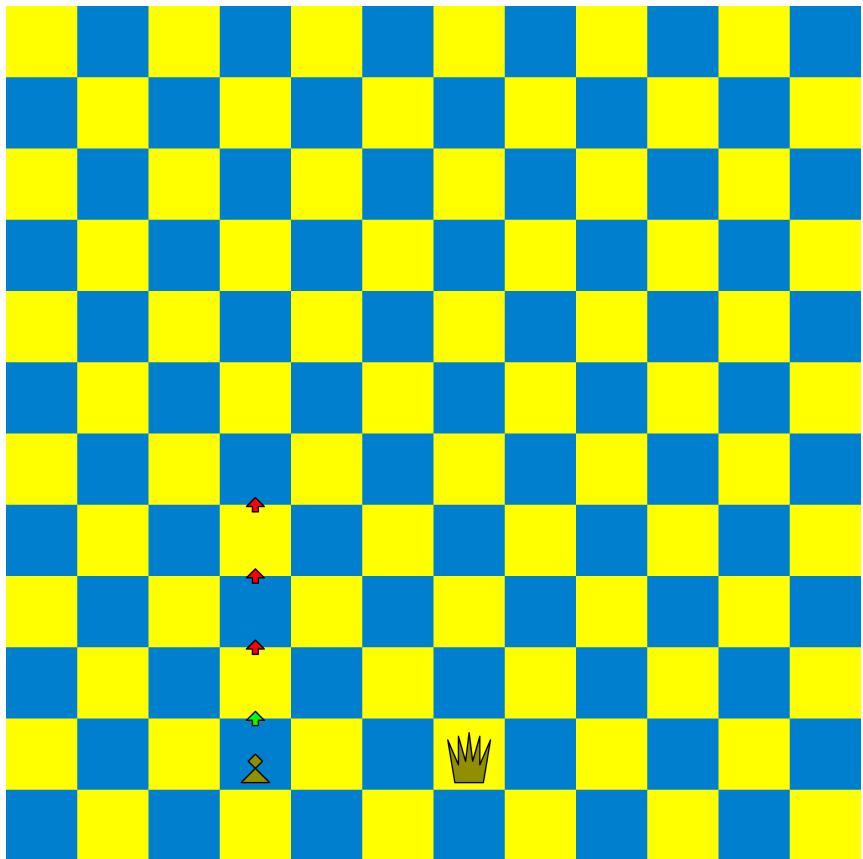


Figure 34: Converting Pawn end

Here, dark Pawn has been converted at light Pawn's initial position, and hasn't been moved; still, converted Pawn cannot rush (move forward for two or more fields).

## Cascading

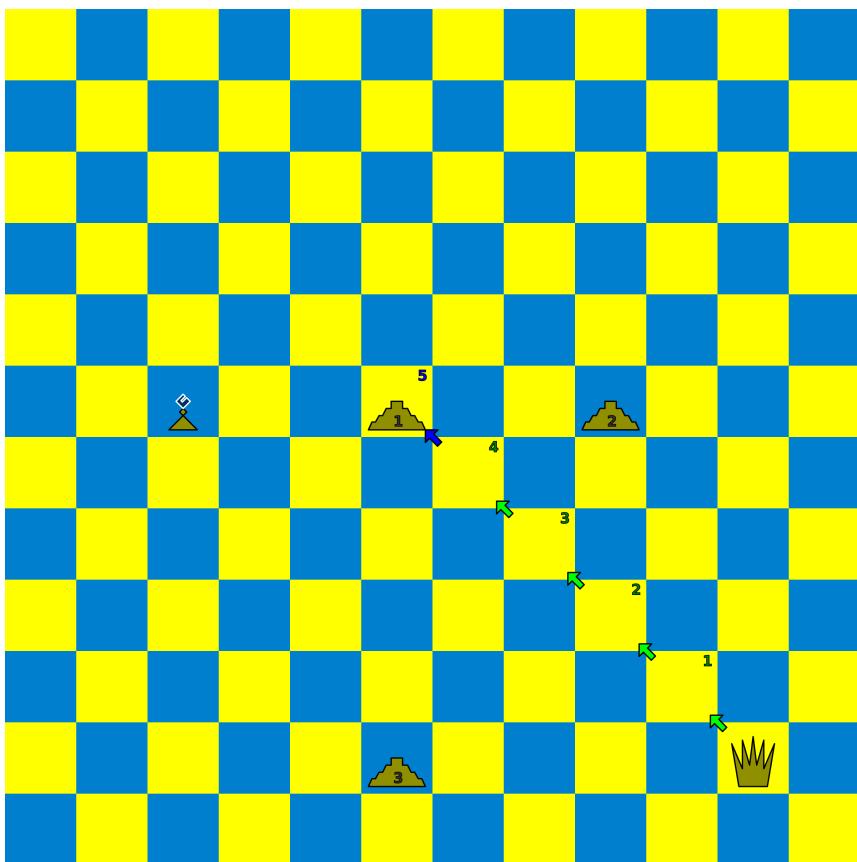


Figure 35: Cascading start

Once activated, Pyramid can also activate another Pyramid. To do so, activated Pyramid has to have at least 1 remaining momentum to transfer it to another Pyramid. If all momentum received was spent moving, Pyramid cannot cascade, i.e. cannot activate another Pyramid.

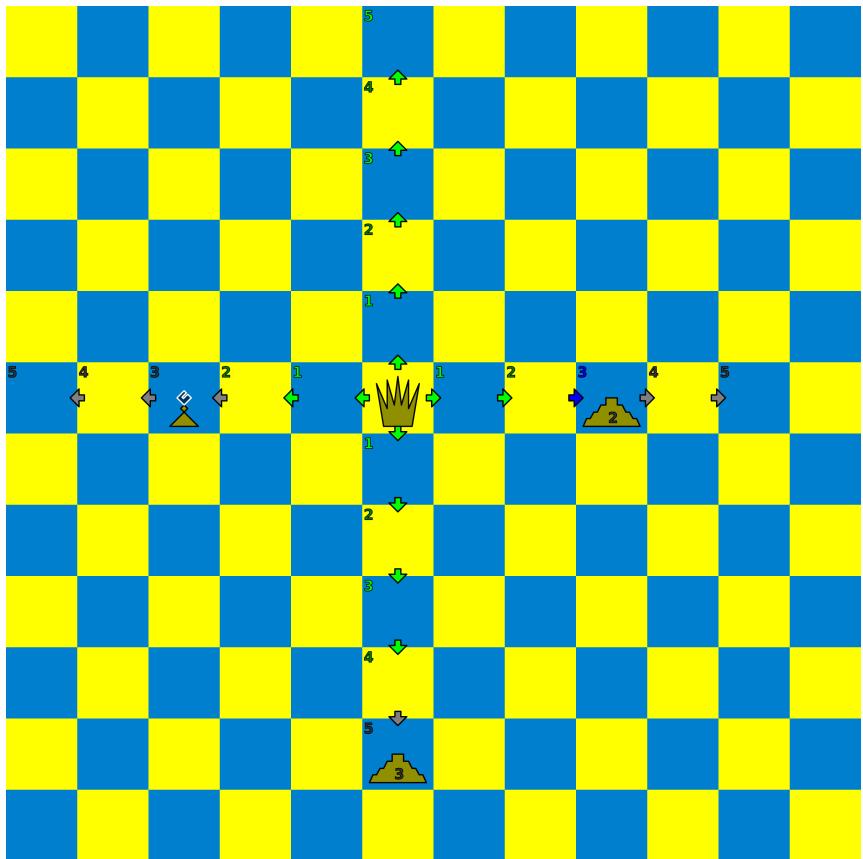


Figure 36: Cascading, 1st Pyramid activated

Pyramid 1 has been activated by Queen and received momentum of 5, arrows now show its all possible moves. Note, Pyramid 3 can't be activated, it's on the very end of fields reachable by Pyramid 1. Note also that Pyramid 1 can't activate, nor move past light Bishop on the left.

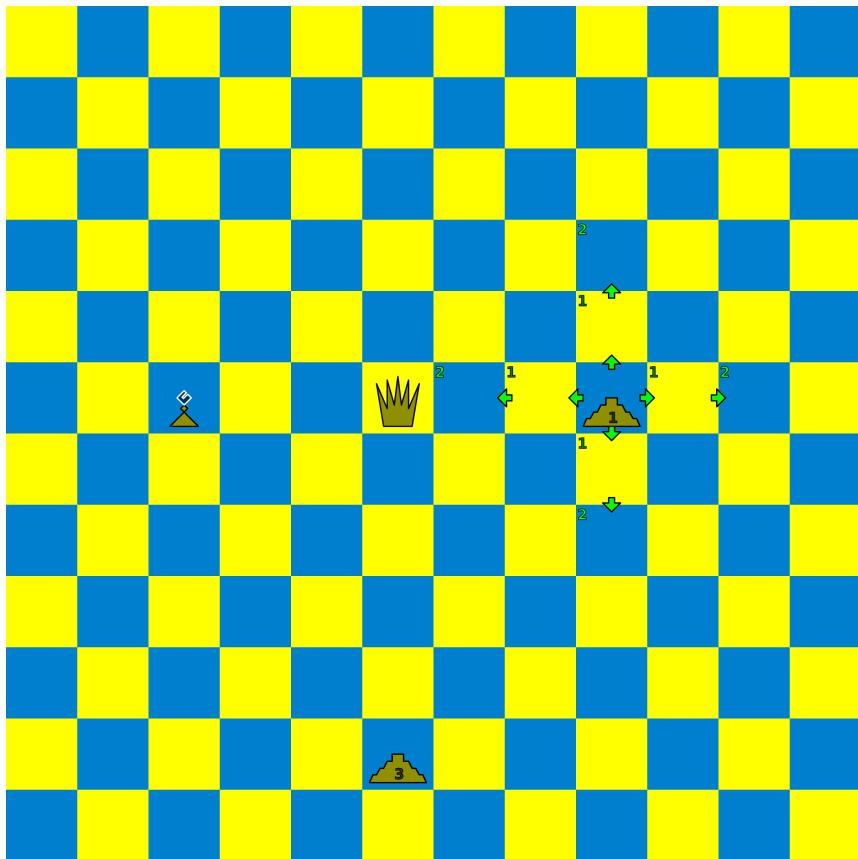


Figure 37: Cascading, 2nd Pyramid activated

Pyramid 2 has been activated by Pyramid 1 and in the process received momentum of 2, arrows now show all possible moves by Pyramid 2.

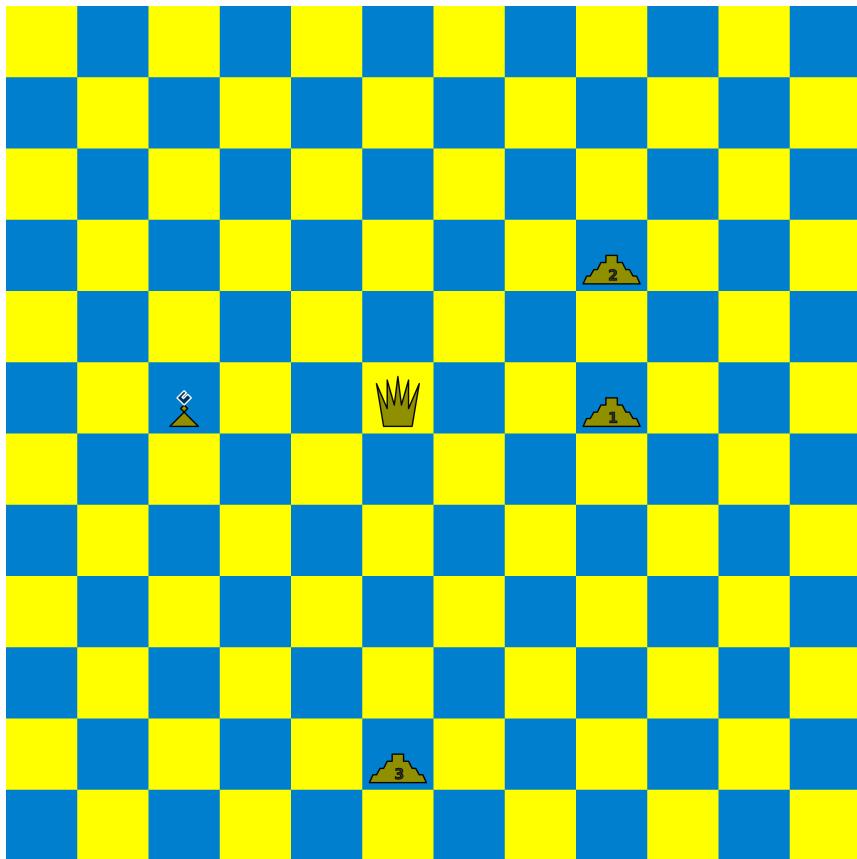


Figure 38: Cascading end

Pyramid 2 has finished its movement, and so it ends light player's complete move, which consisted of 3 plies, i.e. 3 pieces have been moved.

## Against King

Pyramid can't check opponent's King, meaning that King is not under check even if Pyramid could capture any other piece on the same field.

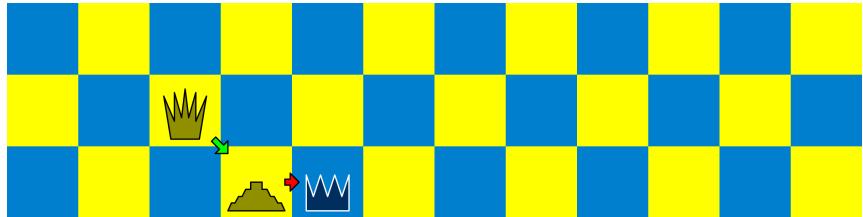


Figure 39: Pyramid vs. King

Above, King does not have to move/defend, as it is not under check from Pyramid.

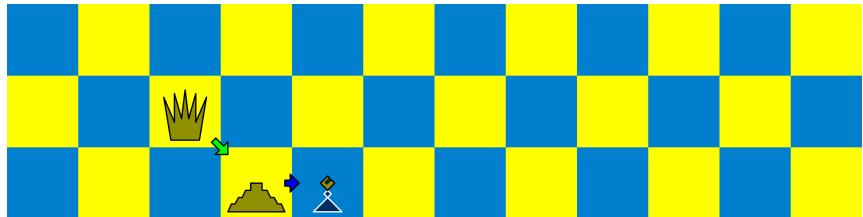


Figure 40: Pyramid vs. Bishop

Bishop in the same place, however, could be captured without any hindrance.

## Activation by Pawn

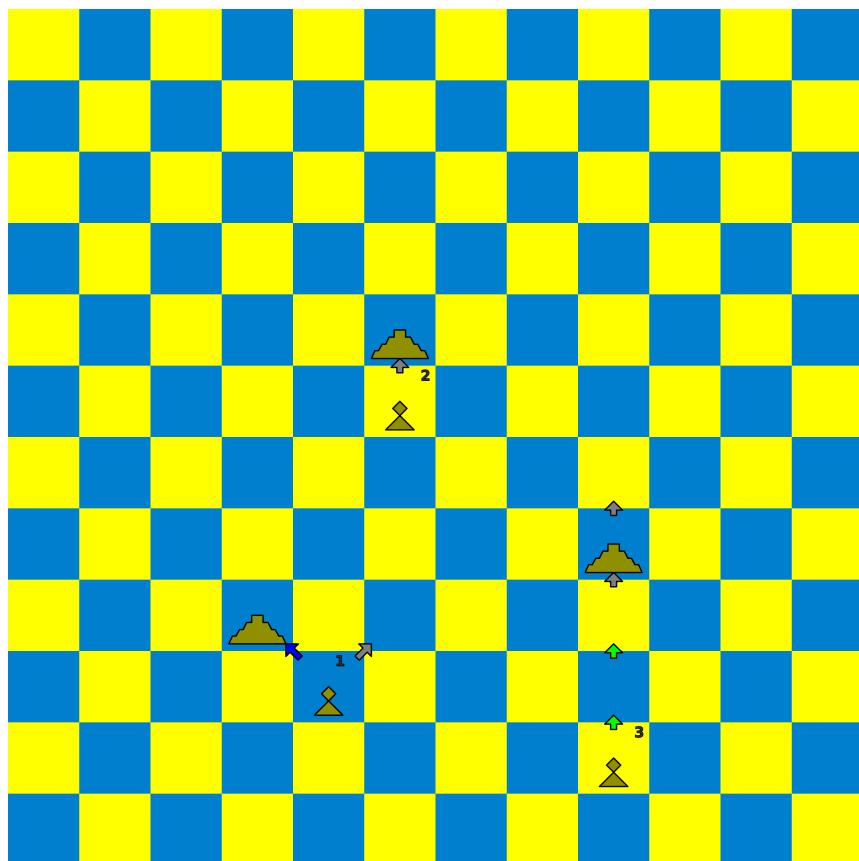
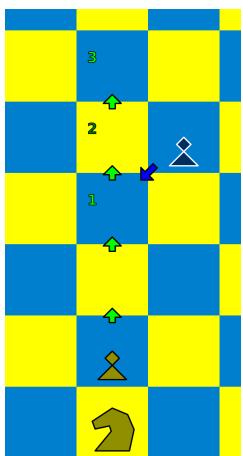


Figure 41: Pyramid activation by Pawns

Pawns can activate Pyramid on own capture-field giving it 1 momentum, see Pawn 1. Pawns can't activate Pyramids on step-fields, and are blocked from moving further, see Pawns 2 and 3.

## Rush, en passant



Rush and en passant are identical to those in Classic Chess, only difference is that Pawn can now move longer on initial turn, up to 4 fields in this variant.

Again, converted opponent's Pawns cannot be rushed, even if converted on an initial positions of own Pawns.

Figure 42: En passant

# Castling

Castling is the same as in Classical Chess, only difference is that King can move 2, 3 or 4 fields across. All other constraints from Classical Chess still applies.



Figure 43: Castling

In example above, all valid King's castling moves are numbered. After any castling, Rook ends on a field next to King closer to center, i.e. closer to King's initial position.



Figure 44: Castling long right

In this example King was castling long to the right. Initial King's position is marked with "K". After castling is finished, right Rook ends up on the field immediately left to the King.

Again, converted opponent's Rooks cannot be castled, even if converted on an initial positions of own Rooks.

## Initial setup

Compared to initial setup of Croatian Ties, Pyramid is inserted between Pegasus and Knight symmetrically, on both sides of chessboard. This can be seen in the image below:

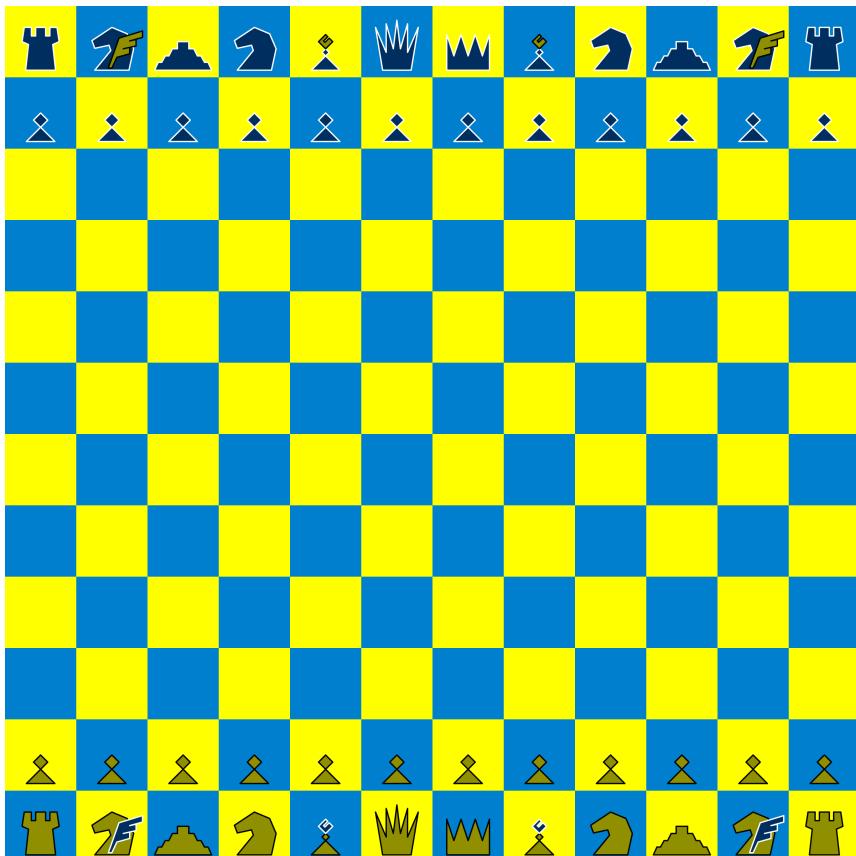


Figure 45: Mayan Ascendancy board

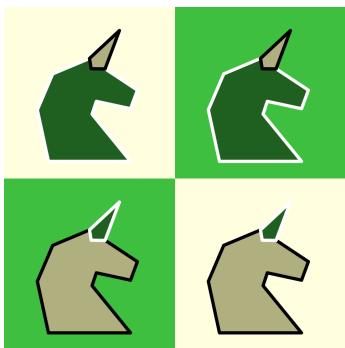
# Age of Aquarius

*The human mind is inspired enough when it comes to inventing horrors; it is when it tries to invent a Heaven that it shows itself cloddish.*

... Evelyn Waugh

Age of Aquarius is chess variant which is played on 14 x 14 board, with light yellow and light green fields and light tan-gold and dark green pieces. A new piece is introduced, Unicorn.

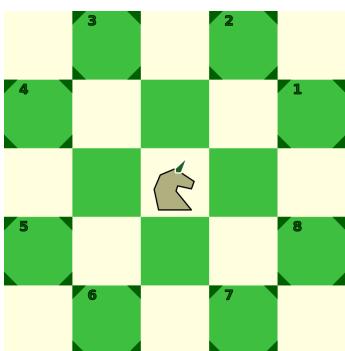
# Unicorn



Unicorn is a piece similar to Knight, only it can jump longer on opposite color fields. Just as Knight, Unicorn is not obstructed by any piece in its surroundings.

Figure 46: Unicorn

## Movement



On fields with the same color as Unicorn, it can move exactly the same way Knight does.

Figure 47: Unicorn short jump

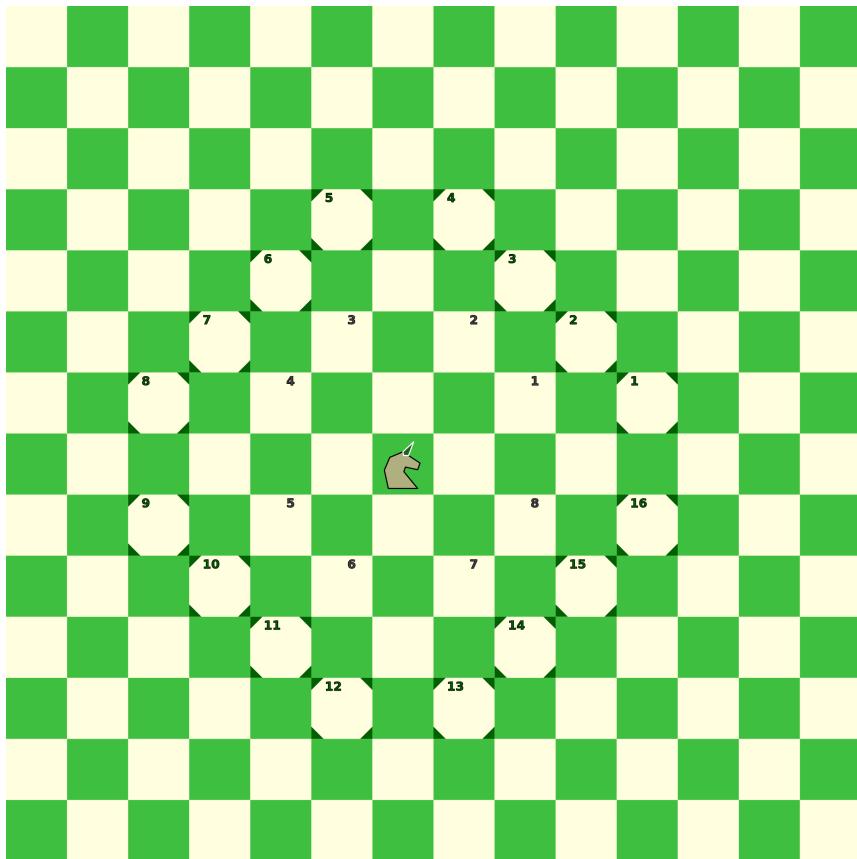


Figure 48: Unicorn long jump

On fields in opposite color, Unicorn can jump much longer. Again, just as Knight, Unicorn is not hampered by surrounding pieces. Own pieces on marked step-fields would prevent Unicorn to move. The same marked fields are also capture-fields, opponent's pieces on them could be captured.

For comparison, Knight's step-fields are also numbered (gray).

# Promotion

In all variants prior to this one promotion was forced, Pawn had to be promoted immediately upon reaching opposite end of chessboard (or when **reached by own Pyramid on opponent's side of the board**). Promotion otherwise is identical to one in Classical Chess, which is described in details here: [https://en.wikipedia.org/wiki/Promotion\\_\(chess\)](https://en.wikipedia.org/wiki/Promotion_(chess)).

In this variant promotion is not forced, Pawn does not have to be promoted immediately, or at all. Pawn can be promoted later in a game, if it hasn't moved between being tagged for promotion and actual promotion itself. Thus, promotion can take place only on a field at which Pawn has been tagged for promotion.

Tag is a link between a piece and a field at which it stands, representing delayed opportunity. So, if tagged Pawn moves before actual promotion, the Pawn loses its tag, and cannot be promoted anymore. Field at which Pawn has been tagged for promotion does not hold tag, and does not grant ability to promote to any other Pawn passing over it.

If Pawn tagged for promotion gets captured or converted, that opportunity has been lost. Neither converted Pawn (now opponent's), nor any other Pawn (own or opponent's), can be promoted on the field at which Pawn has been converted.

Delayed promotion is a complete move, it can contain only promotion of one Pawn and nothing else.

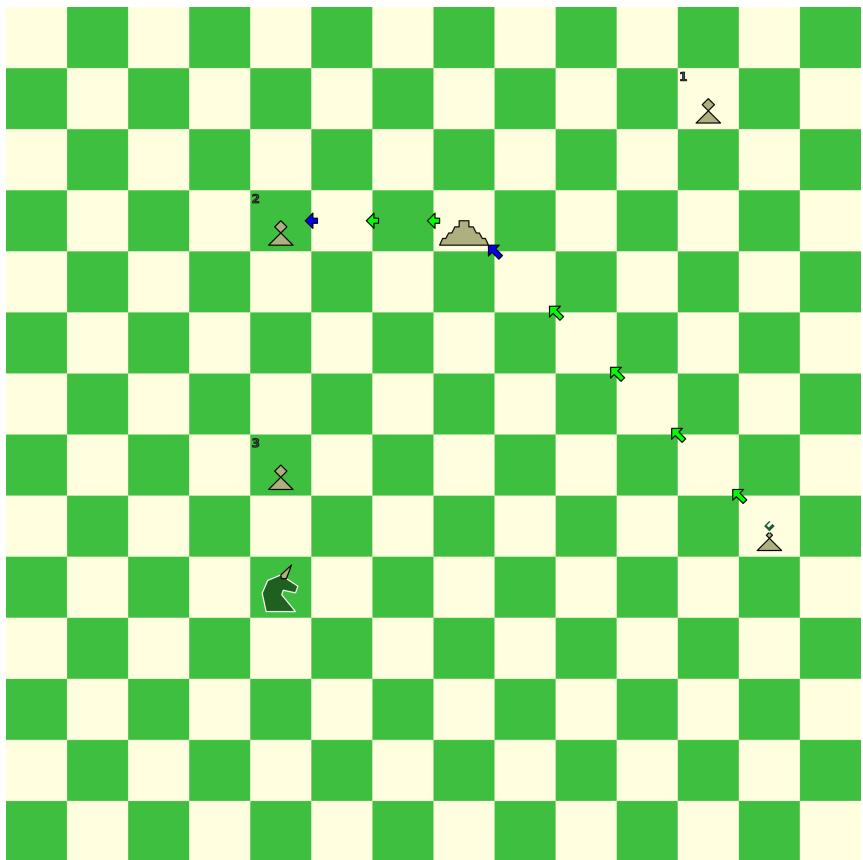


Figure 49: Promotion start

Here, light player is about to tag Pawn 2 for promotion, using Pyramid activated by Bishop. Note, Pawn 3 is not yet eligible for promotion, as it's still on own side of chessboard.

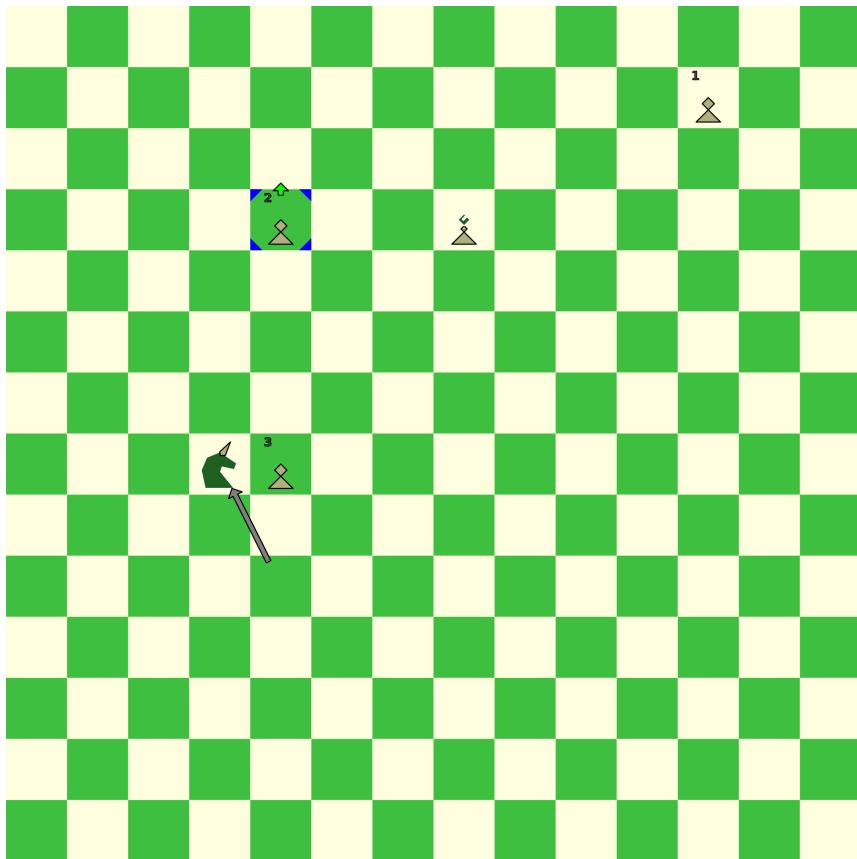


Figure 50: Pawn 2 tagged for promotion

To speed things up, next images show dark player's response (grey arrow), and light player's plan for next move (green arrow). Each depicted position is after dark player's move, but before light player's move.

Here, dark Unicorn is attacking tagged Pawn 2. Pawn 2 is to move next.

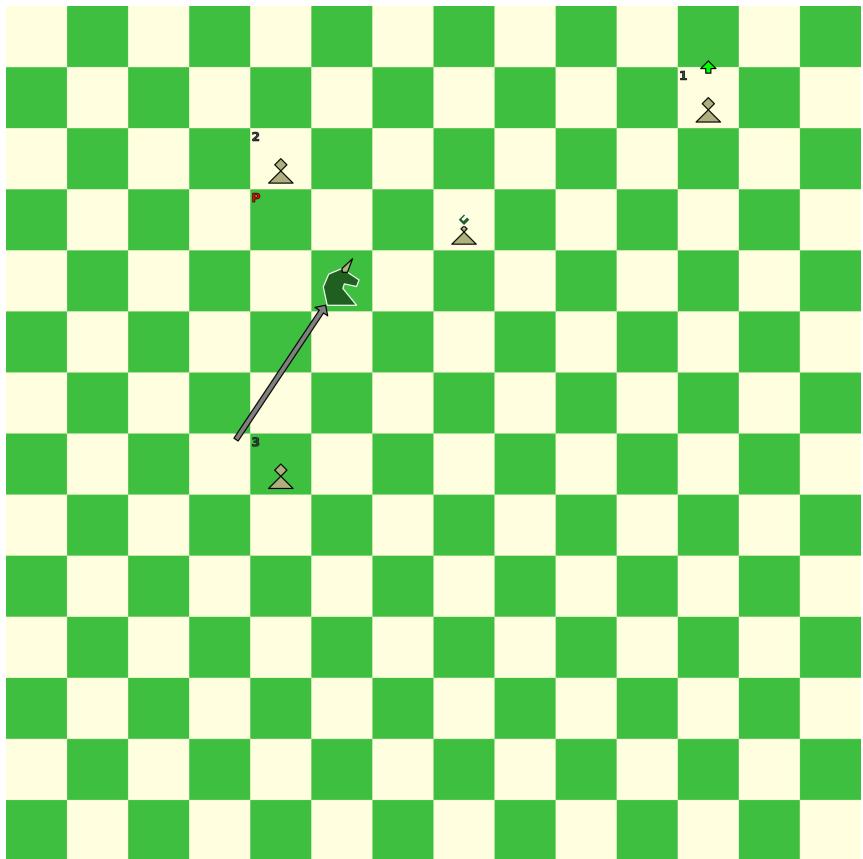


Figure 51: Pawn 1 about to get promotion

Dark Unicorn closed in, attacking both Pawn 2 and Bishop. Since Pawn 2 moved away from field P at which it was tagged for promotion, that opportunity has been lost, and can't be recovered. Label P on a field just marks where Pawn 2 was tagged for promotion. Field P isn't special in any way, it won't make e.g. Pawn 3 tagged for promotion when reached.

Light Pawn 1 is about to go next.

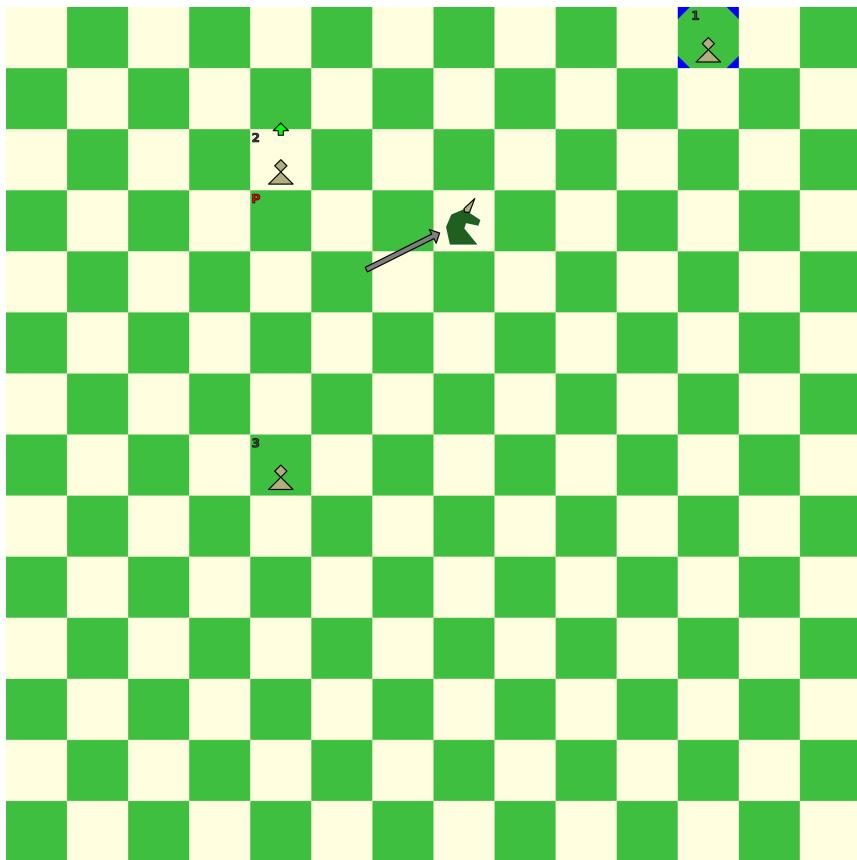


Figure 52: Pawn 1 tagged for promotion

Light Pawn 1 is now tagged for promotion, and is to be promoted later. Dark Unicorn closed in again, capturing light Bishop.

Light Pawn 2 is about to go next.

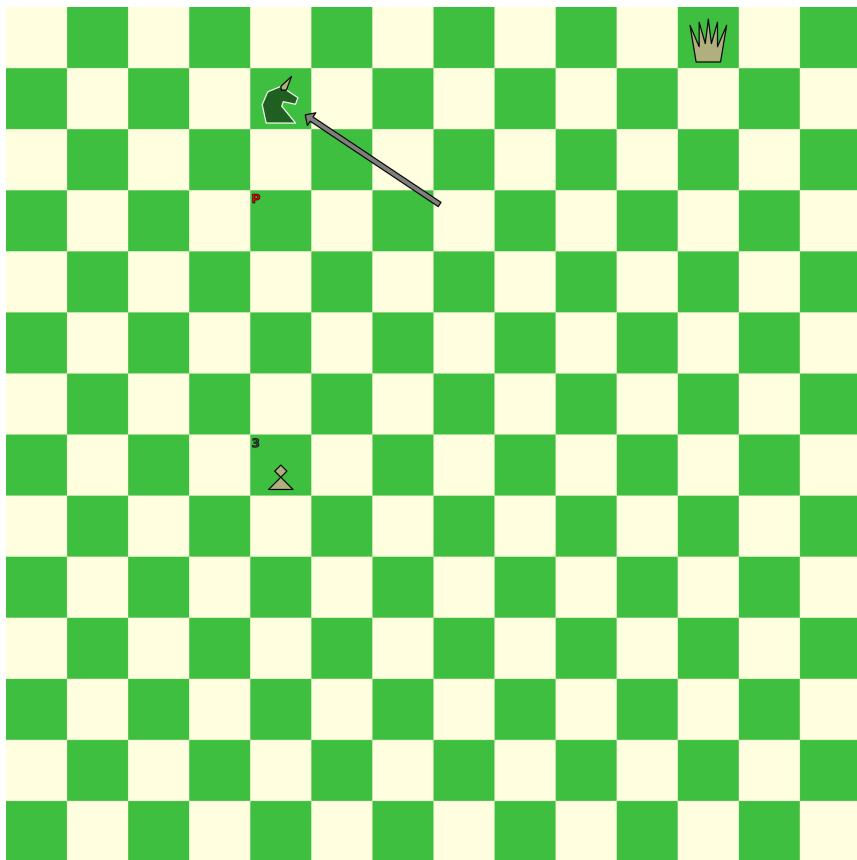


Figure 53: Pawn 1 promoted

Dark Unicorn captures light Pawn 2.

Light Pawn 1 is promoted to Queen.

## Converting tagged Pawn

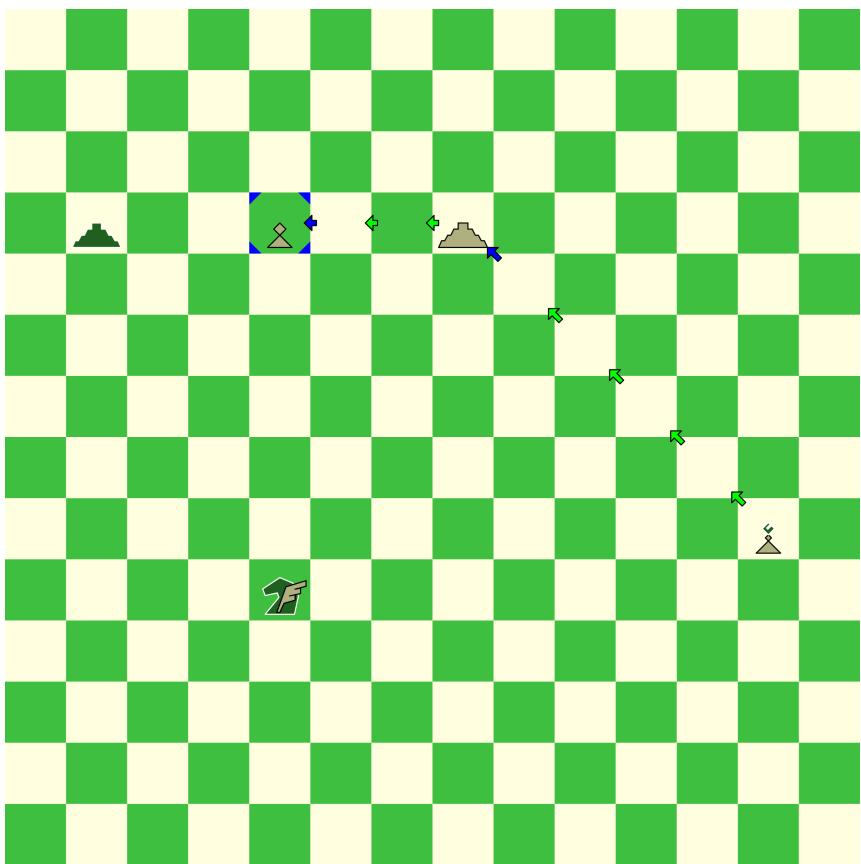


Figure 54: Tagging Pawn for promotion

Pawn tagged for promotion after being converted loses its tag, and with it opportunity to promote.

Here, light Pawn would be tagged for promotion, after light player completes its move.

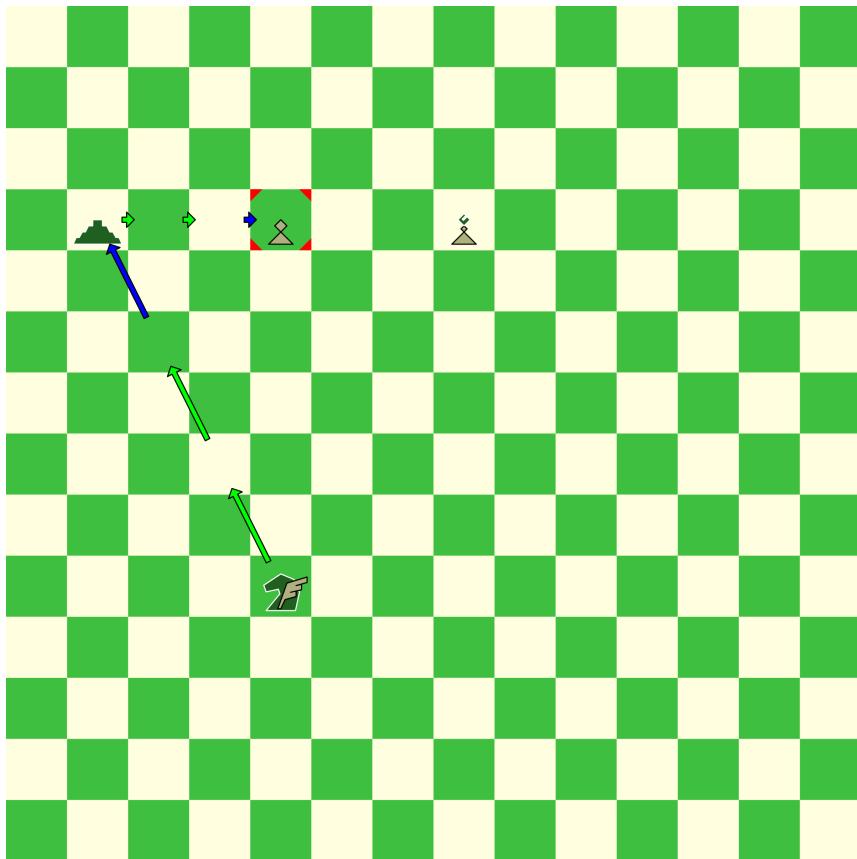


Figure 55: Converting tagged Pawn

Opponent pieces (except King) can be **converted into own pieces**, on own side of chessboard. So, Pawns tagged for promotion are also valid objects of conversion.

Here, light Pawn tagged for promotion would be converted, and its tag would be invalidated, after dark player completes its move.

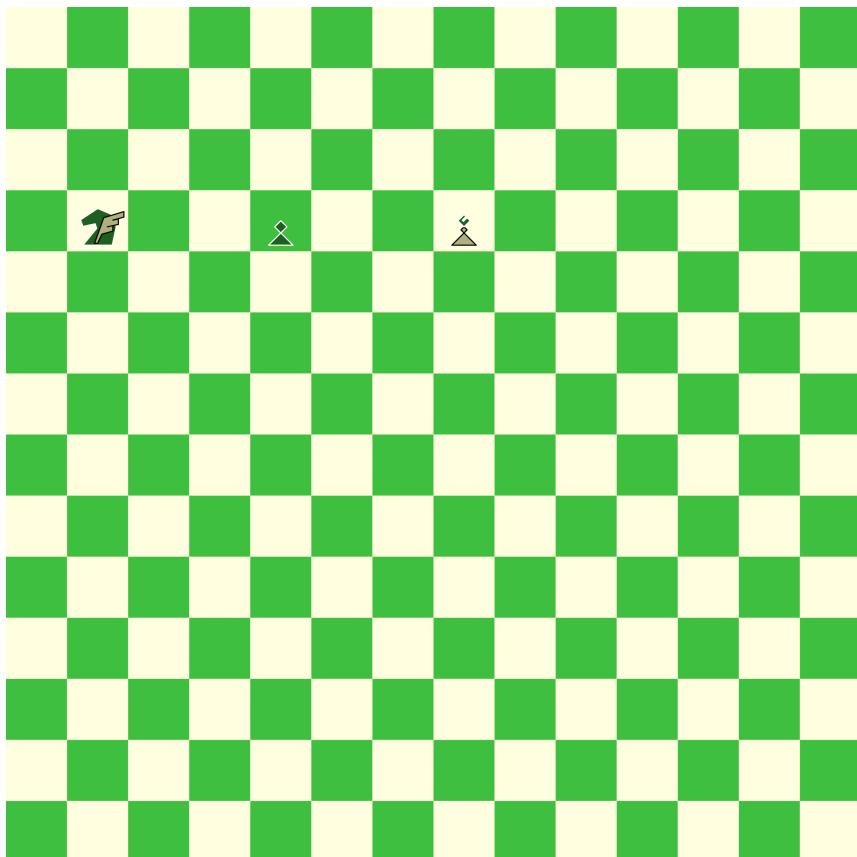
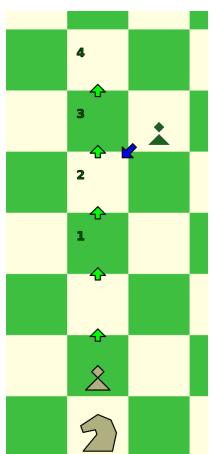


Figure 56: Tagged Pawn converted

Tag for promotion is a link between a piece and field at which it's situated.

Now that light Pawn tagged for promotion is gone, that link is broken. To be able to promote, a new tag has to be established between converted dark Pawn and its location, on light side of chessboard.

# Rush, en passant



Rush and en passant are identical to those in Classic Chess, only difference is that Pawn can now move longer on initial turn, up to 5 fields in this variant.

Figure 57: En passant

# Castling

Castling is the same as in Classical Chess, only difference is that King can move 2, 3, 4 or 5 fields across. All other constraints from Classical Chess still applies.



Figure 58: Castling

In example above, all valid King's castling moves are numbered.



Figure 59: Castling long left

In this example King was castling long to the left. Initial King's position is marked with "K". After castling is finished, left Rook ends up on the field immediately right to the King.

## Initial setup

Compared to initial setup of Mayan Ascendancy, Unicorn is inserted between Pyramid and Knight symmetrically, on both sides of chessboard. This can be seen in the image below:

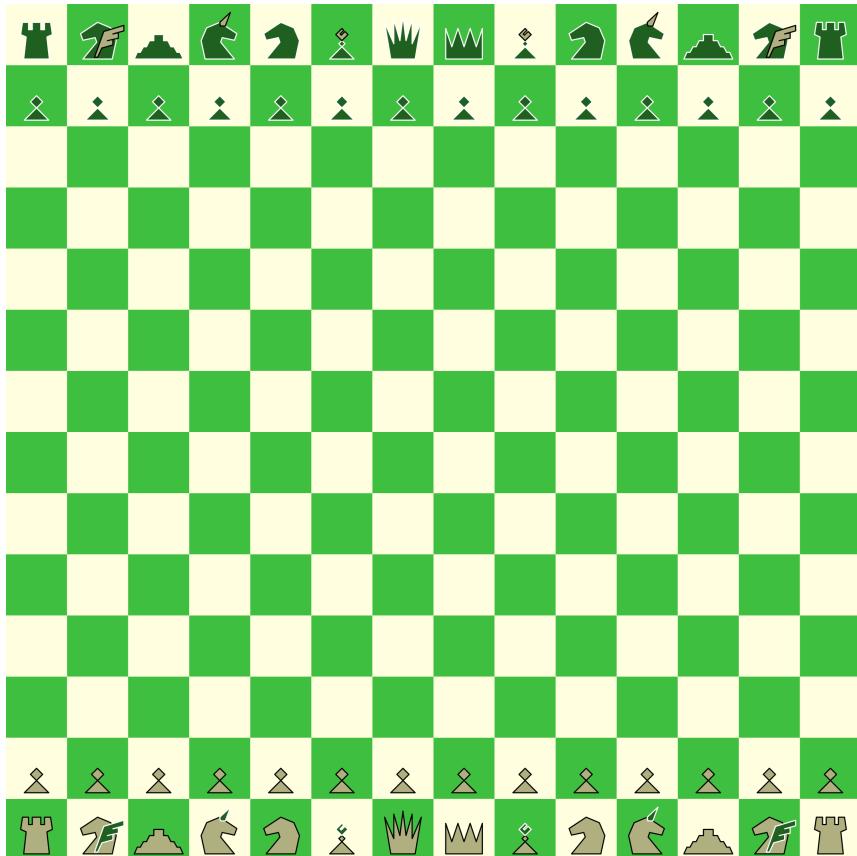


Figure 60: Age of Aquarius board



# Miranda's veil

*Under all that we think, lives all we believe, like the  
ultimate veil of our spirits.*

... Antonio Machado

Miranda's veil is chess variant which is played on 16 x 16 board, with white and dark violet fields and light magenta and indigo pieces. A new piece is introduced, Wave.

## Wave

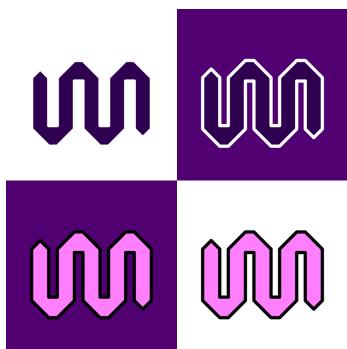


Figure 61: Wave

Wave is passive piece, it has to be activated before it can move. Activation is done with own piece capturing field at which Wave is located, before Wave can move. Movement of Wave mimics that of activating piece, and is not limited to single step.

Wave does not use received momentum for moving, and so Wave can be activated even with no momentum. Wave can activate any

own piece, except King, if it has momentum. Wave can also activate other Wave, own or opponent's, even if it has no momentum. Wave transfers all of received momentum to a piece it activates.

Wave is transparent; all other pieces can move past (pass over) Wave, as if it isn't present on a chessboard. Other pieces are transparent to Wave; Wave can move past (pass over) any piece, as if it isn't there. Transparency of Wave makes activation of Wave optional.

Wave cannot capture any piece; and so cannot neither check nor checkmate opponent's King.

## Activation

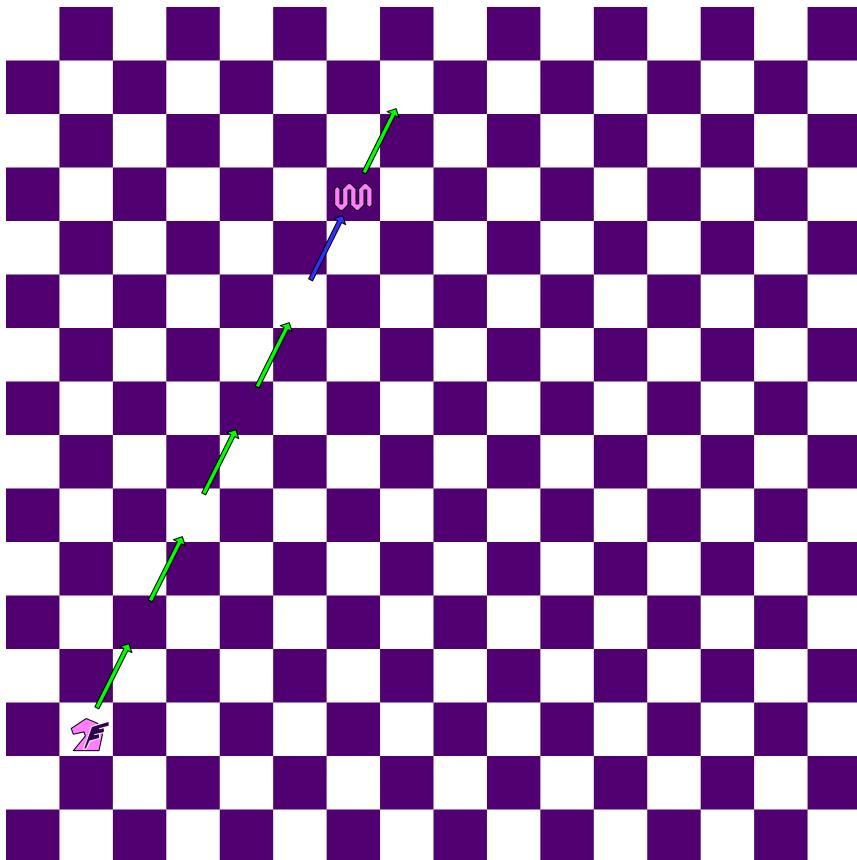


Figure 62: Activating Wave

A piece can activate own Wave by simply capturing a field at which that Wave stands. Activation is optional, a piece could just as well move past Wave. Activated Wave receives any momentum activating piece had.

Here, Pegasus has opportunity to activate Wave, with 5 momentum.

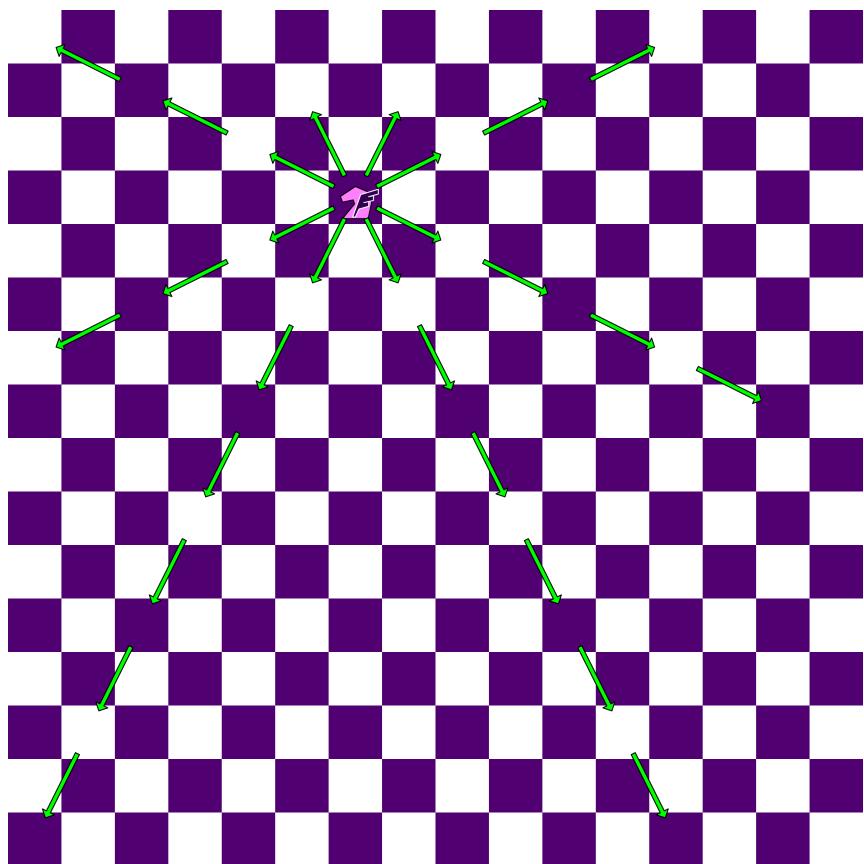


Figure 63: Wave activated

Activated Wave inherits way of moving from the activating piece. Activated Wave does not spend received momentum for moving, and so Wave can be activated even if activating piece has no momentum.

Here, Wave activated by Pegasus (now "in the air") moves like one, i.e. along one chosen semi-diagonal.

## Activating pieces

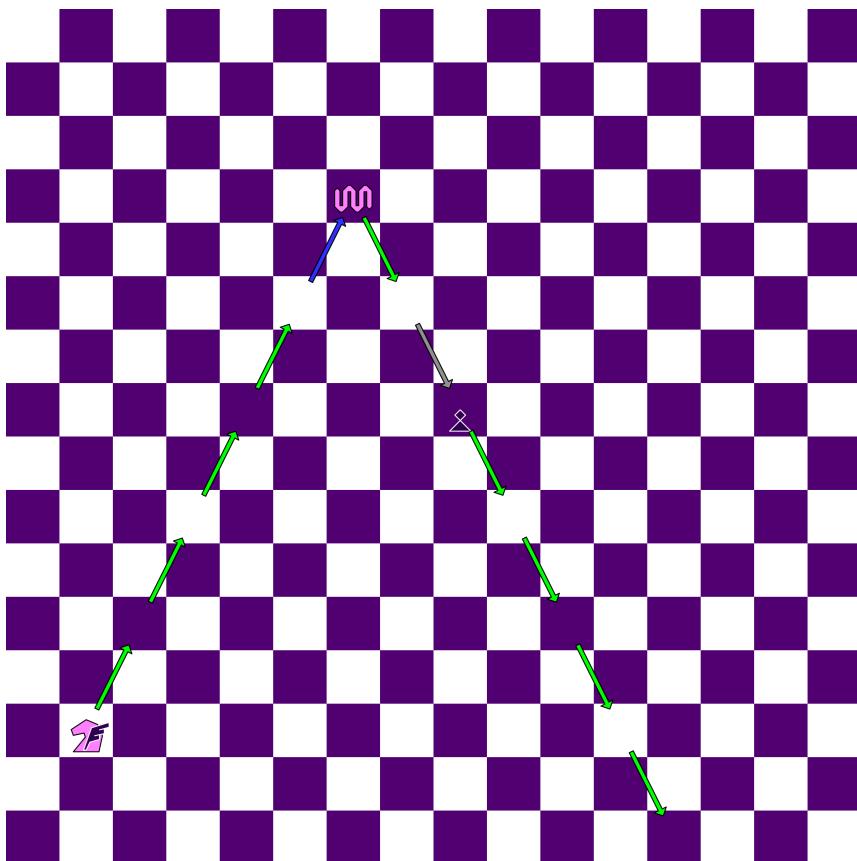


Figure 64: Passing opponent's Pawn

Wave in its movement is not obstructed by any piece on chessboard, it can move past (pass over) any piece, as if it's not there. In short, other pieces are all transparent to Wave, and all activations are optional.

Here, Wave cannot activate opponent's Pawn on its step-field, but it's not hindered by that Pawn, and can reach fields behind it, which would be out of reach for Pegasus.

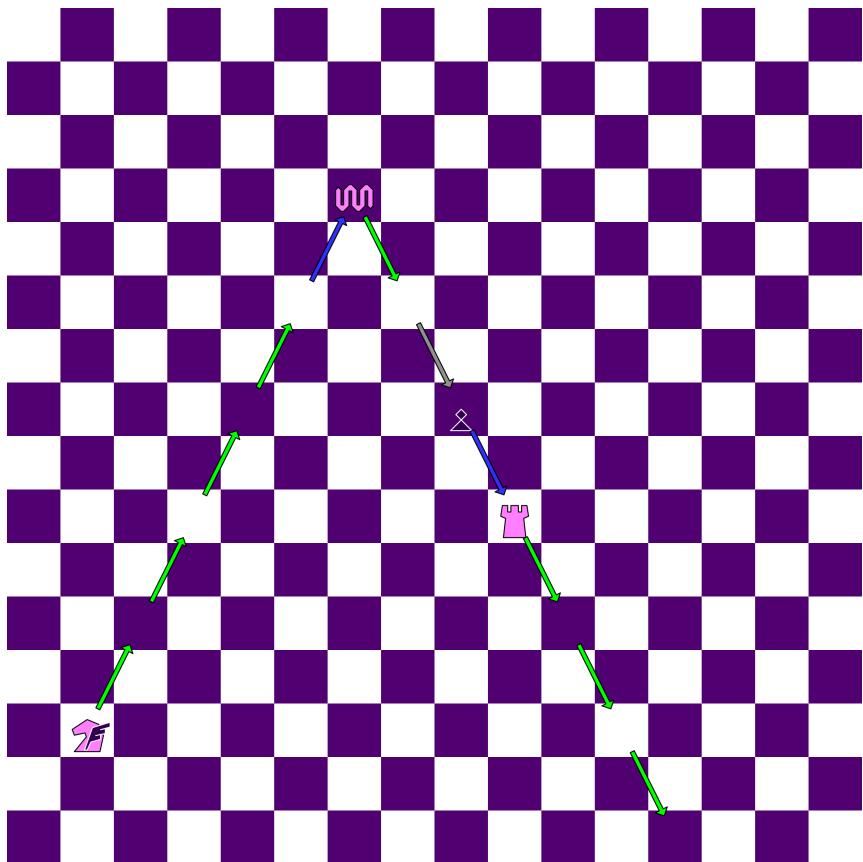


Figure 65: Activating Rook

Wave can activate any own piece, except King, if it has momentum. Wave can also activate any other Wave, own or opponent's, even if it doesn't have any momentum. Wave does not spend received momentum while moving, and would transfer it entirely to any piece it activates.

Here, Wave can activate own Rook, even though it's positioned behind opponent's Pawn, and transfer to it all of 5 received momentum.

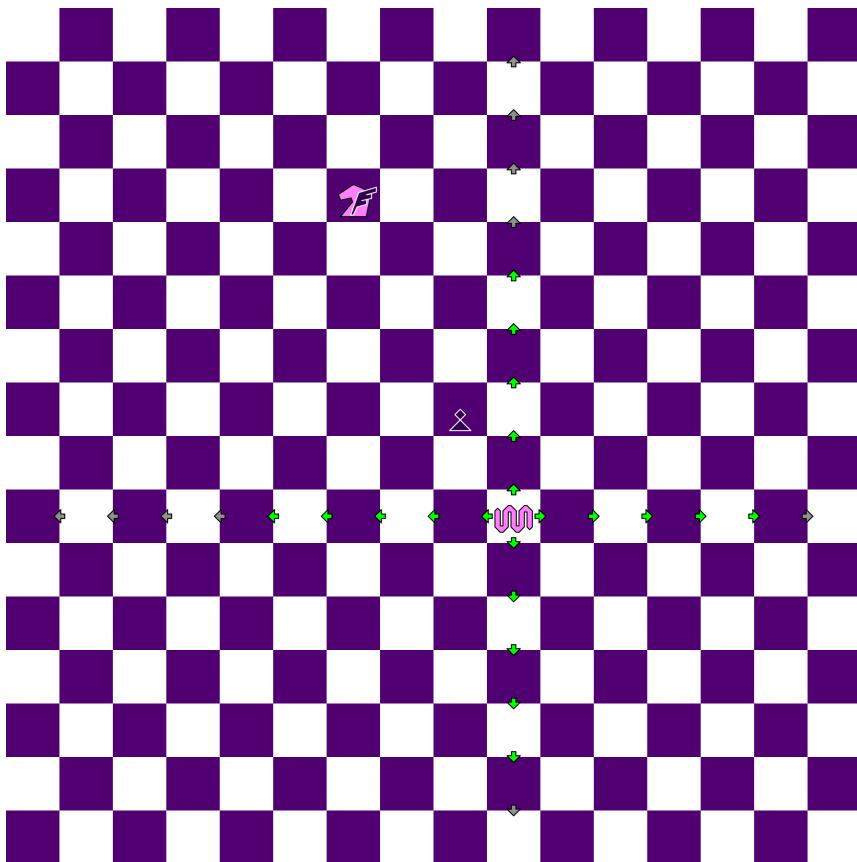


Figure 66: Rook activated

Material is any piece, except Wave. Activated material moves the same as it would in a normal move, i.e. if not activated. The only difference is that activated material is limited by received momentum, i.e. can't move for more fields than momentum it received.

Here, activated Rook (now "in the air") can choose one of horizontals or verticals as its new direction. Rook can reach at most 5 fields, because that's the momentum it received.

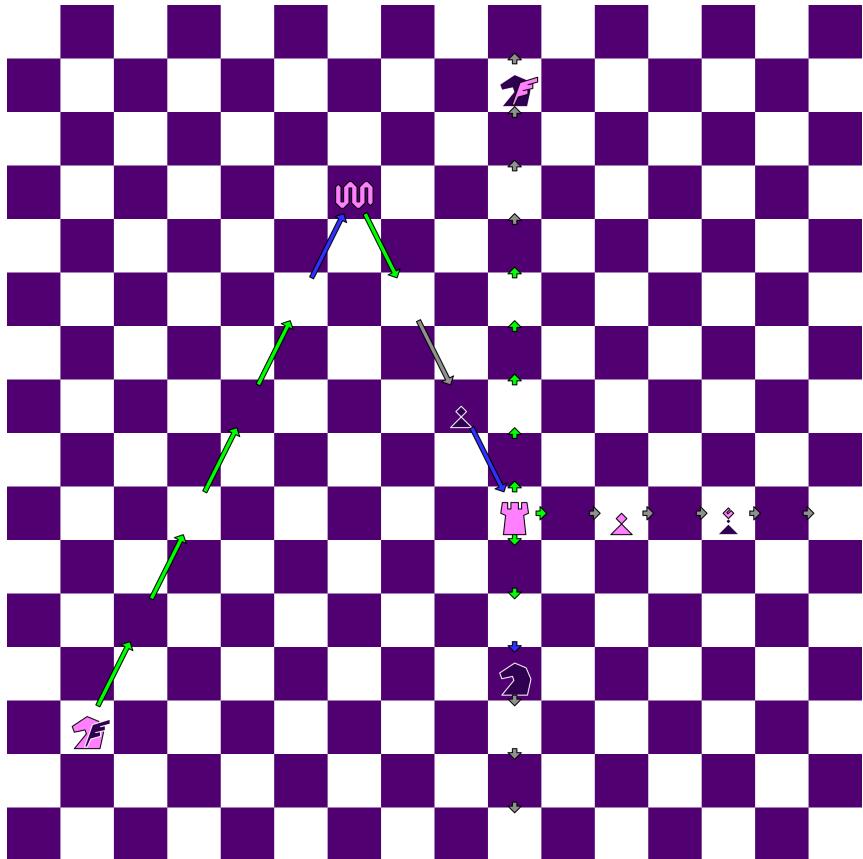


Figure 67: Rook captures

Activated material piece can also capture opponent's piece, if it's within reach, and not obstructed by other pieces.

Here, activated Rook can capture dark Knight; it can't capture dark Bishop since own light Pawn is in the way. Light Rook can't capture dark Pegasus since it's out of reach.

## Wave is transparent

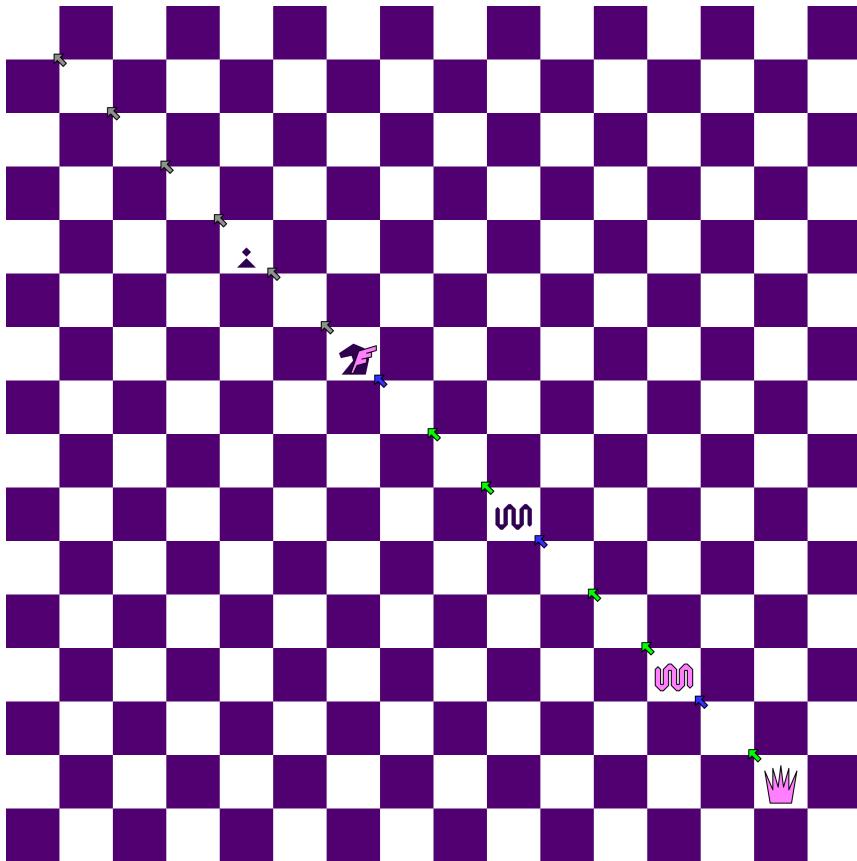


Figure 68: Wave is transparent

Just as other pieces are transparent to Wave, so is Wave transparent for all the other pieces. Any interaction with a Wave is optional; a piece could activate own Wave, it could capture opponent's Wave, or it could move past all Waves in its path, and e.g. capture opponent's piece behind a Wave.

Here, light Queen could interact with any Wave in her path, or capture dark Pegasus; dark Pawn is shielded by own Pegasus.

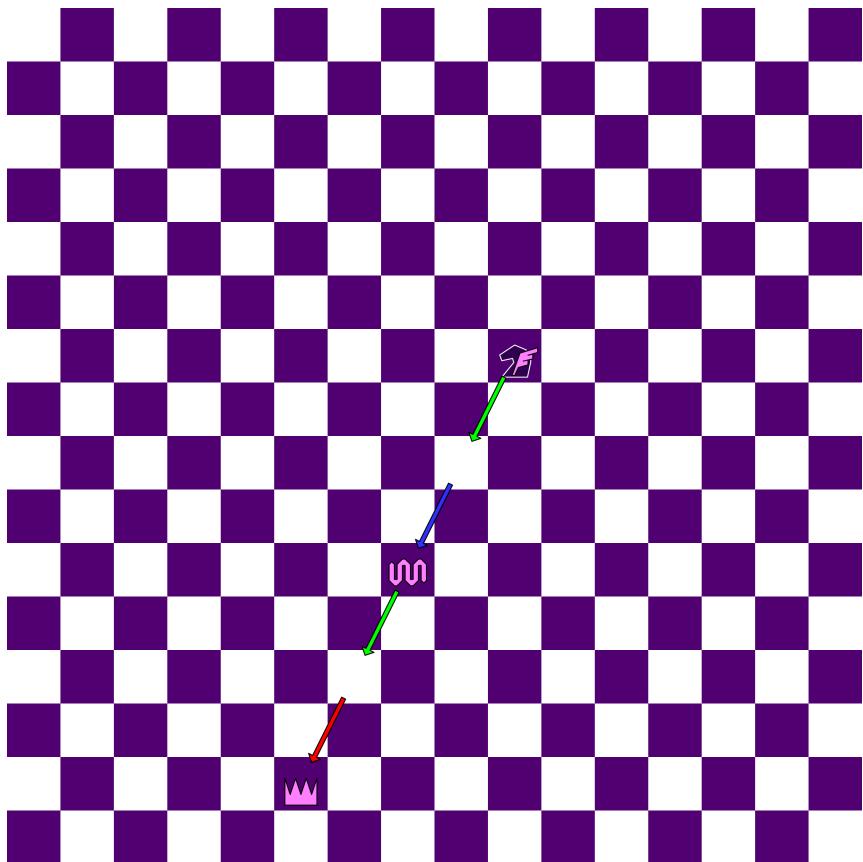


Figure 69: Wave is not pinned

Since it's transparent Wave cannot be pinned, i.e. a piece can ignore (pass over) Wave placed on its capture-field, and still check opponent's King.

Here, dark Pegasus checks light King, even though light Wave is on dark Pegasus' capture-field. Any other piece positioned instead of light Wave would be **hard-pinned**, and light King wouldn't be in check.

## Wave and castling

Wave is transparent, so it doesn't block castling if positioned between castling pieces and their destination fields. Wave cannot be activated by castling piece, so it blocks any castling which uses its field as a destination.

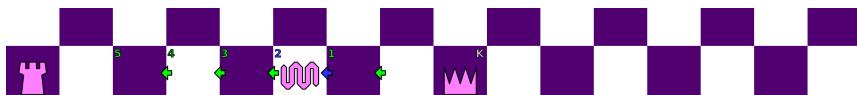


Figure 70: Castling King



Figure 71: Castling Rook

In previous example King initiated castling by moving onto a field past Wave, Rook can now finish castling onto empty field between the two, so the whole castling move is legal.



Figure 72: Castling Rook blocked

If in previous example King initiated castling by moving onto a field just past Wave, Rook cannot castle onto field occupied by Wave, so the whole castling move is illegal.

## Piece blocked

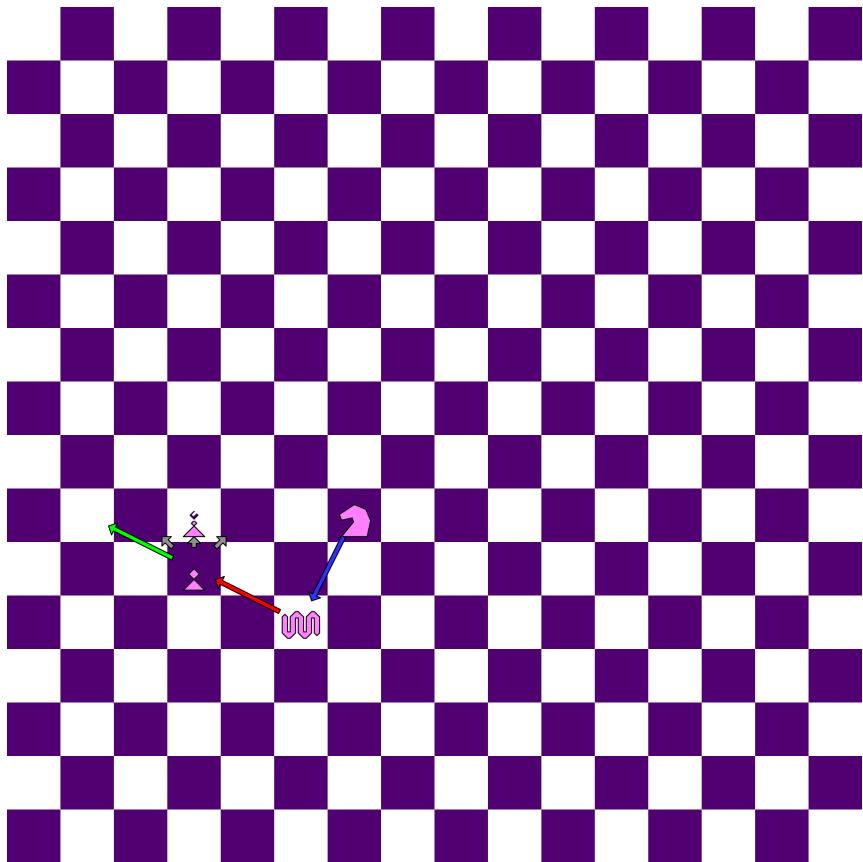


Figure 73: Piece blocked

Wave cannot activate blocked pieces, even if it has momentum. Here, Pawn is blocked from moving forward by own Bishop, and there are no opponent's pieces on its diagonal capture-fields. So, Wave cannot activate Pawn, even though it has one momentum received from Knight.

## Movement

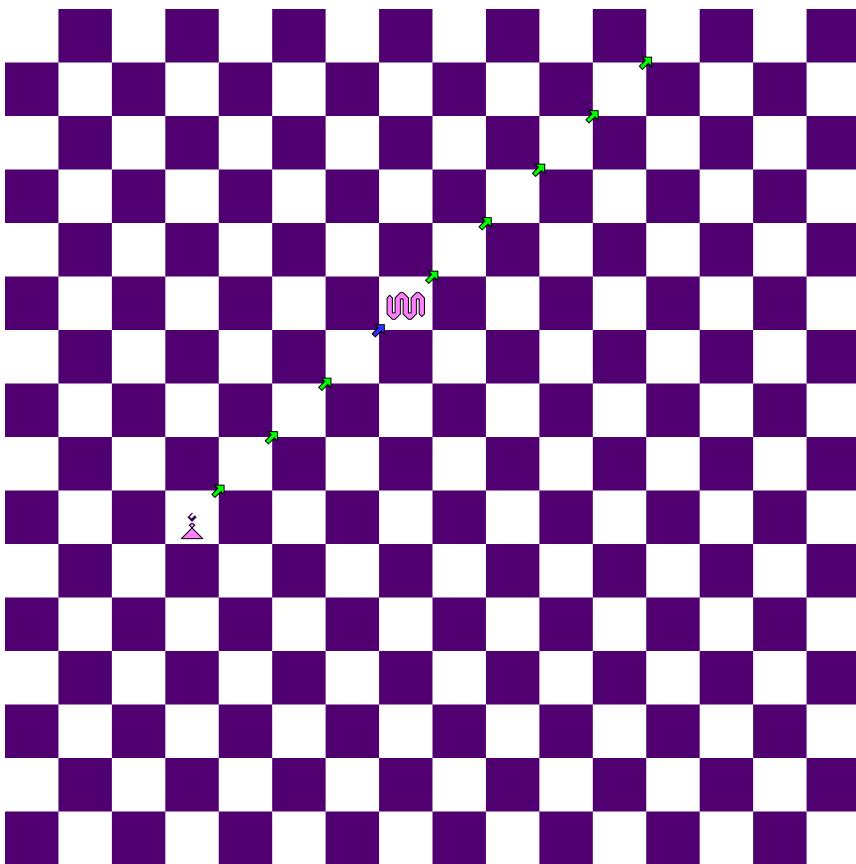


Figure 74: Bishop activating Wave

Generally, activated Wave inherits way of movement from activating piece. Wave activated by pieces which move for one field (such as Pawn, Knight, King, and Unicorn) can move over multiple fields. Again, activating Wave is optional, activating piece could continue its movement past Wave. Activated Wave is not limited by received momentum, and can move past any piece as if it's not there.

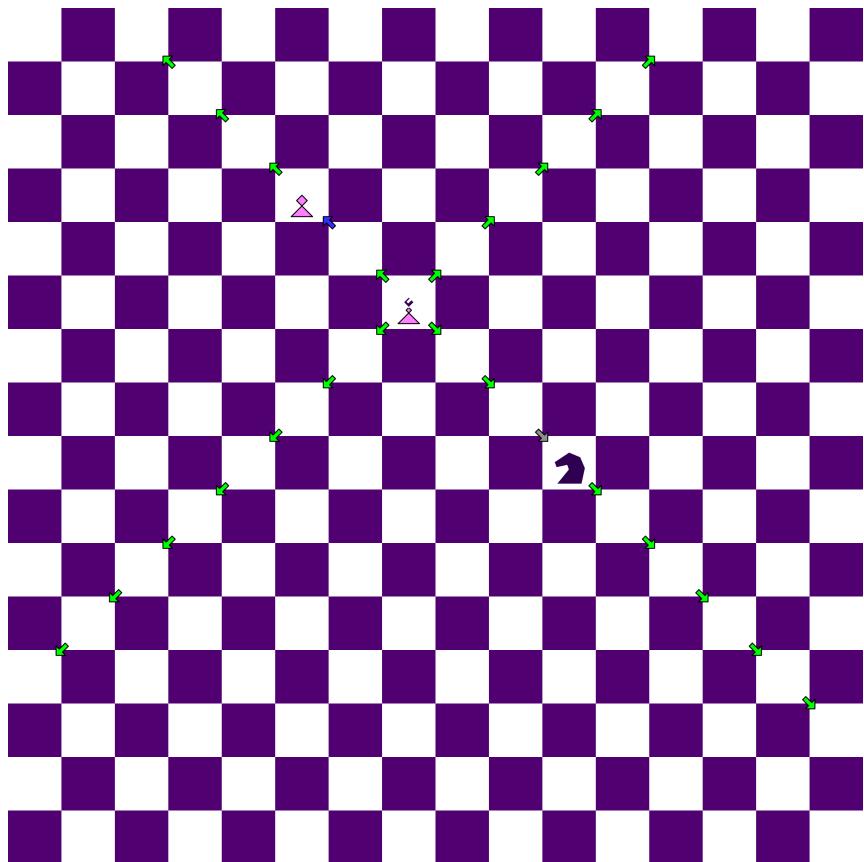


Figure 75: Wave activated by Bishop

Here, Wave (now "in the air") activated by Bishop moves like one, i.e. along one chosen diagonal. Activated light Wave cannot activate dark Knight, but can activate own Pawn. Wave is not obstructed by neither Pawn nor Knight, and can move past them. Wave is not limited by 4 received momentum, and can reach edge of chessboard.

## Activated by Knight

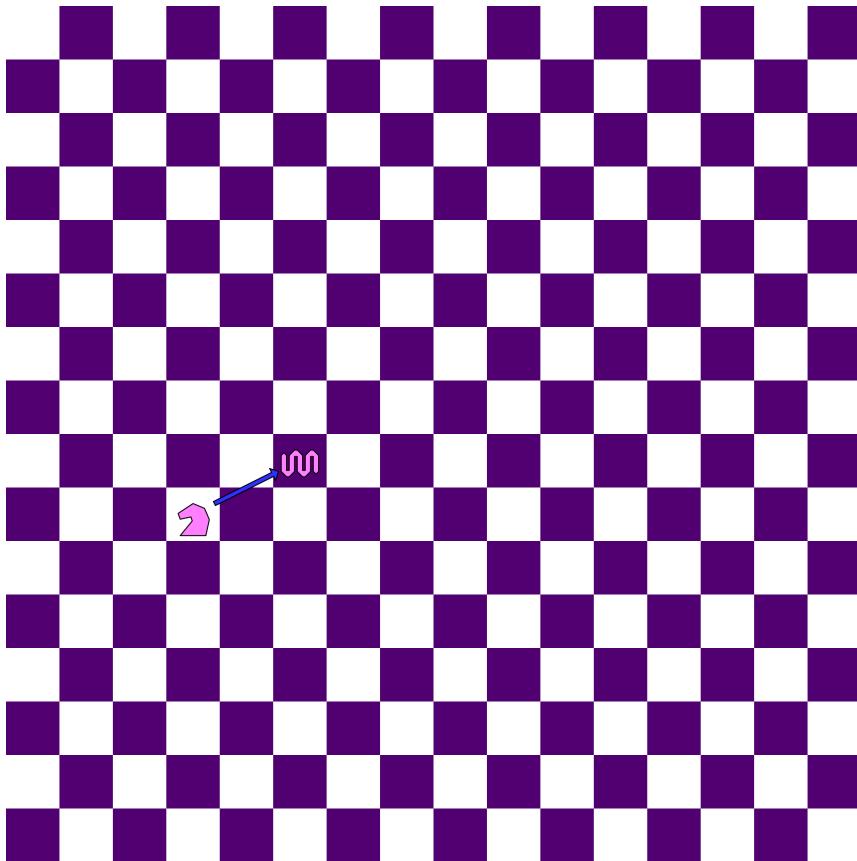


Figure 76: Knight activating Wave

Wave can make multiple steps in a ply, even if activated by a piece which can make only one step. Activated Wave can take one chosen direction, which cannot be changed later.

Here, Knight is about to activate Wave, and transfer to it one momentum.

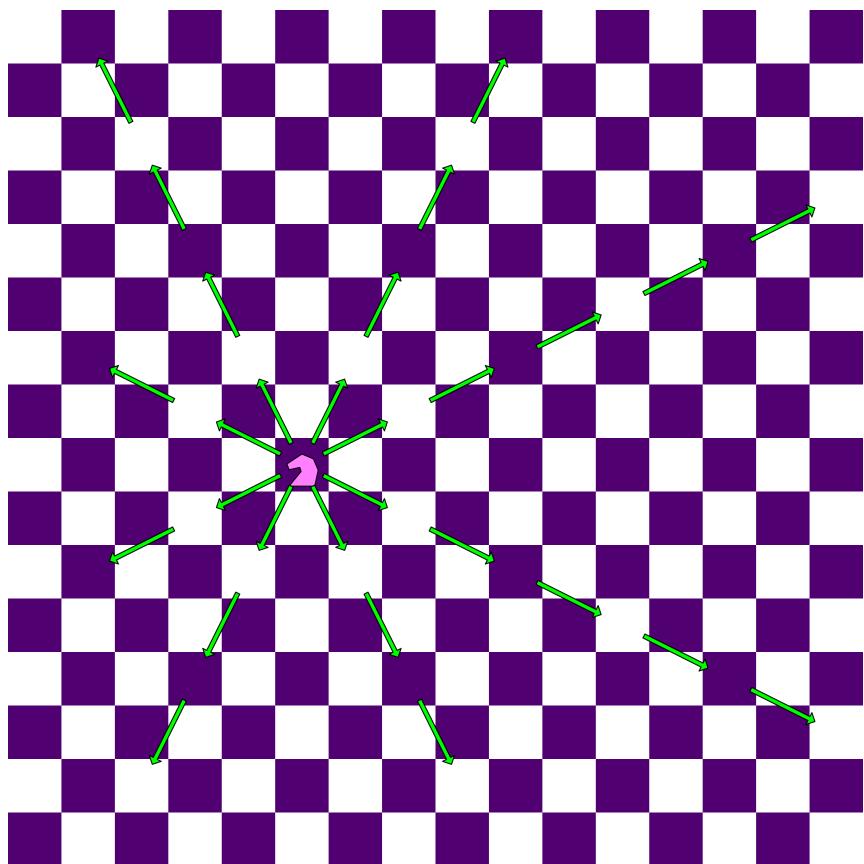


Figure 77: Wave activated by Knight

Here, Wave (now "in the air") activated by light Knight can choose one semi-diagonal (corresponding to steps Knight can make), and then move over multiple step-fields, up to the edge of chessboard. So, Wave activated by Knight moves like a Pegasus.

## Activated by King

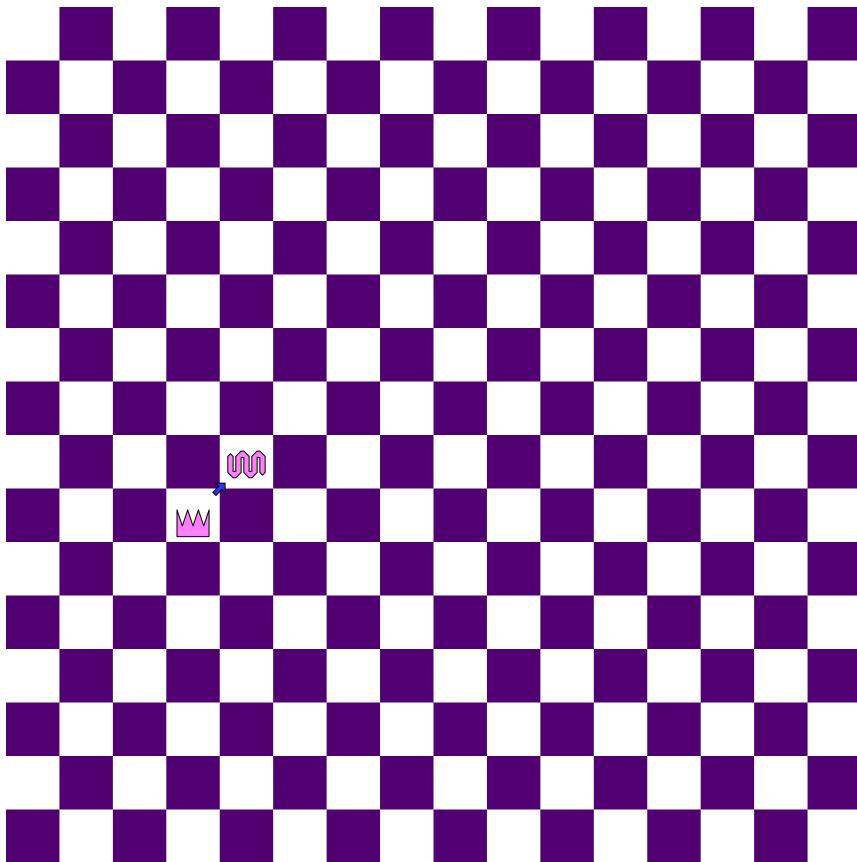


Figure 78: King activating Wave

Similarly, Wave activated by King can choose one direction along diagonals, horizontal or vertical lines (corresponding to steps King can make).

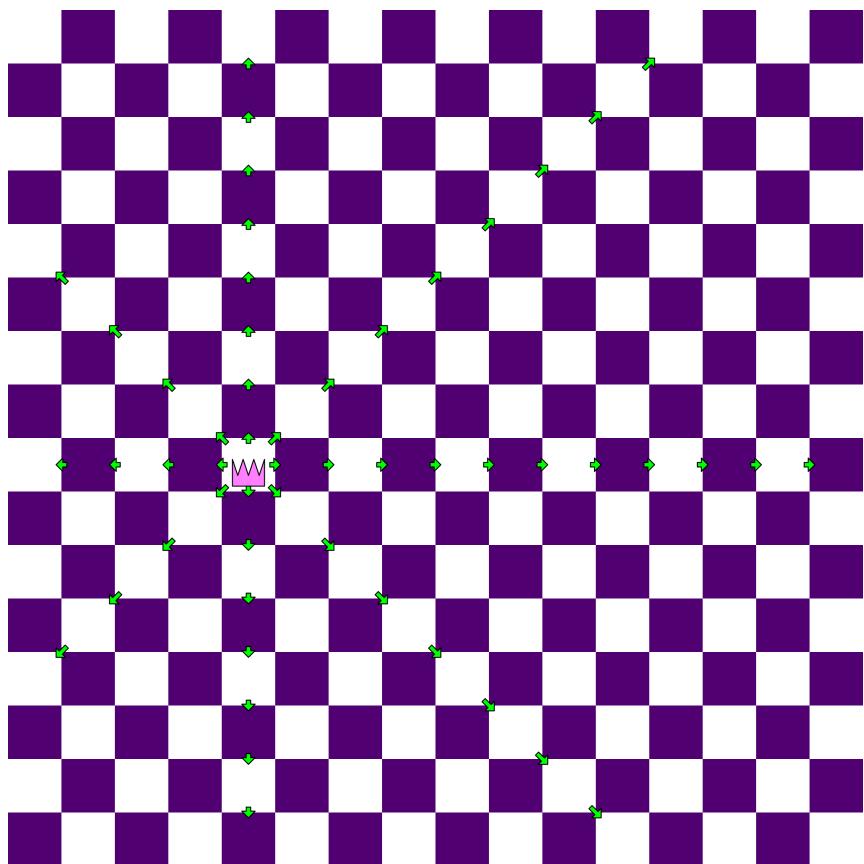


Figure 79: Wave activated by King

Then, Wave (now "in the air") activated by King can move over multiple step-fields, up to the edge of chessboard. Direction taken by activated Wave cannot be changed for duration of a ply. So, Wave activated by King moves like a Queen.

## Activated by Pawn

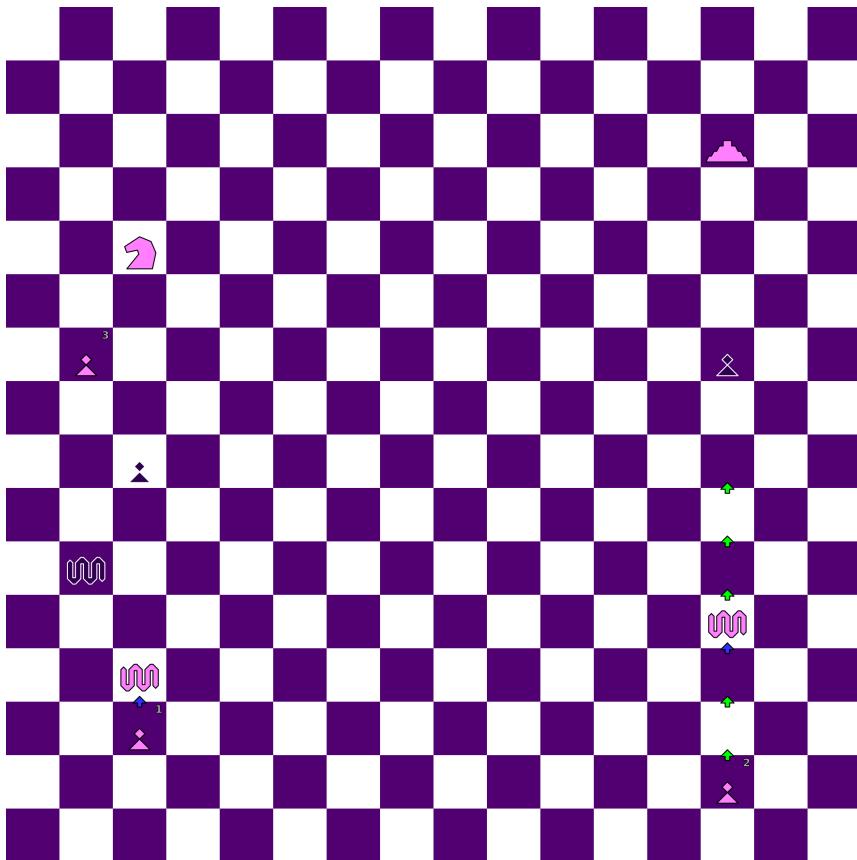


Figure 80: Pawn activates Wave on step-field

Image above and the next one both have two examples presented in parallel; on the left, and to the right.

Pawn can activate Wave on its step-fields. Ordinary step would give 1 momentum to Wave (Pawn 1), while rushed Pawn would give **count of traveled-over step-fields** as momentum, in this case 3 (Pawn 2). Since Wave is transparent, rushed Pawn does not have to activate Wave, and can continue rushing further instead.

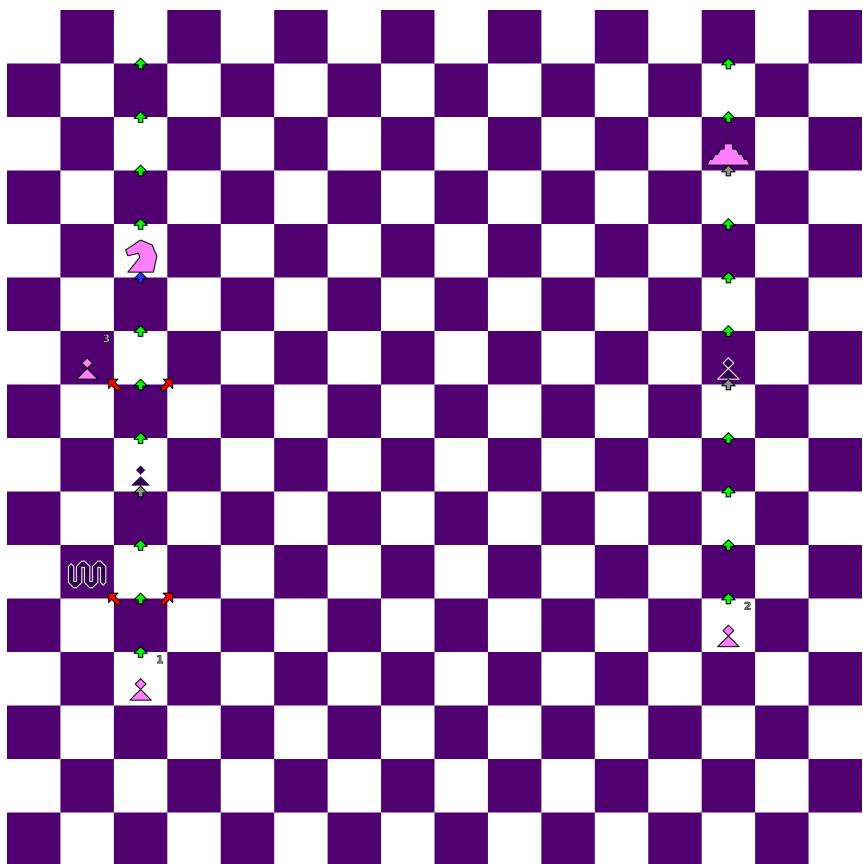


Figure 81: Wave activated on Pawn's step-field

Wave activated on Pawn's step-fields can move only forward, towards opponent's initial positions, until the end of a chessboard. Wave could also activate light Knight, transferring to them 1 received momentum; Wave cannot activate Pyramid. Wave cannot change its direction to Pawn's capture-fields, even if pieces are present on them. So, Wave cannot activate neither opponent's piece (dark Wave), nor own (Pawn 3).

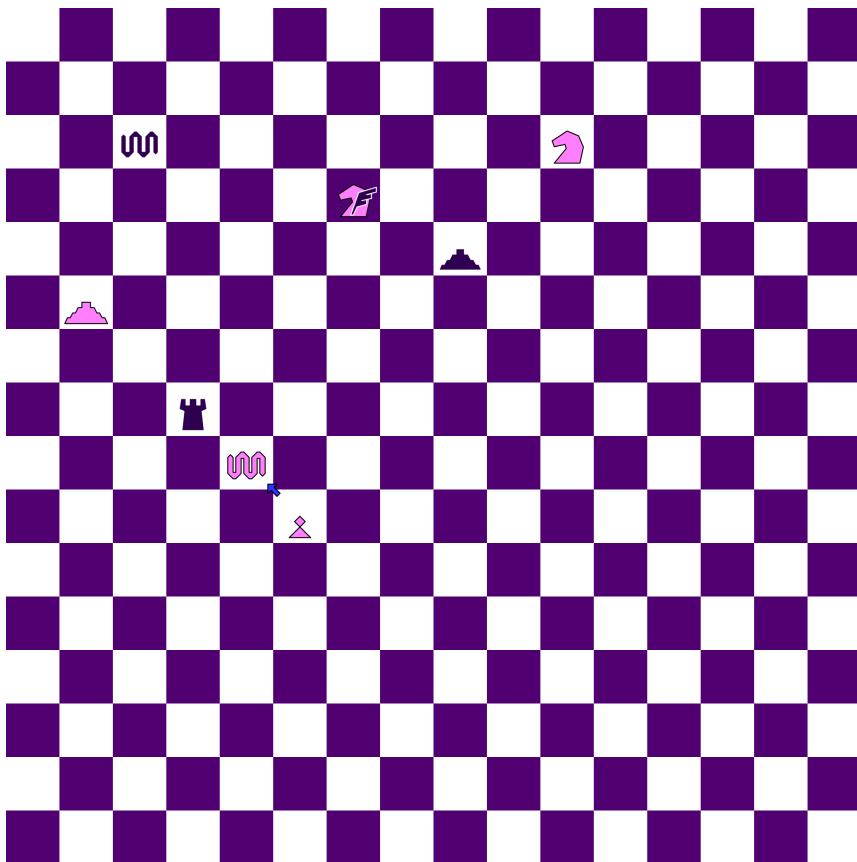


Figure 82: Pawn activates Wave on capture-field

In this example, Wave can be activated by Pawn on its capture-field, receiving 1 momentum.

Once activated, Wave can move forward diagonally (towards opponent's **figure row**), either to the left or to the right, until the end of the board, regardless if capture-fields are empty, or if own or opponent's pieces are present.

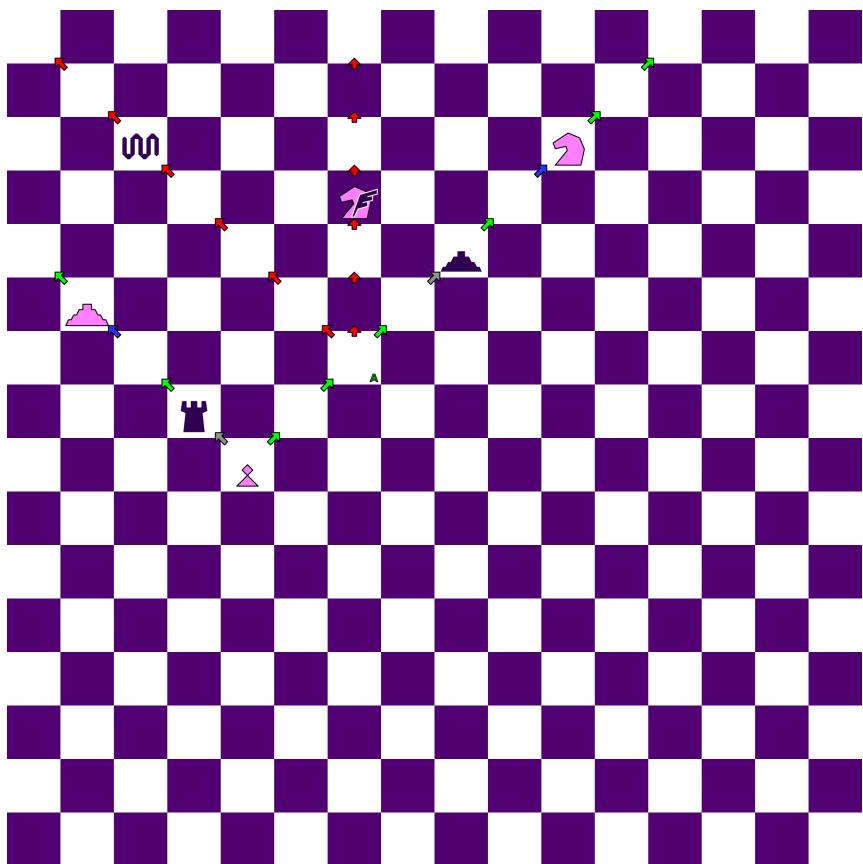


Figure 83: Wave activated on Pawn's capture-field

Wave activated on Pawn's capture-fields (now "in the air") can also activate Pyramid in addition to ordinary pieces (here, light Knight). Once in motion, Wave cannot change initially chosen direction. Here, upon reaching field A, Wave cannot change direction to Pawn's step-fields, or to Pawn's other capture diagonal. So, Wave can't activate neither light Pegasus, nor dark Wave.

## Activated by Unicorn

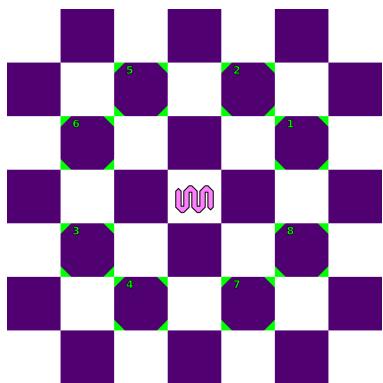


Figure 84: Wave short jump

Wave, activated by Unicorn on a field with the same color as Wave, has the same step-fields as Knight has.

Wave activated on a field in opposite color can jump much longer, and has the same step-fields as Unicorn has. For comparison, short steps are also numbered (grey).

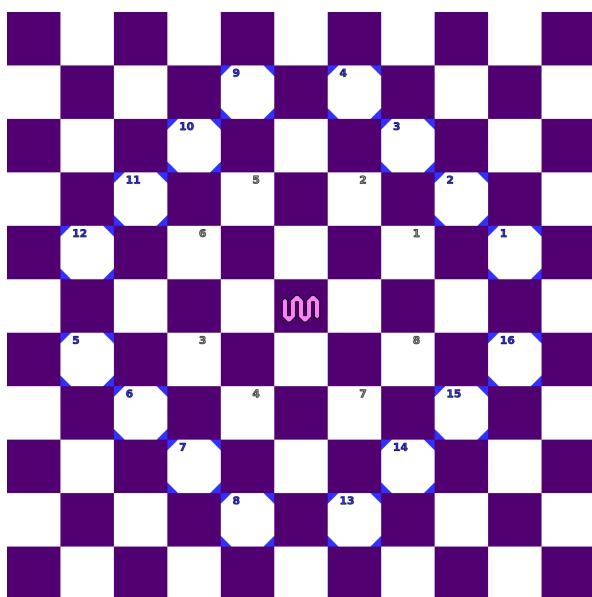


Figure 85: Wave long jump

On two initial steps, Wave can freely choose any marked fields, regardless if it's long or short step. If Wave was positioned on a same-color field, first step would be short, and second one long; vice versa if Wave started on an opposite-color field. On all subsequent steps, Wave has to keep alternating between the two initially chosen steps, for the remainder of a ply.

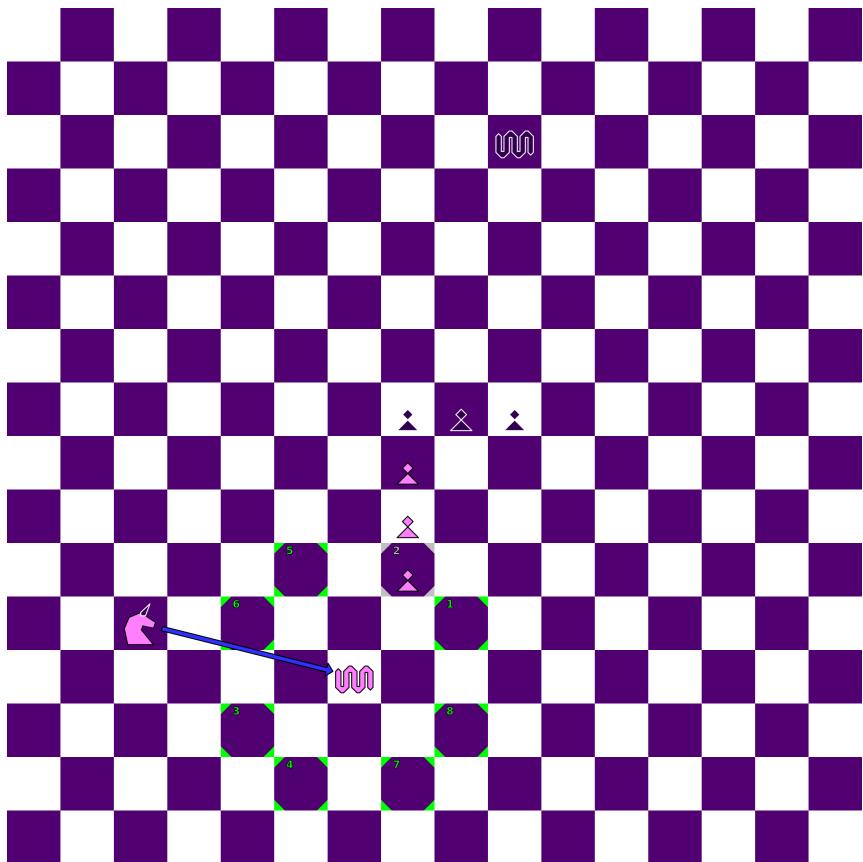


Figure 86: Unicorn activates Wave

Here, light Wave is activated by Unicorn on the same-color (light) field, so all available step-fields are short jumps, i.e. the same as Knight. For first step, Wave can choose any of marked step-fields, including the one occupied by own piece (light Pawn on field 2). Normally, own piece could be activated, leaving Wave in its position. In this particular case, light Pawn is blocked from moving, so it can't be activated. Light Wave can still choose field 2 as a first step, only it has to move past light Pawn on it.

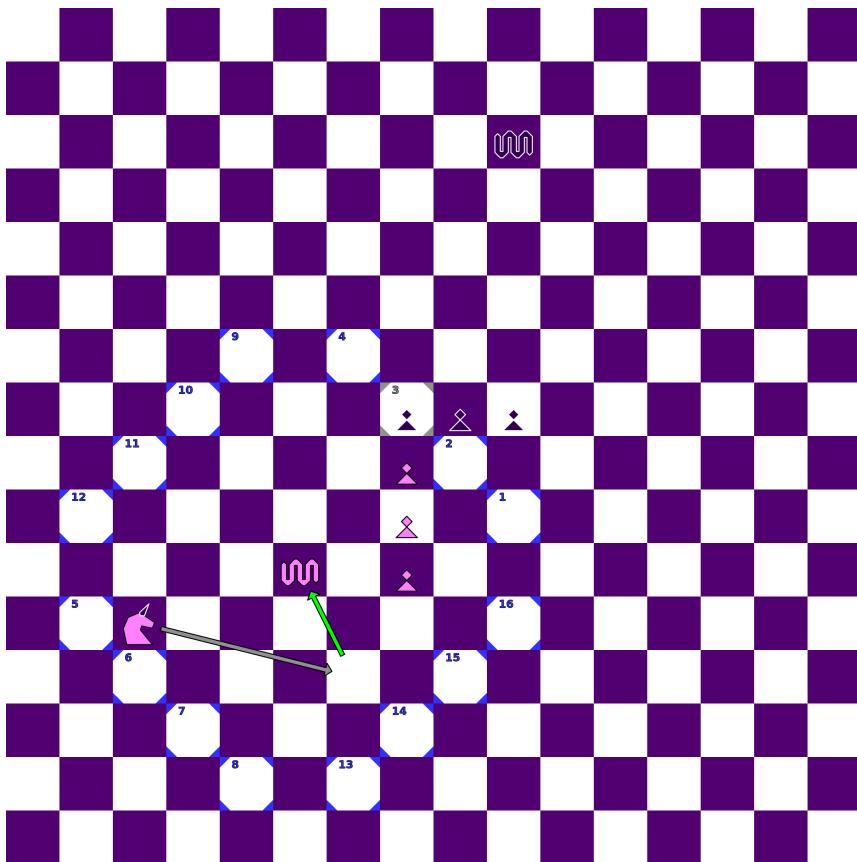


Figure 87: Wave activated by Unicorn, step 1

Here, after first step, light Wave is located on an opposite-color (dark) field, so all available step-fields are long jumps, which are the same as those of Unicorn. Dark Pawn on field 3 can't be activated, because it's opponent's piece. Just as with light Pawn in previous example, that does not prevent light Wave to choose field 3 as its second step, only it has to move over dark Pawn on it, and continue moving further.

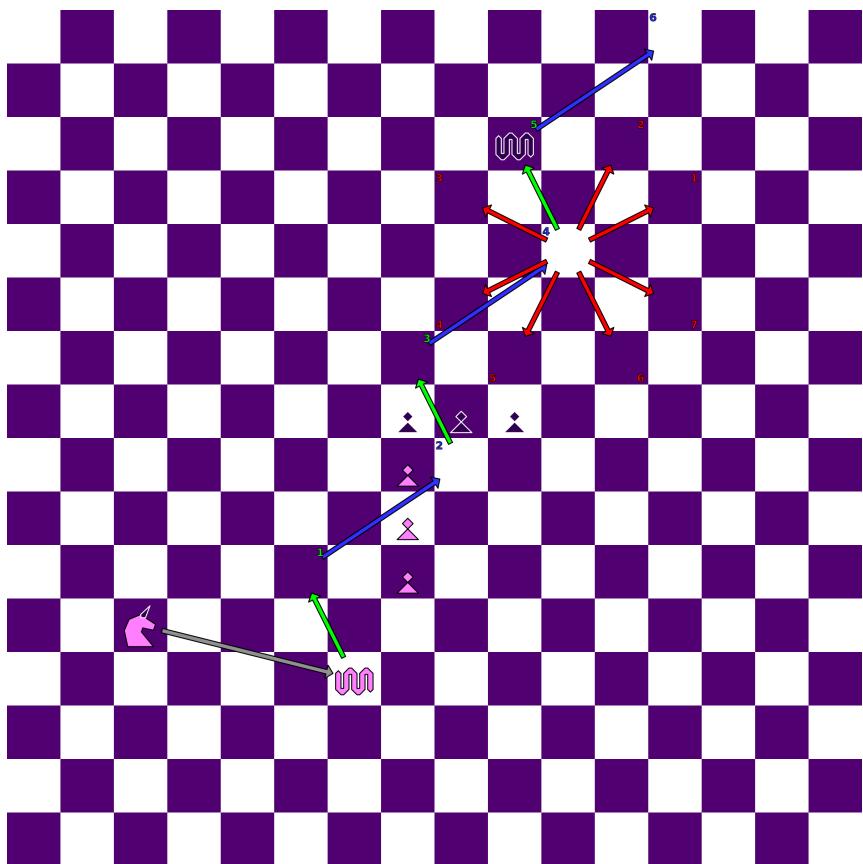


Figure 88: Wave activated by Unicorn, complete ply

After second step is chosen, complete movement of Wave consists of alternating between the two initially chosen steps, which Wave for the rest of a ply has to follow, e.g. after reaching field 4, it cannot move to any other step-field (red). Light Wave could also activate dark Wave, in which case it would end its ply on dark Wave's field, and dark Wave would move away. Pieces on all other non-step fields are ignored (Pawns).

## Out of board steps

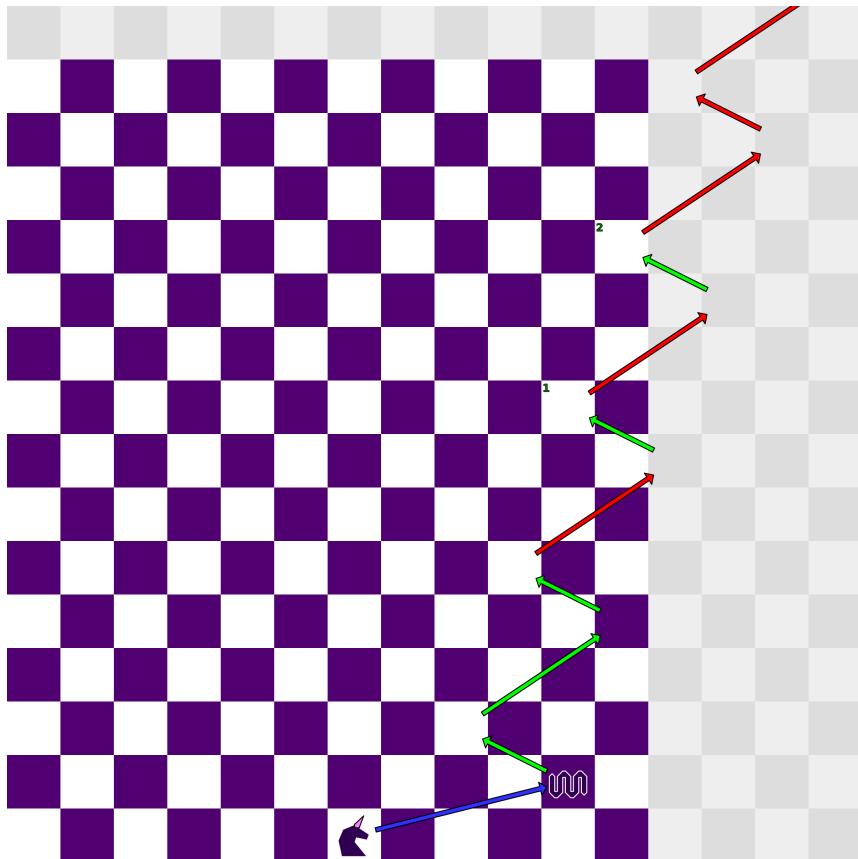


Figure 89: Wave off-board steps

Here, light grey fields are virtual fields extending existing chessboard. For Wave, it's legal to step outside of a board, and all subsequent steps are also legal, as long as its ply ends on a board. So, Wave activated by Unicorn can reach fields 1 and 2, even though it stepped outside of the board. It is illegal for any piece, including Wave, to end its ply outside of a board.

## Cascading Waves

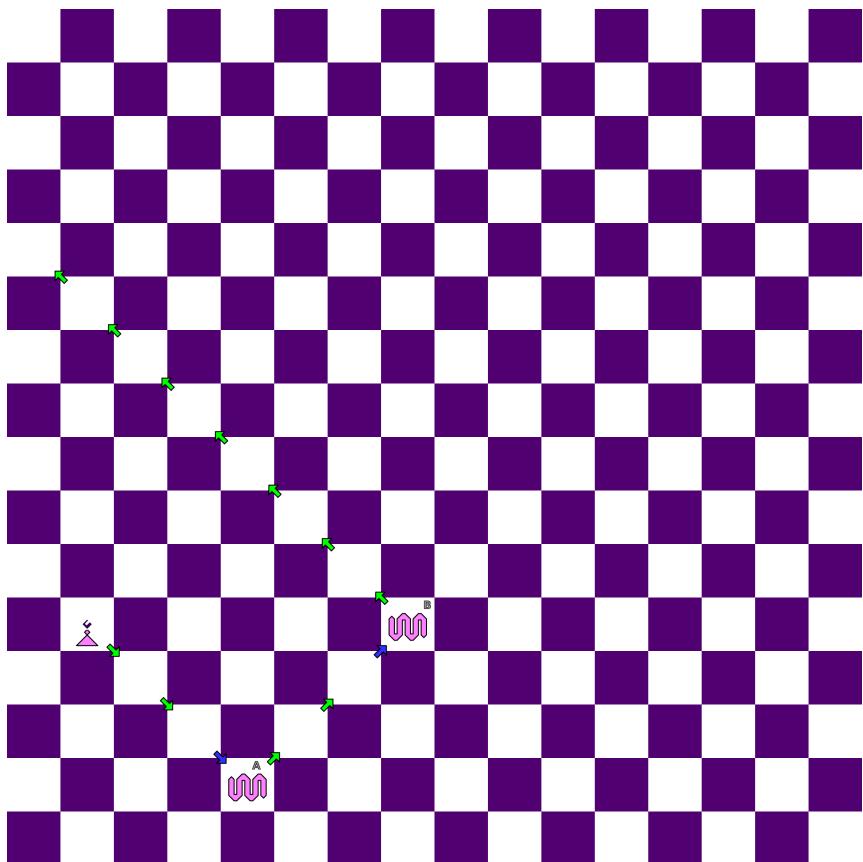


Figure 90: Cascade start

A Wave can also activate other Wave; movement of an activated Wave is the same as activating Wave. Generally, activated Wave inherits way of movement from activating piece.

Here, Wave B moves like a Bishop, because activating Wave A moved like a Bishop, since it was activated by one.

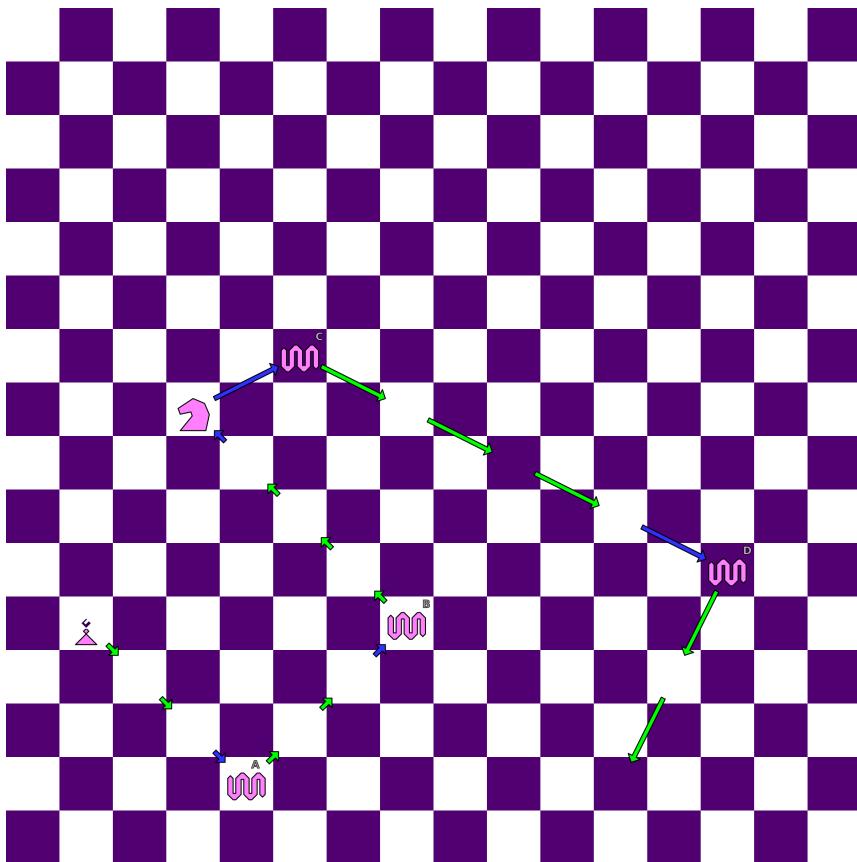


Figure 91: Active piece cascaded

When piece activated in a cascade is not a Wave, it has its own rules of movement, and Waves activated afterwards inherit them from that activating piece; such a piece is called activator.

Here, Waves activated after Knight moves like multi-step Knight (i.e. Pegasus), since Waves are not restricted to only one step, even if activator is. For Waves A, and B activator is Bishop, while for Waves C, and D activator is Knight.

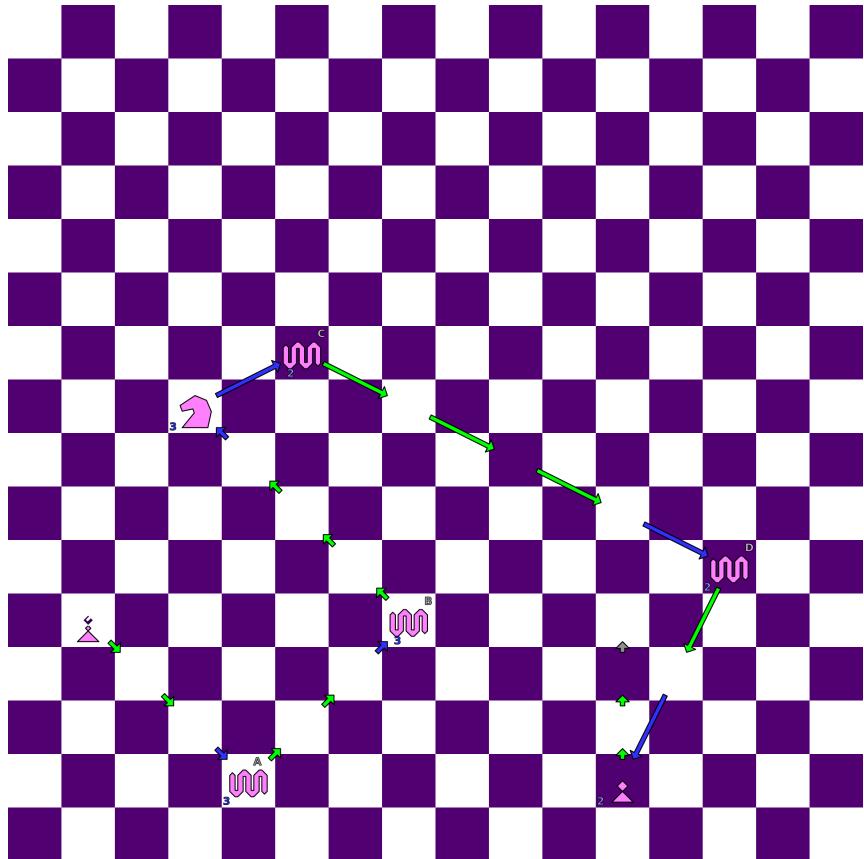


Figure 92: Cascade end

First piece in a cascade gathers momentum over step-fields traveled. All pieces transfer all of momentum remaining after movement to the next piece in a cascade. Wave doesn't spend received momentum for movement, but all other pieces do.

Here, numbers in lower, left corner are received momentum. Bishop gathered 3 momentum, 1 has been spent by Knight, and so activated Pawn can be rushed for only 2 fields.

## No momentum

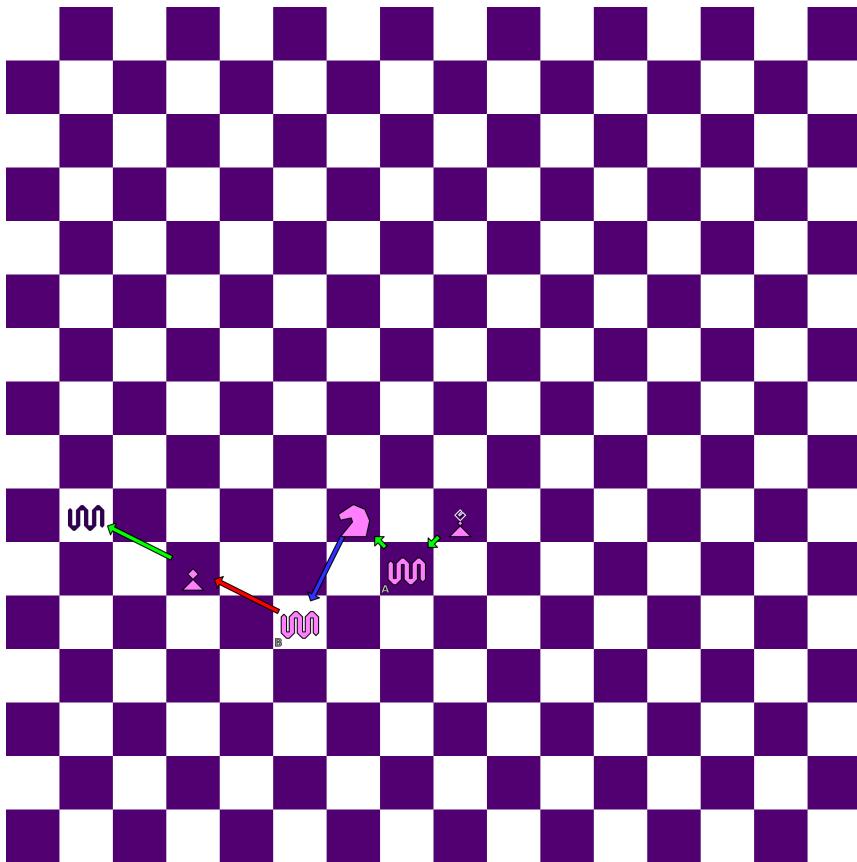


Figure 93: No momentum

Wave can be activated with no momentum, if so it can activate only other Waves, but cannot activate material pieces. Here, one momentum originating from Bishop has been already spent by Knight, so Wave B is activated with no momentum, and so it cannot activate Pawn. Wave B can pass-by Pawn, and activate dark Wave, also with no momentum.

## Single-step piece and momentum

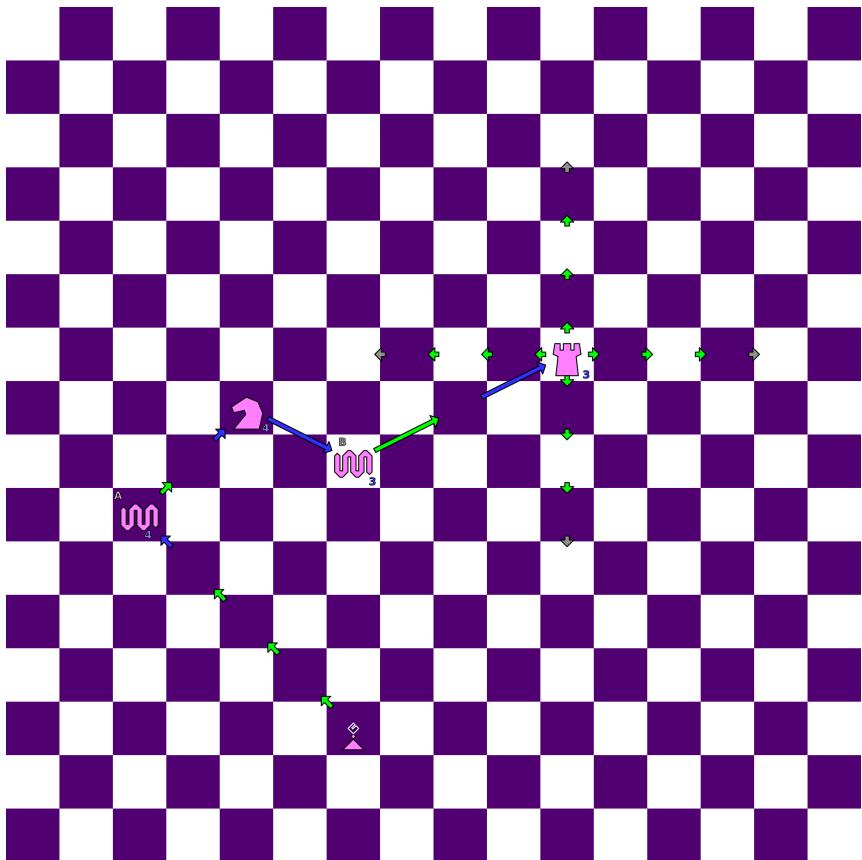


Figure 94: Single-step piece and momentum

All pieces can receive any amount of momentum, and transfer all of unspent momentum after movement to the next piece in a cascade; this includes pieces which can only make single step in a ply, like Knight.

Here, numbers in lower right corner are received momentum; Knight received 4 momentum, and transferred remaining 3 to next Wave in a cascade, even though it can make only one step in a ply.

## Activating Pawn

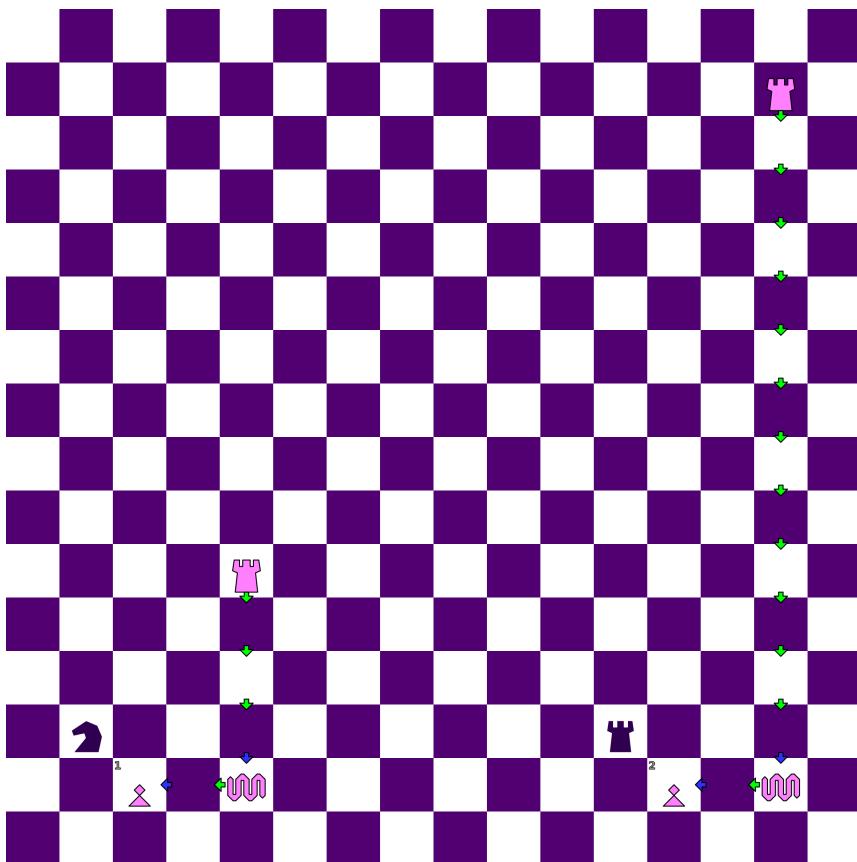


Figure 95: Activating Pawns

Image above and the next one both have two examples presented in parallel; on the left, and to the right.

Activating Pawn in its initial position gives it ability to capture opponent's piece or rush, i.e. perform longer initial movement. Pawn can be rushed only for momentum received, but no more than longest rush move available, in this variant up to (and including) 6 fields.

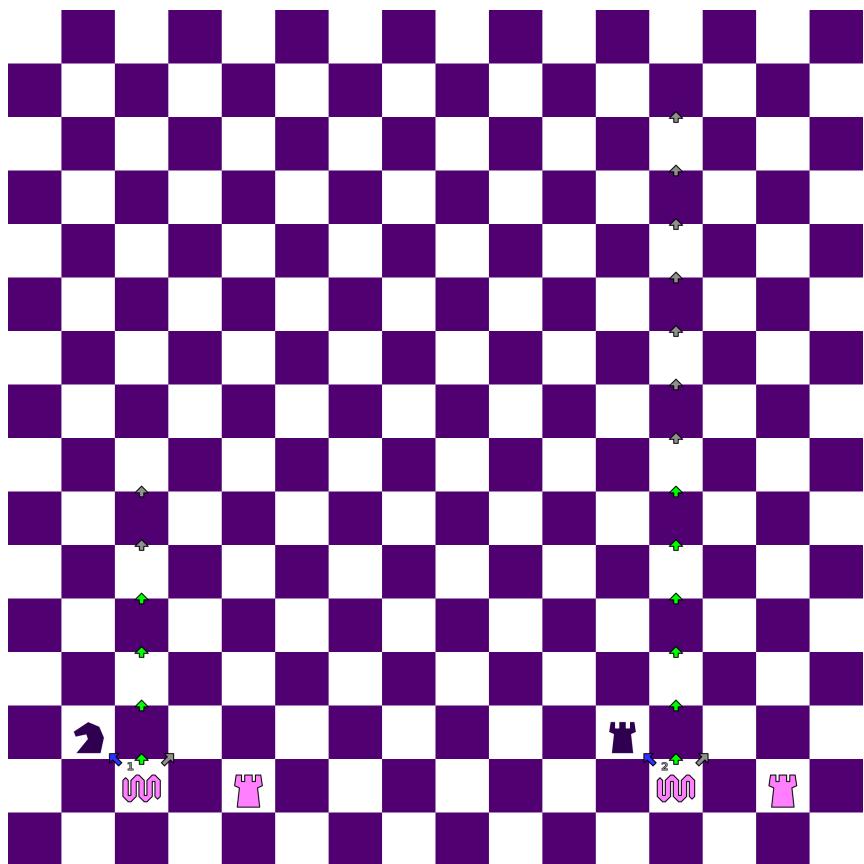


Figure 96: Pawns activated

Pawn 1 received 4 momentum, and so when rushing it the furthest 2 fields are out of reach. Pawn 2 had 13 momentum, but could use only 6 for rush, since this is the longest rush movement available in this variant.

## Activating Pyramid

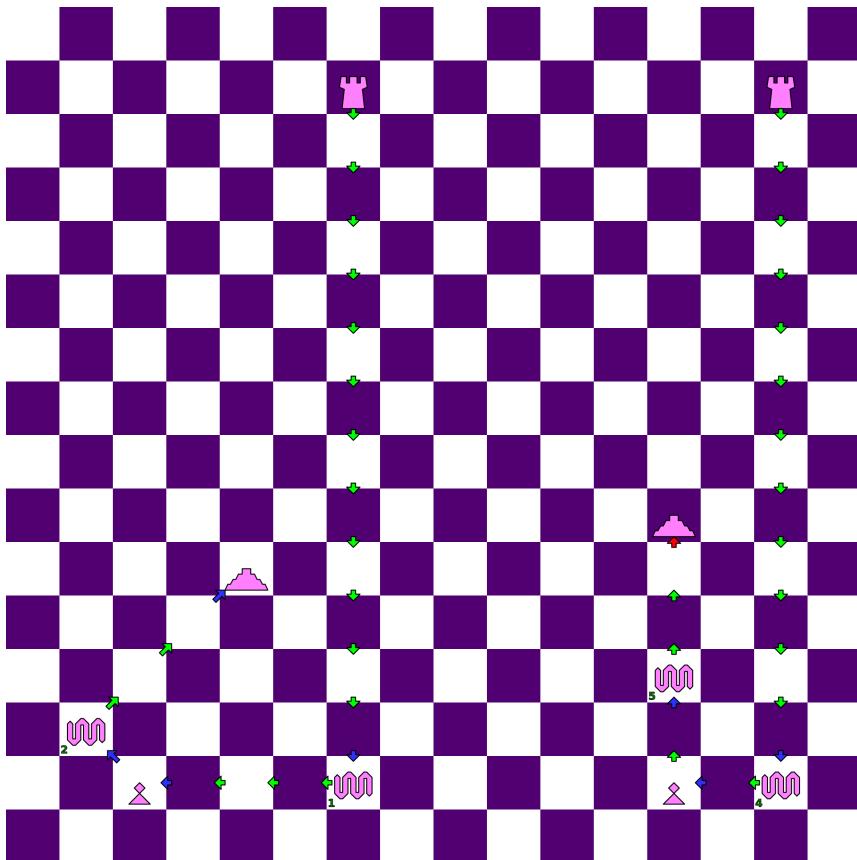


Figure 97: Activating Pyramid by Pawn

Image above and the next one both have two examples presented in parallel; on the left, and to the right.

Pawn cannot activate Pyramid on its step-fields, regardless **if it's direct activation**, or in a cascade (right example, above). All pieces, including Pawn, can activate Pyramid on their capture-fields, both in **a direct activation**, or in a cascade (left example, above).

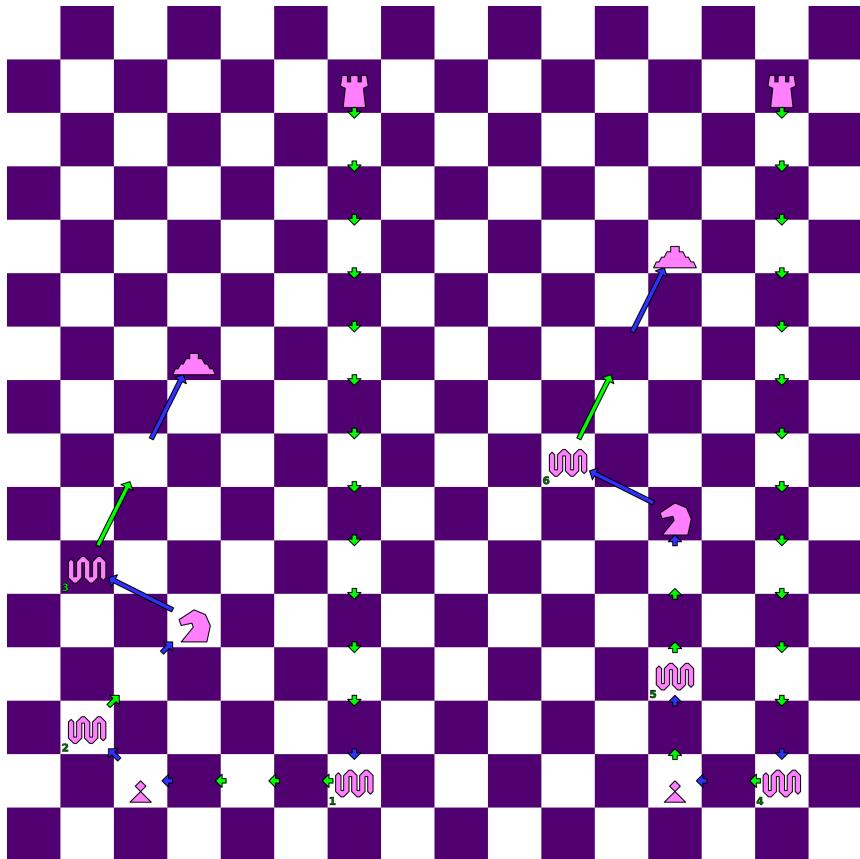


Figure 98: Activating Pyramid by cascading Pawn

All pieces can activate Pyramid on their capture-fields, even if a Pawn in cascade used step-fields to continue (or start) said cascade (right example, above).

So, if Pyramid can be activated depends solely if last active piece (preceding that Pyramid in a cascade) traveled over its step- or capture-fields. This is so for all subsequent activations, what Wave can activate is what last active piece preceding it in a cascade could activate, with addition of opponent's Wave.

## Activated by Pyramid

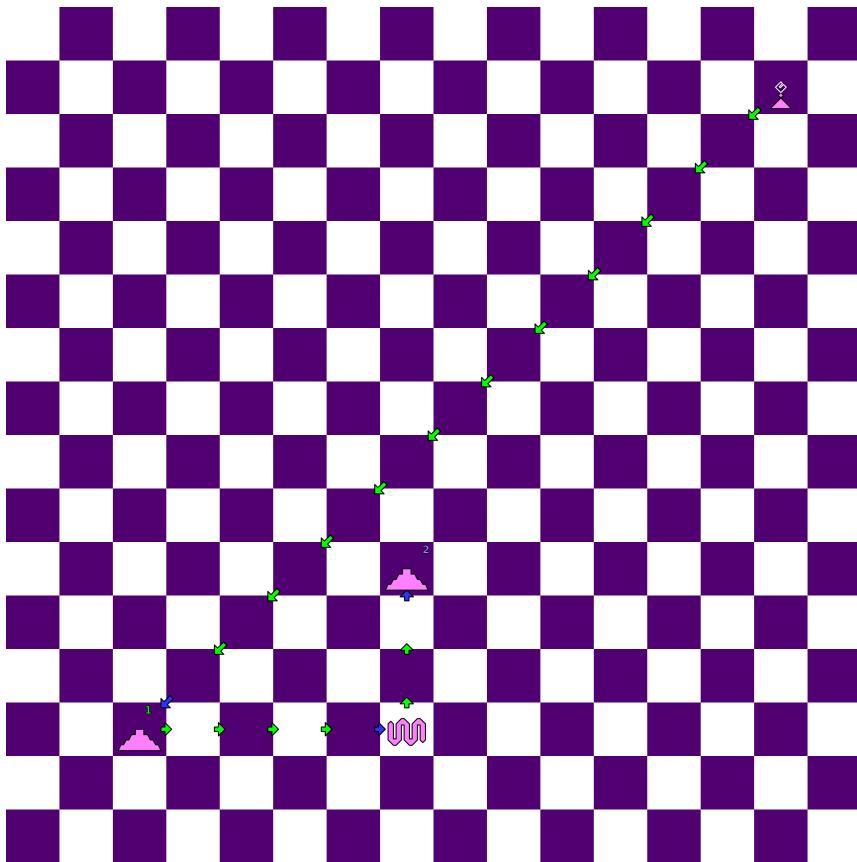


Figure 99: Activated by Pyramid

Pyramid can capture opponent's pieces, so Wave activated by Pyramid is activated on a capture-field, and can activate another Pyramid.

Note, Wave inherits its movement from last material (non-Wave) piece in a cascade (here, Pyramid 1) even though it's passive piece, and not from the last active piece in a cascade (here, light Bishop).

## Reactivating pieces

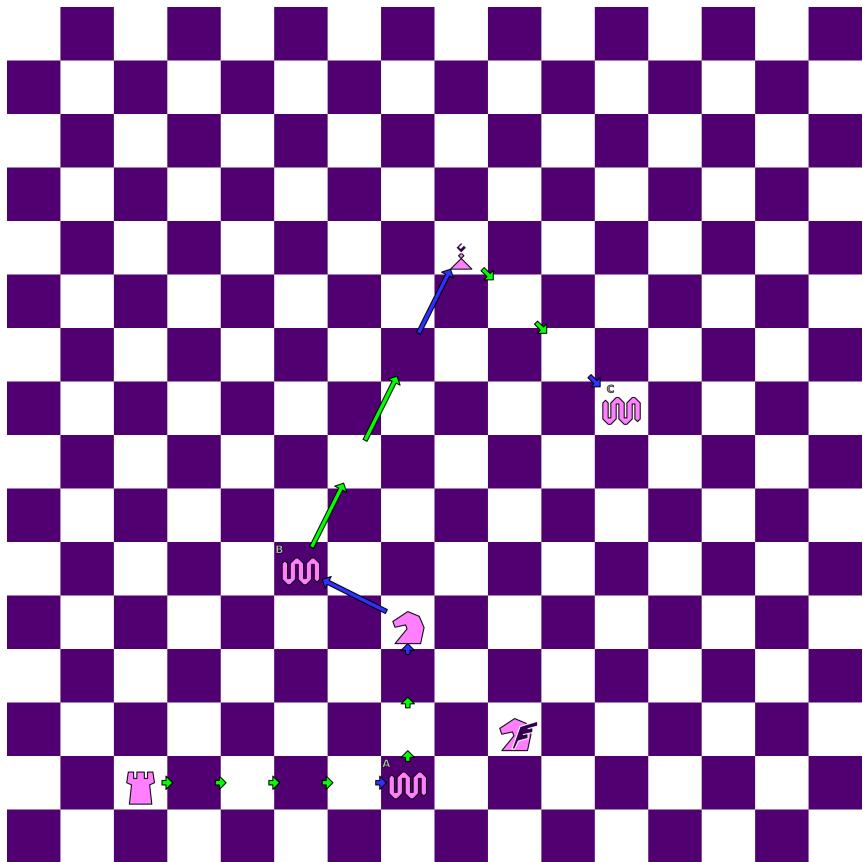


Figure 100: Start reactivating piece

During cascade, after each ply activation takes place according to current position of pieces on a chessboard, just as it would at the beginning of a move. Every piece activated in a cascade can choose any legal direction of movement independently of any previous choice.

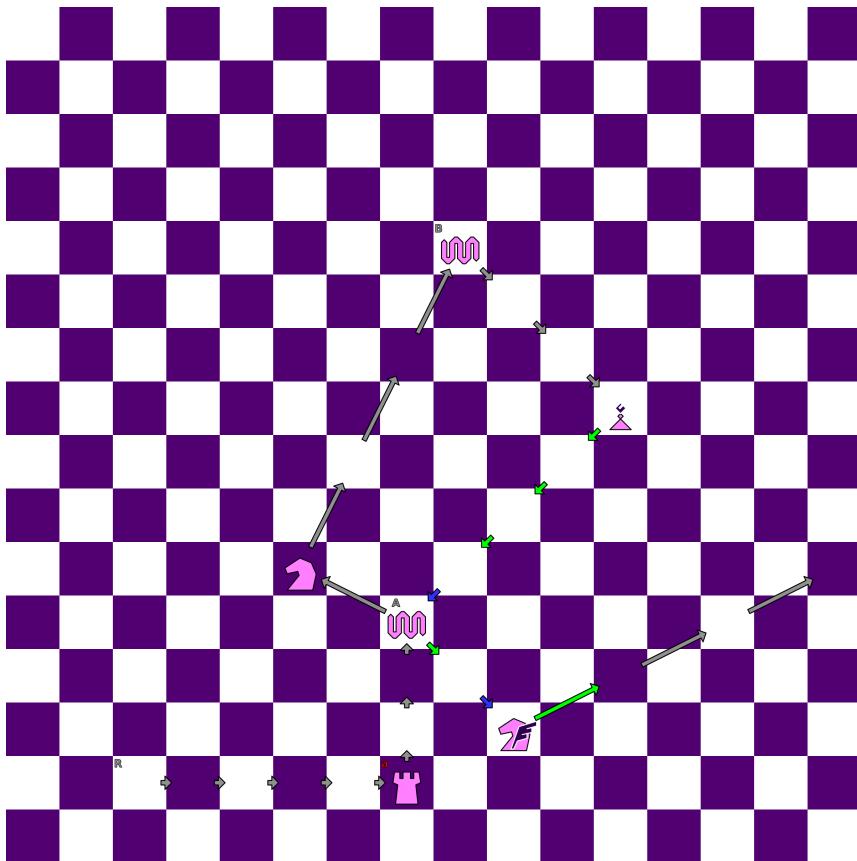


Figure 101: Reactivating piece steps

It's possible to re-activate piece which already participated in the same cascade; reactivation takes place on a field occupied by piece at the beginning of that ply.

Here, Wave C (now "in the air") is about to reactivate Wave A, which can then e.g. cascade Pegasus. Since Wave A has already been moved in cascade from its initial position "a", so reactivation takes place on a changed position, i.e. current at the beginning of reactivating ply.

## Cascading pinned piece

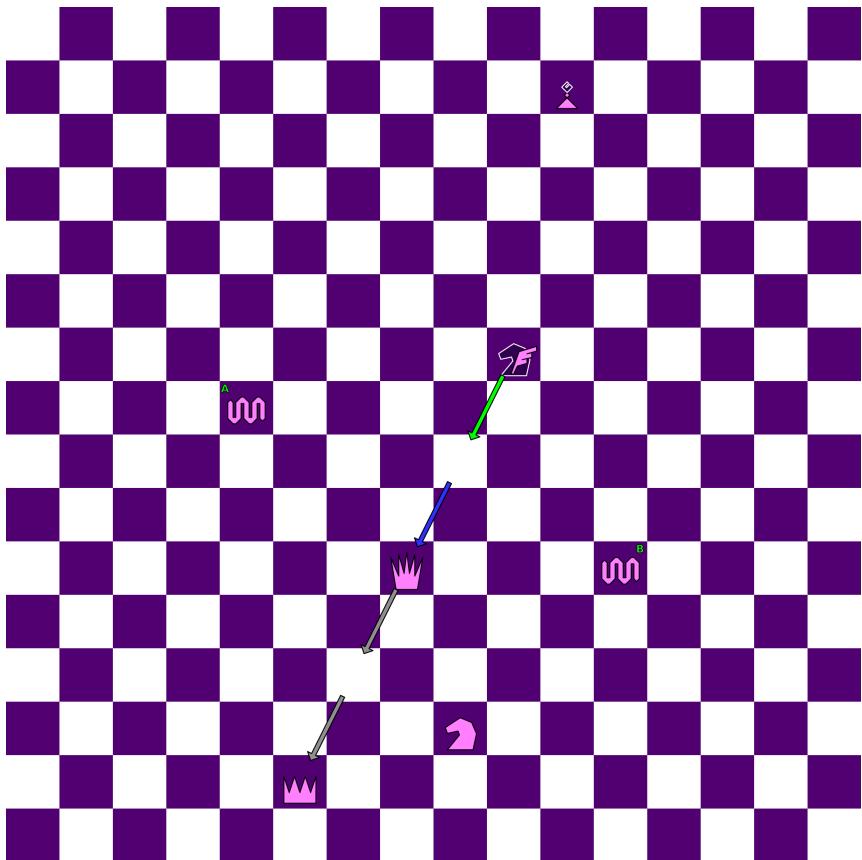


Figure 102: Light Queen is hard-pinned

A piece hard-pinned to its King cannot move in a normal, non-cascading move, since that would leave King checked. Whether King is checked or checkmated is determined only after a move (a cascade) has been finished. So, in a cascade one could replace hard-pinned piece with any other material piece; Wave can't be used since it's transparent.

Here, light Queen is hard-pinned.

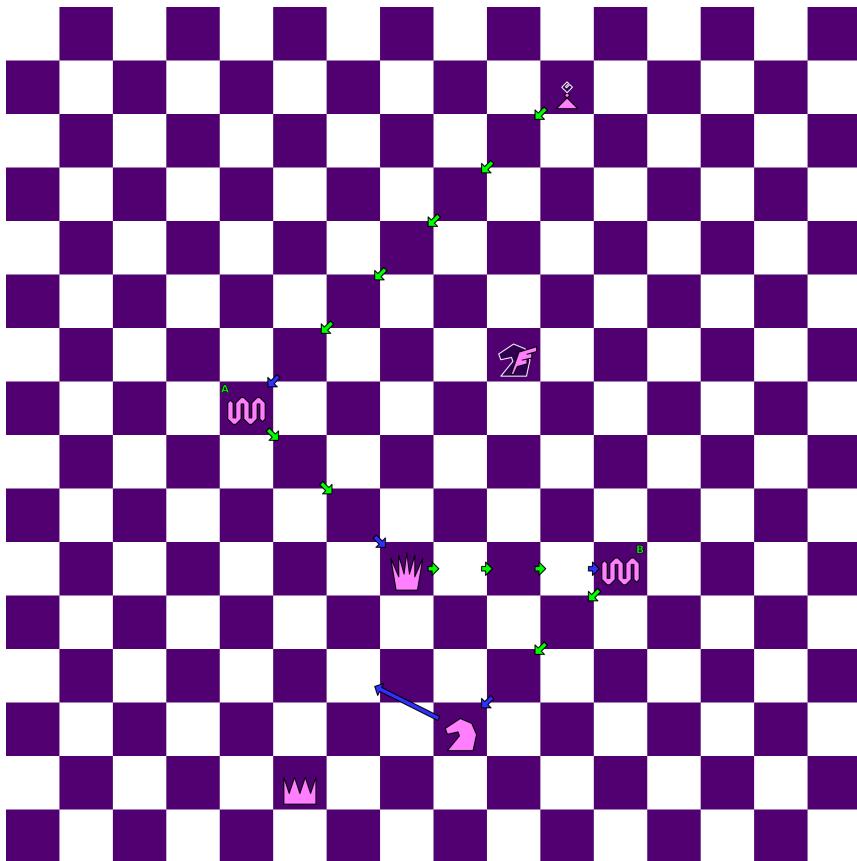


Figure 103: Cascading pinned piece

During cascade, Wave can be the only piece on a pinning path (i.e. on opponent's capture-field), as long as any material piece is pinned after that cascade has been finished. Pinned piece doesn't have to be replaced at the same field; blocking any capture-field which leads to own King will do.

Here, light Wave A is the only piece on dark Pegasus' capture-path after it activates Queen; this is fine, Knight will be pinned after light player's move has been finished.

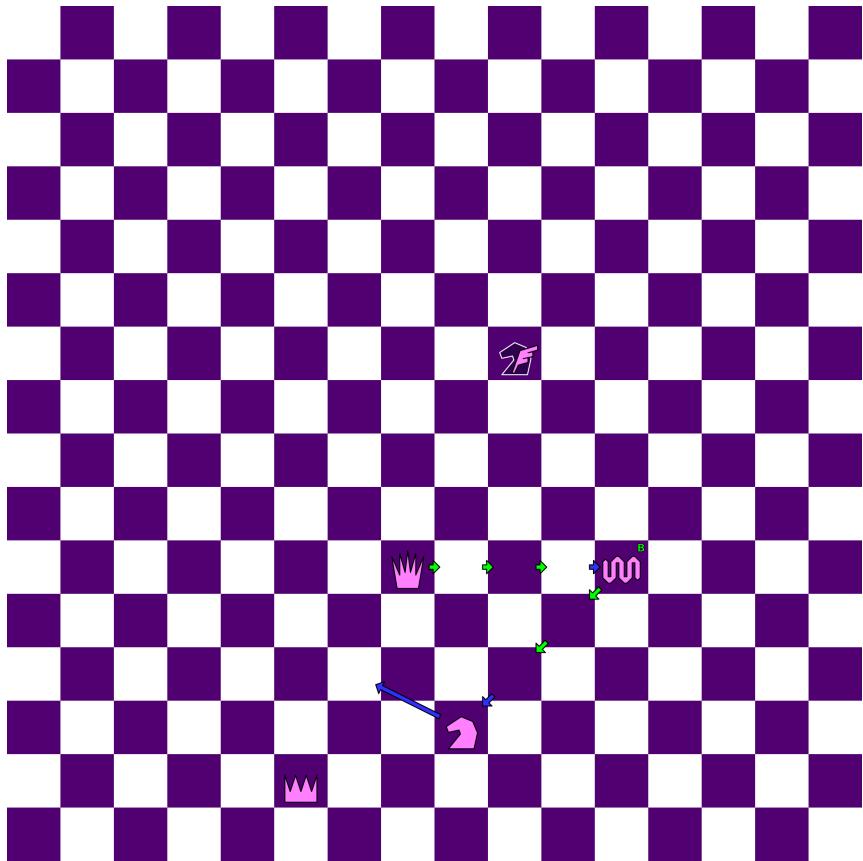


Figure 104: Pinned piece starts a cascade

It's possible for pinned piece to start a cascade, leaving opponent's capture-path empty. Similarly to previous example, this is also fine, as long as some other material piece is pinned after that same cascade has been finished.

## Activating piece, check, and checkmate

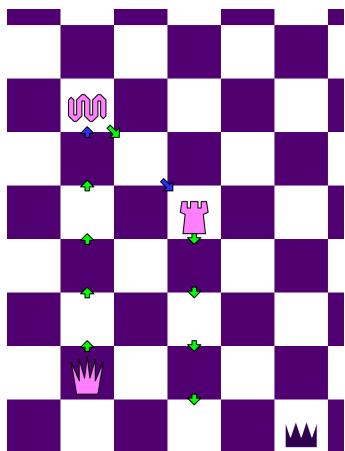


Figure 105: King not in check

Opportunity to check (or checkmate) after activation is still not an attack on opponent's King.

Opponent's King can be checked (or checkmated) only if it's located on a capture-field of active piece when move is finished.

Passive pieces **cannot neither check nor checkmate** opponent's King, even if they have capture-fields (e.g. Pyramid).

Here, dark King is not in check yet, even if it would be located on light Rook's capture-field after activation and repositioning.

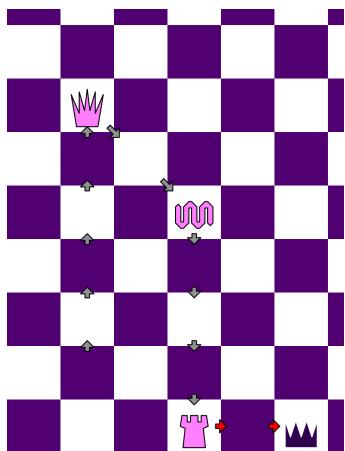


Figure 106: King checked

Only after all pieces in cascade has settled, and move has finished, can a piece check (or checkmate) opponent's King.

On the left, grey arrows show path traveled over by a piece they point to. Light player's move has been finished, now is dark player's turn. Dark King is now positioned on light Rook's capture-field, so now it's in check.

## Cascade check, checkmate

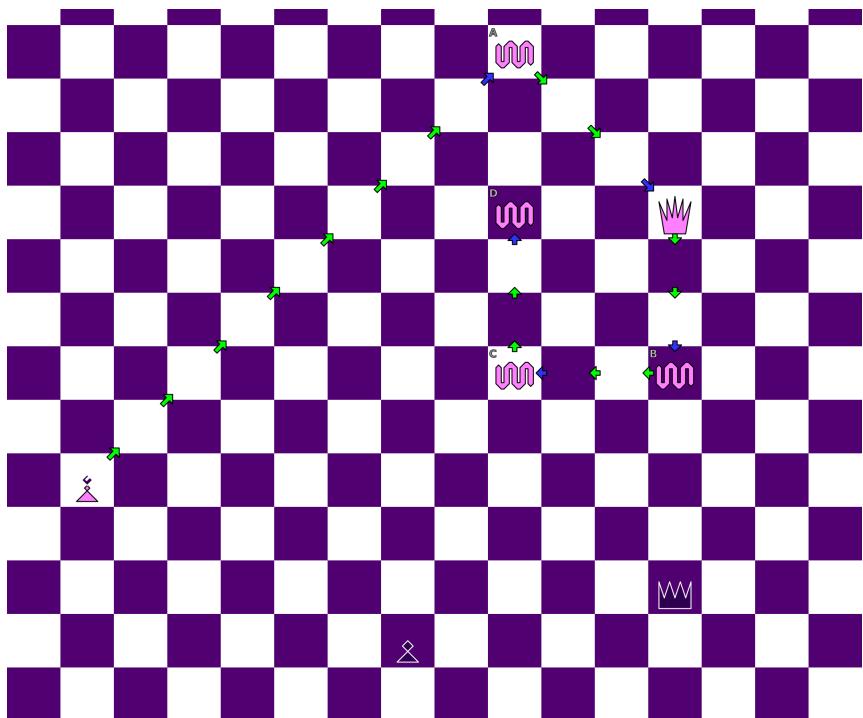


Figure 107: Activating Queen

Again, King is checked (or checkmated) only after cascade has finished; just like after normal, non-cascaded move. During cascade, piece can be reactivated on a temporary field, and thus repositioned to a new field. So, a piece can temporarily be located on a field where it would check (or checkmate) King, if that would be its final destination for that cascade. When piece is repositioned from its temporary location, King is not affected, and game continues.

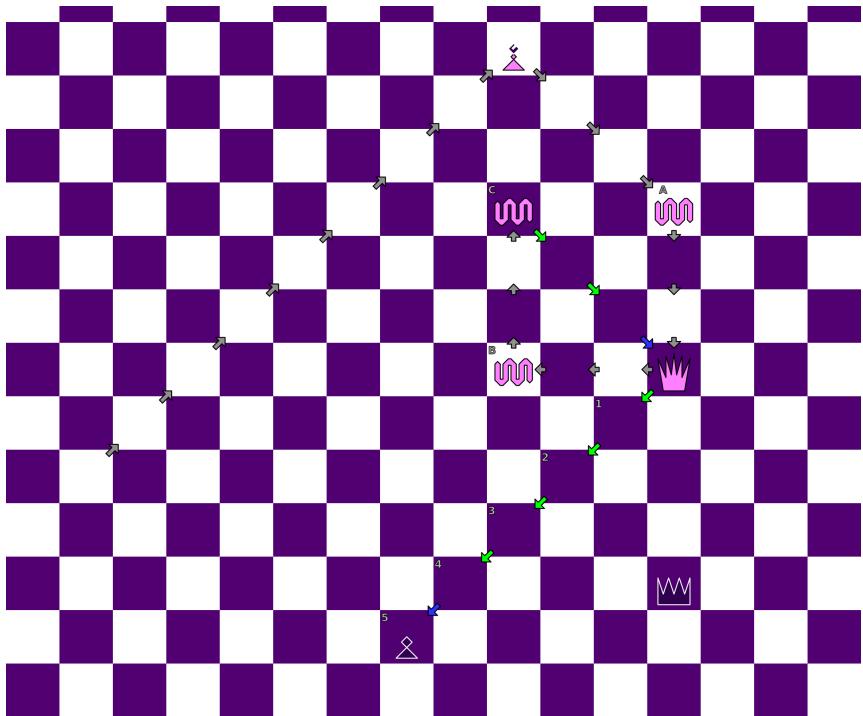


Figure 108: Reactivating Queen

Here, light Queen after being positioned on a temporary field does not attack dark King, because all of its momentum has been transferred to Wave B, then C and finally D. Wave D is now "in the air", about to reactivate light Queen with remaining 5 momentum; grey arrows show path traveled over by piece they point to. After reactivation, light Queen still won't attack dark King, even though it's located on light Queen's capture-field, and within range. This is so because being checked (or checkmated) is a status of a position, after all pieces had settled down, and move has been done. This means, cascade would have to finish with activated light Queen settling onto e.g. field 2, or 4, for that Queen to check dark King.

## Static move is illegal

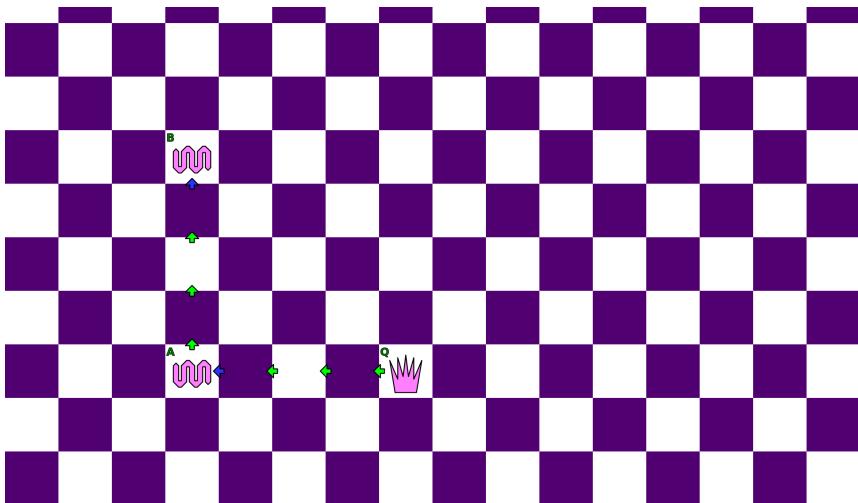


Figure 109: Static move start

Since pieces can be reactivated in a cascade, and after activation they can choose direction of movement independently from any previous choice, it would be possible to perform a move so that the same pieces occupy the same fields before and after such a move.

For instance, a piece could activate Wave, which could activate another Wave, which could then reactivate initiating piece, which could just make it back to starting position. Net result would be that Waves involved have just swapped places, all other pieces would be on their original fields. Since one piece is indistinguishable from the other of the same kind, for all intents and purposes that would be the same, as if no move has been performed.

Here, light Queen is about to activate Wave A, which can then activate Wave B.

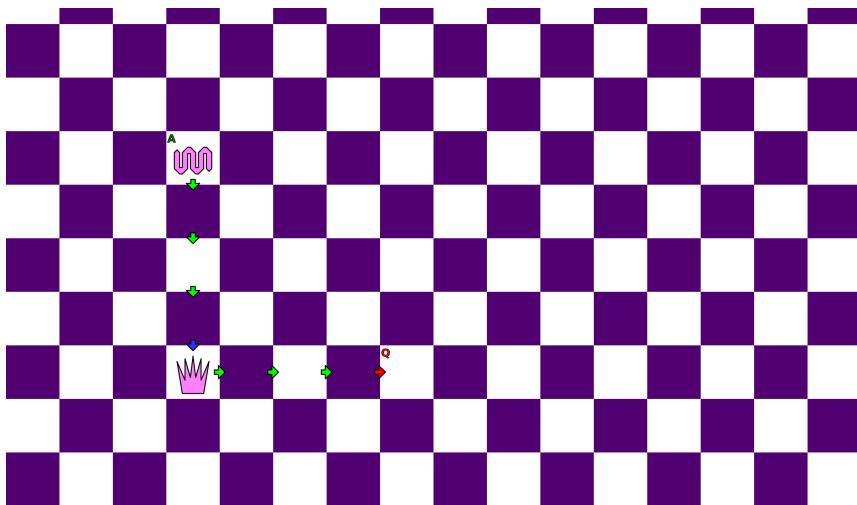


Figure 110: Static move is illegal

Here, Wave B (now "in the air") is about to reactivate light Queen, which would be able to return to its starting position; because Waves do not use momentum, and distance traveled by light Queen would be the same as it was while accumulating momentum.

However, this is illegal. Position after such a move would be virtually the same as before the move. It is forbidden for any piece starting a cascade (or moving on its own) to end move in the same position it had before the move. This restriction does not apply to any other piece activated in a cascade.

## Static piece is legal

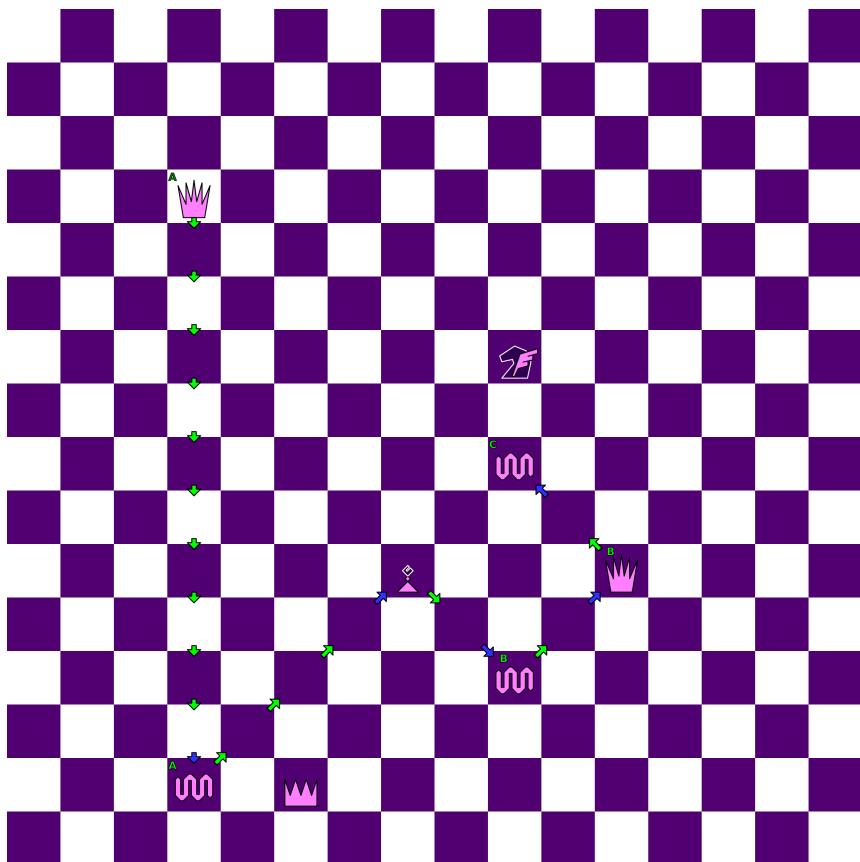


Figure 111: Static piece start

Static piece is a piece which was moved out of its position, but at the end of the same move it was returned to its starting field.

Here, first half of a cascade started by Queen A is shown. Note that light Bishop is **hard-pinned**, so it should return to its starting position, or one of Queens has to be used as a substitute for a pin, as **Waves can't do that**.

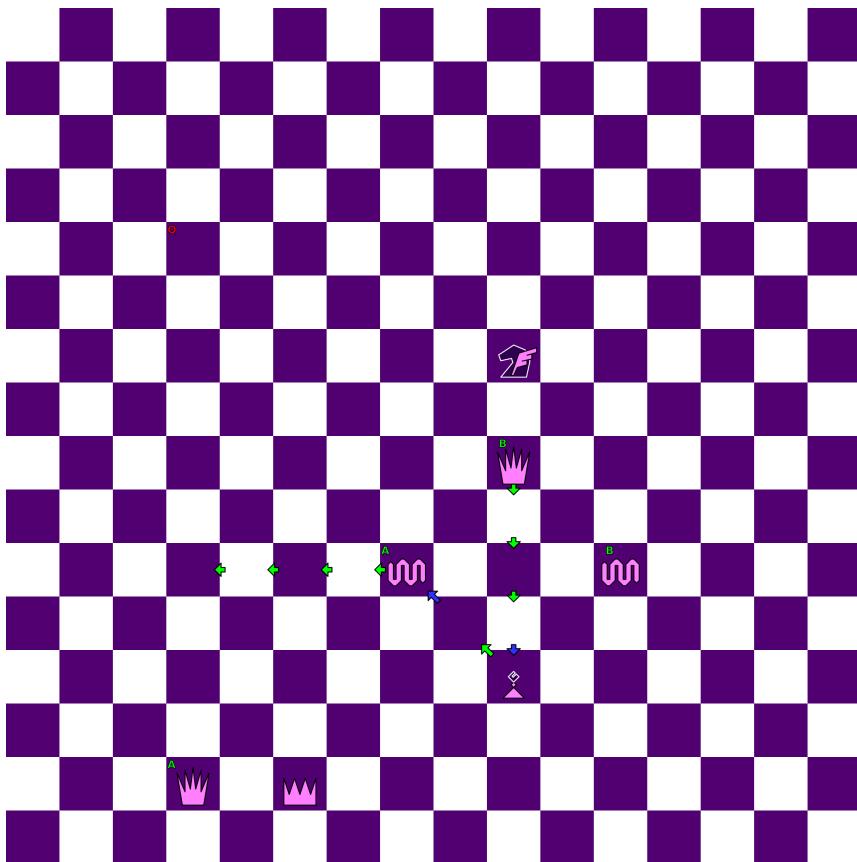


Figure 112: Static piece is legal

Here, first half of a cascade has been played out; Wave C (now "in the air") is about to activate Bishop which can then return to its original pinned position, and then force Wave A out of the pin.

This move is legal, since static piece (in this case, light Bishop) did not start a cascade, and the one which did (here, light Queen A) will remain out of its starting position (field Q), when this move ends.

## Delayed promotion is legal

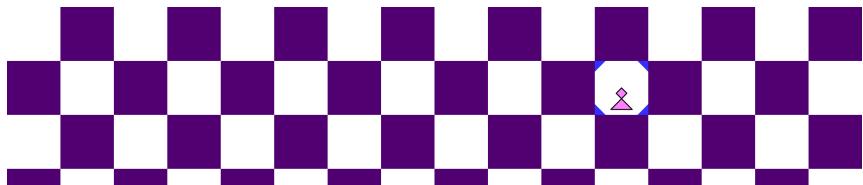


Figure 113: Pawn is tagged for promotion

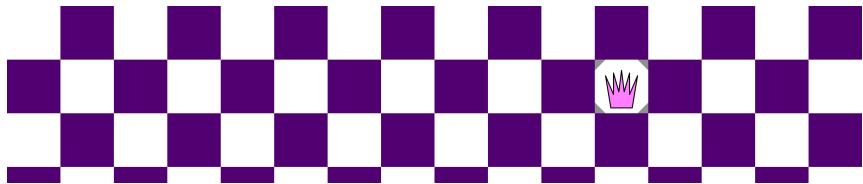


Figure 114: Pawn was promoted to Queen

While **static move is illegal**, **delayed promotion** is legal, even though starting and destination fields are the same. This is so because piece after promotion is different than the one at the beginning.

## En passant turned capture

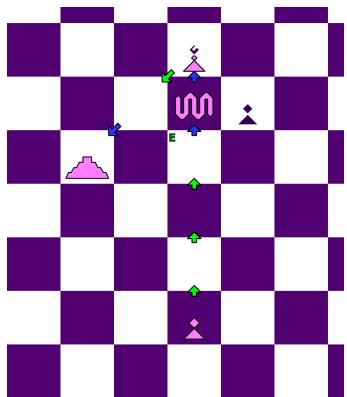


Figure 115: Rushing cascade

Rushing Pawn can start a cascade in which other own piece is placed onto opponent's en passant capture-field. Opponent's Pawn can then capture a piece, but cannot capture rushing Pawn en passant anymore.

On the left, dark Pawn is positioned so that it would gain en passant opportunity, should light Pawn rush over field E. Rushing Pawn is about to start a cascade by activating light Wave, which can then activate Bishop, which can then activate Pyramid.

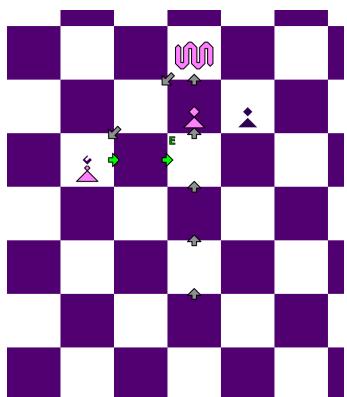


Figure 116: Setting-up a figure

Grey arrows show path traveled over by a piece they point to; taken together they show first part of the cascade, which is already done.

Here, activated light Pyramid (now "in the air") is about to move to its destination field E.

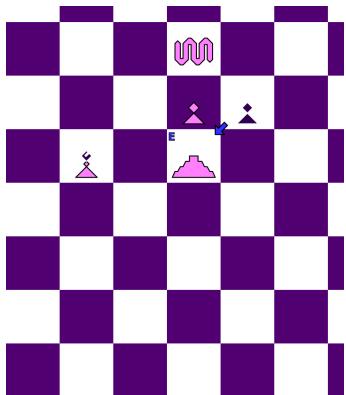


Figure 117: Capturing figure instead

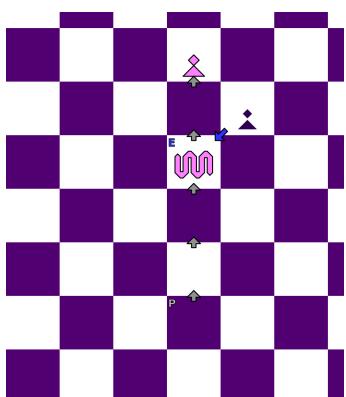


Figure 118: Capturing Wave instead

On the left, since activated Pyramid has settled onto field E, rushing light Pawn cascade has finished, and now it's dark player's turn.

Even though it rushed over field E on the very previous turn, light Pawn cannot be captured en passant, because dark Pawn is capturing light Pyramid instead, since that is positioned on its capture-field.

Since **Wave is transparent**, rushing Pawn can pass over it, and can continue rushing further. Any piece captured instead of a rushed Pawn prevents that Pawn being captured en passant.

In a new example on the left similar to previous one, grey arrows show path traveled over by rushing light Pawn, from its starting field P. Now on dark player's turn, dark Pawn cannot realize en passant opportunity, and can only capture light Wave instead, since Wave is positioned on its capture-field E.

The same capturing prevents en passant also applies to rushing Pawns which has been activated; the only difference from examples here is that momentum gathered has to be enough to also drive rushing Pawn.

## Cascading opponent

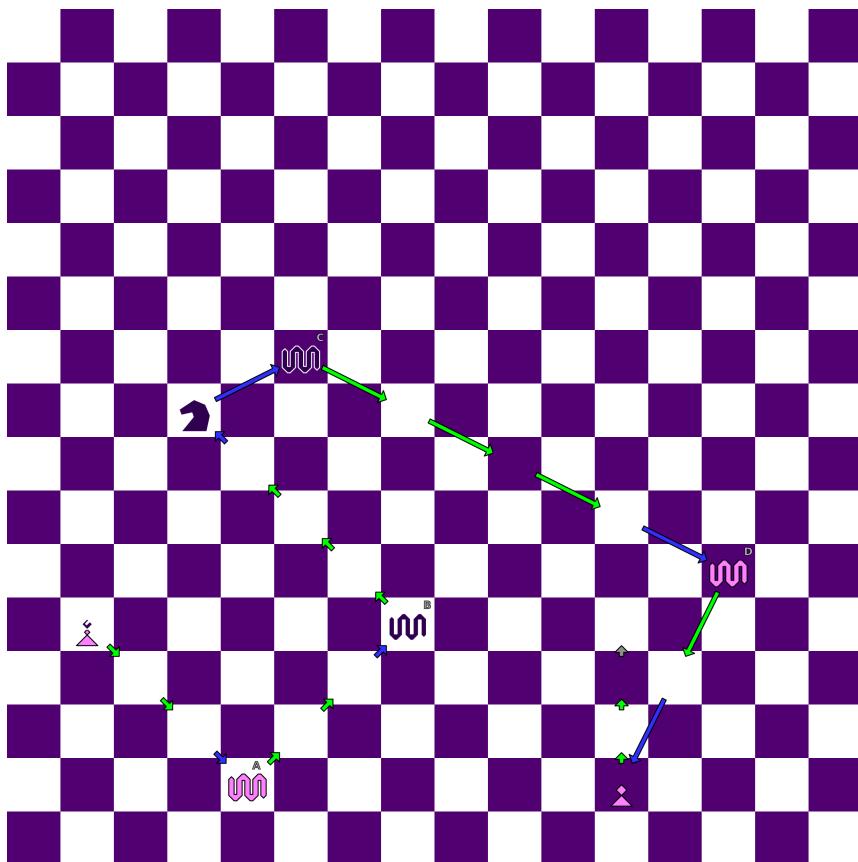


Figure 119: Cascading opponent

Own Wave can activate opponent's Wave, and vice versa, opponent's Wave can activate own Wave. In both cases activated Wave moves the same way activating Wave does. Opponent's Wave can also activate any other opponent's piece, except King. Note, color of the first piece in a cascade matches color of a player who started that cascade, thus determines which pieces are own and which are opponent's.

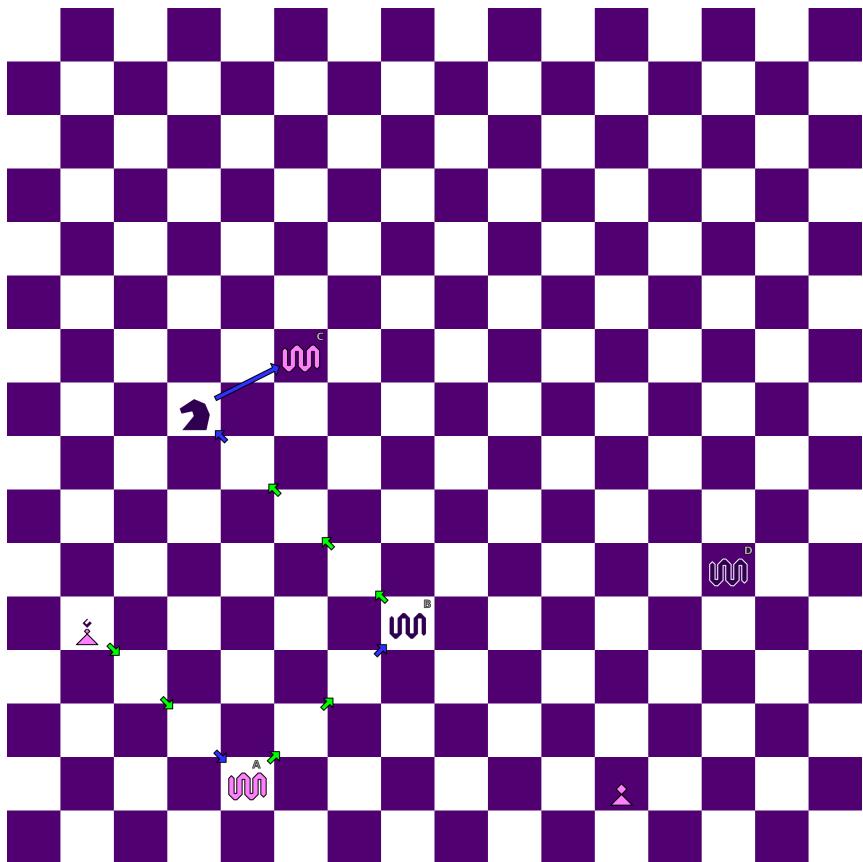


Figure 120: Cascaded opponent capturing piece

Opponent's pieces, activated in own cascade, keep all of their behavior as if in a normal move, for instance capturing their opponent's (in own cascade, that would be own!) pieces.

Here, dark Knight, in a cascade started by light player, is not (and cannot be) activating light Wave, it's just capturing it.

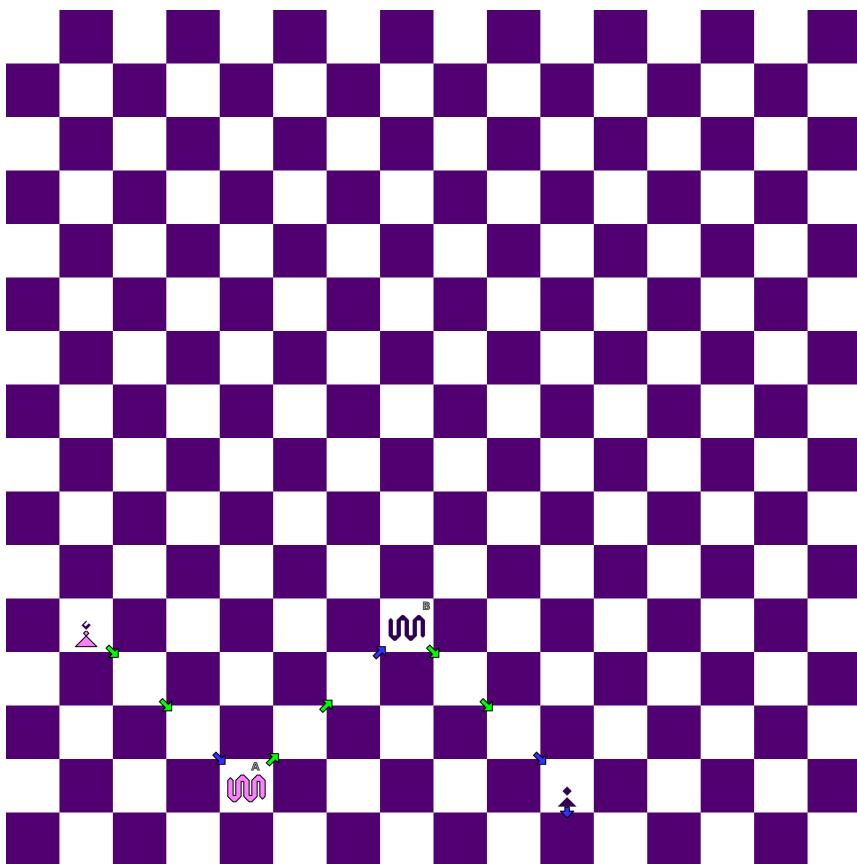


Figure 121: Cascaded opponent promoting Pawn

Opponent's Pawn in own cascade can be promoted only to other opponent's pieces, this includes opponent's Pawns tagged for promotion.

Here, dark Pawn, in a cascade started by light player, is not (and cannot be) promoted to light piece, it's being promoted to dark piece, e.g. dark Queen.

## Cascade self-checkmate

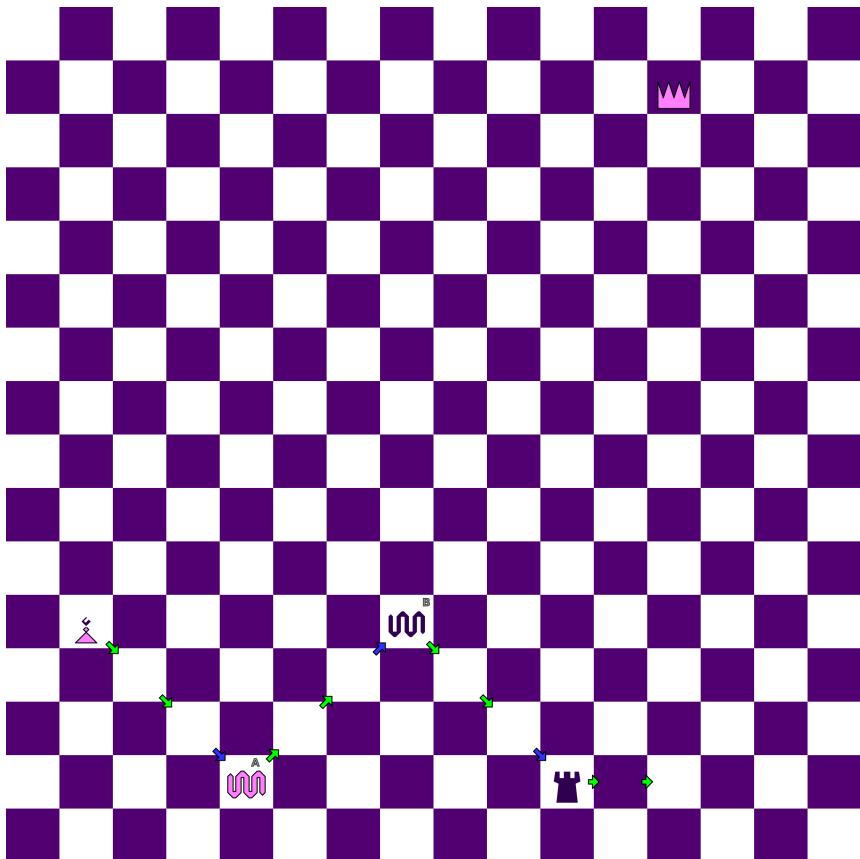


Figure 122: Cascading opponent's Rook

Opponent's piece, activated in own cascade, can be positioned on a field where it would check own King if cascade has finished; this is fine as long as that piece is reactivated and **moved away from its temporary position**. Opponent's piece left in a position from where it does check own King after own cascade is finished leads to immediate self-induced checkmate, since now it's opponent's turn, and own King can't be removed from check.

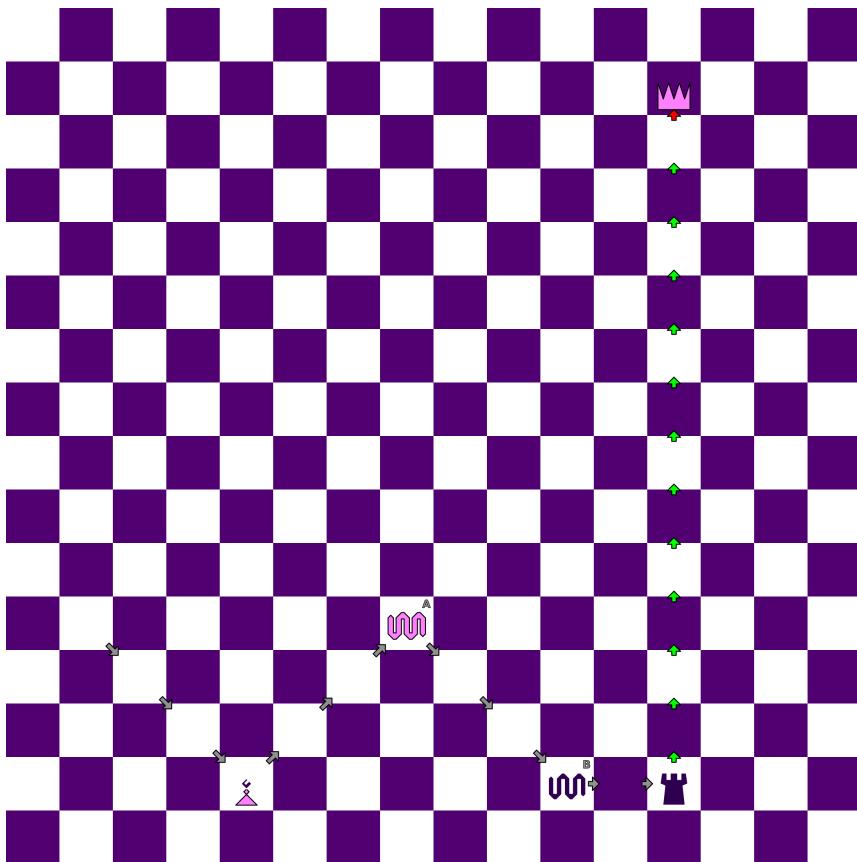


Figure 123: Cascaded self-checkmate

Here, light player's cascade has finished; notice, first piece in a cascade is light Bishop. Light player has left dark Rook in a position to check light King; grey arrows show path traveled over by a piece they point to. Now is dark player's turn; since light King can't be moved out of a check, this is immediate self-checkmate.

## Wave blocked

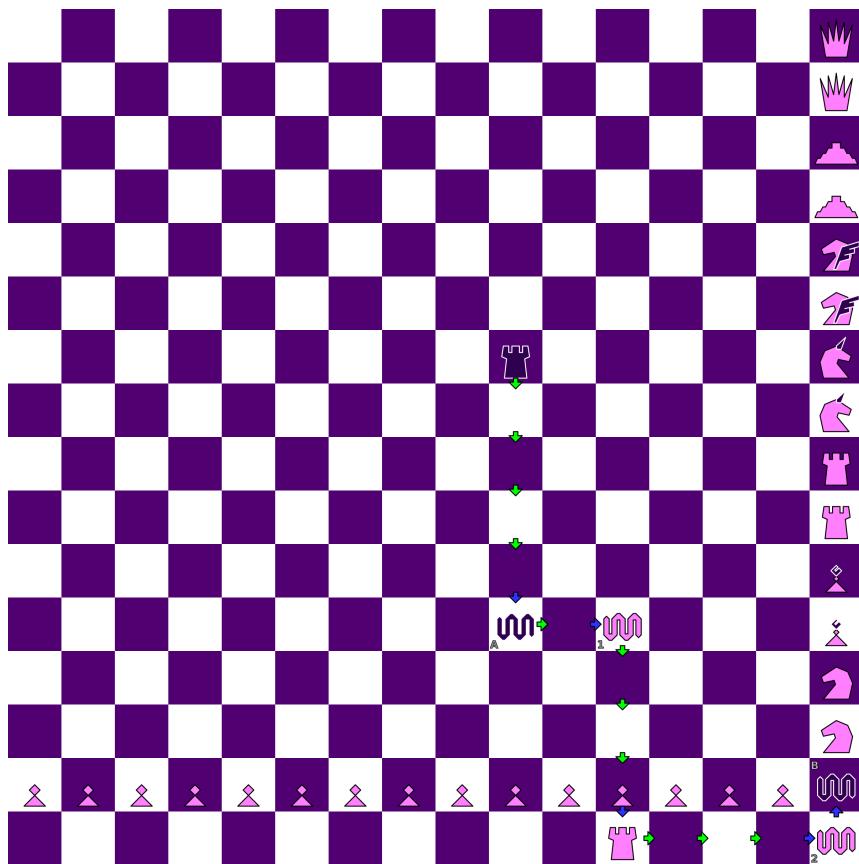


Figure 124: Activating Wave

Wave cannot activate opponent's pieces, except for Waves. Activated Wave which movement is completely blocked is obliterated, i.e. is removed from chessboard as if captured by opponent.

Here, dark Wave B is about to be activated with one momentum.

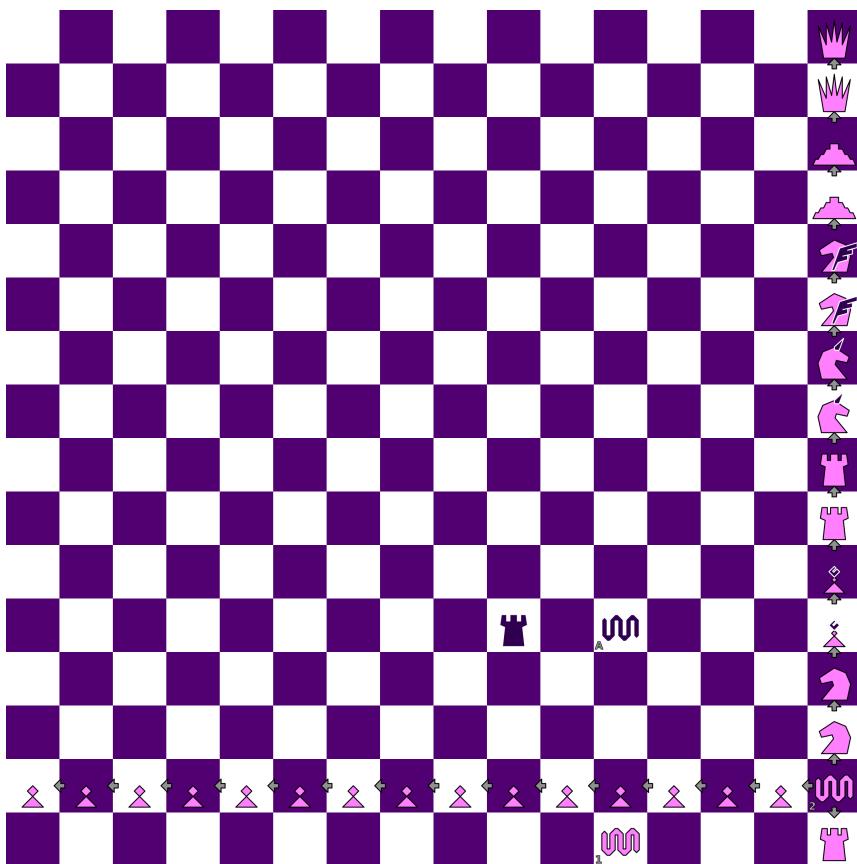


Figure 125: Activated Wave blocked

Here, dark Wave B is activated without committing its movement yet (it's "in the air"). All accessible step-fields are blocked by opponent's light pieces, which cannot be activated by dark Wave, even though it has one momentum. Note, Wave (just like any other piece) has to move away from its starting position, it cannot stay and re-activate piece that has activated it (here, light Wave 2). Thus, dark Wave B is obliterated, i.e. removed from chessboard.

## En passant blocked

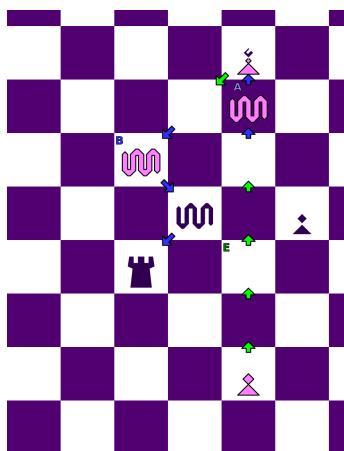


Figure 126: Rushing cascade

Rushing Pawn can start a cascade in which opponent's piece is placed onto opponent's Pawn capture-field. Opponent's Pawn is then blocked by its own piece, and cannot capture rushing Pawn en passant anymore.

On the left, dark Pawn is positioned so that it would gain en passant opportunity, should light Pawn rush over field E. Rushing Pawn is about to start a cascade by activating light Wave A, continuing to Bishop, light Wave B, dark Wave, ending with dark Rook.

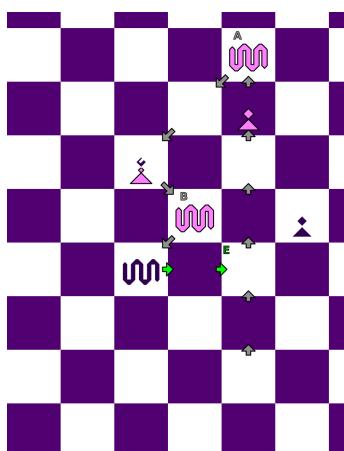


Figure 127: Blocking en passant

Grey arrows show path traveled over by a piece they point to; taken together they show first part of the cascade, which is already done.

Here, activated dark Rook (now "in the air") is about to move to its destination field E.

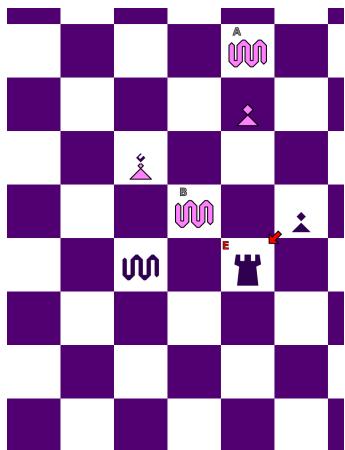


Figure 128: Blocked en passant

On the left, since activated Rook has settled onto field E, rushing light Pawn cascade has finished, and now it's dark player's turn.

Even though it rushed over field E on the very previous turn, light Pawn cannot be captured en passant, because dark Pawn is blocked by its own dark Rook, and so it cannot move to its capture-field.

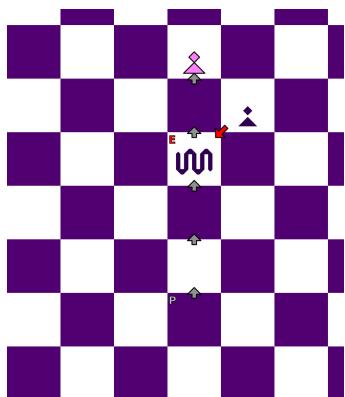


Figure 129: Blocked by Wave

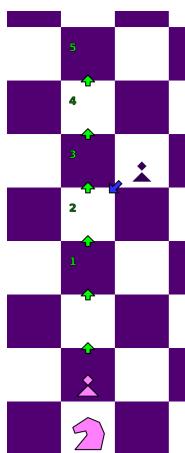
Since **Wave is transparent** to all pieces, own or opponent's; rushing Pawn can pass over opponent's Wave, and can continue rushing further. Any piece blocking opponent's Pawn capture-field also prevents rushing Pawn to be captured en passant.

In a new example on the left similar to previous one, grey arrows show path traveled over by rushing light Pawn, from its starting field P. Now on dark player's capture rushing Pawn en passant, since dark Wave is blocking its capture-field E.

turn, dark Pawn cannot capture rushing Pawn en passant, since dark Wave is blocking its capture-field.

The same blocking prevents en passant also applies to rushing Pawns which has been activated; only momentum gathered has to be enough to also drive rushing Pawn.

## Rush, en passant



Rush and en passant are identical to those in Classic Chess, only difference is that Pawn can now move longer on initial turn, up to 6 fields in this variant.

Figure 130: En passant

## Promotion

Promotion is non enforced, delayed variety, i.e. it's the same as in [previous chess variant](#), Age of Aquarius.

# Castling

Castling is the same as in Classical Chess, only difference is that King can move between 2 and 6 fields across. All other constraints from Classical Chess still applies.



Figure 131: Castling

Above, all valid King's castling moves are numbered.



Figure 132: Castling long right

In this example King was castling long to the right. Initial King's position is marked with "K". After castling is finished, right Rook ends up at field immediately left to the King.

Again, **Wave is transparent**, so it does not block castling if it's positioned between castling pieces and their destination fields. Wave cannot be activated by castling pieces, so Wave blocks both King and Rook from castling **onto a field it occupies**.

## Initial setup

Compared to initial setup of Age of Aquarius, Wave is inserted between Knight and Unicorn symmetrically, on both sides of chessboard. This can be seen in the image below:

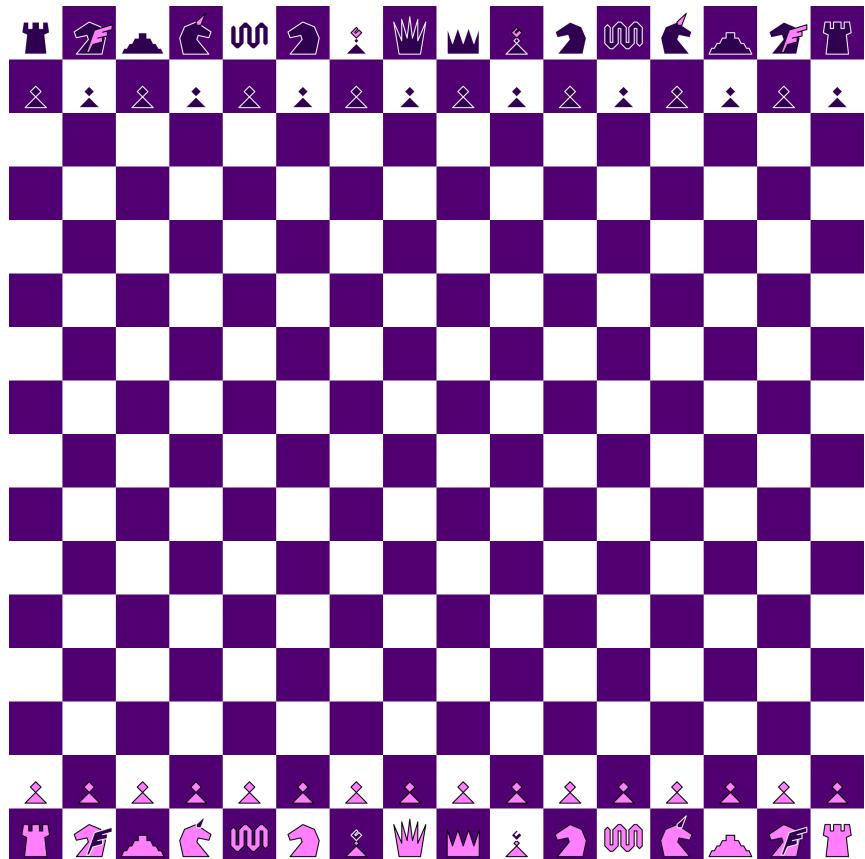


Figure 133: Miranda's veil board

# Nineteen

*The truth is at the beginning of anything and its end are alike touching.*

... Yoshida Kenko

Nineteen is chess variant which is played on 18 x 18 board, with light gold-yellow and white fields and gold-yellow and dark gray pieces. A new piece is introduced, Star.

## Star

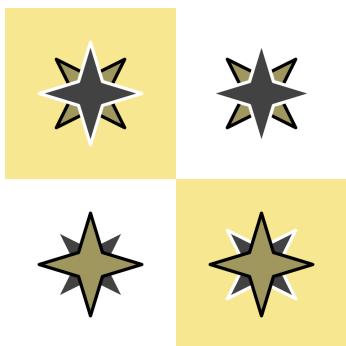


Figure 134: Star

Star does not belong to any player, and cannot be moved, activated, captured, or converted. Light Stars are positioned in lower left and upper right corners, dark Stars in lower right and upper left corners.

Star is a teleporting piece. Teleportation is initiated by touching a Star, or a field at which it stands with a piece, using either normal or capturing step. Piece in question, if it's not Wave, then reappears on any empty portal-field near Star in opposite color. Any momentum carried is lost, piece can't move any further from emerging portal-field, and so a move (cascade) is finished. Teleportation is not limited by matching colors of a piece and a Star, any piece can use any Star to start teleporting.

Player initiating teleportation can choose which opposite color Star will be destination, and at which empty portal-field piece will reappear. If there is no empty portal-field near both Stars of opposite color piece is obliterated, i.e. removed from chessboard as if it has been captured.

If teleported piece is Wave, it continues movement from a field occupied by the other Star in the same color. Wave retains all of momentum carried into teleportation. The way and direction of movement of Wave is the same as before teleportation.

Kings cannot be teleported. Pawns cannot be promoted to a Star.

## Portal-fields

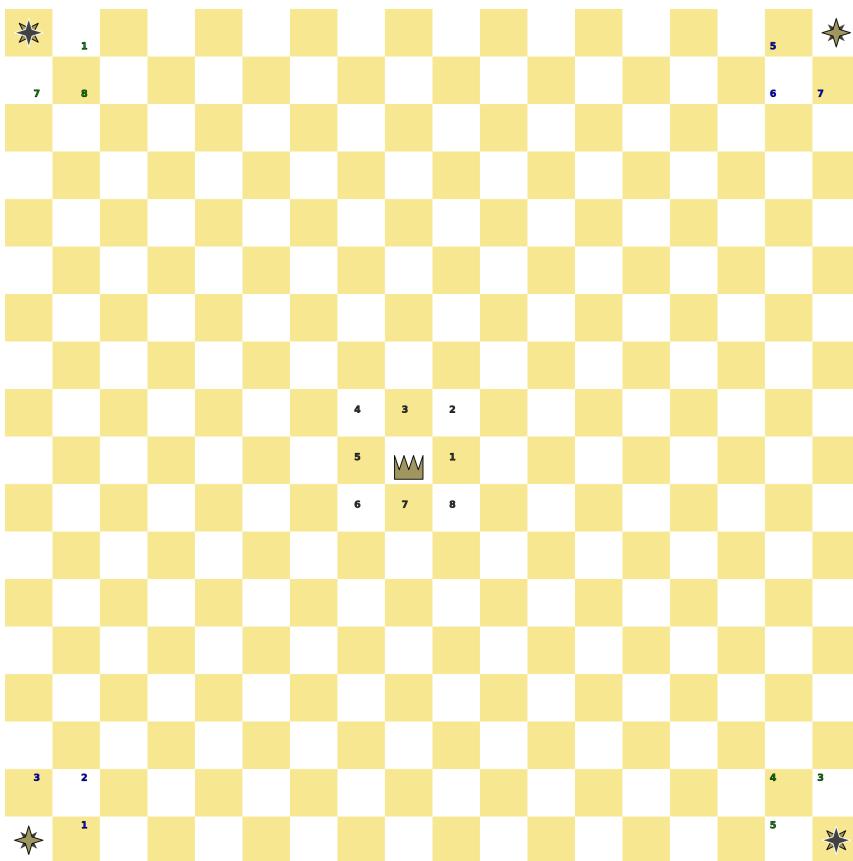


Figure 135: Portal-fields

Portal-fields are all fields immediately surrounding a particular field horizontally, vertically and diagonally. They are the same as step-fields of a King.

Since all Stars are pinned into the corners of a chessboard, there are always exactly 3 portal-fields around each one.

## Teleporting pieces

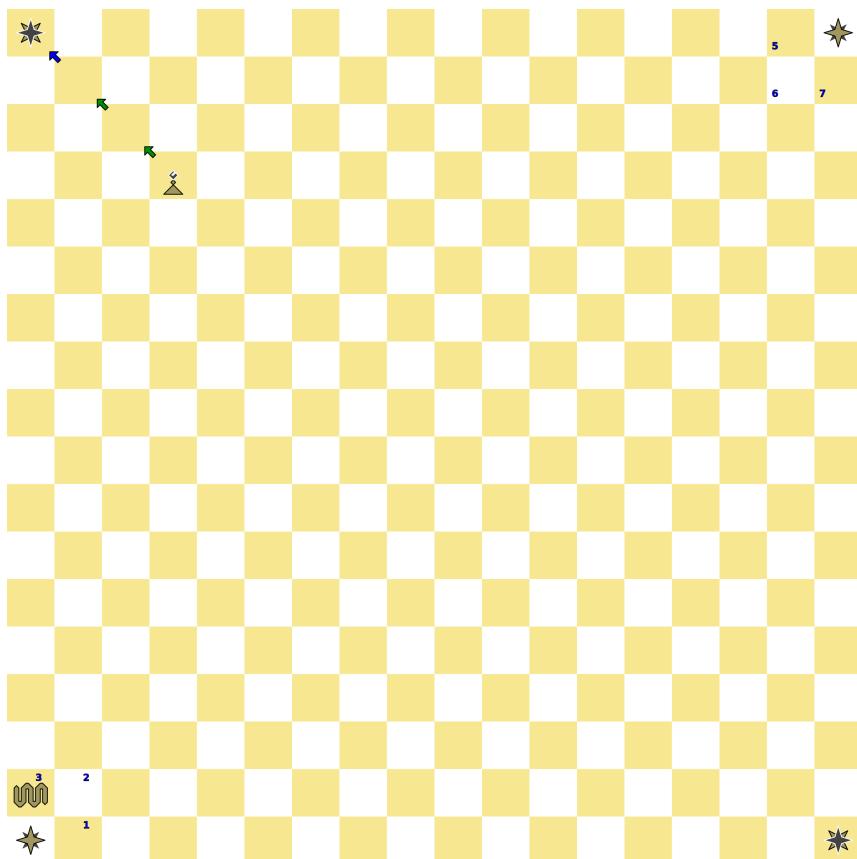


Figure 136: Teleportation start

A piece (except King) can start teleporting by stepping into any Star. Teleporting piece (if it's not Wave) can then emerge on any empty portal-field surrounding Stars in opposite color. Here, light Bishop is about to teleport by diving into dark Star. Portal-fields around light Stars are numbered, Bishop could appear on any empty field. Light Wave on field 3 blocks Bishop from emerging there, even if Wave could be activated by Bishop in a normal, cascading move.

## Teleportation blocked

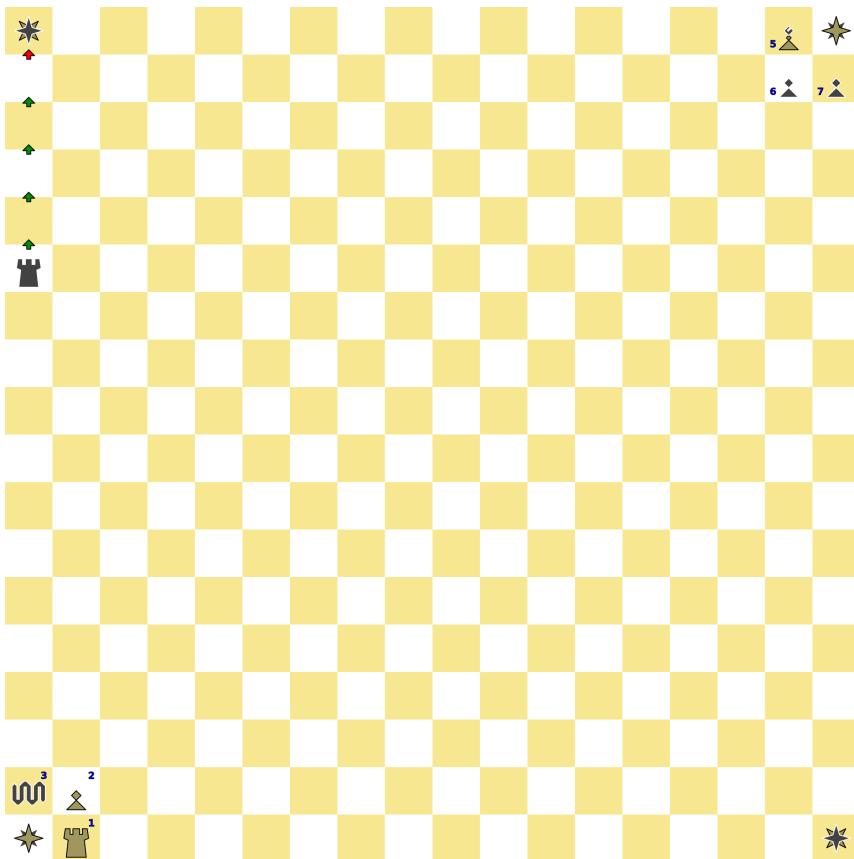


Figure 137: Teleporting dark Rook

If all eligible portal-fields are not empty, teleported piece is blocked from emerging, and is oblationed, i.e. removed from chessboard as if captured by opponent.

Here, after teleportation dark Rook will be oblationed, because there is no empty (numbered) portal-field around both Stars in opposite color.

## Teleporting Wave

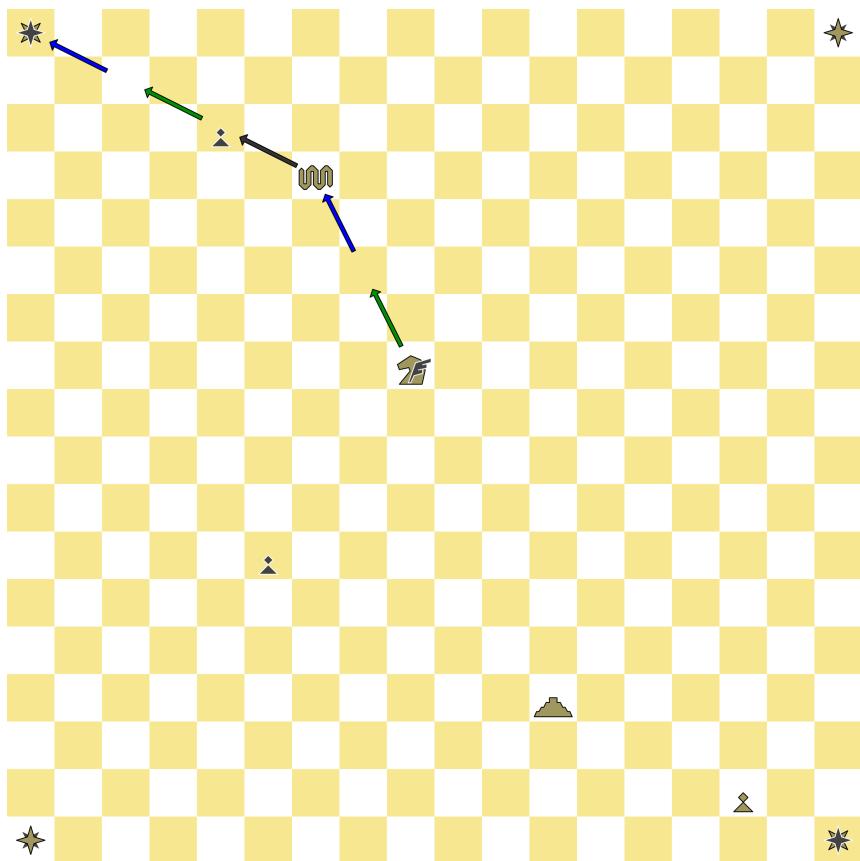


Figure 138: Teleporting light Wave

Wave can start teleporting by stepping into a Star, just like any other piece could do. Since Wave is not obstructed by any piece on its step-fields, it can reach a Star even if activating piece (here, Pegasus) would be blocked.

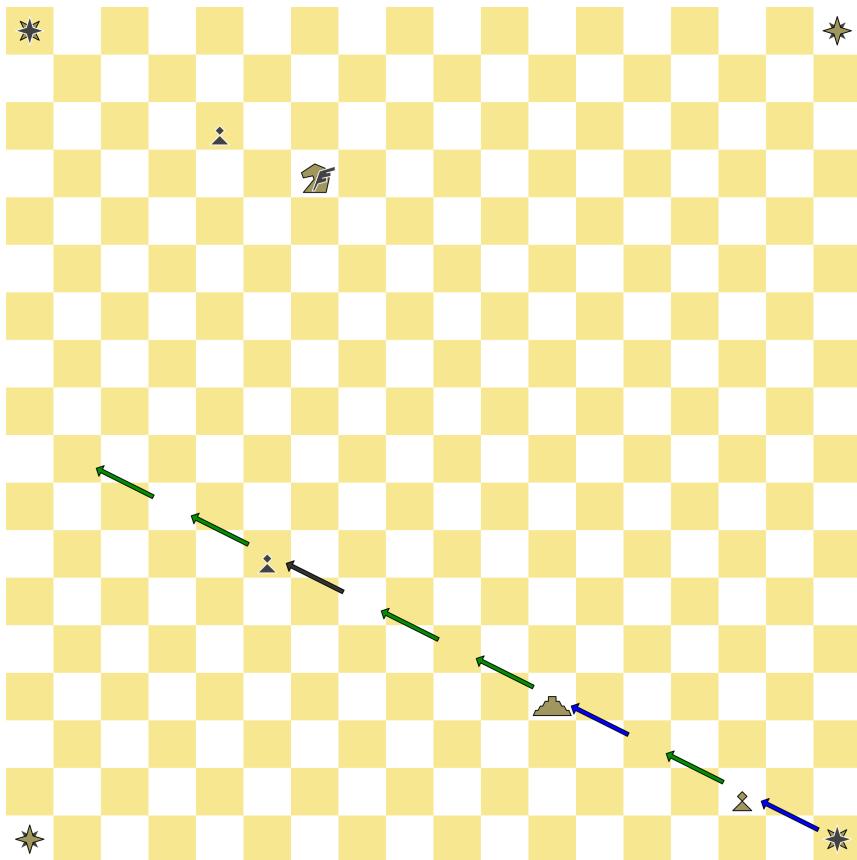


Figure 139: Teleportation end

Teleported Wave emerges from the other Star in the same color as the starting one. Wave has to continue movement in the same direction as it did before teleportation, direction cannot be changed. Wave also retains momentum it had before teleportation, so here it can activate Pyramid, or **rush light Pawn for 2 fields**.

## Teleporting Wave blocked

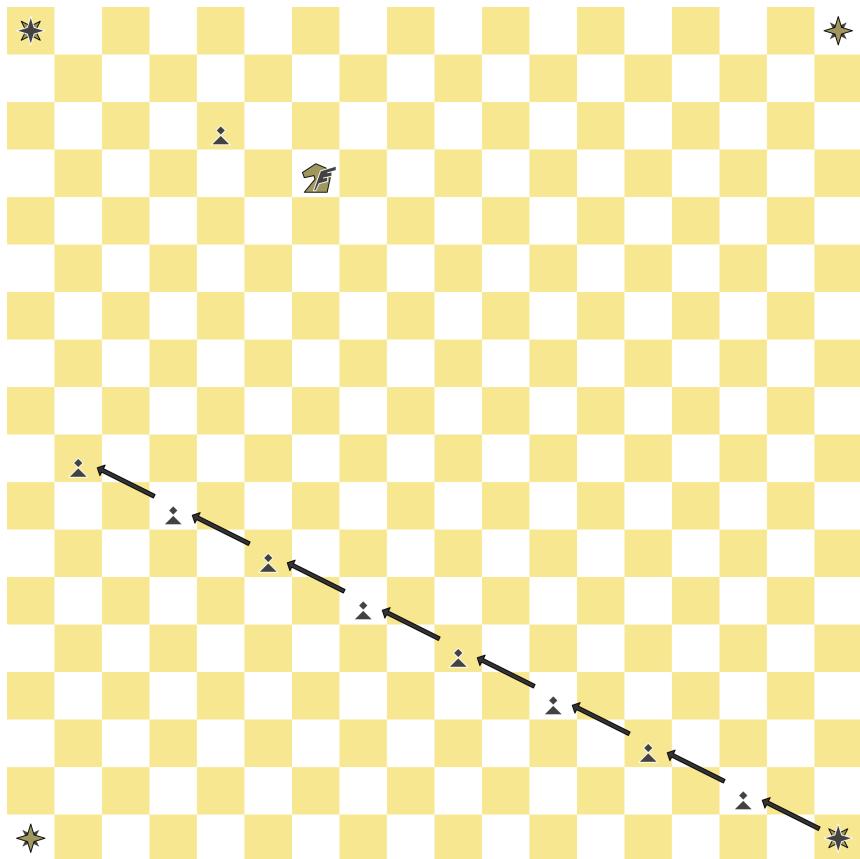


Figure 140: Teleported Wave blocked

If teleported Wave has all of its step-fields blocked (here, by dark Pawns), it is removed from chessboard, just like any other **teleported piece which has all portal-fields blocked**.

## Teleporting off-board

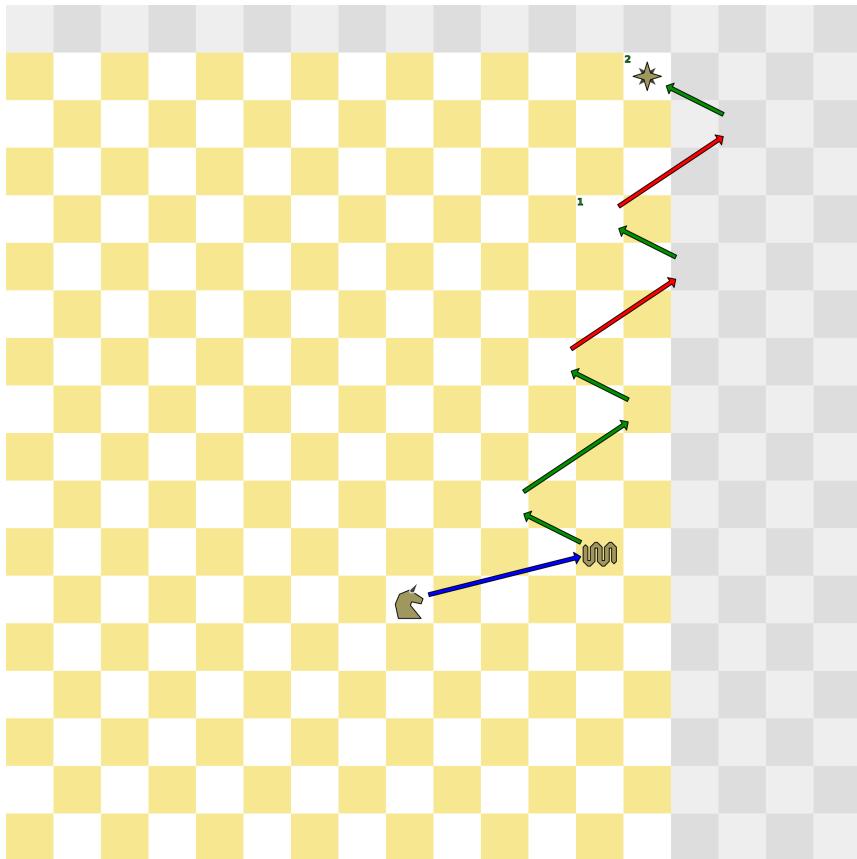


Figure 141: Wave out-of-board before teleportation

Here, light grey fields are virtual fields extending existing chessboard. **Wave activated by Unicorn** has to choose 2 different steps at the beginning of its movement, and follow them for the remainder of a ply. Wave's movement is legal as long as its **ply ends on a chessboard**. So, light Wave can reach light Star and start teleporting, even though it stepped outside of a board.

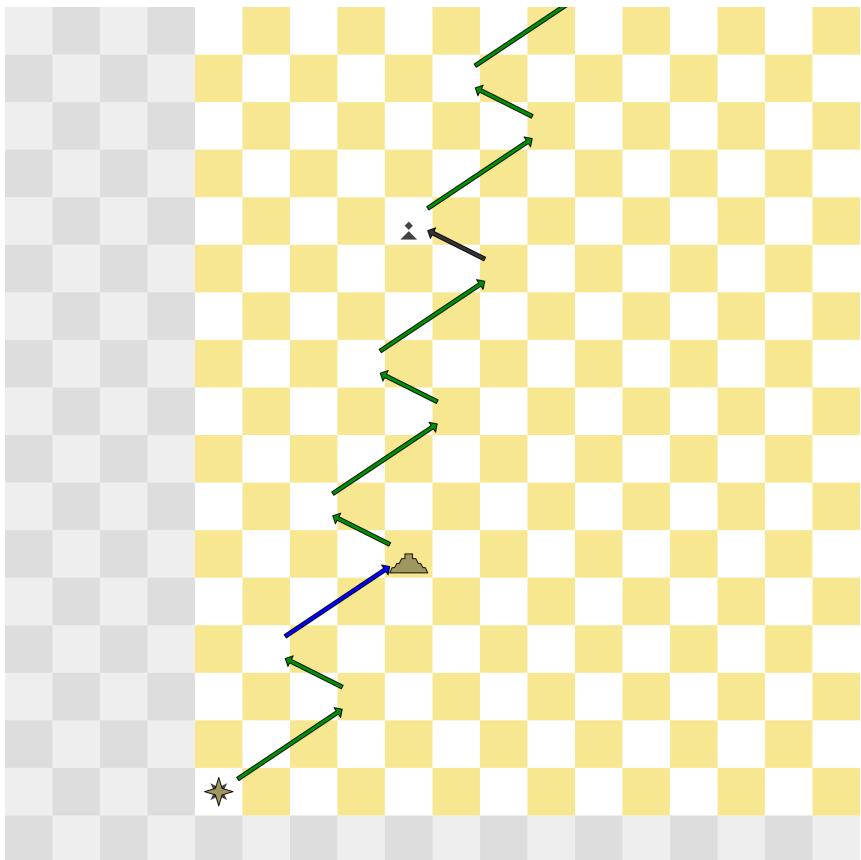


Figure 142: Wave teleported

Teleported Wave has to continue its movement performing the same step(s) as before teleportation. That means, teleported Wave has to continue alternating between 2 initially chosen steps, according to a color of a current field. So, emerging step (here, long jump) is different from a step starting teleportation (short jump).

## Emerging off-board

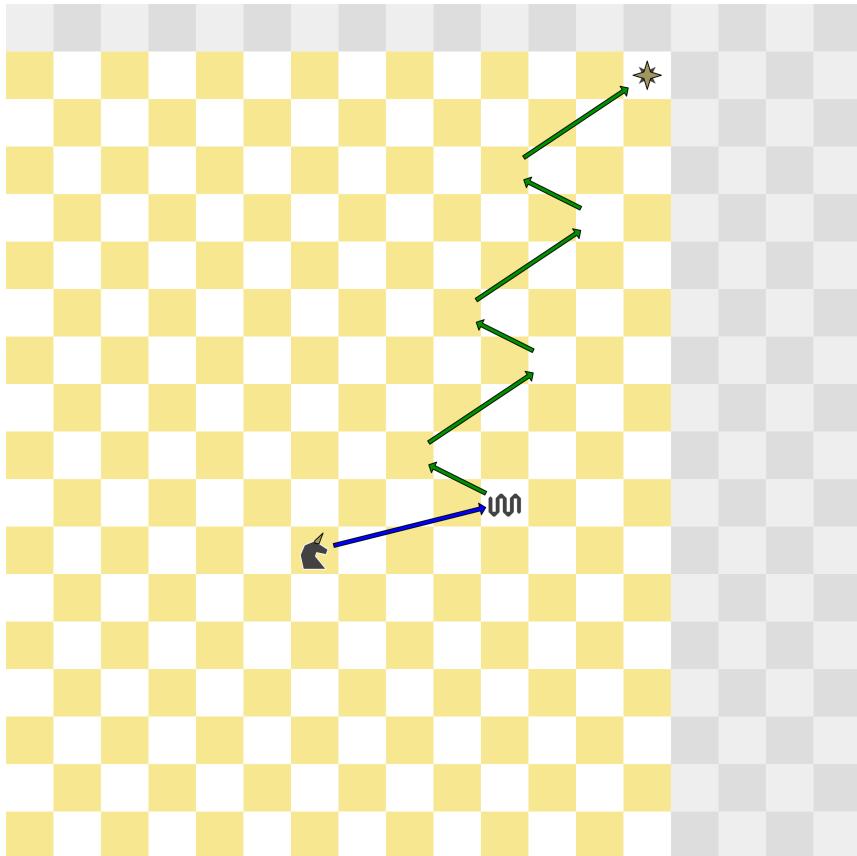


Figure 143: Wave before teleportation

Similar example as previous, with dark Wave which has the same steps (short, long jump) over the same colored fields (dark, light fields) switched. So, teleporting step is also different (here, long jump) from previous example (short jump).

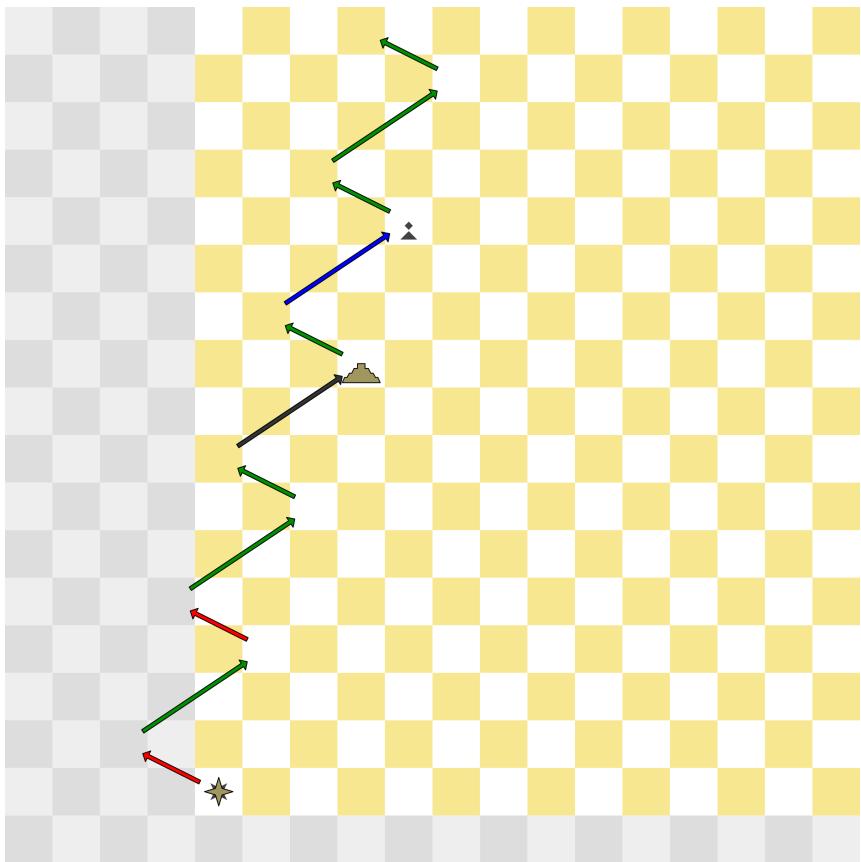


Figure 144: Wave out-of-board after teleportation

Again, teleported Wave has to continue alternating between 2 initially chosen steps, according to a color of a current field, i.e. color of starting field of each step. Wave's movement is legal as long as its **ply ends on a chessboard**. So, dark Wave can e.g. activate dark Pawn (with 1 momentum carried through teleportation), even though it stepped outside of a board.

## Teleporting Pawn

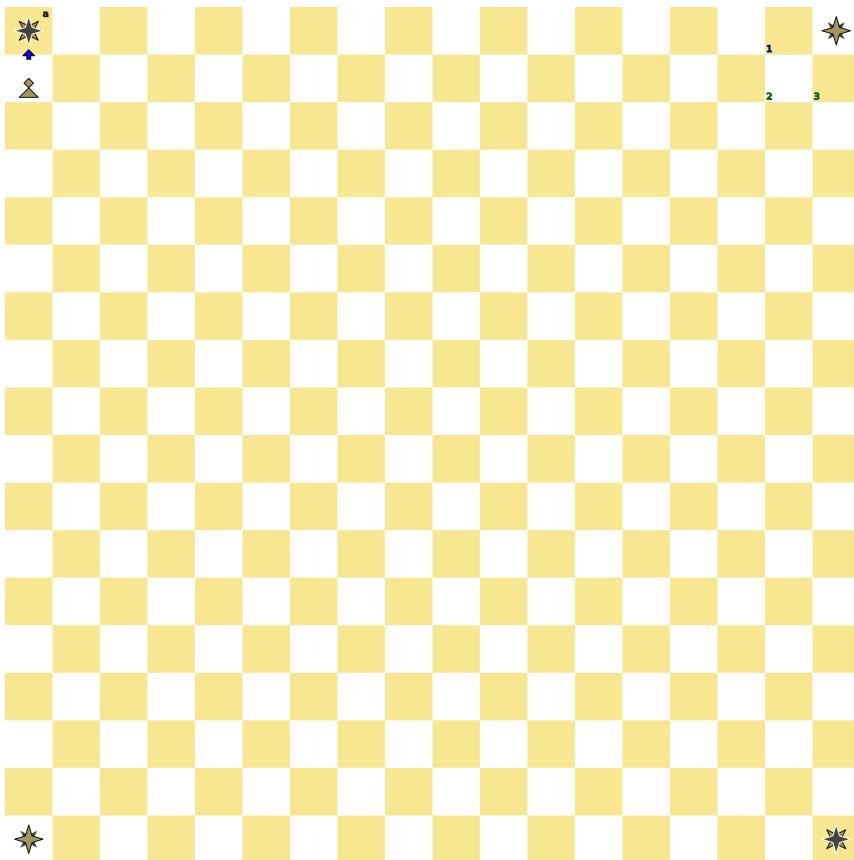


Figure 145: Pawn teleporting on step-field

All pieces can access a Star on own step- or capture-field. So, light Pawn in the same column as dark Star (here, a) can step into it, and teleport away. If destination Star is on **opponent's side of a board**, teleported Pawn is tagged for promotion (fields 1, 2, 3). If destination portal-field is on opponent's **figure row** (field 1), player can choose between promoting Pawn outright, or keeping it tagged for promotion.

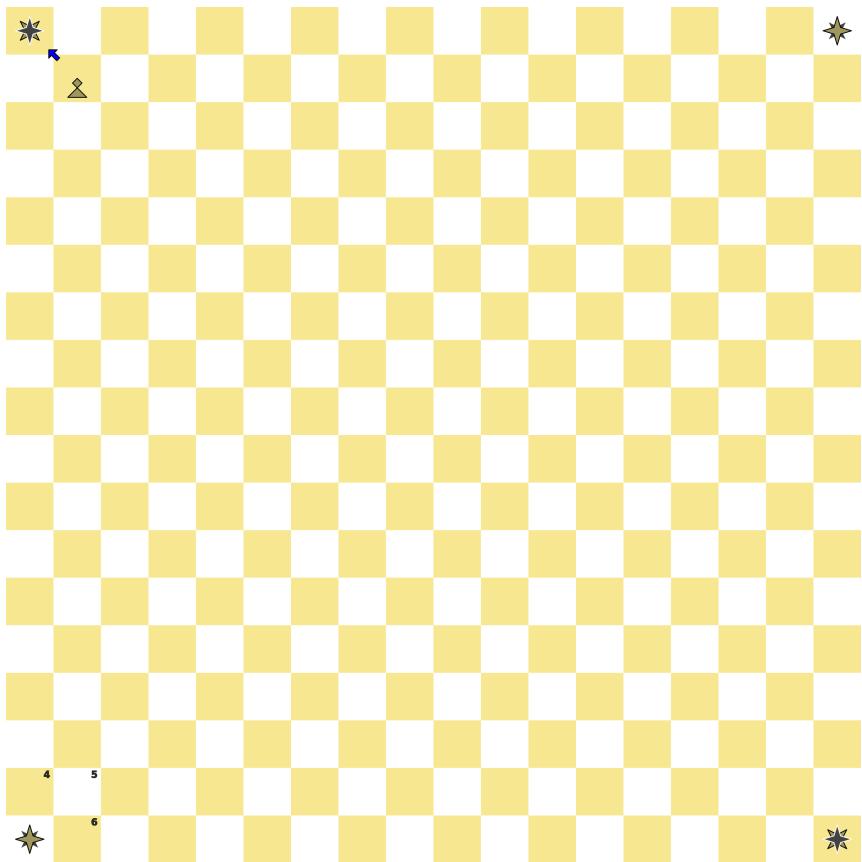


Figure 146: Pawn teleporting on capture-field

Pawn can also dive into a Star located at its capture-field, and teleport away. If destination Star is on **own side of a board** (portal-fields 4, 5, 6), teleported Pawn loses options to promote, and does not gain opportunity to rush on an initial move.

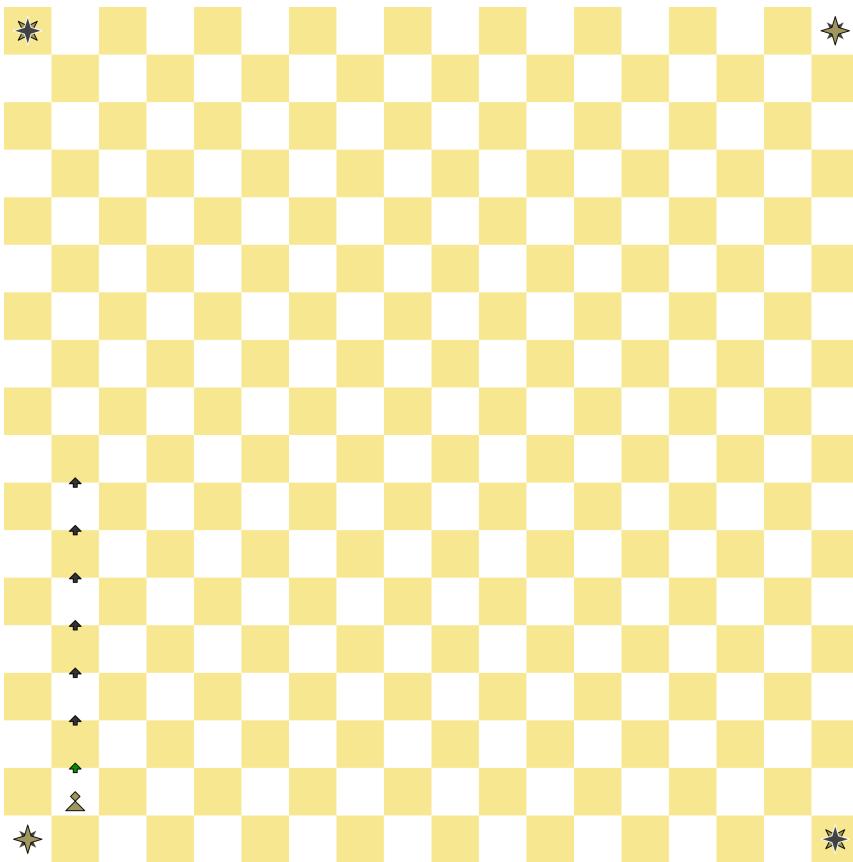


Figure 147: Pawn teleporting end

Light Pawn teleported onto own side of chessboard cannot rush, even if destination field is on own **Pawn row**. This is so even if said Pawn is activated with more than 1 momentum, on its initial move.

## Teleporting Bishop

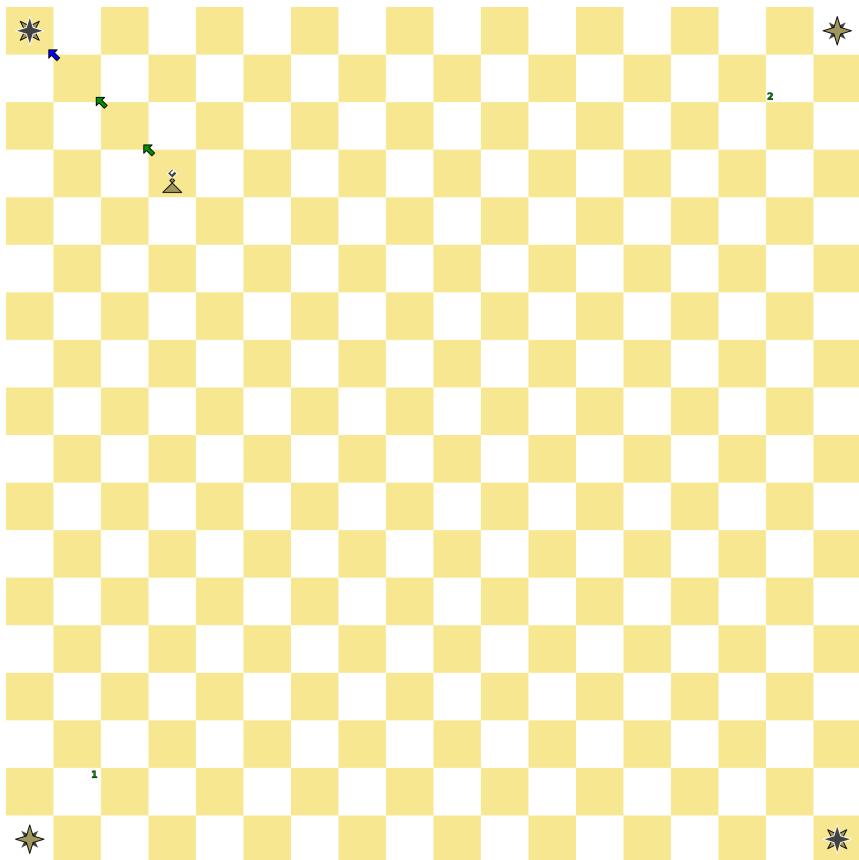


Figure 148: Bishop teleportation

Teleporting Bishop, like any other piece, can choose any empty portal-field around opposite-color Star as a destination, regardless of a color of that emerging field. Teleporting to a field in a different color changes (color of) accessible fields for teleported Bishop, for the remainder of a game. Here, such color-changing portal-fields are enumerated, 1 and 2.

## King cannot teleport

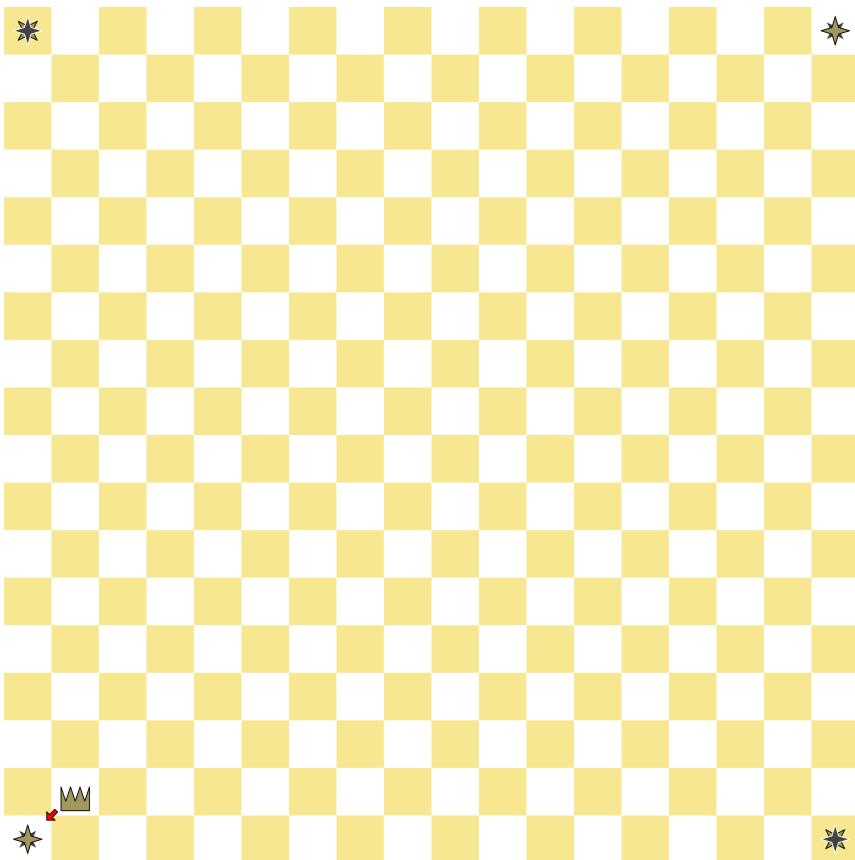


Figure 149: King cannot teleport

King cannot teleport at all; regardless if positioned on own or opponent's side of a chessboard, regardless if using Star of a matching or opposite color.

## Sideways Pawns

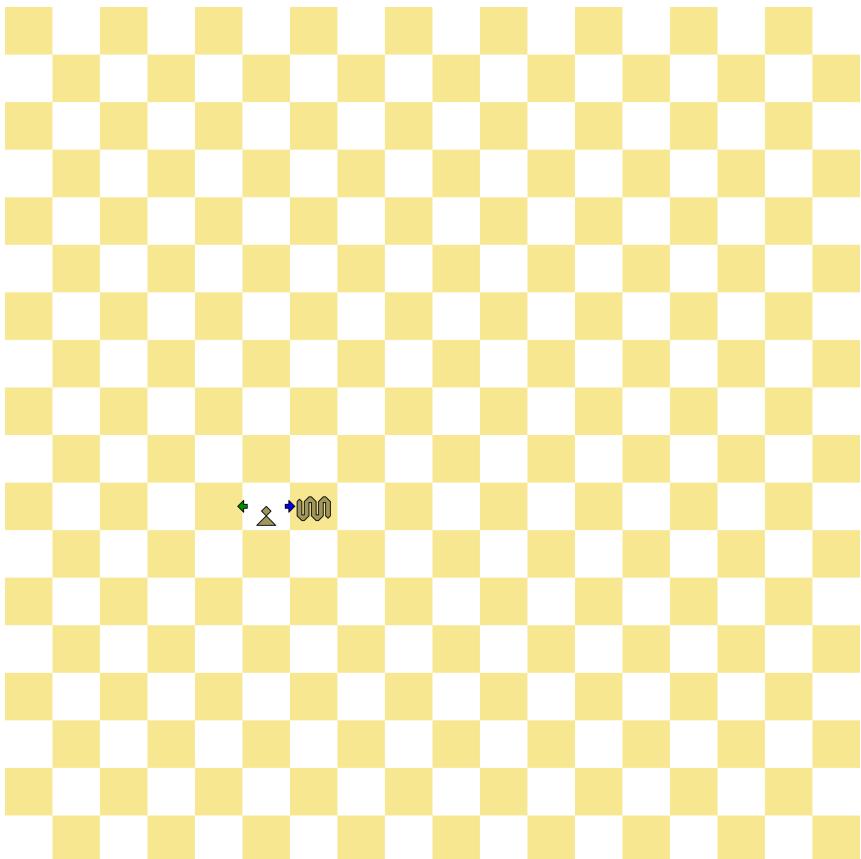


Figure 150: Sideways moving Pawn

In this and all subsequent variants Pawn can move sideways for one field, onto a field immediately to its left, or to its right. Side fields are just step-fields; destination has to be empty, or it can host own Wave.

Here, light Pawn can make one step onto empty field to the left; or it can move onto the right step-field, and activate light Wave, with one momentum.

## Activating Wave

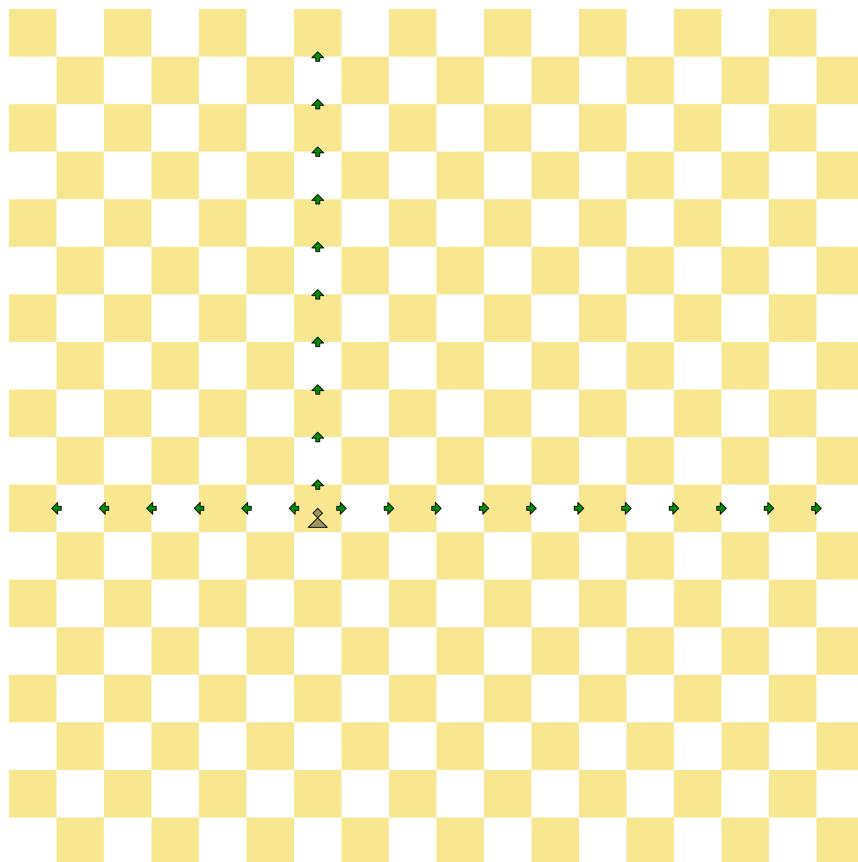


Figure 151: Wave activated by stepping Pawn

Wave activated by a piece has the same choices of direction as activating piece, and can take any of those regardless of any previous choice. So, Wave activated by a Pawn on its step-field moves the same as stepping Pawn, regardless if that Pawn stepped forward or sideways, i.e. it moves horizontally or vertically towards opponent. Unlike Pawn, Wave is not limited to only one step, and so can move to the end of chessboard. Direction, once chosen, cannot be changed later in a ply.

## Activating Pyramid

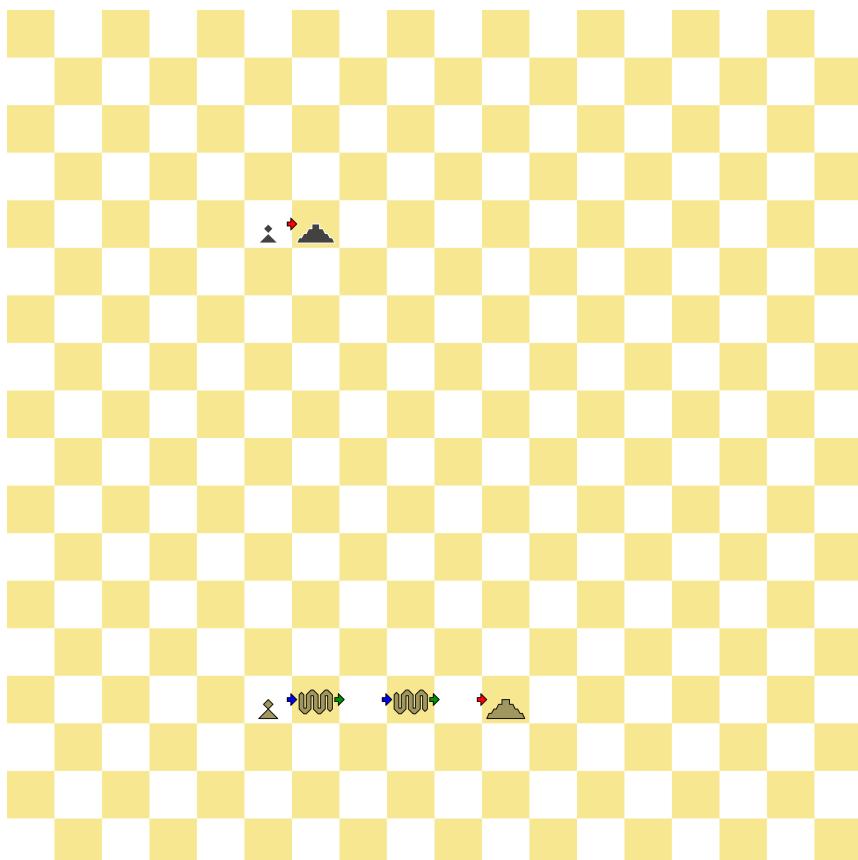


Figure 152: Pyramid can't be activated

Image above and the next one both have two examples presented in parallel, on the top, and to the bottom.

Pawn **cannot activate Pyramid on its step-fields**, only on capture-fields. Since side fields are also step-fields, Pyramid can't be activated by a sideways moving Pawn, neither directly (top) nor indirectly (bottom), regardless how many Waves where used for indirection.

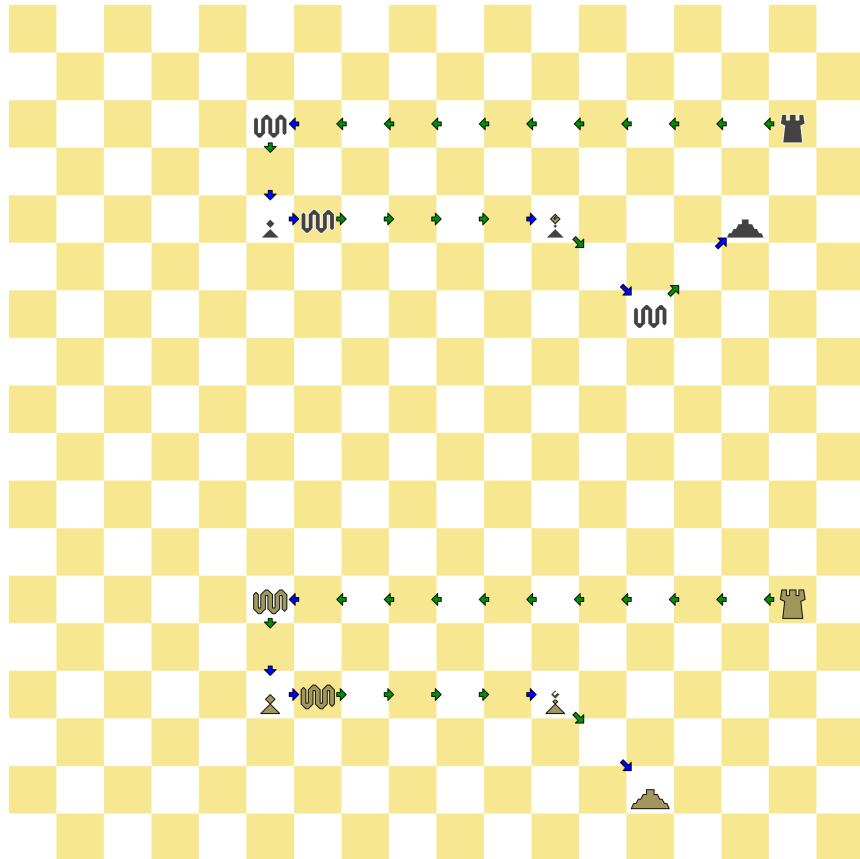


Figure 153: Pyramids cascaded by sideways Pawns

Similarly to previous example, Pyramid can be activated if last active piece is not step-field moving Pawn, even if cascade contains one.

Here, both cascades contain step-field moving Pawns, but last active pieces in both cases are Bishops. Both Bishops can activate Pyramids, regardless if it's directly (bottom), or indirectly, via Wave (top).

## Pawn ranks, rows

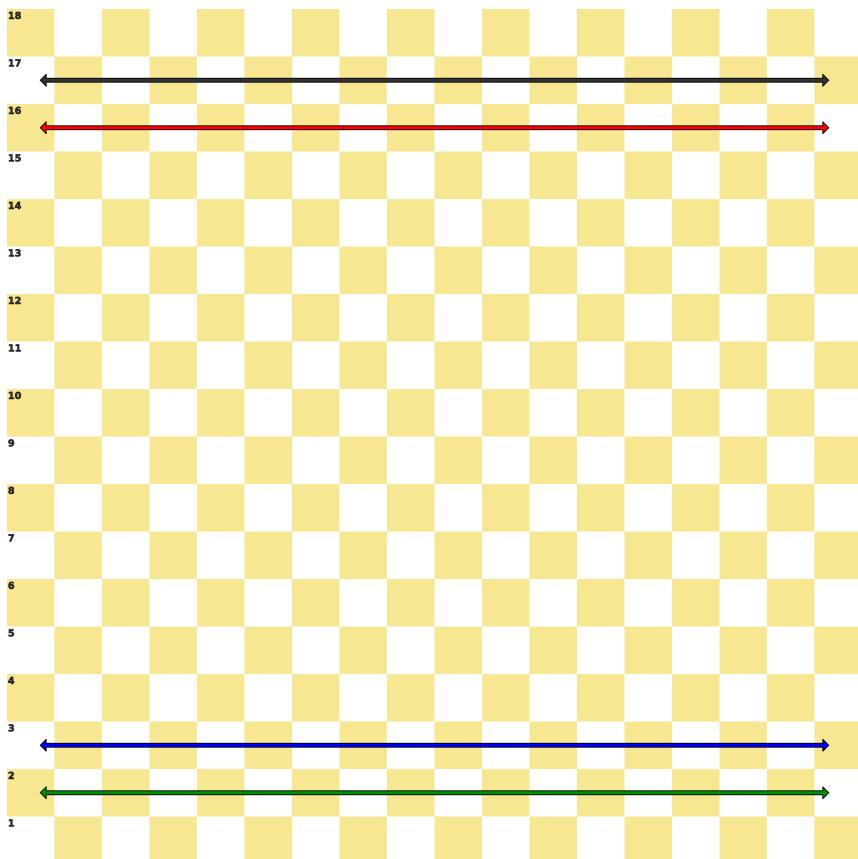


Figure 154: Pawn rows

In this variant, an additional rank of light (blue arrow) and dark (red) Pawns has been added to [initial setup](#). Ranks of Pawns are enumerated starting with one closest to opponent; the closest rank being the first one (blue, red arrows), while the standard rank of Pawns is the second rank (green, grey).

# Rush, en passant

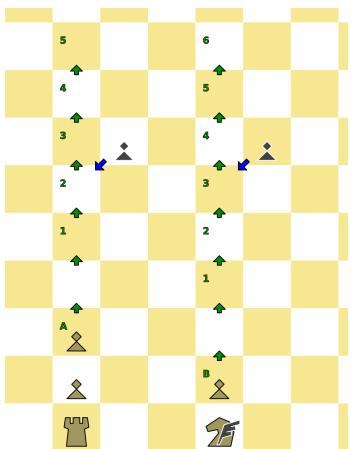


Figure 155: En passant

Image here have two examples presented in parallel: on the left, and to the right.

Rush and en passant are very similar to those in Classic Chess.

Pawns from both ranks can be rushed, up to the other end of **own side of the chessboard**.

In this variant, Pawns in the first row (here, light Pawn A) can be rushed for up to 6 fields, while those in second row (here, light Pawn B) can go up to 7 fields forward.

# Promotion

Promotion is non enforced, delayed variety, i.e. it's the same as in **previous chess variant**, Age of Aquarius.

Again, Pawns cannot be promoted to a Star.

Additionally, promotion in this variant is monogamous. Only one Queen in the same color can be present on chessboard at any given time.

## Only one Queen

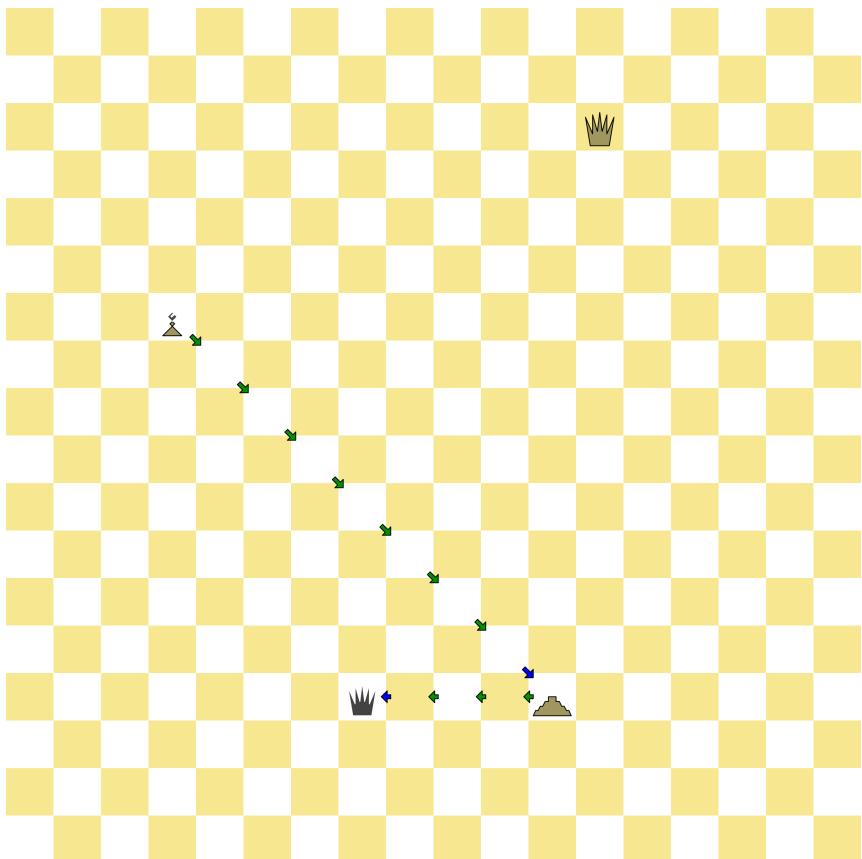


Figure 156: Not converting a Queen

Opponent's Queen **can be converted as usual**, if there is no own Queen present on a chessboard, e.g. if it was captured. In this variant, each player can have at most one Queen. If own Queen is on a chessboard, opponent's Queen cannot be converted, and has to be captured instead.

# Castling

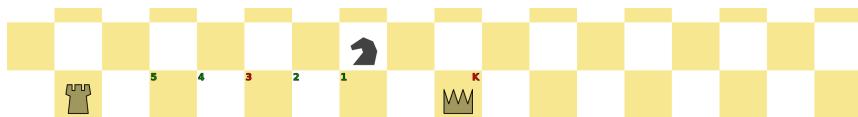


Figure 157: New castling start

In this, and all subsequent variants King is allowed to castle over attacked fields (here, field 3), and even if it's being in check (field K).

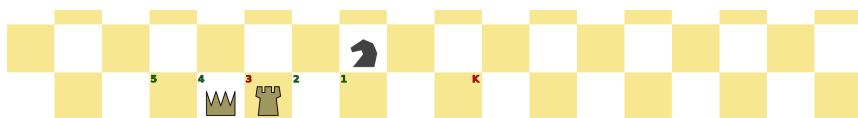


Figure 158: New castling end

All other constraints from Classical Chess remains the same; namely, King and Rook can only castle on their first move, King cannot end its movement on an attacked field, there must be no opaque pieces between castling King and Rook. Since it's transparent, Wave can be positioned between castling pieces and their destination fields. Wave cannot be activated by castling pieces, so Wave cannot be positioned onto their destination field.



Figure 159: Castling

Newly introduced constraint from Mayan Ascendancy still holds, i.e. converted opponent's Rook cannot be castled, even if converted on an initial position of own Rook. Additional difference in this variant is that King can castle between 2 and 6 fields across.

## Initial setup

Stars are positioned in very corners of chessboard, light Stars in lower left and upper right corners, dark Stars in lower right and upper left corners. Additional rank of light and dark Pawns has been added. All other figures are also repositioned.

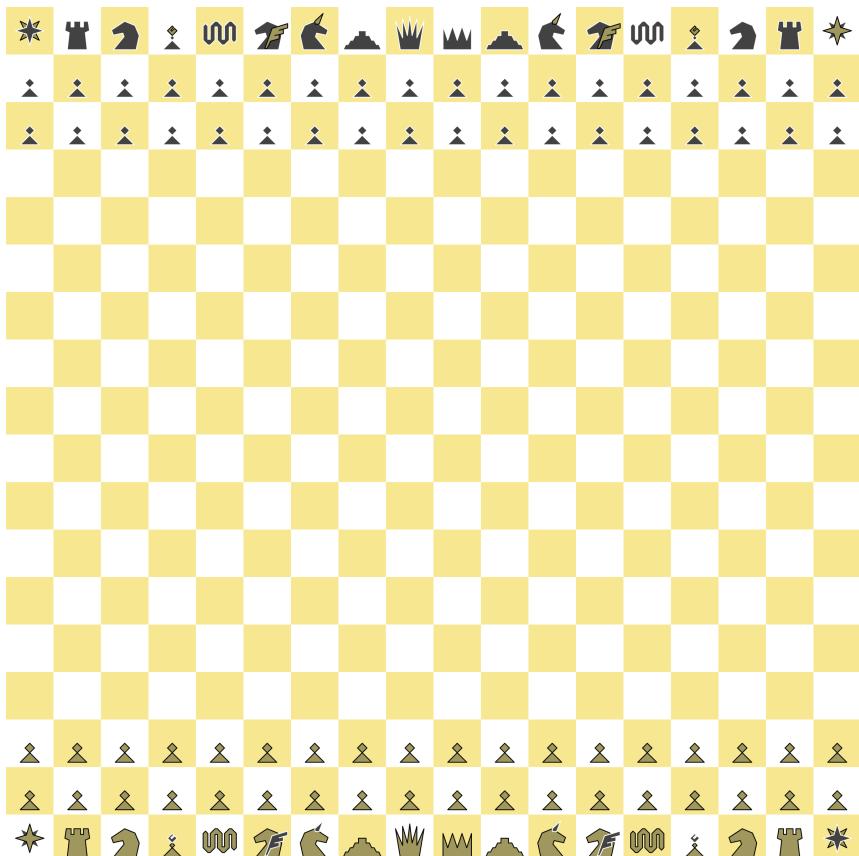


Figure 160: Nineteen board

# Hemera's Dawn

*Then assuredly the world was made, not in time,  
but simultaneously with time.*

... St. Augustine

Hemera's Dawn is chess variant which is played on 20 x 20 board, with darkish red-brown and grey fields and pure red and bright yellow pieces. Star colors are bright blue and white. Three new pieces are introduced; Centaur, Scout, and Grenadier.

## Centaur

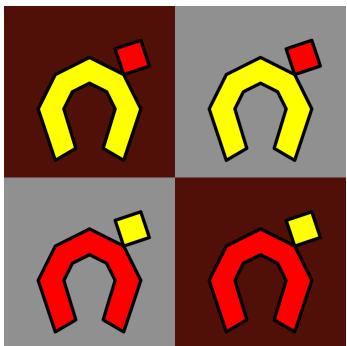
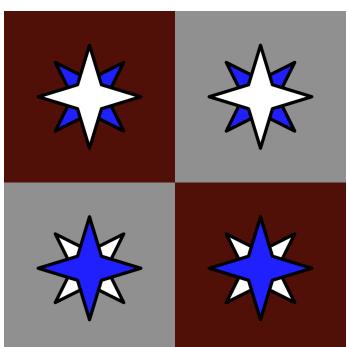


Figure 161: Centaur

Centaur is similar to Unicorn, only it can continue its jumpy movement in two chosen directions until another piece is encountered, or it runs out of a chessboard.

First direction is chosen freely, second direction is limited by the first choice. Once both long and short jump directions are determined, Centaur has to follow them in all subsequent steps, for the remainder of that ply.

For Centaur's ply to be legal, all steps must end up on the chessboard. Unlike Wave, Centaur cannot step outside of a chessboard, and in later step(s) return back onto it.



Star colors in this variant are different to colors of light and dark pieces.

Figure 162: Star

## Movement

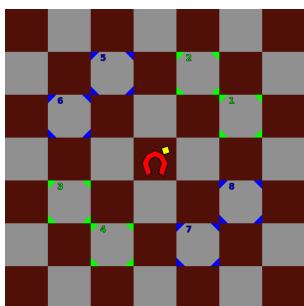


Figure 163: Centaur short jump

On fields with the same color as Centaur, it has the same step-fields (green, blue) as Knight has.

On fields in opposite color, Centaur can jump much longer, and has the same step-fields (green, blue) as Unicorn has. For comparison, short steps are also numbered (grey).

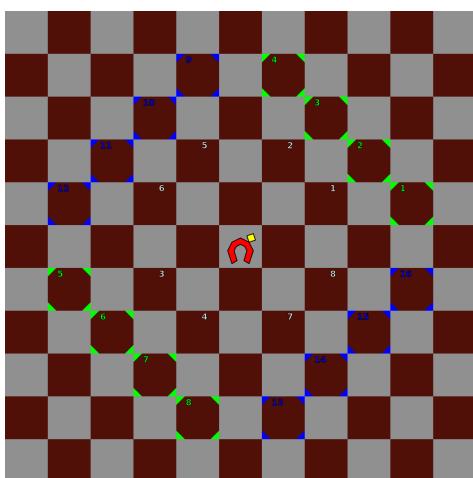


Figure 164: Centaur long jump

Again, just as Knight (and Unicorn), Centaur is not hampered by a piece on any unmarked field.

Step-fields are also capture-fields, Centaur would be able to capture opponent's pieces on any marked field, regardless of marker color (green, blue).

On initial step, Centaur can freely choose any marked field, regardless of marker color (green, blue), or step (long, short). On second step, Centaur can choose any step-field in the other color (blue if green was chosen initially, green if blue was first choice). On all subsequent steps, Centaur has to keep alternating between the two initially chosen steps, for the remainder of a ply.

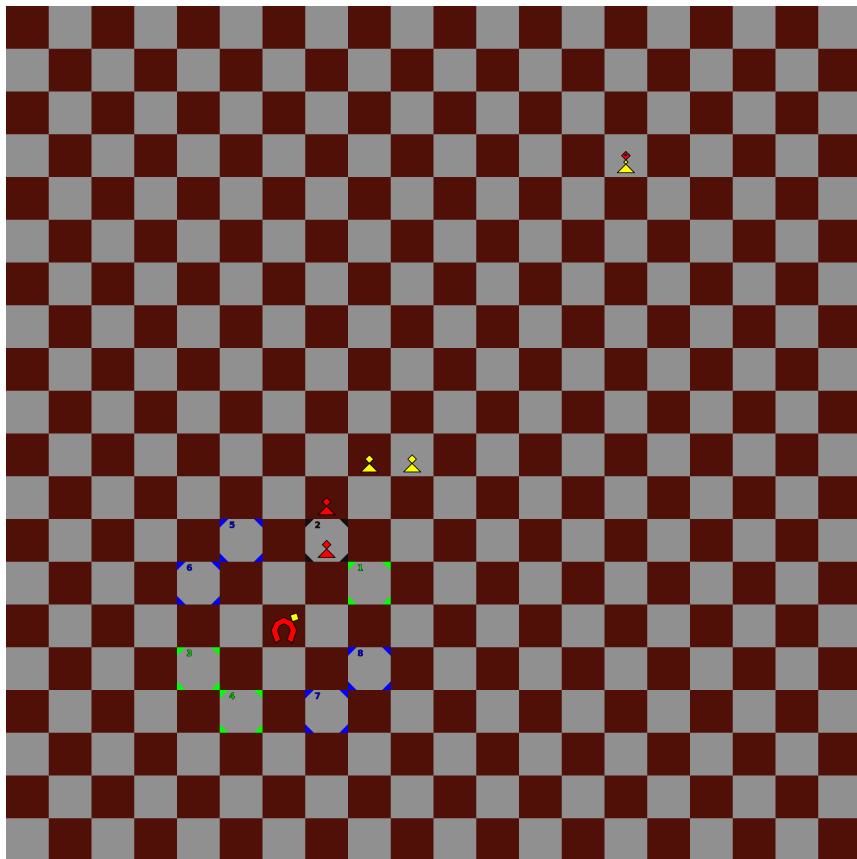


Figure 165: Centaur initial step

Here, light Centaur is located on the same color (i.e. light) field, so all available step-fields are short jumps, which are the same as those of Knight. For the first step, Centaur can choose any of marked step-fields, except the one which is blocked by own piece (light Pawn).

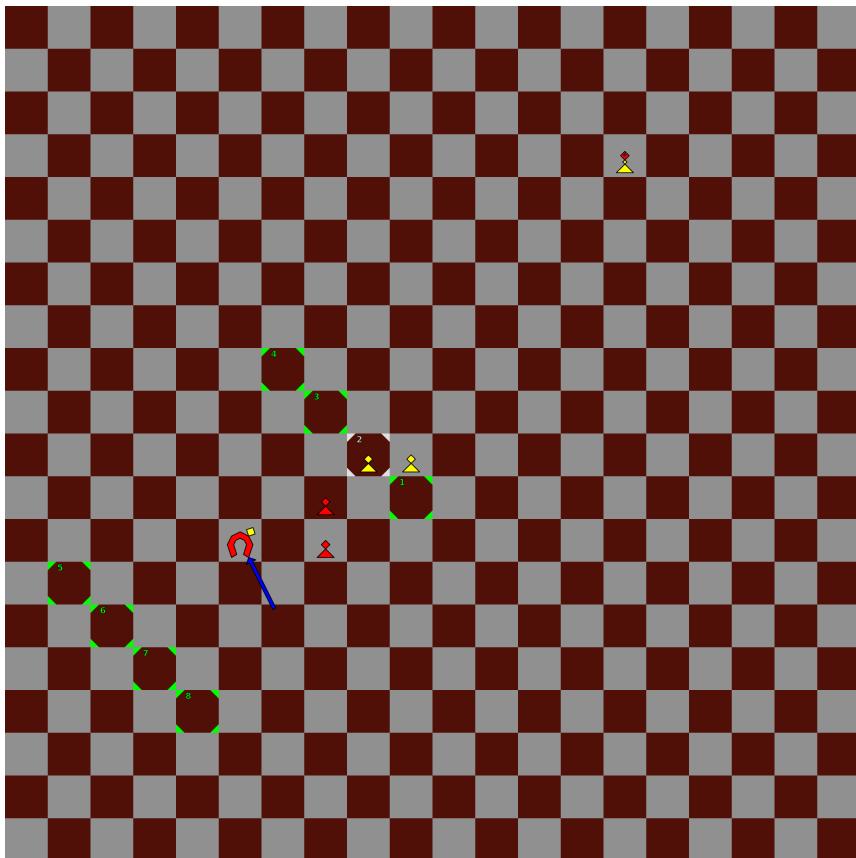


Figure 166: Centaur second step

Here, after first step, light Centaur is located on a dark field, so all available step-fields are long jumps, which are the same as those of Unicorn. Since upper-left step-field (blue) was chosen for a first step, next step has to be one of upper-right, lower-left fields (green). Note, opponent's piece (dark Pawn) can be captured, but it blocks light Centaur from moving any further.

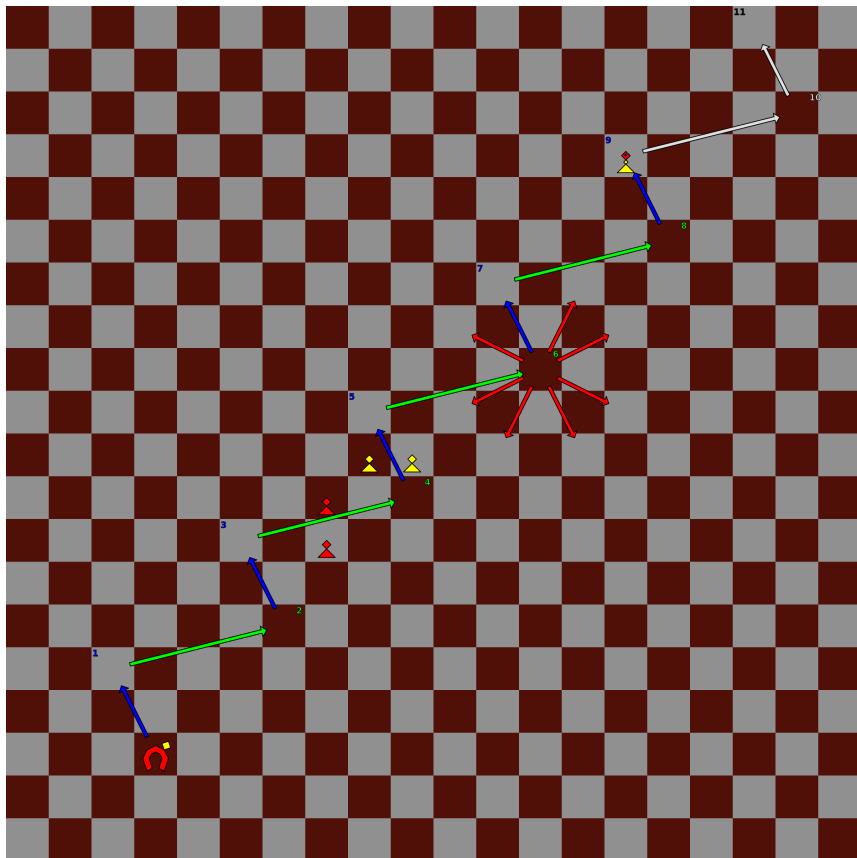


Figure 167: Centaur complete move

After second step is chosen, complete movement of Centaur consists of alternating between the two initial steps. Centaur for the rest of a ply has to follow those two initial steps, e.g. after reaching field 6, it cannot move to any other step-field (red). Light Centaur could also capture dark Bishop, but is prevented from moving any further (grey). Pieces on all other fields are ignored (Pawns).

## Out of board steps

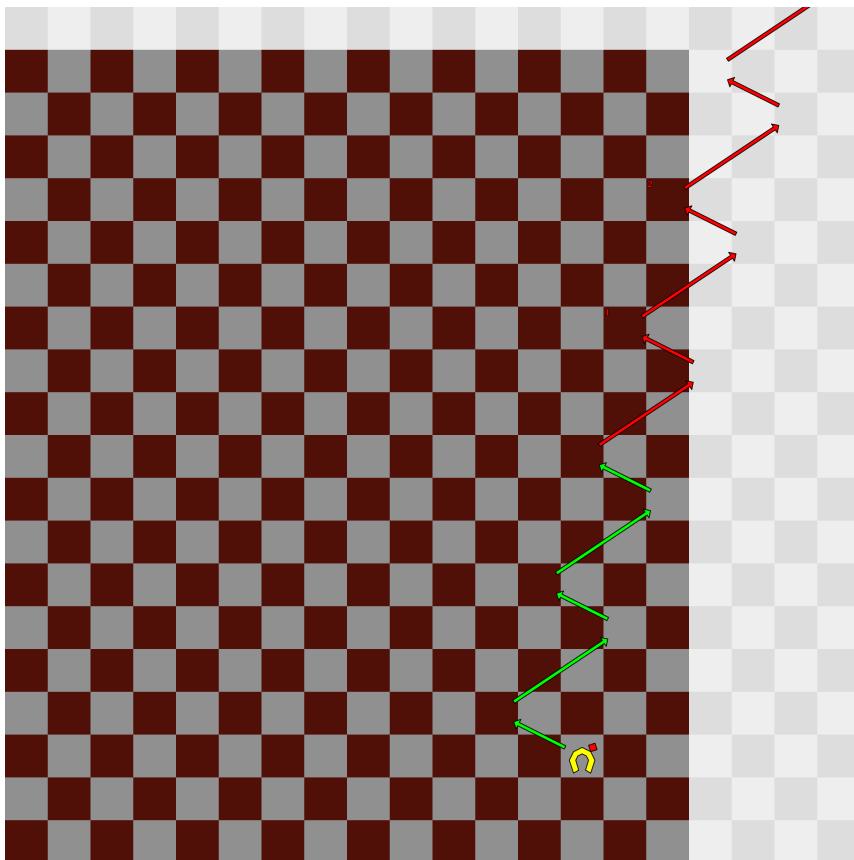


Figure 168: Centaur off-board steps

Here, light grey fields are virtual fields extending existing chessboard. For Centaur, it's illegal to step outside of a chessboard, and all subsequent steps are also illegal.

Here, Centaur cannot reach fields 1 and 2 from starting position with selected directions, even though it would end movement on the chessboard.

## Activating Wave

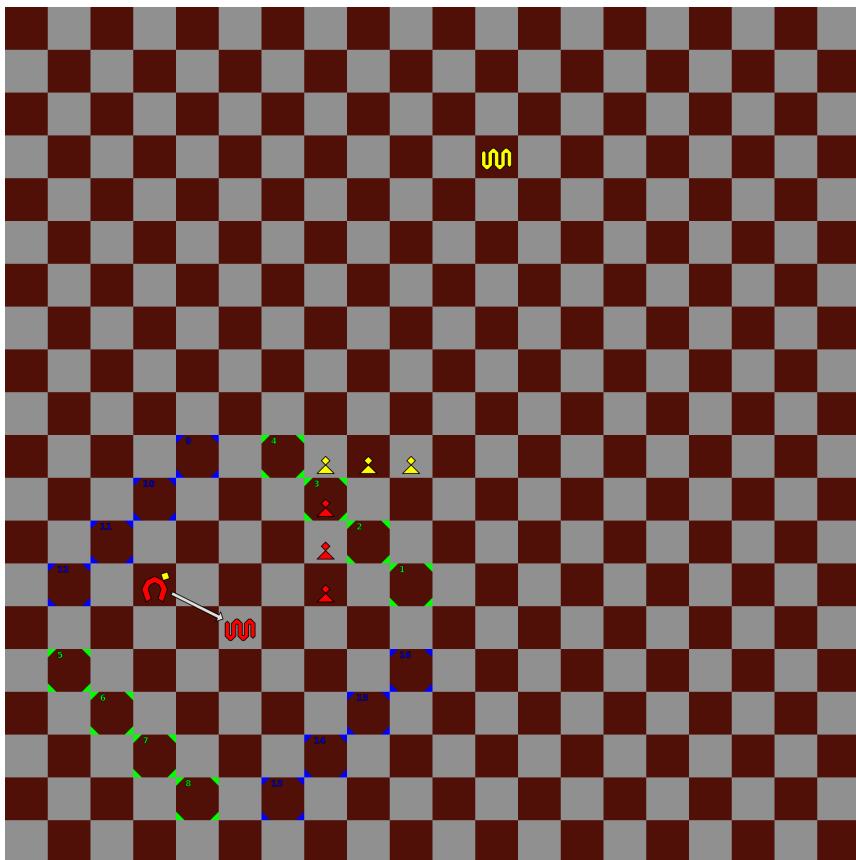


Figure 169: Wave activation by Centaur, first step

Wave activated by Centaur, **moves like one**. Here, light Wave is activated on the opposite color (i.e. dark) field, so all available step-fields are long jumps, which are the same as those of Unicorn. For the first step, Wave can choose any of marked step-fields (green, blue), including the one occupied by own piece (light Pawn). Light Pawn could be activated, or stepped over.

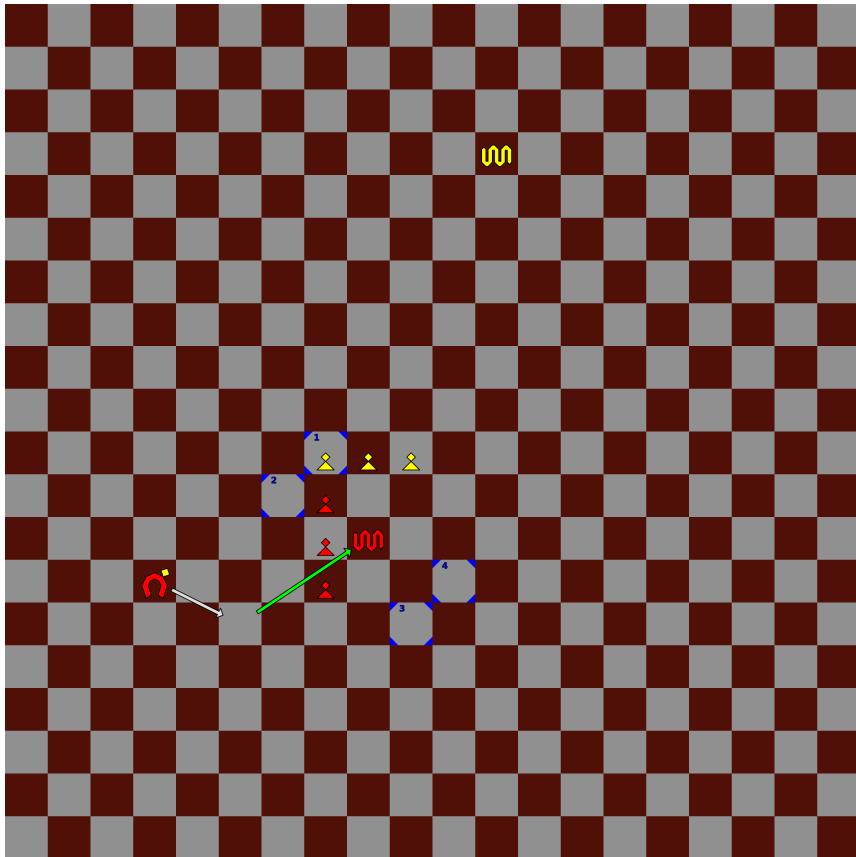


Figure 170: Wave activation by Centaur, second step

After first step, light Wave is located on a light field, so all available step-fields are short jumps, which are the same as those of Knight. Since upper-right step-field (green) was chosen for a first step, next step has to be one of upper-left, lower-right fields (blue). Light Wave cannot activate opponent's piece (dark Pawn), but it can step over it.

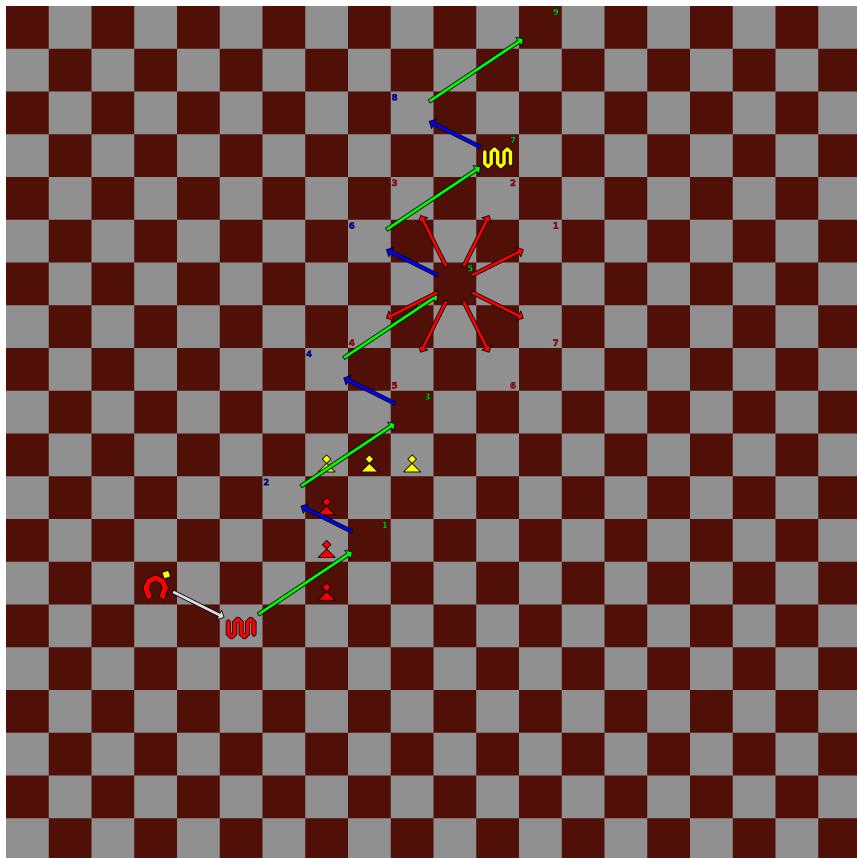


Figure 171: Wave activation by Centaur

After second step is chosen, complete movement of Wave consists of alternating between the two initially chosen steps, which Wave for the rest of a ply has to follow, e.g. after reaching field 4, it cannot move to any other step-field (red). Light Wave could also activate dark Wave, or it could continue moving further. Pieces on all other fields are ignored (Pawns).

## Out of board steps

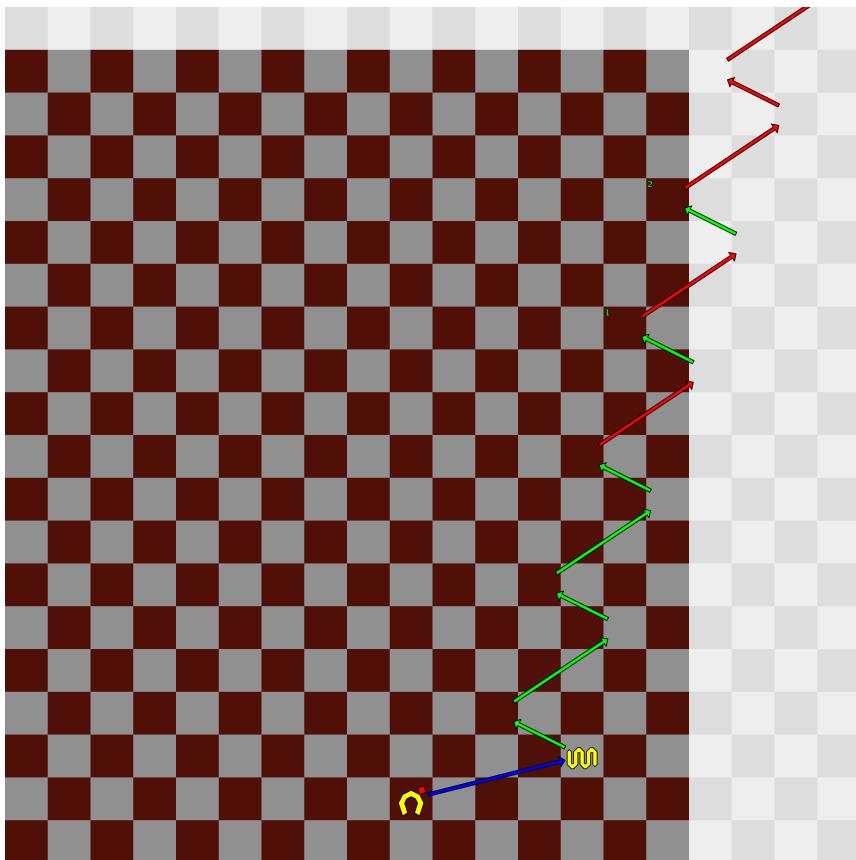


Figure 172: Wave off-board steps

Again, light grey fields are virtual fields extending existing chessboard. Wave activated by Centaur can step outside of a board, as long as its ply ends on a board, just like [Wave activated by Unicorn](#). Here, step-fields 1 and 2 are reachable by Wave, even though it stepped outside of the board. It is illegal for any piece, including Wave, to end its ply outside of a board.

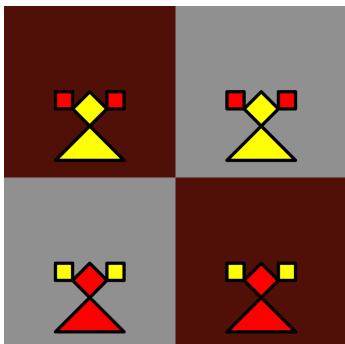
## Teleporting Wave



Figure 173: Wave off-board teleporting

Activation by Centaur and following teleportation of Wave is **exactly the same as if activated by Unicorn**, except Wave can now carry more than 1 momentum, because Centaur's ply can be longer than just 1 step.

# Scout



Scout is more mobile relative of a Pawn. Like Pawn, Scout can rush, and can be captured by en passant. Also like Pawn, Scout can capture opponent's rushing privates (Pawns, Scouts, Grenadiers) by en passant. Unlike Pawn, Scout cannot be promoted. Pawns can be promoted to Scouts.

Figure 174: Scout

## Movement

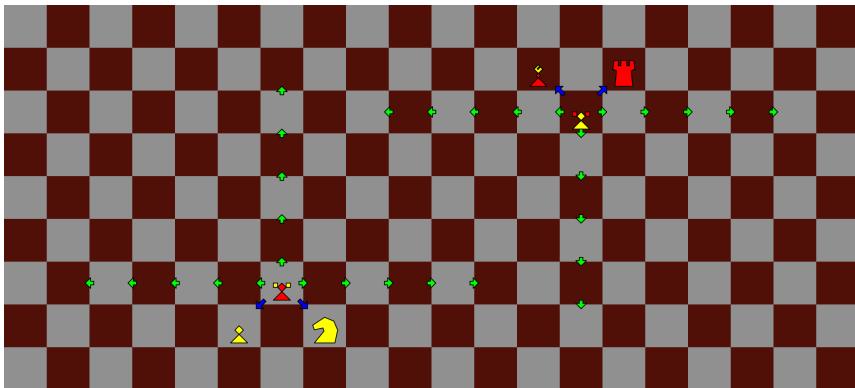


Figure 175: Scout movement

Scout can make a few steps forward (towards opponent's initial positions), and to the sides. Forward movement is the same as Pawn's; light Scout moves straight upwards, while dark Scout moves straight downwards. Count of steps Scout can make depends on size of a chessboard; in this variant Scout can make up to 5 steps in each direction.

Scout can also capture opponent's pieces with its diagonal steps; unlike Pawn's, those are backwards steps, i.e. towards own initial positions.

Steps (arrows) are referred to by relative position of its end field (point). So, capture-steps for light Scout are down-left, down-right diagonals; and for dark Scout up-left, up-right diagonals.

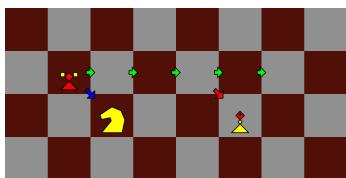


Figure 176: Scout capturing

Like Pawn, Scout can capture only on its first step in a ply, and cannot capture after it started moving. Here, light Scout can capture dark Knight since it's first step, but cannot capture dark Bishop after it made 3 steps to the right.

### Forking steps

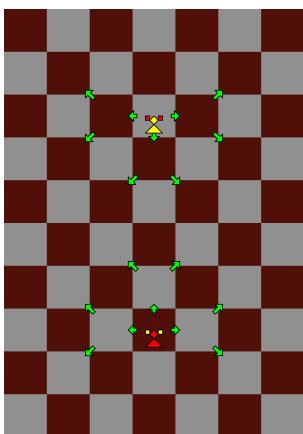


Figure 177: Forking steps

Forking steps refer to two diagonal steps available after a step up, down, left or right is made.

Forked steps are extension of a first step; so, e.g. after left step only left-up, and left-down steps are available, but not right-up, right-down.

Here are shown all forking steps for both light and dark Scout. Light Scout would use forking step after left, up, or right steps are taken; dark Scout would chose forking step after left, down, or right steps.

## Rerouting Scout

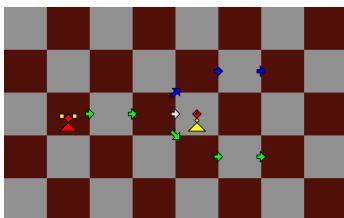


Figure 178: Rerouting Scout

Scout's horizontal and vertical steps are just a movement steps, and so can be blocked. When step is blocked, Scout can choose one of associated diagonal, forking step to move around obstacle. Then, Scout has to continue its movement in the same direction it was moving before rerouting.

In rerouting examples here blue arrows are used just to distinguish one valid path over the other, when choice (forking step) is being made.

First step can also be blocked (including by own piece), direction to follow after rerouting is the blocked one.

If initially chosen direction is blocked after rerouting, Scout can be rerouted again. Each choice of forking step is independent from any previous choice.

Here, each time Scout is blocked by any Pawn (own or opponent's), it can choose between equally valid right-down or right-up forking steps, regardless of any previous choices.

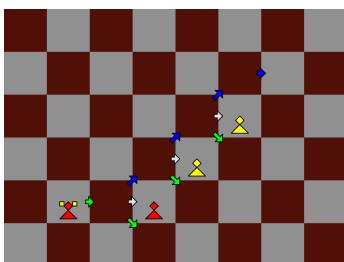


Figure 179: Rerouting first step

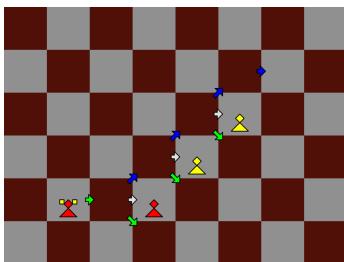


Figure 180: Continuous rerouting

## Activating Scout

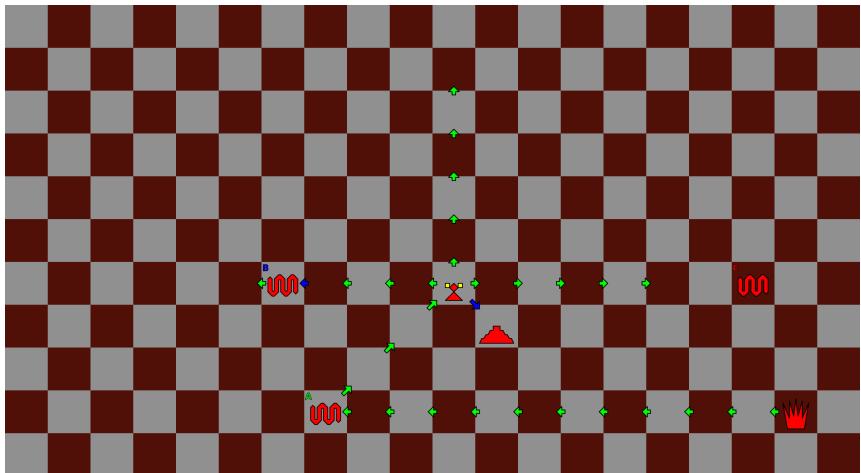


Figure 181: Activating Scout

Activated Scout is limited by both count of steps it can make, and momentum it received, whichever is lower. In this variant, Scout can make at most 5 steps; limit depends on size of a chessboard. Here, light Scout is activated by own Queen via Wave. Wave C is out of reach for light Scout, even though it received 11 momentum.

Activated Scout uses received momentum for movement, and transfers all of remaining momentum to the piece it activates. Here, light Scout can activate Wave B, and transfer to it remaining 7 momentum.

## Activating Wave, Pyramid

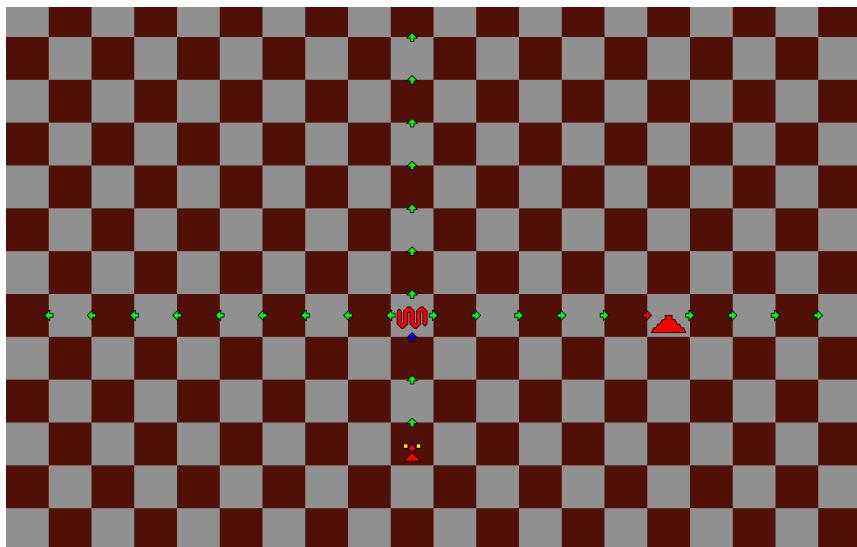


Figure 182: Activating Wave on step-fields

Wave activated by Scout on its step-fields can move left, right, or forward (towards opponent's initial positions); the same as [Wave activated by Pawn on its step-field](#). Direction, once chosen, cannot be changed for duration of a ply. Activated Wave is not limited by received momentum, and so can move until end of a chessboard is reached. Wave activated on step-fields cannot activate Pyramid.

[The same as Pawn](#), Scout cannot activate Pyramid on its step-fields, neither directly nor indirectly (via Wave).

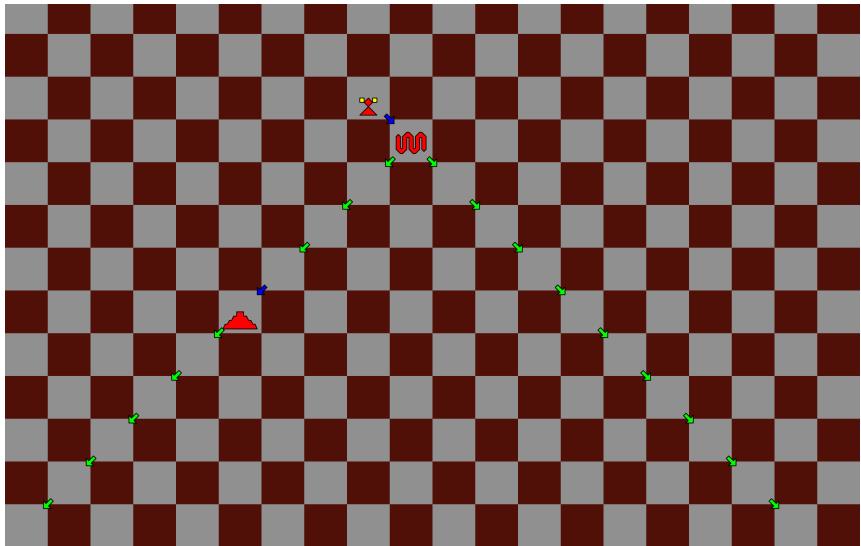


Figure 183: Activating Wave on capture-fields

Wave activated by Scout on its capture-fields can move diagonally left or right, towards own initial positions. This is similar to [Wave activated by Pawn on its capture-field](#), except Wave steps are now backwards. Direction, once chosen, cannot be changed for duration of a ply. Activated Wave is not limited by received momentum, and so can move until end of a chessboard is reached. Wave activated on a capture-field can activate a Pyramid.

Scout can activate Pyramid on its capture-fields. Cascade in which Pyramid is activated can contain Scout moving over its step-fields, as long as last material (non-Wave) piece is the one which can activate Pyramid; this is [the same as in cascade with a Pawn](#).

## En passant

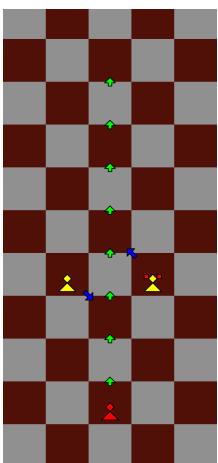


Figure 184: En passant

In this, and all subsequent variants, any private (Pawn, Scout, or Grenadier) can capture any other opponent's private en passant; types of pieces do not need to match.

For example, light Scout could capture rushing dark Grenadier en passant, just as Pawns are able to do the same to rushing opponent's Pawns in Classical Chess.

Capturing rushing opponent's Pawn with Scout is very similar to [en passant with a Pawn](#), the only real difference is that Pawn captures at forward, diagonal field, i.e. towards opponent's initial positions, while Scout captures at diagonal field backwards, i.e. towards own initial positions.

Here, dark Scout and dark Pawn are both positioned on the same rank, and both can capture rushing light Pawn en passant; the only difference between capturing with either of those two pieces are their capture-fields.

## Initial positions

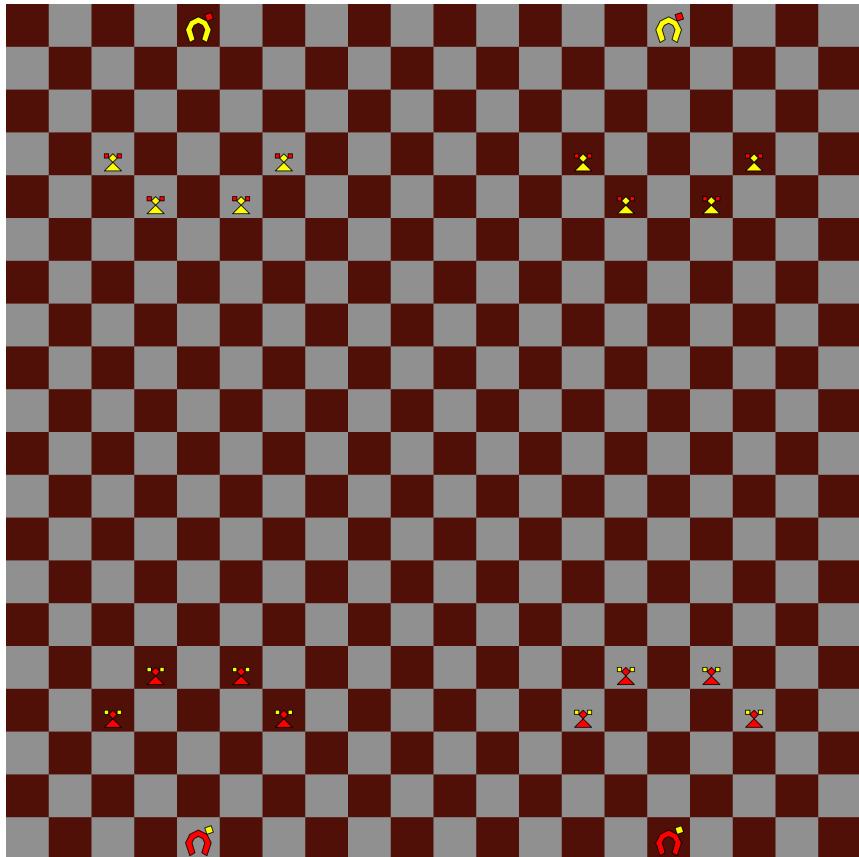
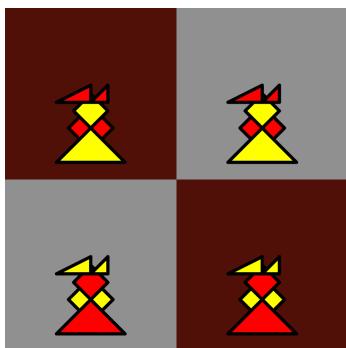


Figure 185: Initial positions of Scouts

In this variant a set of Scouts are added to the initial setup, 8 to each light and dark player, in front of regular Pawn ranks.

Scouts are positioned relative to Centaurs' initial positions, to block them from capturing opponent's pieces from the very first move.

# Grenadier



Grenadier is more tactical relative of a Pawn. Like Pawn, Grenadier can rush, and can be captured by en passant. Also like Pawn, Grenadier can capture opponent's rushing privates (Pawns, Scouts, Grenadiers) by en passant. Unlike Pawn, Grenadier cannot be promoted. Pawns can be promoted to Grenadiers.

Figure 186: Grenadier

## Grenadier-fields

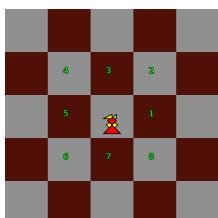


Figure 187: Grenadier-fields

Grenadier-fields are all fields immediately neighboring Grenadier horizontally, vertically, and diagonally. They are the same fields as step-fields of a King.

Grenadier is in close quarters if there is at least one opponent's piece present on its grenadier-fields.

## Movement

Light and dark Grenadier moves in the same way; so, in following examples only light Grenadier movement is shown.

When starting a ply Grenadier can move to, and capture at different fields depending if it's in close quarters or not.

Just like Pawn, Grenadier have capture- and step-fields separated, and so it can move onto capture-field only if there is opponent's piece to be captured.

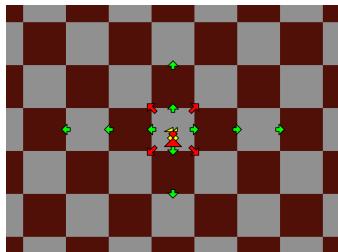


Figure 188: Movement

Grenadier can capture only at closest neighboring fields at all 4 diagonals (red arrows).



Figure 189: Transition

lose) any steps, if it passes by opponent's piece.

When there is no opponent's piece on its grenadier-field, Grenadier can take up to 3 fields to the left or right, and at most 2 fields up or down; these are step-fields, so e.g. Pyramid cannot be activated on them (green arrows). Movement limits depends on size of a chessboard.

Presence of opponent's pieces on grenadier-fields is relevant only at the start of Grenadier's ply.

So, Grenadier which started a ply without opponent's piece on its grenadier-fields won't gain (or

## Forking steps

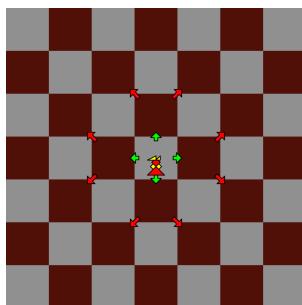


Figure 190: Forking steps  
first step followed by its accompanying capture-steps are shown.

Forking steps refer to two diagonal capture-steps available after a step up, down, left or right is made.

Steps (arrows) are referred to by relative position of its end point.

Forked capture-steps available are extension of first step; so, e.g. after left step only left-up, and left-down capture-steps are available, but not right-up, right-down.

Here, all possible choices for

## Close quarters

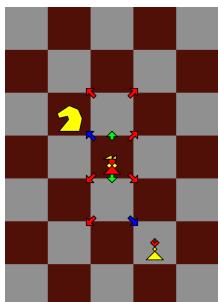


Figure 191: Vertical steps

When there is opponent's piece on its grenadier-fields, Grenadier can take one step up or down; after which it can take associated forking capture-step, if there is opponent's piece to capture (here, dark Bishop). Before taking any other step, Grenadier can take diagonal capture-step; here, capturing dark Knight.

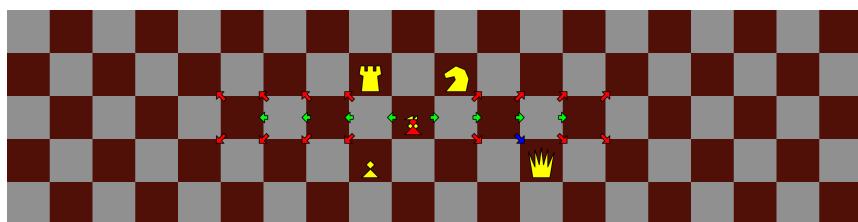


Figure 192: Horizontal steps

In close quarters, Grenadier can take one step more than count of opponent's pieces on its grenadier-fields either to the left or to the right; here, three opponent's pieces grants four horizontal steps. After each step Grenadier can optionally capture opponent's piece with associated forked capture-step (here, dark Queen).

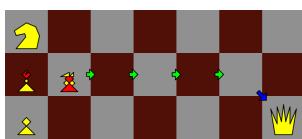


Figure 193: Transition

Again, whether Grenadier is in close quarters is determined at the very beginning of a ply, before first step; and also how many steps it's being granted due to opponent's pieces on its grenadier-fields.

Here, Grenadier after first step has no opponent's pieces in its vicinity, yet it still can capture dark Queen.

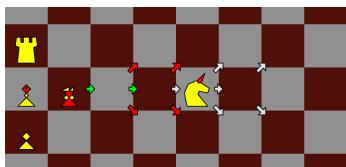


Figure 194: Blocked steps

Grenadier cannot capture on its step-fields, so those can be blocked, and with it all subsequent step- and forked capture-fields.

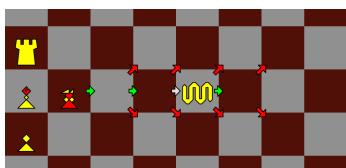


Figure 195: Steps not blocked

Waves are transparent, so do not block subsequent fields. Grenadier cannot interact with opponent's Wave, so that step-field is blocked, but not fields behind it.

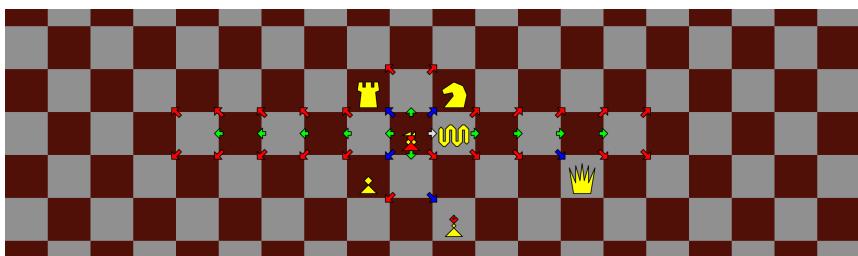


Figure 196: Complete close quarters pattern

Steps, normal and forked capture-steps taken together form complete movement pattern in close quarters, i.e. when opponent's pieces were present on its grenadier-fields, before Grenadier took first step in a ply.

Note, in close quarters Grenadier can take only one step up or down; regardless how many opponent's pieces there are on its grenadier-fields.

## Activating Grenadier

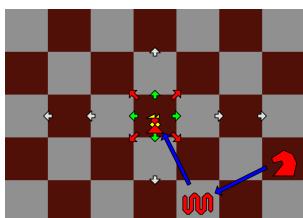


Figure 197: Activated

Activated Grenadier is limited by received momentum, up to maximum allowed by movement pattern; both in close quarters, and out. Both normal and capture-steps are counted towards movement limit.

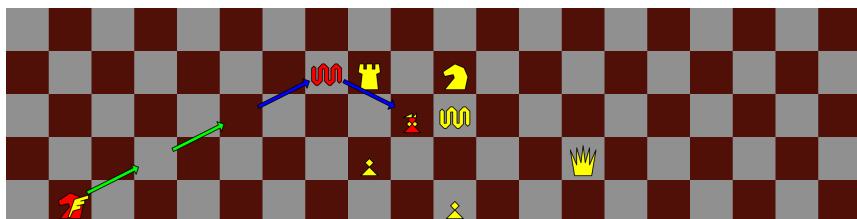


Figure 198: Activating close quarters Grenadier

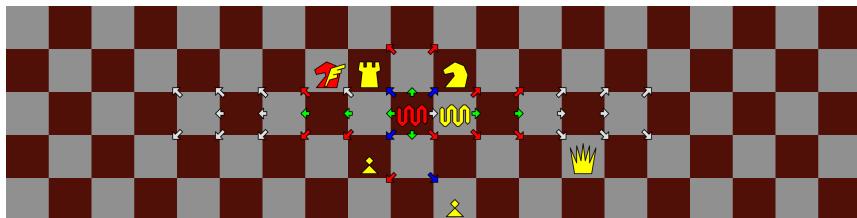


Figure 199: Close quarters Grenadier activated

Here, Grenadier activated in close quarters (now "in the air") cannot capture dark Queen, since it's limited by received 3 momentum.

Any surplus momentum is lost, unless Grenadier activates a piece. Just like any other piece, Grenadier can activate own Wave on either step- or capture-fields, while own Pyramid can be activated only on capture-fields. As before, all of remaining momentum is transferred to activated piece.

## Activating Wave, Pyramid

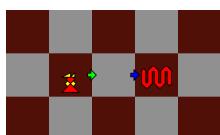


Figure 200: Activating

Wave activated by Grenadier on its step-fields moves like a Rook, straight to the left, right, up, or down; regardless if activating Grenadier was in close quarters, or not.

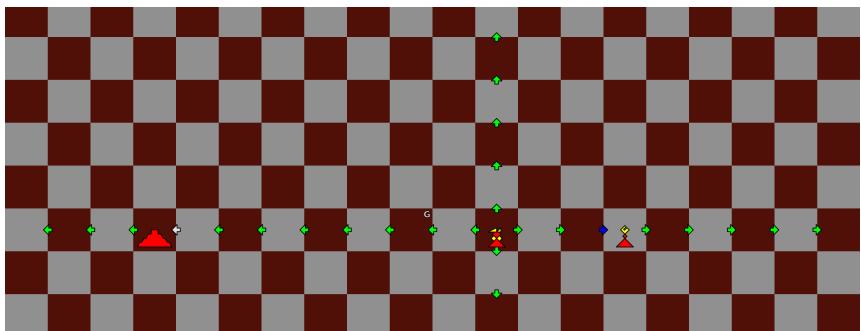
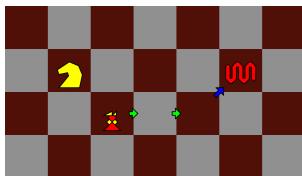


Figure 201: Wave activated on step-fields

Direction, once chosen, cannot be changed for duration of a ply. Activated Wave is not limited by received momentum, and so can move until end of a chessboard is reached. Wave activated on step-fields cannot activate own Pyramid.

The same as Pawn, Grenadier cannot activate Pyramid on its step-fields, neither directly nor indirectly (via Wave).



Wave activated by Grenadier on its capture-fields moves diagonally, like a Bishop; regardless if activating Grenadier was in close quarters or not.

Figure 202: Activating

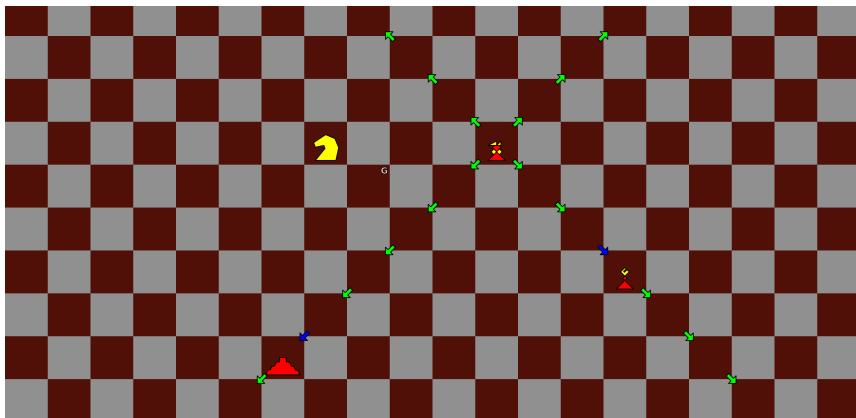


Figure 203: Wave activated on capture-fields

Direction, once chosen, cannot be changed for duration of a ply. Activated Wave is not limited by received momentum, and so can move until end of a chessboard is reached. Wave activated on a capture-field can activate own Pyramid.

Grenadier can activate Pyramid on its capture-fields. Cascade in which Pyramid is activated can contain Grenadier moving over its step-fields, as long as last material (non-Wave) piece is the one which can activate Pyramid; this is **the same as in cascade with a Pawn**.

## En passant

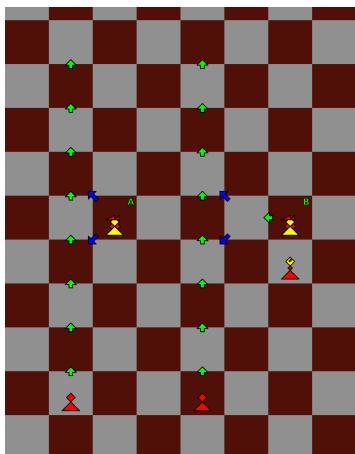


Figure 204: En passant

Image on the left contains two examples in parallel; to the left, and on the right.

Grenadier can capture rushing Pawn by en passant with its diagonal capture-step (here, Grenadier A). If there is opponent's piece on its grenadier-field, it can also use forked capture-step, after one or more steps (here, Grenadier B).

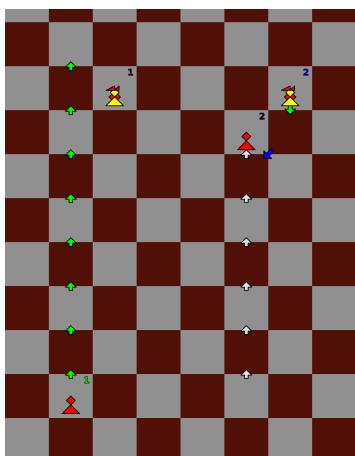


Figure 205: En passant, extended

Image on the left contains two stages of the same example; to the left before Pawn rushing (Pawn 1, Grenadier 1), and on the right after Pawn rushed (Pawn 2, Grenadier 2).

Pawn can end its rush onto a grenadier-field of opponent's Grenadier. This grants Grenadier close quarters movement, which can now also make a step parallel to Pawn's rush, before capturing it en passant, in addition to base diagonal capture-steps (Grenadier A in previous example).

## Initial positions

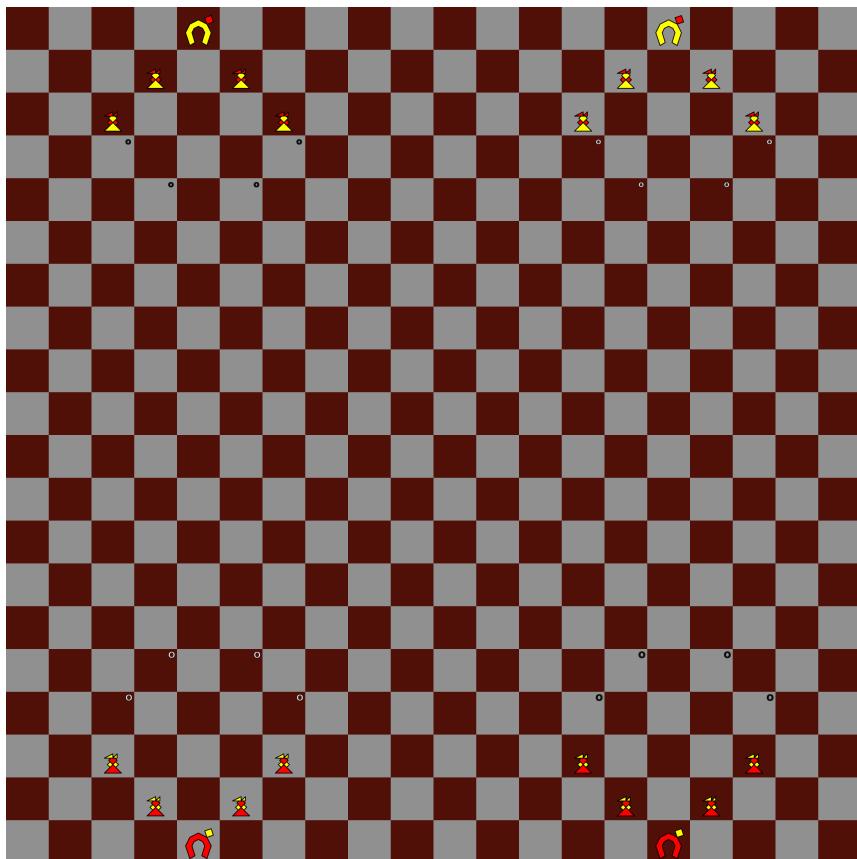


Figure 206: Initial positions of Grenadiers

In this variant a set of Pawns in [the initial setup](#) are replaced by Grenadiers.

There are the same amount of Grenadiers as are Scouts, 8 for each player. Initial positions of Grenadiers mirrors those of Scouts; for comparison, [initial positions of Scouts](#) are also marked in the example above.

## Rush, en passant

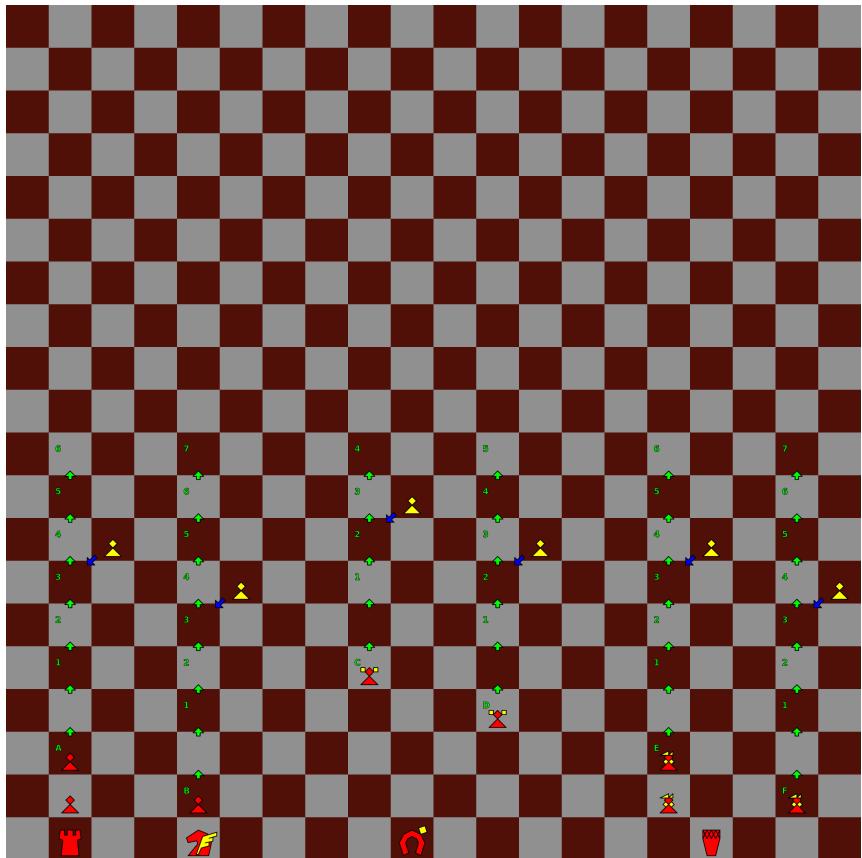


Figure 207: Rush, en passant

Image above have 6 examples presented in parallel: one for each Pawns A, B, Scouts C, D, and Grenadiers E, F.

Rush and en passant are very similar to those in [Nineteen variant](#). All privates (Pawns, Scouts, and Grenadiers) can be rushed up to, and including, the last row on own side of a chessboard. All rushed privates can be captured by any opponent's private en passant, capturing and captured pieces do

not need to be the same type.

In this variant, Pawns and Grenadiers can be rushed 7 (Pawn A, Grenadier E) or 8 (Pawn B, Grenadier F) fields, depending if they were in first or second privates row. Scouts can be rushed 5 (Scout C) or 6 (Scout D) fields, depending how close their starting position is to opponent.

Note, first move of a private (any of Pawns, Scouts, and Grenadiers) is always a rush, if it moves for 2 or more fields forward, regardless of its normal movement limits.

For instance, Scouts in this variant can move at most 5 fields forward; outermost Scouts could reach end of own side of chessboard without rushing. Regardless, first move of any Scout from its initial position is a rush, and expose it to possible capture by en passant, if it moves for 2 or more fields forward.

Converted opponent's privates cannot be rushed, even if converted on an initial positions of own privates.

## Promotion

Promotion is non enforced, delayed variety, i.e. it's the same as in [previous chess variant](#), Age of Aquarius.

Promotion in this variant is polygamous, more than one Queen in the same color can be present on chessboard at any given time.

# Castling

Castling is **the same as in Nineteen variant**, only difference is that King can move between 2 and 7 fields across. All other constraints from Nineteen variant still applies.



Figure 208: Castling

In example above, all valid King's castling moves are numbered.



Figure 209: Castling short right

In this example King was castling short to the right. Initial King's position is marked with "K". After castling is finished, right Rook ends up at field immediately left to the King.

## Initial setup

Compared to initial setup of Nineteen, Centaur is inserted between Bishop and Wave symmetrically, on both sides of chessboard. Scouts are added before first row of Pawns, and Grenadiers replace some Pawns. This can be seen in the image below:

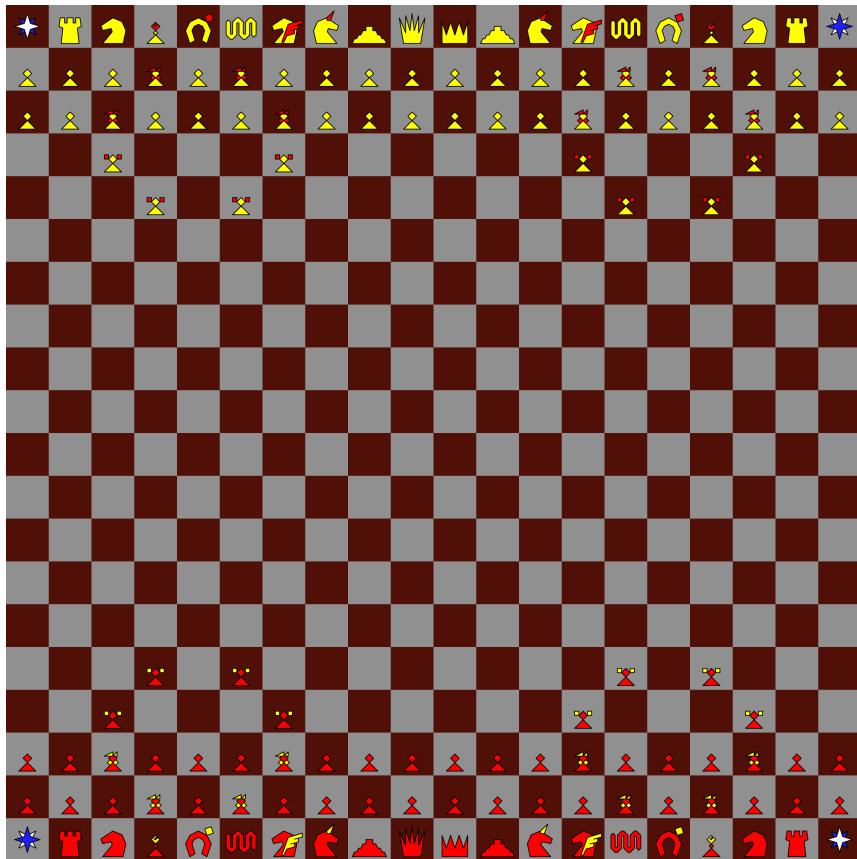


Figure 210: Hemera's Dawn board



# Tamoanchan Revisited

*I dream, therefore I exist.*

... August Strindberg

Tamoanchan Revisited is chess variant which is played on 22 x 22 board, with white and bright cyan fields and light grey and grey pieces. Star colors are yellow and bright red. A new piece is introduced, Serpent.

# Serpent

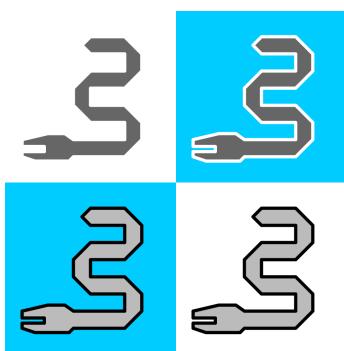


Figure 211: Serpent  
up to 14 fields, inclusively.

Serpent moves diagonally one field at the time, after which it alternates diagonal.

All step-fields are also capture-fields, Serpent would be able to activate not just Wave, but also Pyramid on any of them.

Serpent has movement limit, which is calculated from a board size of a variant being played. In this variant Serpent can move for

As an alternative move, Serpent can move one field vertically or horizontally if it's unoccupied, to change color of accessible fields, and even teleport while using color-changing move. Serpent can also displace any Pawn in its way, both own or opponent's.

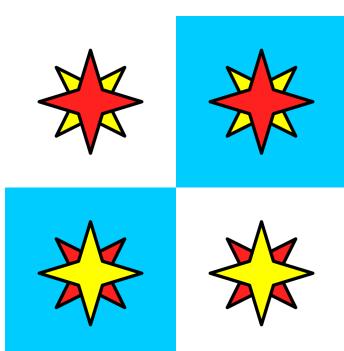


Figure 212: Star

Serpent can also initiate sacrificing of own Pawn, after which it can capture multiple opponent's Pawns in a single move.

Star colors in this variant are presented on the left.

## Movement

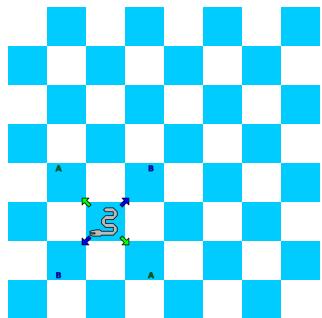


Figure 213: Diagonals

On its first step Serpent can choose among any of the 4 diagonal fields, i.e. either A or B diagonal.

On all subsequent steps Serpent has to alternate between diagonals. Choice between 2 fields on a diagonal is independent of any previous choice.

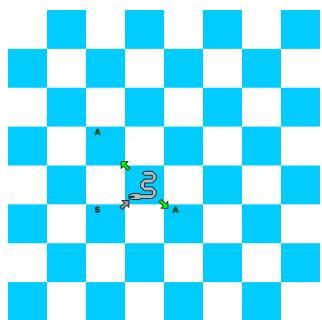


Figure 214: Step 1

Starting position is marked S.

First step was taken onto upper-right field on diagonal B. Next step has to be onto either field on diagonal A.

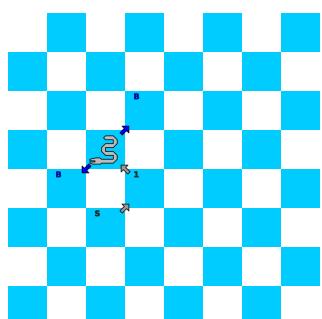


Figure 215: Step 2

Step taken by Serpent was onto upper-left field on A diagonal.

Next step has to be on diagonal B, chosen freely between the 2 fields, regardless of choice made for the first step.

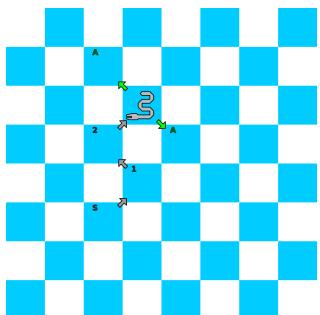


Figure 216: Step 3

Last step was on B diagonal, next step has to alternate again, onto A diagonal.

Field numbers counts steps to them, and also gathered momentum.

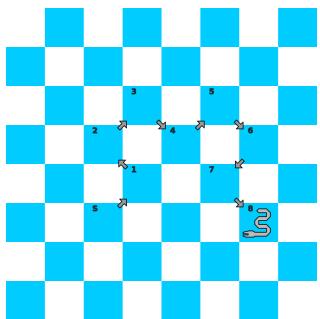


Figure 217: End step

Finished move with 8 steps performed.

In this variant, Serpent is limited to 14 steps.

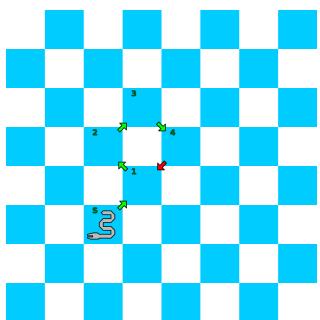
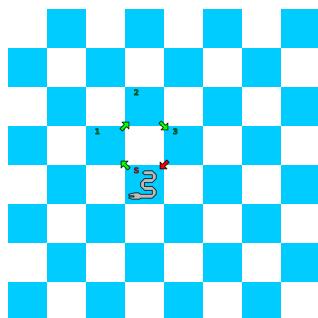


Figure 218: Loops are illegal

In a single ply Serpent can visit each field in its path only once. So, loops within a single ply are illegal.

Fields visited in a previous ply (or, in a previous move) are accessible without any limitations. So, loops within a single move are legal, if they are closed in a ply other than starting ply of that loop.

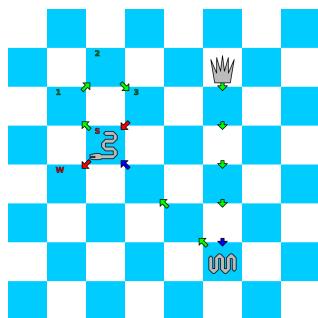
## Static move is illegal



Static move is one in which a piece ends in the same position as it was at the beginning of that same move. The same as in [previous example](#), it's illegal for a single Serpent in a move, or one starting a cascade, to end its movement on its starting position.

Figure 219: Static move

## Static piece is illegal



Unlike [previous example](#), Serpent activated in a cascade cannot, in the same ply, end its movement on its starting field.

Here, Serpent activated in a cascade cannot return to its originating field S, and so it cannot reactivate Wave, and force it to move over to e.g. field W.

Figure 220: Static piece

## Revisiting fields, loops

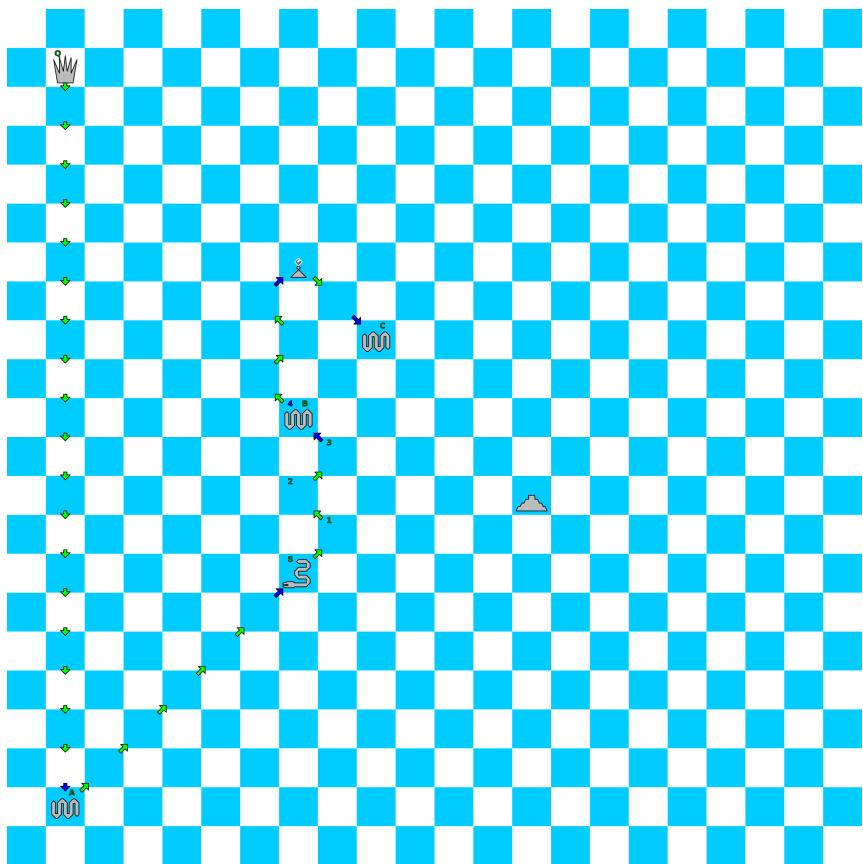


Figure 221: Serpent's first ply

While Serpent cannot revisit fields, and make loops in a single ply, Serpent can do it in a new ply; either in a new move, or in the same move, if it has been reactivated.

Here, Queen is about to activate Serpent via Wave A, which will then continue cascade to Wave B, Bishop, and Wave C; Serpent's steps are also enumerated.

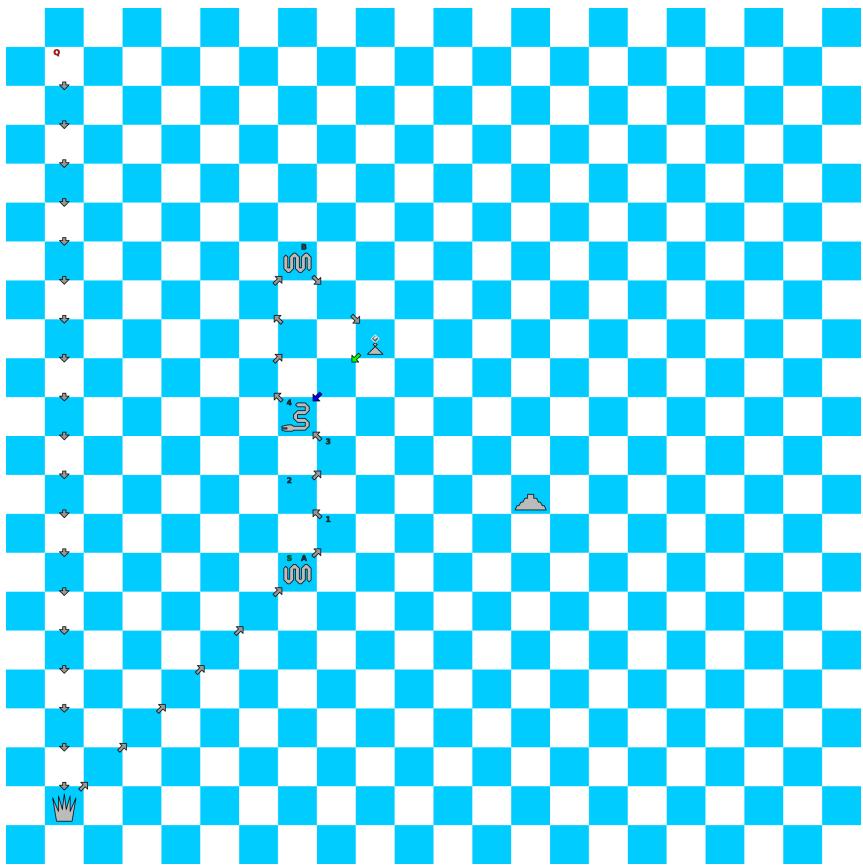


Figure 222: Reactivating Serpent

Here, first part of cascade has been played out; grey arrows show path traveled over by a piece they point to. Wave C is now "in the air", about to reactivate light Serpent with remaining 13 momentum.

Note, light Queen cannot return to its starting field Q, even if reactivated with enough momentum, since it's **the very first piece in a cascade**.

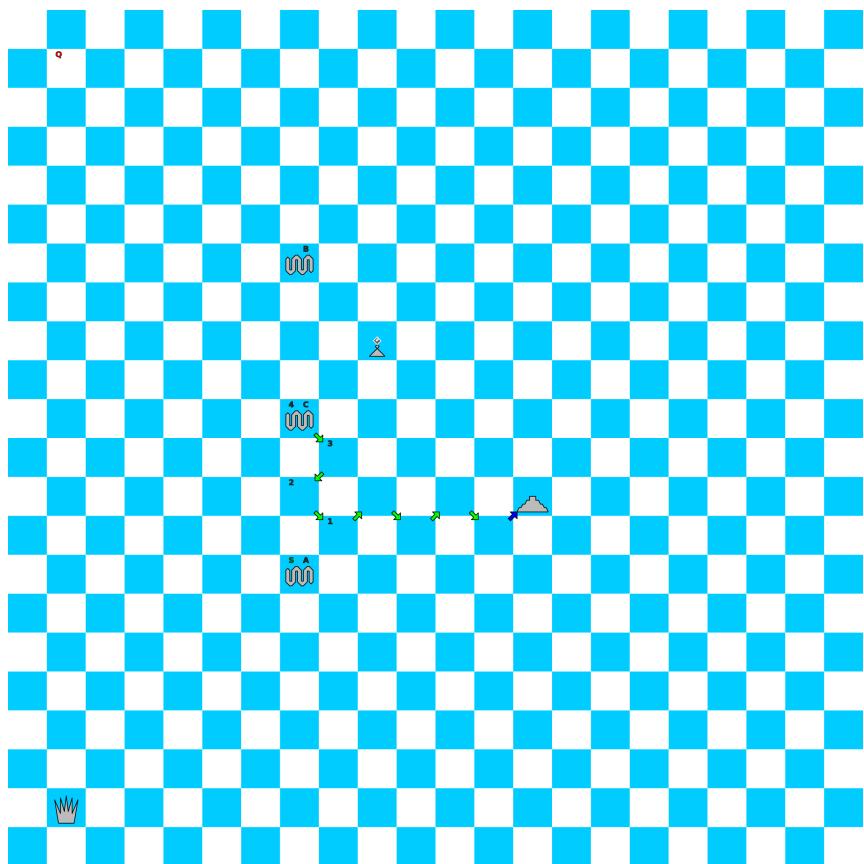


Figure 223: Serpent's second ply

Here, reactivated light Serpent (now "in the air") can revisit enumerated fields it traveled over in a previous ply, and e.g. activate light Pyramid.

Unlike Queen, Serpent can also settle onto own starting field S, since it didn't start cascade.

## Different paths, momentum

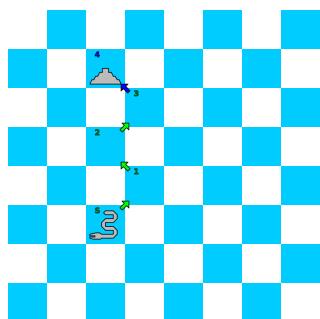


Figure 224: The shortest path

While loops are illegal within single ply, it's still possible to find different paths to the same destination, some of those with different lengths, resulting in different accumulated momentum.

Example on the left shows the shortest path possible to activate Pyramid, with 4 momentum.

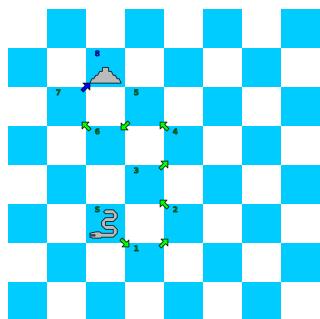


Figure 225: Long path

Example on the left in the same situation now shows longer path available, activating Pyramid with 8 momentum.

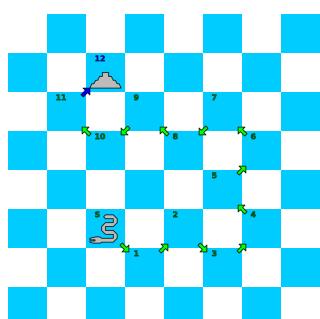


Figure 226: Longer path

One of the longest paths available in the same situation is shown on the left, with 12 momentum accumulated.

Again, Serpent in this variant is limited to maximum of 14 steps performed in a single ply.

## Step limit, momentum

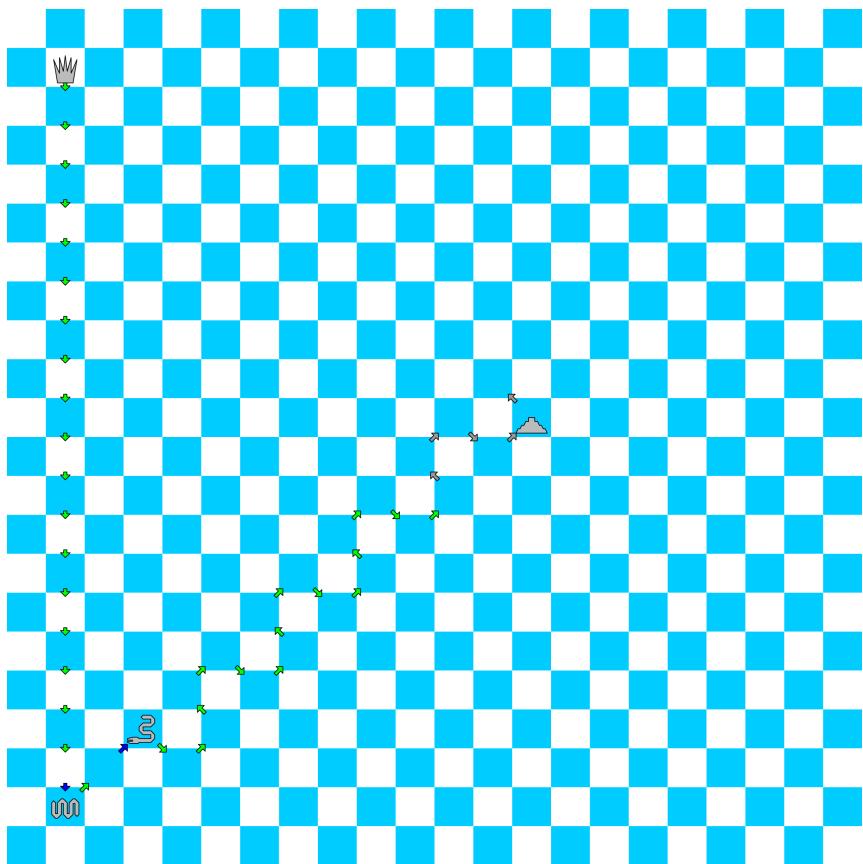


Figure 227: Serpent's step limit

In this variant, Serpent can make at most 14 steps in one ply. This is so, even if Serpent was activated with more than 14 momentum, like in example above.

In a cascade, Serpent can be activated multiple times; so, in a single move, Serpent can still move for more than its step limit.

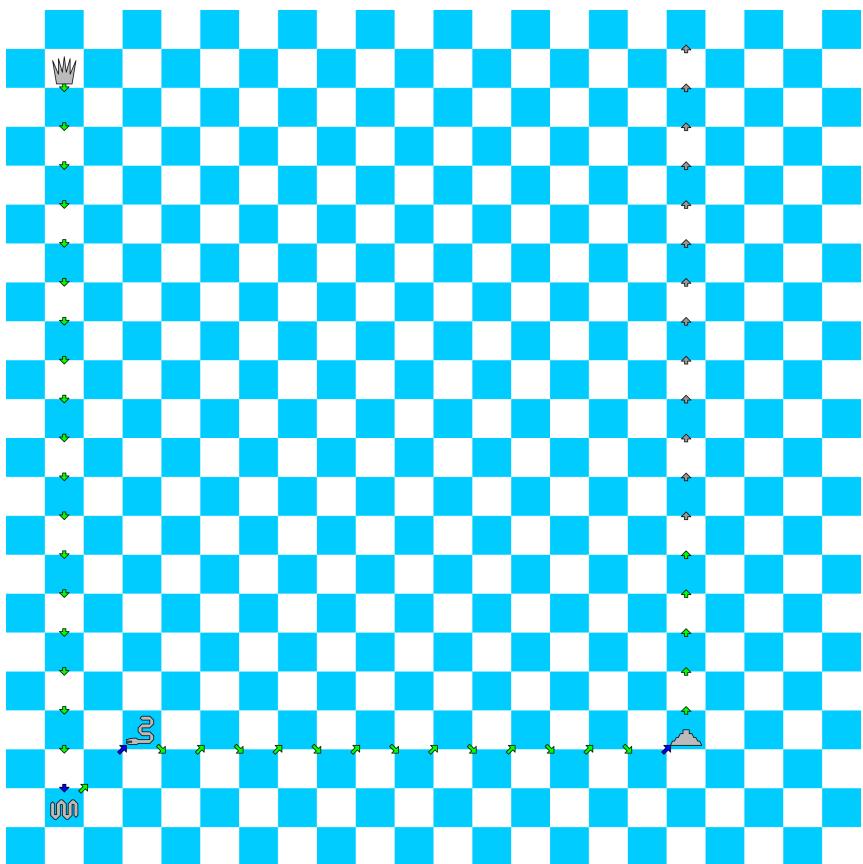
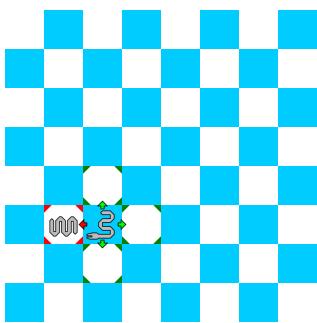


Figure 228: Surplus momentum used

Serpent with more momentum than its step limit can activate a piece, and transfer to it all of surplus momentum.

Here, Serpent used all of its 14 steps allowance, so Pyramid is activated with excess 5 momentum; which were unusable, but still carried by Serpent.

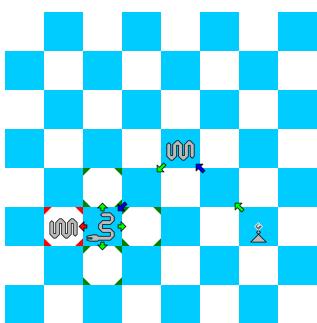
## Color-changing move



Serpent's alternative move is a way to change color of accessible fields, provided that destination field is empty.

Color-changing fields are all fields immediately neighboring starting location, either horizontally or vertically, but not diagonally.

Figure 229: Color-changing move



Serpent's color-changing move can also be at the end of a cascade, if Serpent was activated.

Figure 230: Color-changing cascade

## Displacing Pawns

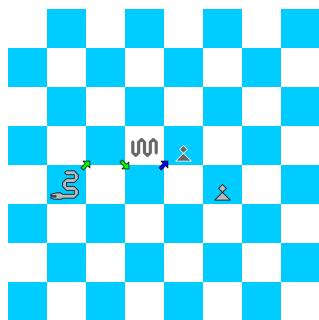


Figure 231: Before displacement

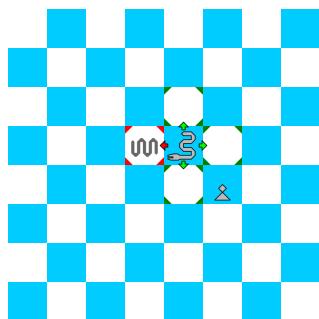


Figure 232:  
Displacement step

Serpent can displace Pawns it encounters and, in the same ply, continue its movement. Only Pawns, own or opponent's, can be displaced; all other pieces cannot be displaced.

Displacement fields are the same as color-changing fields, and also has to be empty.

A Pawn can be displaced onto a field immediately to the left, right, up, or bottom from its standing position, if that displacing field is empty, regardless if light or dark Pawn is being displaced.

Here, dark Pawn (now "in the air") can be displaced onto any of 3 empty neighboring fields; left field is illegal for displacement, since it's not empty.

Multiple Pawns are displaced in order in which they are encountered, each immediately after Serpent stepped onto a field at which that Pawn was positioned. After Pawn is displaced, Serpent can continue its ply. Pawns can share displacing fields; if so, first Pawn displaced prevents others from being displaced onto the same field.

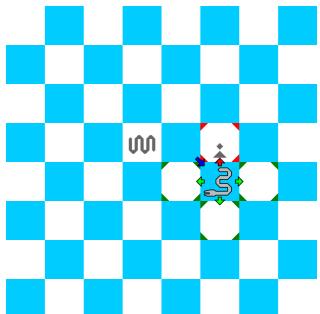


Figure 233:  
Displacement step

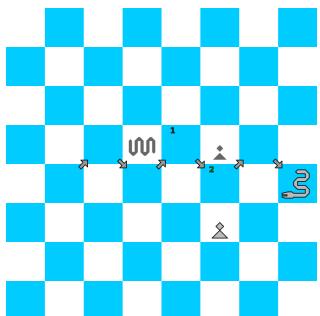


Figure 234:  
Displacement end

Here, dark Pawn has been displaced onto field shared with light Pawn (now "in the air"), which cannot be displaced onto up-field, as it's not empty any more.

There is no limit to number of displacements Serpent can do in a ply. If there is no empty displacement field, Serpent must capture encountered Pawn (thus ending its ply), or find another path.

Here, dark and light Pawns have been displaced in a single ply from their initial positions 1 and 2, respectively; arrows show complete Serpent's path in a single ply.

Displacement does not use momentum, and can be performed even if Serpent has none.

Here, Serpent activated with four momentum would not spend one to displace dark Pawn. So, light Pawn is within reach, and can be displaced, even if Serpent would have no momentum left when it's reached.

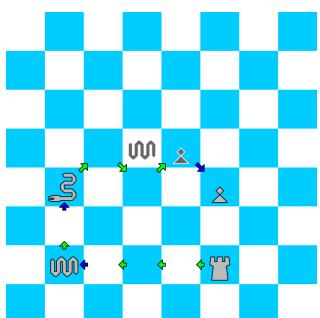


Figure 235: Displacing while activated

## Out-of-board steps

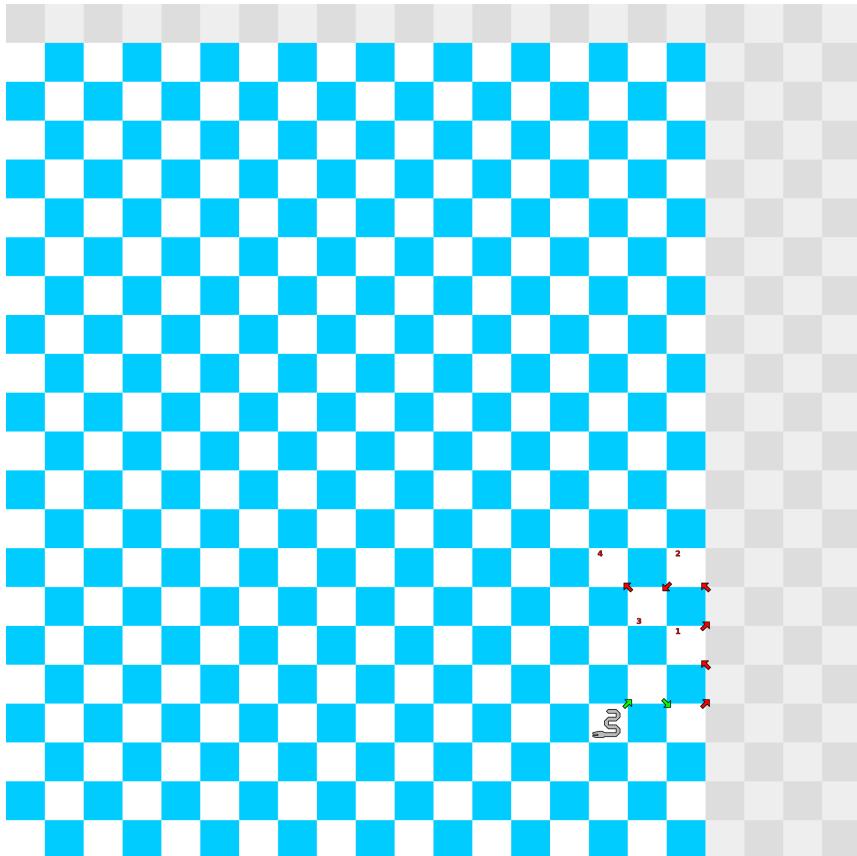


Figure 236: Serpent out-of-board steps

Here, light grey fields are virtual fields extending existing chessboard. For Serpent, it's illegal to step outside chessboard, and all subsequent steps are also illegal. That means, Serpent cannot reach fields 1 through 4 with selected path, even though it would end movement on the chessboard.

## Teleporting Serpent

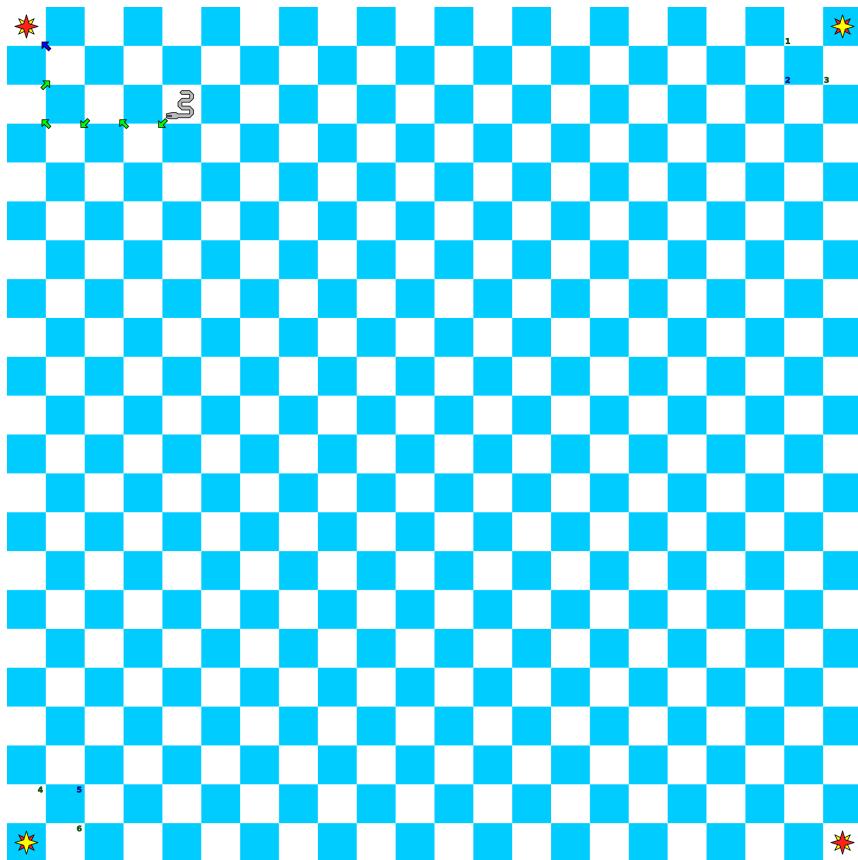


Figure 237: Teleporting Serpent

Serpent teleports to any empty portal-field near Star in opposite color (here, fields 1 – 6), just like **any other piece, except Wave**. Serpent is bound to fields in one color, similar to Bishop. Teleporting Serpent presents opportunity to change color of available fields (here, portal-fields 2, 5), also **similar to Bishop**.

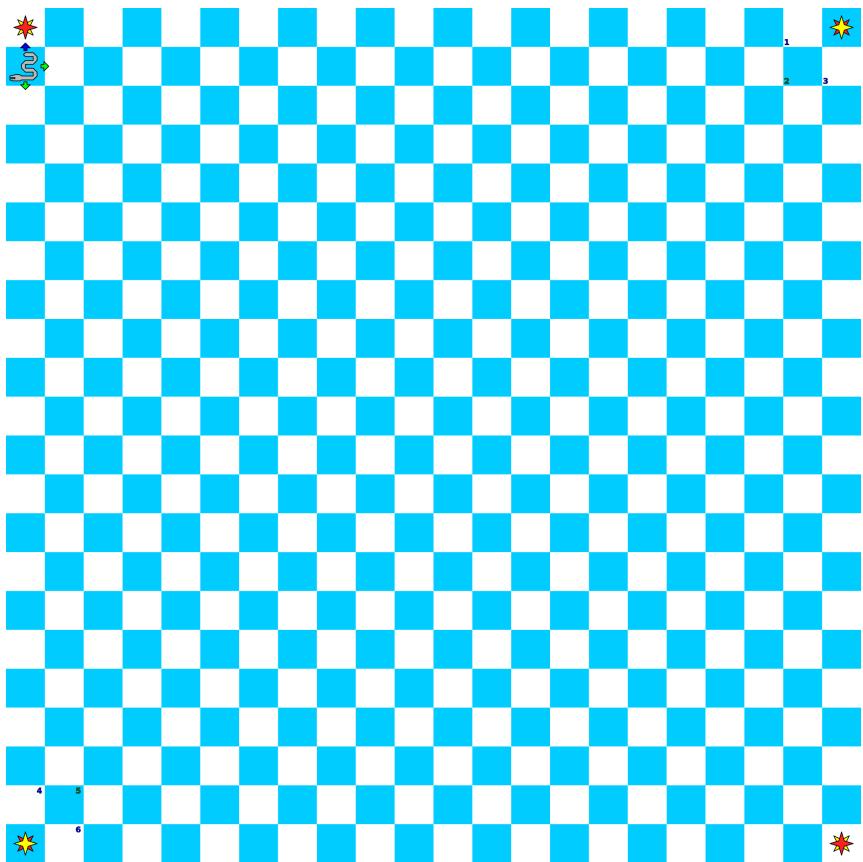


Figure 238: Color-changing step

Serpent can also teleport by performing color-changing step. This also gives opportunity for Serpent to change color of accessible fields. Note, color changing portal-fields (here, fields 1, 3, 4, 6) are switched compared to previous example.

## Pawn-sacrifice move

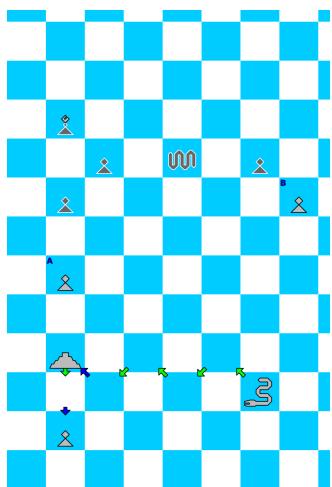


Figure 239: Pawn-sacrifice start

Pawn-sacrifice is a move initiated by Serpent activating Pyramid, which then captures field at which own Pawn is located. Pawn is then **oblationed**, and Serpent gets Pawn-sacrifice tag. Any received momentum (if Serpent was activated) is lost. Any of pieces involved can be on any side of chessboard, own or opponent's.

Here, light Serpent is about to activate Pyramid, which will then oblation own Pawn, thus granting Pawn-sacrifice tag to Serpent.

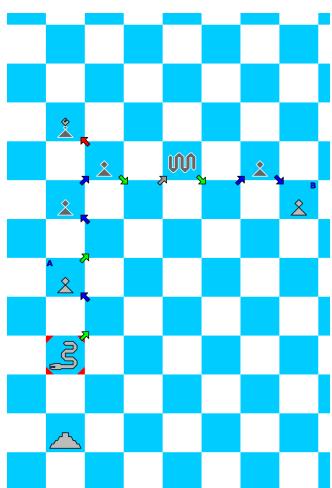


Figure 240: Pawn-sacrifice steps

Initiating Serpent receives its tag on a field at which it activated Pyramid. From there, Serpent can start a new ply in the same move in which tag was obtained; otherwise, tag is lost after move finishes. New ply is limited by **Serpent's step limit**, in this variant Serpent can make at most 14 steps in a single ply.

In a new ply, Serpent can interact only with Pawns, either capture or **displace them**, regardless if own or opponent's Pawns. In the same ply, Serpent can move over empty fields, or pieces which are transparent to Serpent.

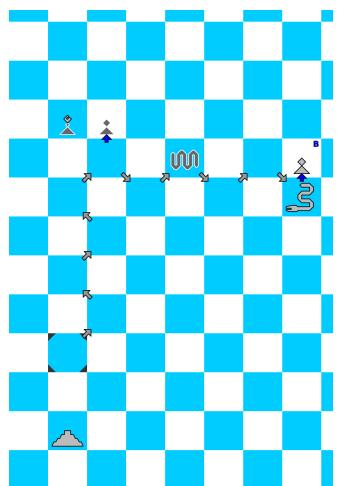


Figure 241: Pawn-sacrifice end

In previous example, tagged light Serpent could interact only with Pawns, both light and dark ones, and could not capture neither dark Bishop nor dark Wave. Dark Wave is transparent to a Serpent, so tagged Serpent could move over it, just like it can move over an empty field.

Here, completed path of tagged Serpent is shown; it displaced a light Pawn and a dark Pawn. Note, tagged Serpent captured one own, light Pawn in addition to two opponent's, dark Pawns.

Serpent can end its Pawn-sacrifice ply by interactions other than capturing or displacing Pawns, by activating own Wave or Pyramid, or by teleporting. If activating a piece, momentum is counted from a field at which Pawn-sacrifice tag was granted.

Here, light Pyramid is placed instead of a dark Wave, tagged light Serpent can activate it, and transfer to it 7 momentum. This ends Serpent's Pawn-sacrifice ply, and so two distant Pawns are now out of reach.

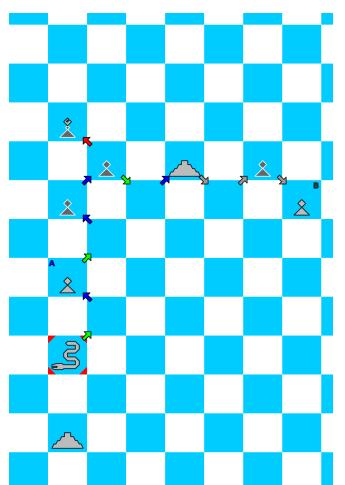
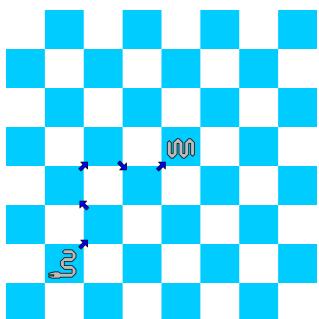


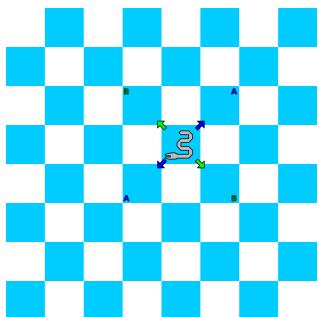
Figure 242: Pawn-sacrifice activation

## Activating Wave



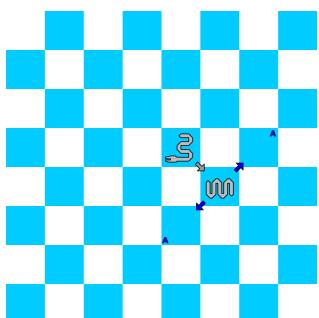
Serpent can activate Wave on its step-fields only, it cannot activate Wave on color-changing fields.

Figure 243: Activating



Activated Wave can freely choose any diagonal field for its first step.

Figure 244: Activated



After first step, Wave must choose next step from the other diagonal.

Figure 245: First step

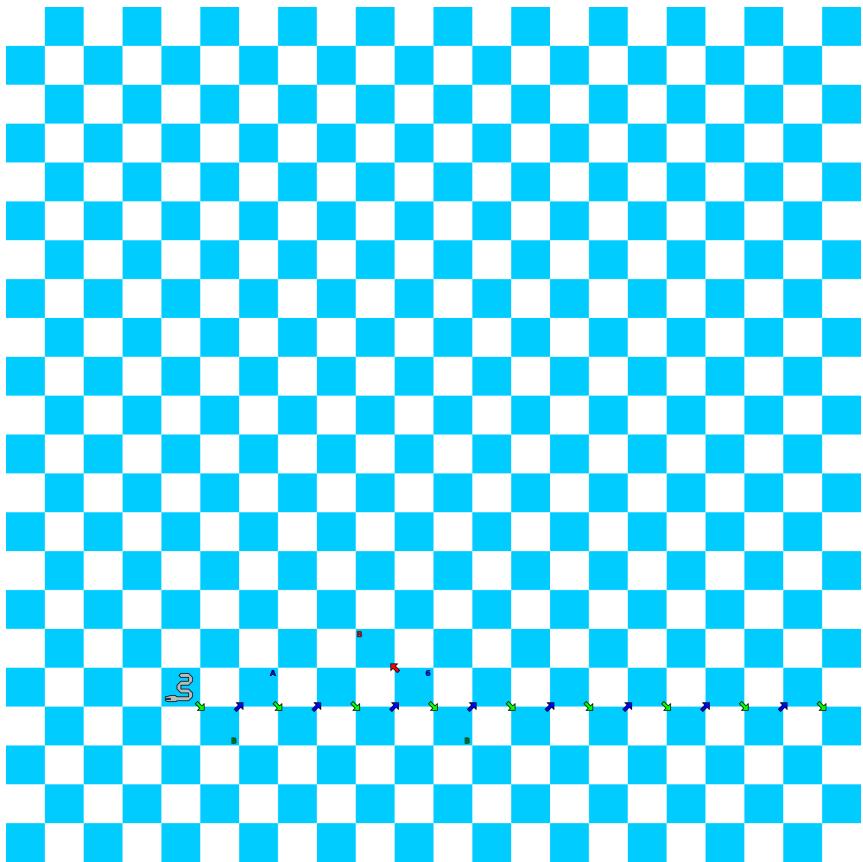


Figure 246: Activated Wave ply

Once the two directions are chosen, they cannot be changed, even if on a proper diagonal. For instance, upon reaching field 6, it's illegal for Wave to change movement to the other direction on B diagonal.

Unlike Serpent, Wave is not limited by number of steps. So, Wave can repeat alternating between 2 chosen directions to the end of the chessboard.

## Out-of-board steps

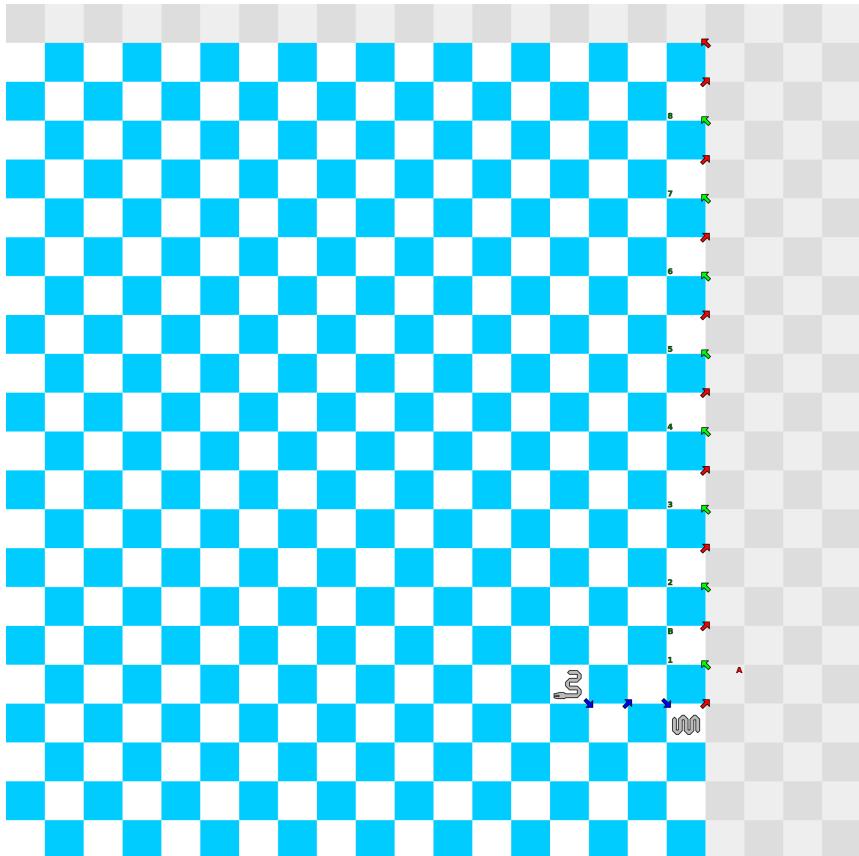


Figure 247: Wave out-of-board steps

Again, light grey fields are virtual fields extending existing chessboard. Wave activated by Serpent can step outside of a board, as long as its ply ends on a board. Here, all enumerated step-fields 1 through 8 are reachable by Wave, even though it stepped outside of the board. It is illegal for any piece, including Wave, to end its ply outside of a board.

## Teleporting Wave

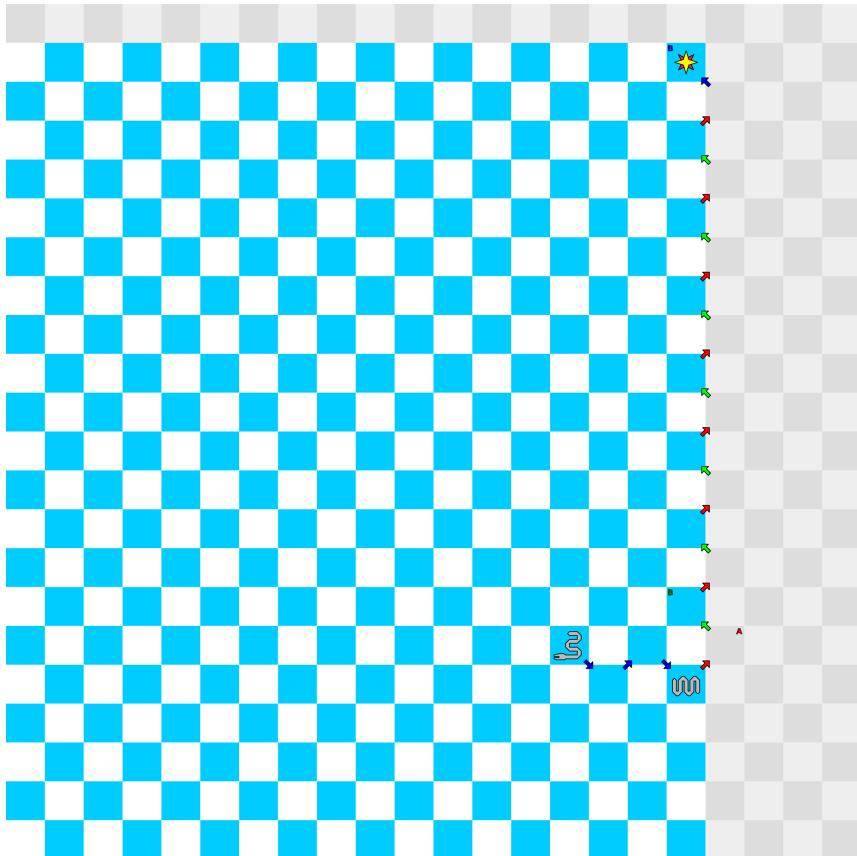


Figure 248: Teleporting off-board Wave

Wave activated by Serpent can reach a Star and start teleporting, even though it stepped outside of a chessboard. After teleporting, Wave emerges from the other Star in the same color, in the opposite corner of a board. Here, Wave started teleporting at light Star in upper-right corner, and so it will emerge from light Star in lower-left corner.

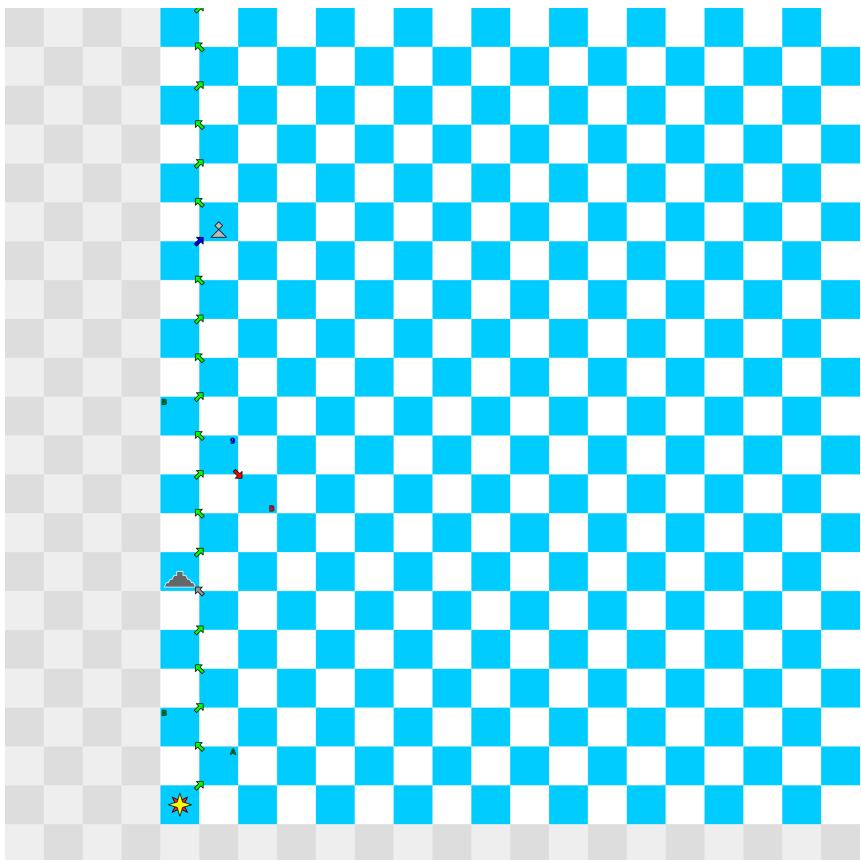


Figure 249: Teleported Wave

Wave has to continue alternating between 2 initially selected directions (here, A and B), even across teleportation. Since Wave dived into a Star from B direction, next step after teleporting has to be in A direction. Again, Wave cannot change directions from those initially selected; e.g. upon reaching field 9, it cannot choose the other direction on B diagonal.

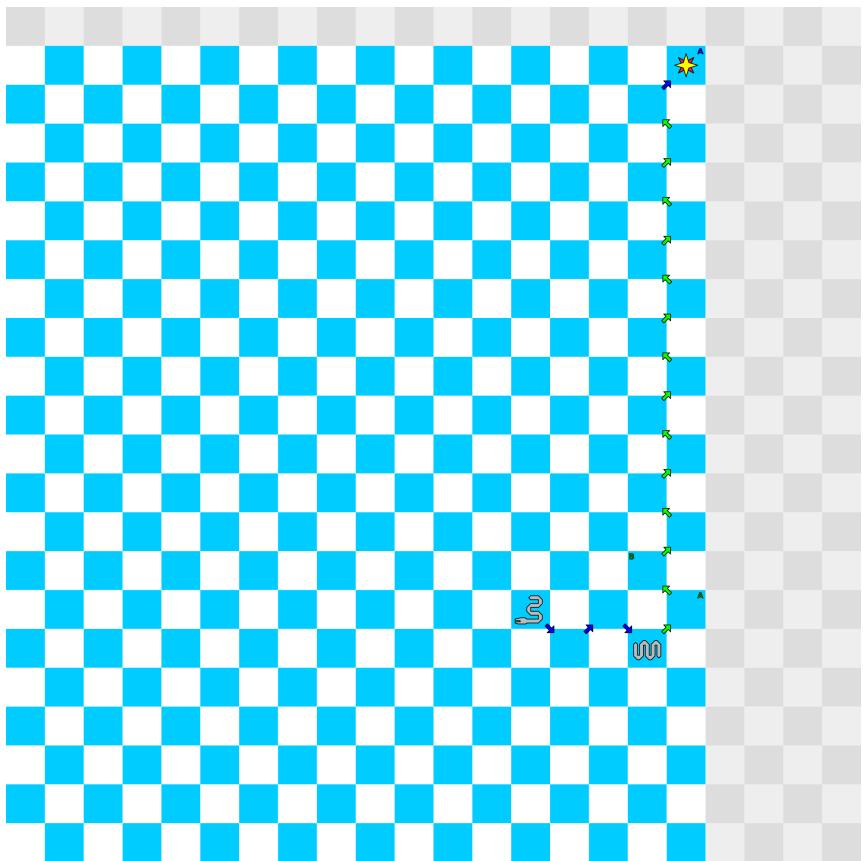


Figure 250: Teleporting Wave

Similar to previous example, Wave activated by Serpent starts teleporting at light Star in upper-right corner of a board, by stepping in A direction.

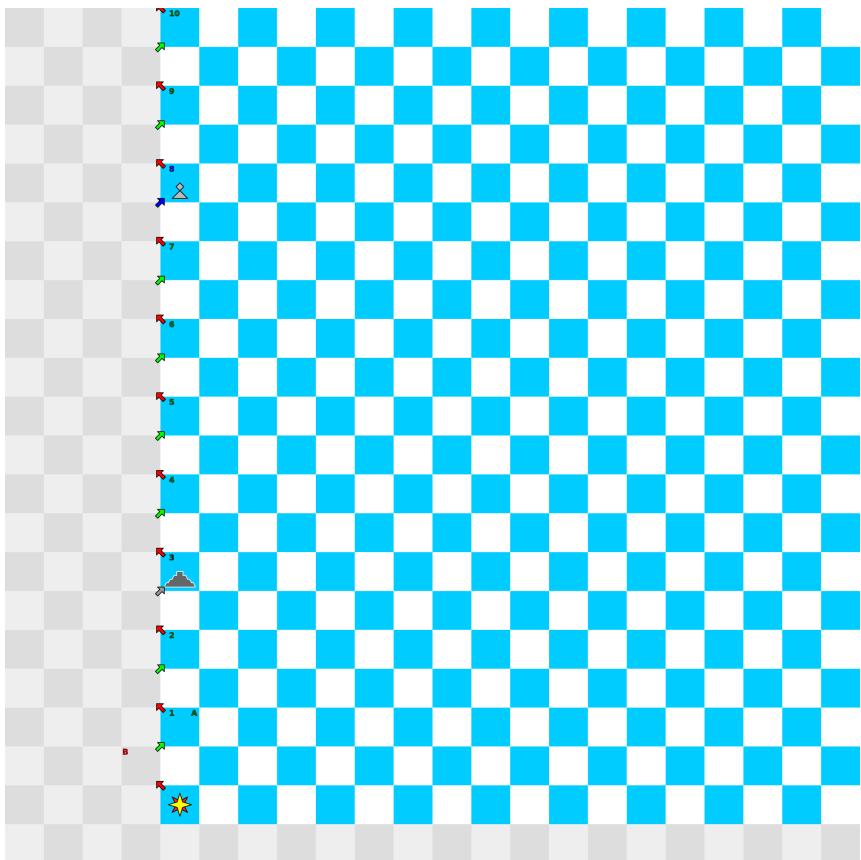


Figure 251: Wave teleported off-board

Wave emerges from light Star in lower-left corner, starting with step in B direction. All enumerated fields (here, 1 to 10) are reachable by teleported Wave, even though it stepped outside of a board. Note, field 3 is blocked by dark Pyramid, but Wave can continue past it, and e.g. activate light Pawn.

## Rush, en passant

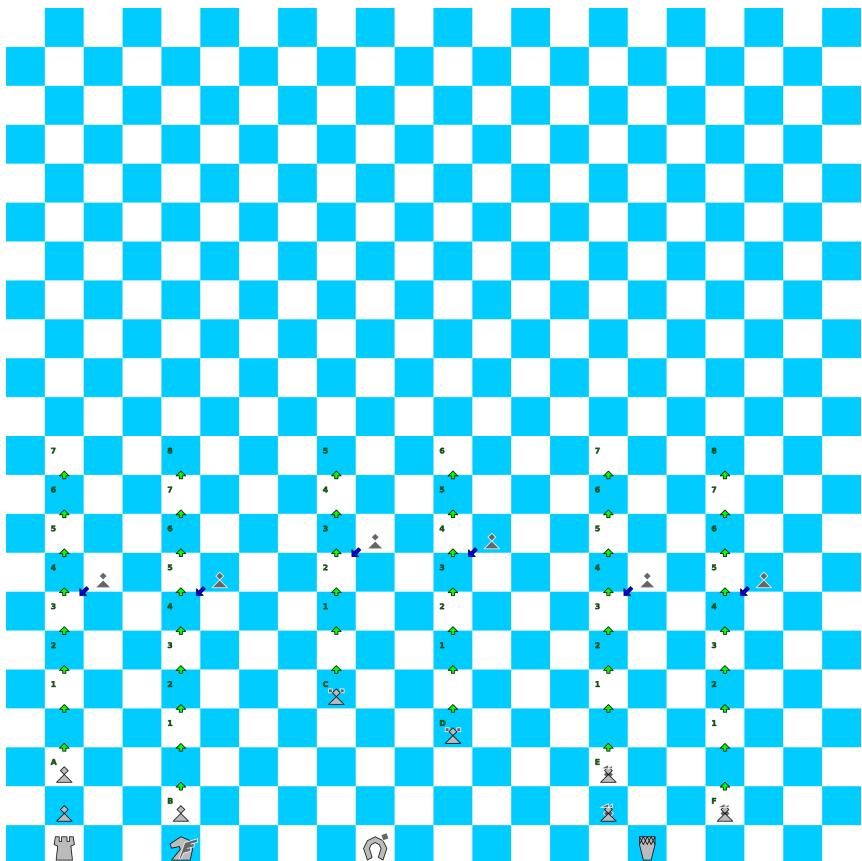


Figure 252: En passant

Image above have 6 examples presented in parallel: one for each Pawns A, B, Scouts C, D, and Grenadiers E, F.

Rush and en passant are identical to those in [Hemera's Dawn variant](#). Own privates (i.e. Pawns, Scouts, and Grenadiers) can be rushed for up to 9 fields in this variant.

# Promotion

Promotion is non enforced, delayed variety, i.e. it's the same as in [previous chess variant](#), Age of Aquarius.

Promotion in this variant is polygamous, more than one Queen in the same color can be present on chessboard at any given time.

# Castling

Castling is [the same as in Nineteen variant](#), only difference is that King can move between 2 and 8 fields across. All other constraints from Nineteen variant still applies.



Figure 253: Castling

In example above, all valid King's castling moves are numbered.



Figure 254: Castling short left

In this example King was castling short to the left. Initial King's position is marked with "K". After castling is finished, left Rook ends up at field immediately right to the King.

## Initial setup

Compared to initial setup of Hemera's Dawn, Serpent is put onto inner field next to Bishop symmetrically, on both sides of chessboard, some figures are also repositioned. This can be seen in the image below:

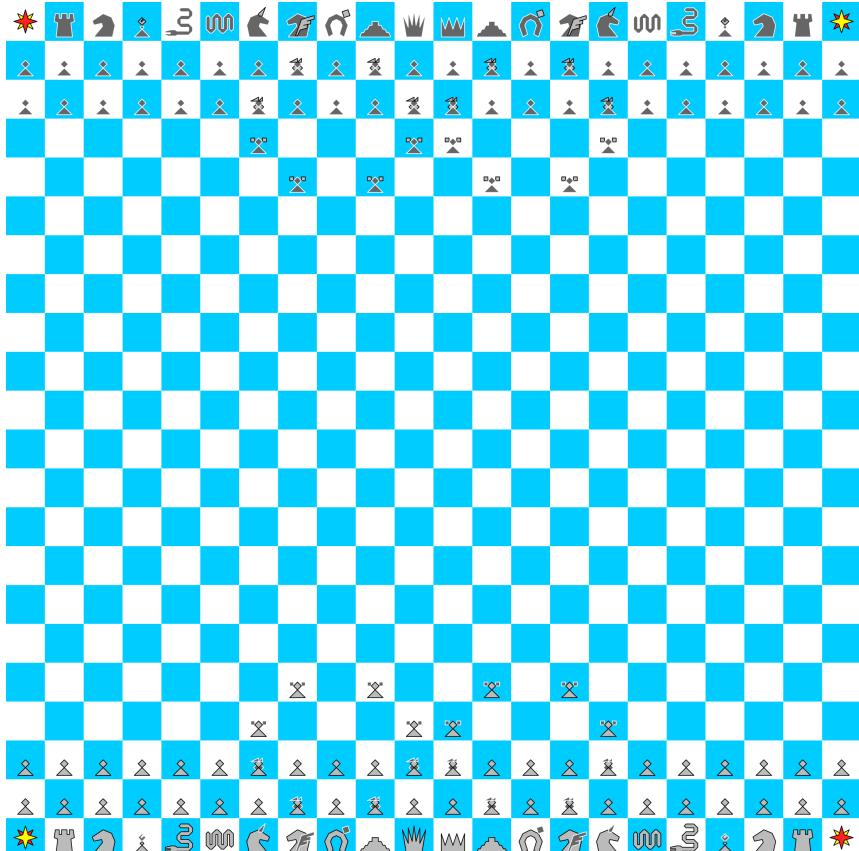


Figure 255: Tamoanchan Revisited board



# Conquest of Tlalocan

*The greatest difficulty with the world is not its ability to produce, but the unwillingness to share.*

... Roy L. Smith

Conquest of Tlalocan is chess variant which is played on 24 x 24 board, with bright red and cyan fields, and dark red and light green pieces. Star colors are bright red and bright blue. A new piece is introduced, Shaman.

## Shaman

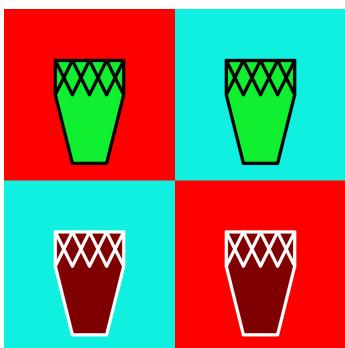


Figure 256: Shaman

Shaman moves like sort-of cross between Knight and long-jump Unicorn, where one figure provides step-fields, and the other capture-fields.

For light Shaman, step-fields are provided by the Knight, while capture-fields are provided by long-range Unicorn. For dark Shaman, it's the opposite.

Shaman can continue its jumpy movement in chosen direction; over step-fields if they're empty, over capture-fields as long as it's capturing opponent's pieces. Shaman can't change direction once started moving.

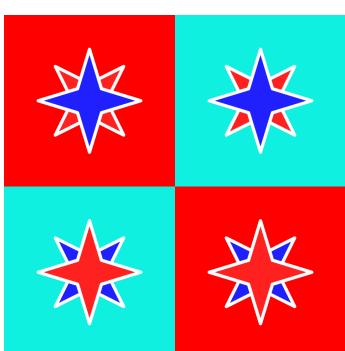


Figure 257: Star

Shaman is divergent; any own piece (and opponent's Shaman) can change direction when they encounter Shaman, after which they use remaining momentum to move.

Shaman can also take on a trance-journey, and displace or capture multiple pieces.

For this variant examples are rendered in B&W to improve legibility.

## Movement

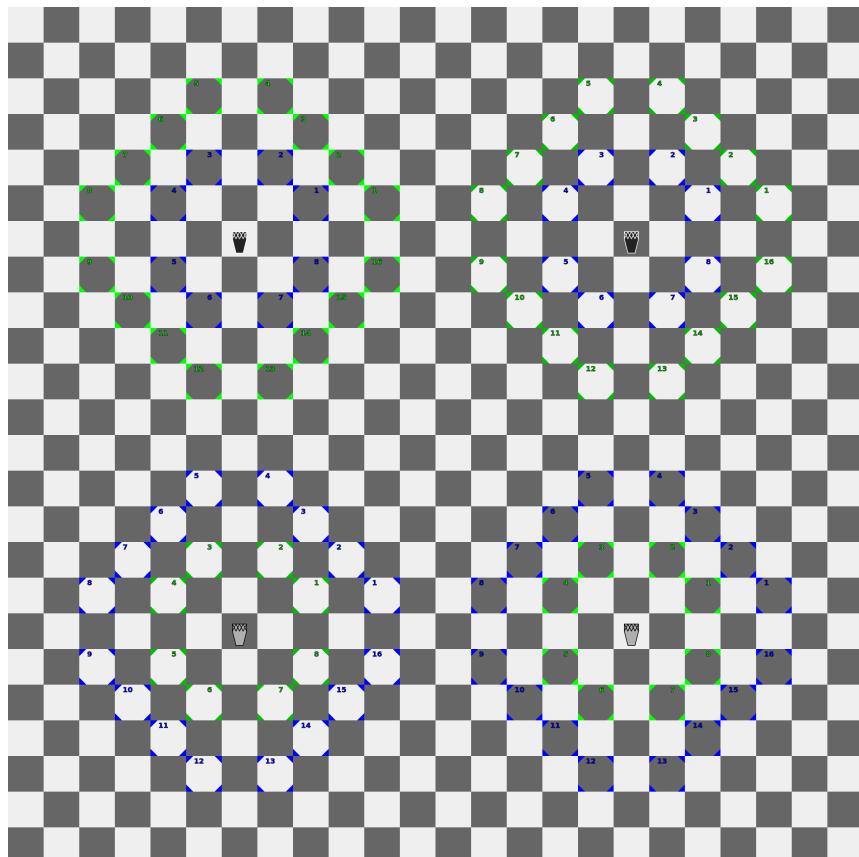


Figure 258: Shaman's movement

Shaman has its step-fields (here, green) separated from capture-fields (blue). For light Shaman, step-fields are the same as Knight's, while capture-fields are accessed after long jump, **similar to Unicorn's**. For dark Shamans, it's the opposite; step-fields are available after long jump, while capture fields are the same as Knight's. Unlike Unicorn, movement of Shaman does not depend on color of field on which it stands, only on color of the piece itself.

## Light Shaman's step-ply

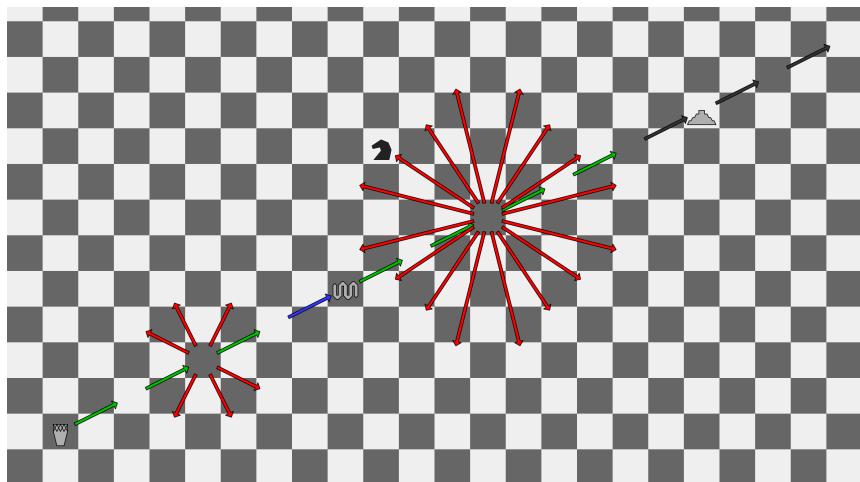


Figure 259: Light Shaman's step-ply

Light Shaman can choose any step-field for its initial direction; once chosen, Shaman has to follow it for the remainder of a ply. Direction of a ply cannot be changed, neither in other step- nor any capture-field (red arrows in the example above).

Wave on a step-field can be activated, and would move as Shaman does. **Wave is transparent** to Shaman, and so does not prevent Shaman from continuing its ply.

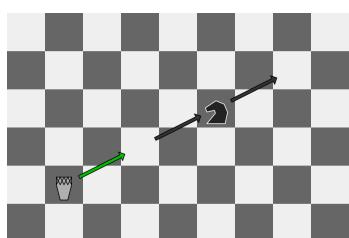


Figure 260: No capture

Shaman can't capture opponent's piece on a step-field, nor activate Pyramid (in the example above). Most pieces are not transparent to Shaman, so when they're encountered on its step-fields, Shaman is prevented from moving any further.

## Light Shaman's capture-ply

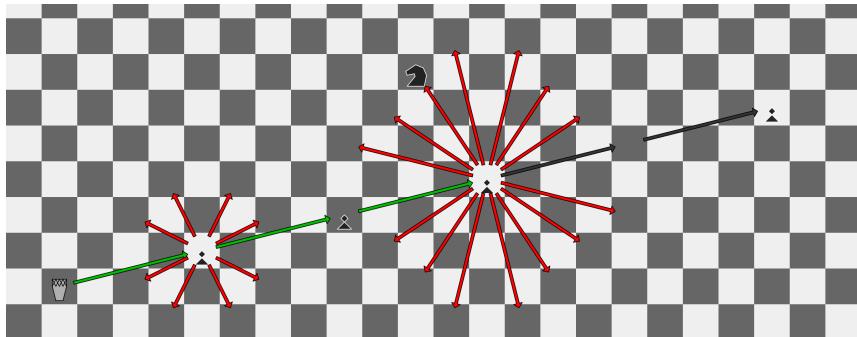


Figure 261: Light Shaman's capture-ply

Shaman can capture opponent's pieces only on its capture-fields. After initial capture, Shaman can continue capturing in the same ply, and in the same direction, as long as there are opponent's pieces to capture. Once capturing, Shaman cannot change direction of a ply into any step- or other capture-field, even if opponent's piece is placed there (above, red arrows). Empty capture-fields cannot be overstepped, any piece at a distant capture-field is out of reach.

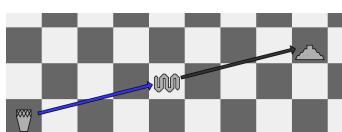


Figure 262: Activation

Capture-ply can end with Shaman activating either Wave or Pyramid on its capture-field. Activation can be done as a first action in a ply, without any opponent's pieces being captured.

Note that in the previous example, even though Wave is transparent to Shaman, Pyramid is out of reach because transparency is lack of interaction, so it's effectively the same as empty capture-field, which cannot be overstepped.

## Dark Shaman's step-ply

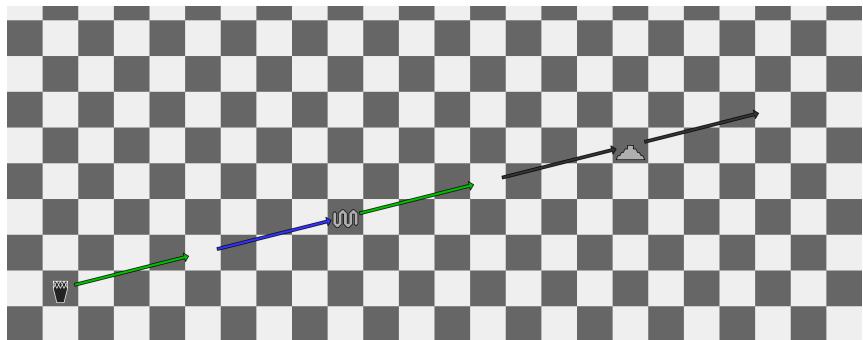


Figure 263: Dark Shaman's step-ply

Dark Shaman's stepping ply is the same as [light Shaman's](#), except it uses Unicorn's long jumps as steps.

## Dark Shaman's capture-ply

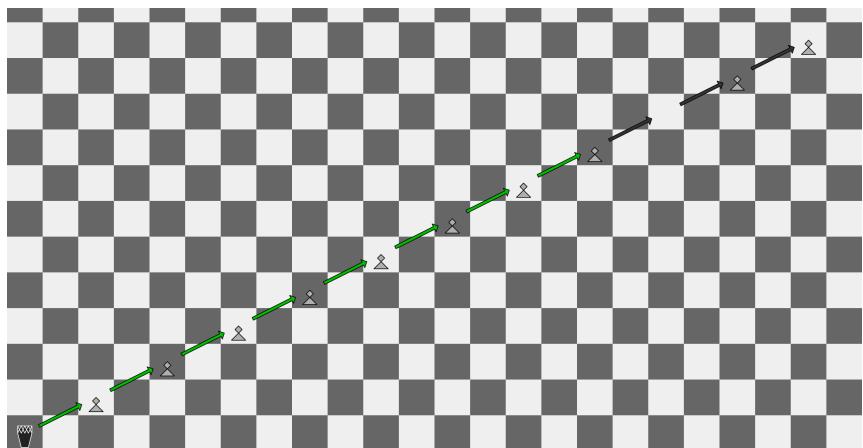


Figure 264: Dark Shaman's capture-ply

Dark Shaman's capturing ply is the same as [light Shaman's](#), except it uses Knight's (short) jumps as capture-steps.

## Activating Wave

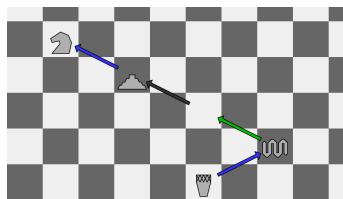


Figure 265: Activating Wave on step-fields

Activated Wave moves the same as activating Shaman, i.e. using the same kind of a step (either ordinary step, or capture-step) Shaman had in the moment of activation.

On the left, Wave is about to be activated by light Shaman on its step-field, so Wave would move using Knight's (short) jump as a step.

The same as activating Shaman, activated Wave cannot change direction in the middle of its ply, regardless if activated on a step- or a capture-field.

Here, Wave is about to be activated by light Shaman on its capture-field, so Wave would move using Unicorn's (long) jump as a step.

Note, Wave activated by Shaman on its capture-field can move over empty fields, even though activating Shaman itself

cannot. Activated Wave can pass-by Pyramid (since it's transparent to Wave), skip over an empty field, and e.g. activate light Knight on a distant field.

Above, activated light Wave can pass-by Pyramid (since it's transparent to Wave), skip over an empty field, and e.g. activate light Knight on a distant field.

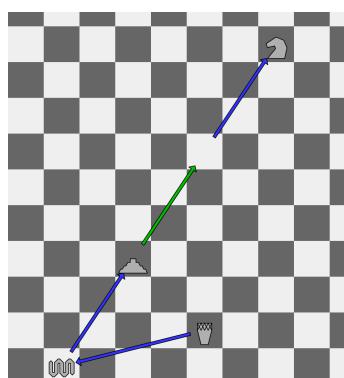


Figure 266: Activating Wave on capture-fields

The same as **Wave activated by Pawn**, only Wave activated by Shaman on its capture-fields can activate Pyramid, while any Wave can activate other pieces if it has momentum.

## Teleporting Shaman

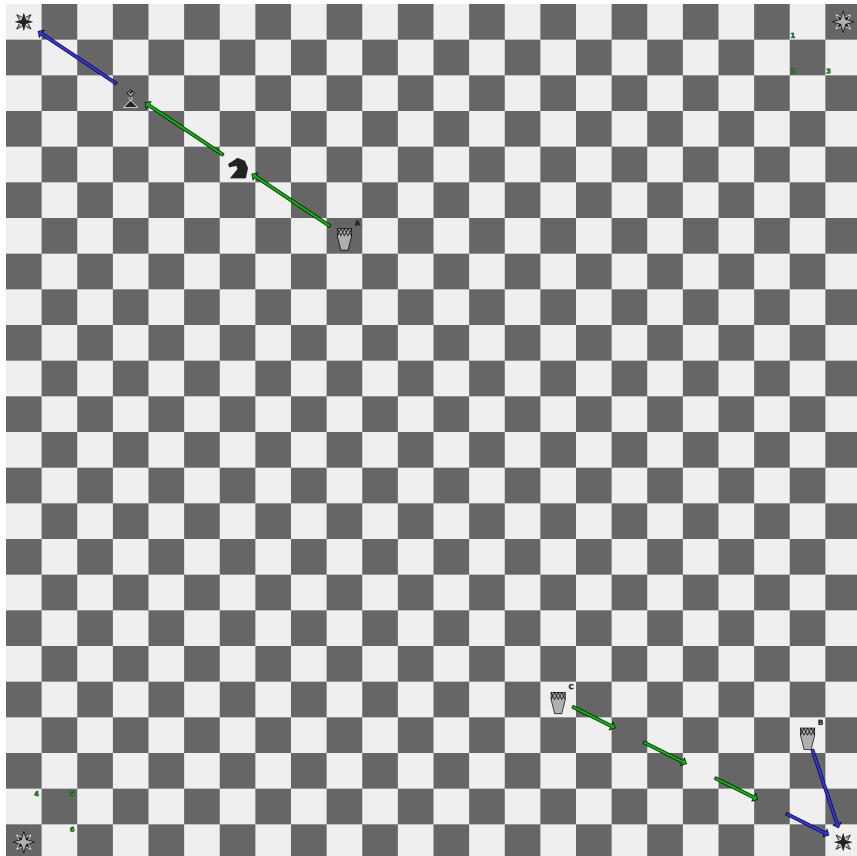


Figure 267: Teleporting Shaman

Image above have three examples in parallel; each starting with one of light Shamans A, B, and C.

Shaman can reach a Star and start teleporting after capturing spree (Shaman A), by diving directly into a Star on a capture-field (B), or after a non-capturing ply (C). In all cases, Shaman would reappear on an empty portal-field, next to a Star in opposite color (here, any of fields 1 – 6).

## Teleporting Pawn

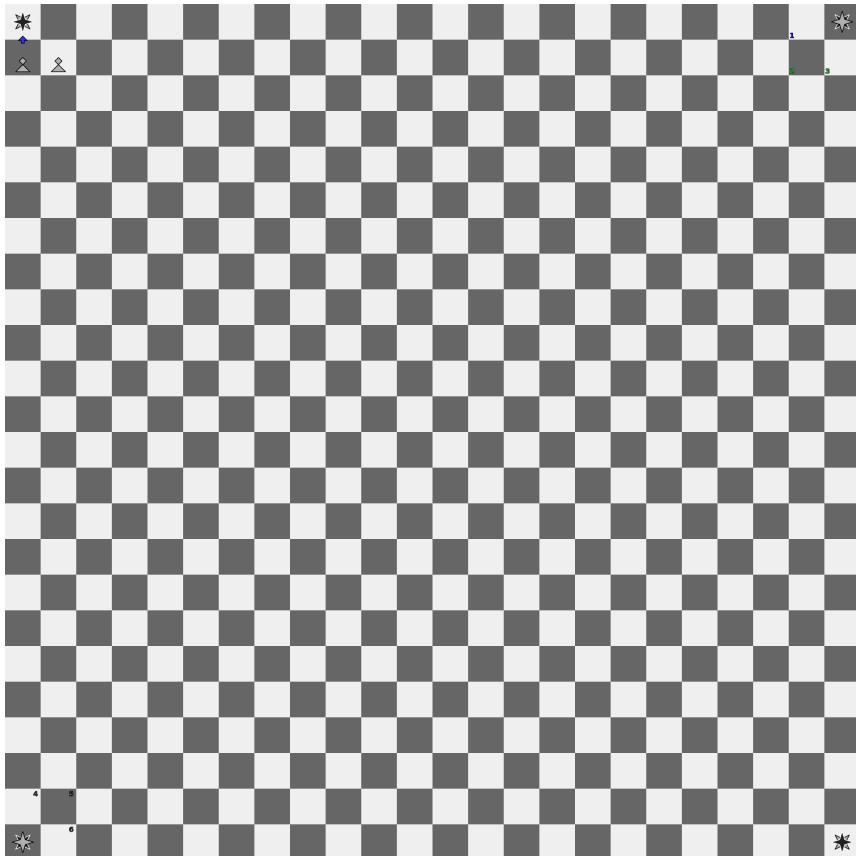


Figure 268: Teleporting Pawn

In this variant **promotion is immediate**, so Pawns cannot be tagged for promotion. Pawn teleported to opponent's **figure row** (here, field 1) has to be promoted immediately. Pawn teleported to opponent's Pawn row (fields 2, 3) won't be tagged for promotion.

Pawn teleported onto own side of a board (portal-fields 4, 5, 6) does not gain opportunity to rush on initial move; the same as in **previous variant, Nineteen**.

# Divergence

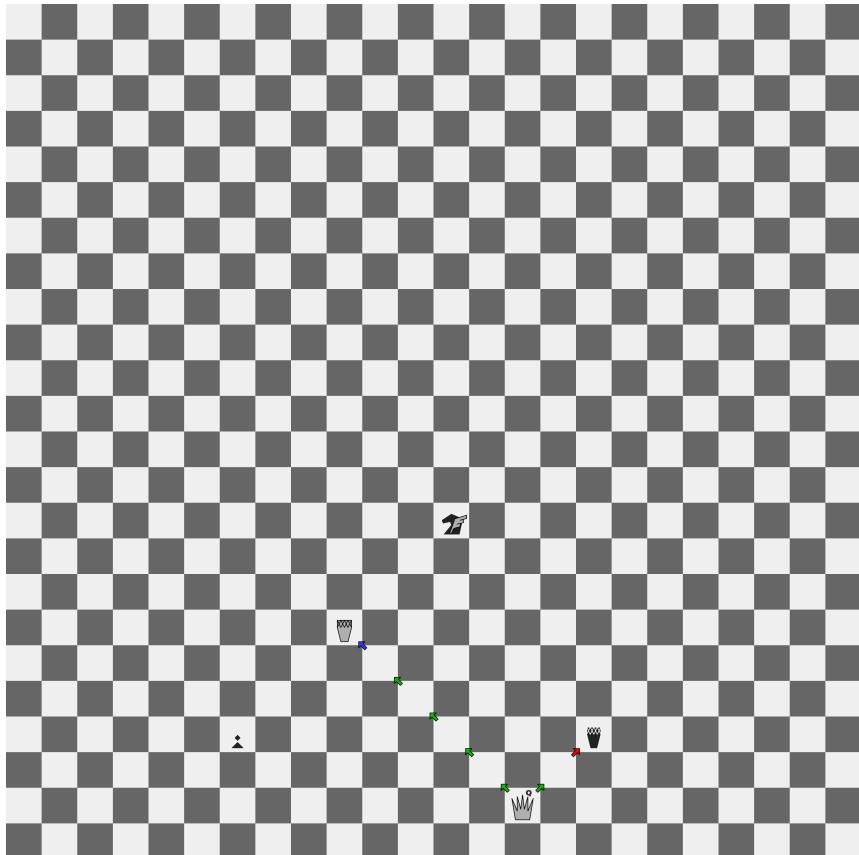


Figure 269: Own Shaman is divergent

Piece, when encounters own Shaman, can continue its movement, and changes direction to any available, as if starting a new ply from a position of encountered Shaman. Direction change is divergence, after which piece is limited by momentum it had when own Shaman was encountered.

Here, light Queen can diverge only from own, light Shaman; but not from opponent's, dark Shaman.

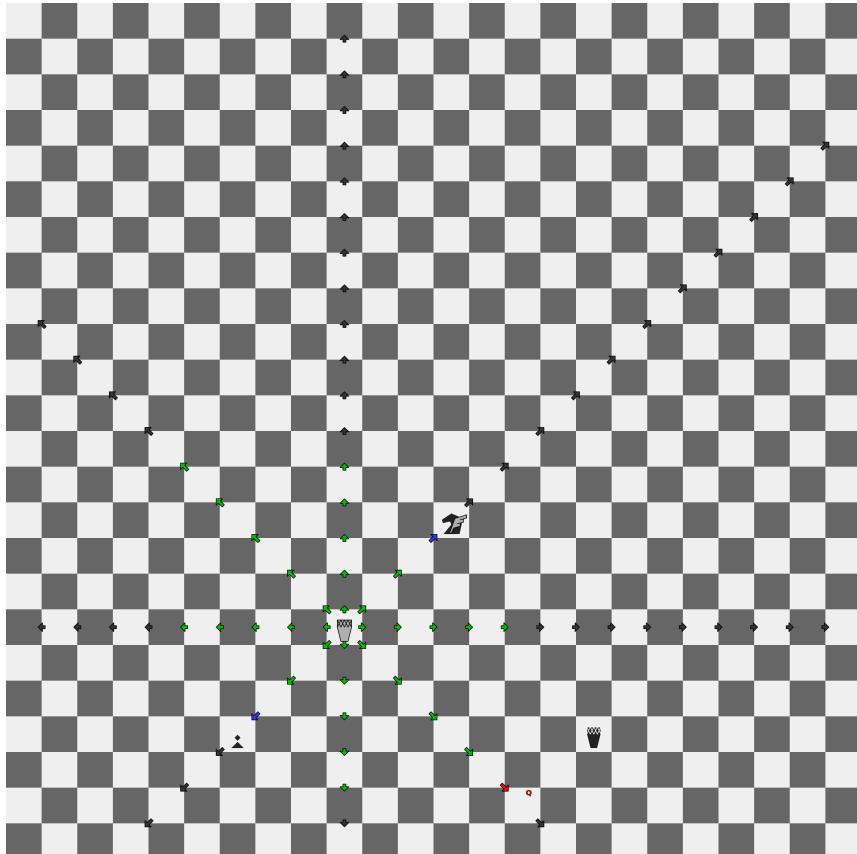


Figure 270: Diverging Queen

Here, light Queen (now "in the air") has reached own Shaman, and can choose a new direction of movement independently of previous choice. Note that light Queen can move for only 5 fields, since diverging piece is limited by momentum it had when own Shaman was reached.

The only piece in a move, just like piece starting a cascade, **cannot end its move on a starting field**. So, in this example, starting field Q is illegal destination for light Queen.

## Diverging activated piece

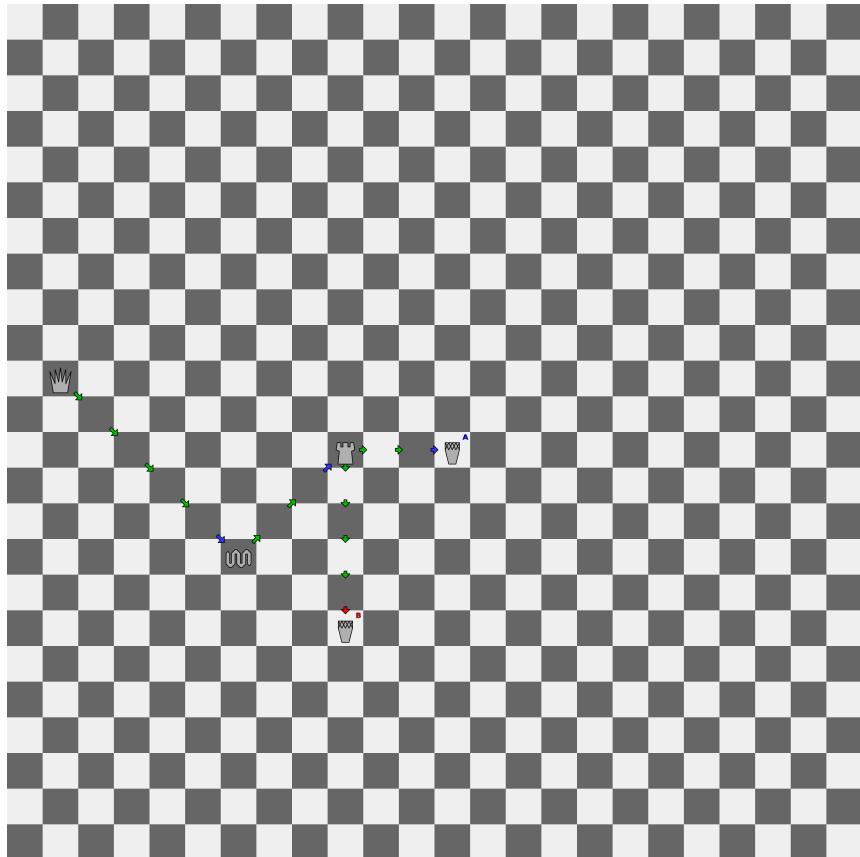


Figure 271: Activating Rook

Activated piece can also diverge, but it's already limited by received momentum while going towards divergent Shaman, as it's limited after diverging.

Activated, material piece which has no momentum when own Shaman is reached cannot diverge from it, only stop before it.

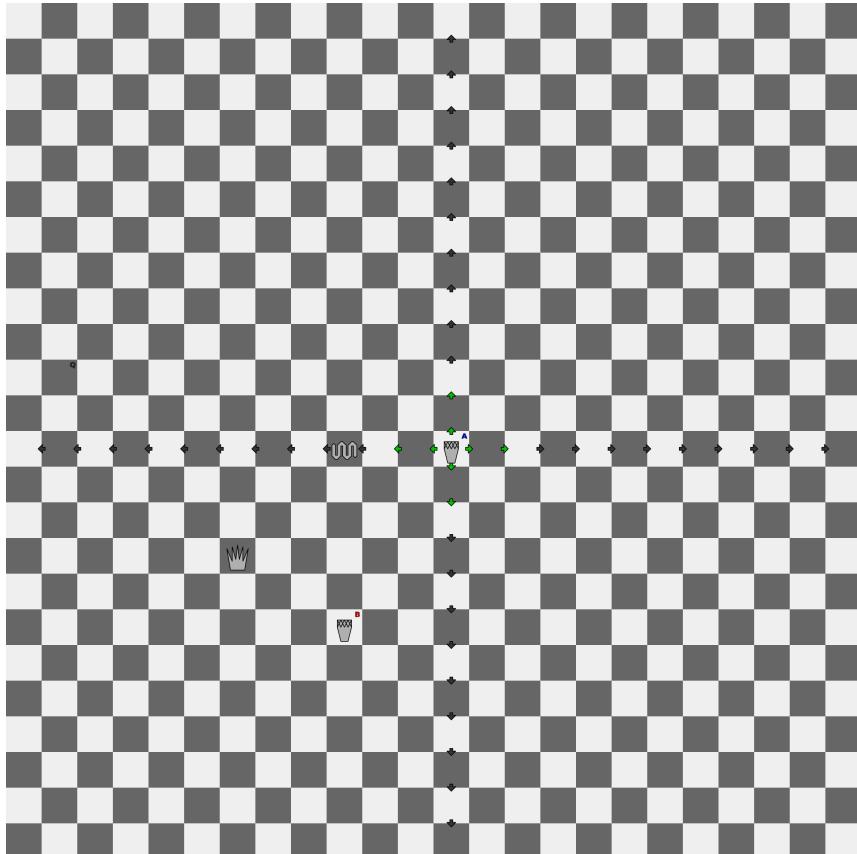


Figure 272: Diverging activated Rook

In previous example, activated Rook couldn't diverge from Shaman B, only stop before it is reached, since all received momentum would be spent moving towards Shaman B.

The same Rook (now "in the air") can diverge from Shaman A, with 2 remaining momentum, i.e. difference between received momentum and amount spent moving towards Shaman A.

## Diverging Pawn

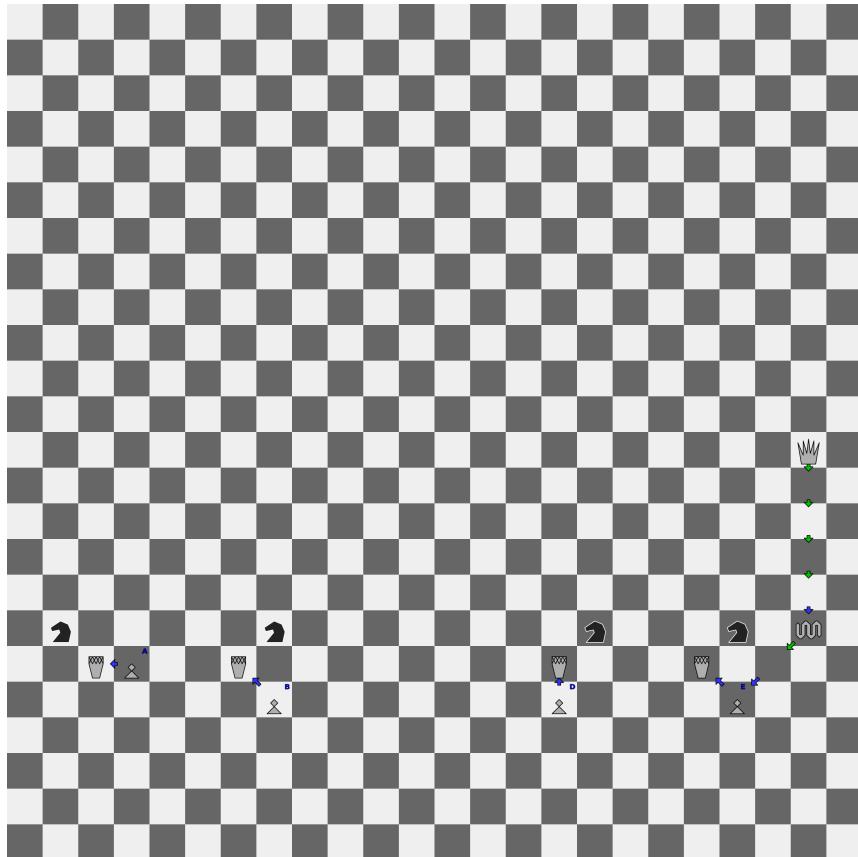


Figure 273: Diverging Pawns start

Image above and the next one have four examples presented in parallel; each with its own, labeled Pawn.

Pawn can diverge from own Shaman by making forward-, sideways-, or capture-step, or by rushing. After divergence, steps are available as if starting a new ply; forward- and sideways-steps if not blocked; capture-steps if opponent's piece is placed on a Pawn's capture-field behind own, divergent Shaman.

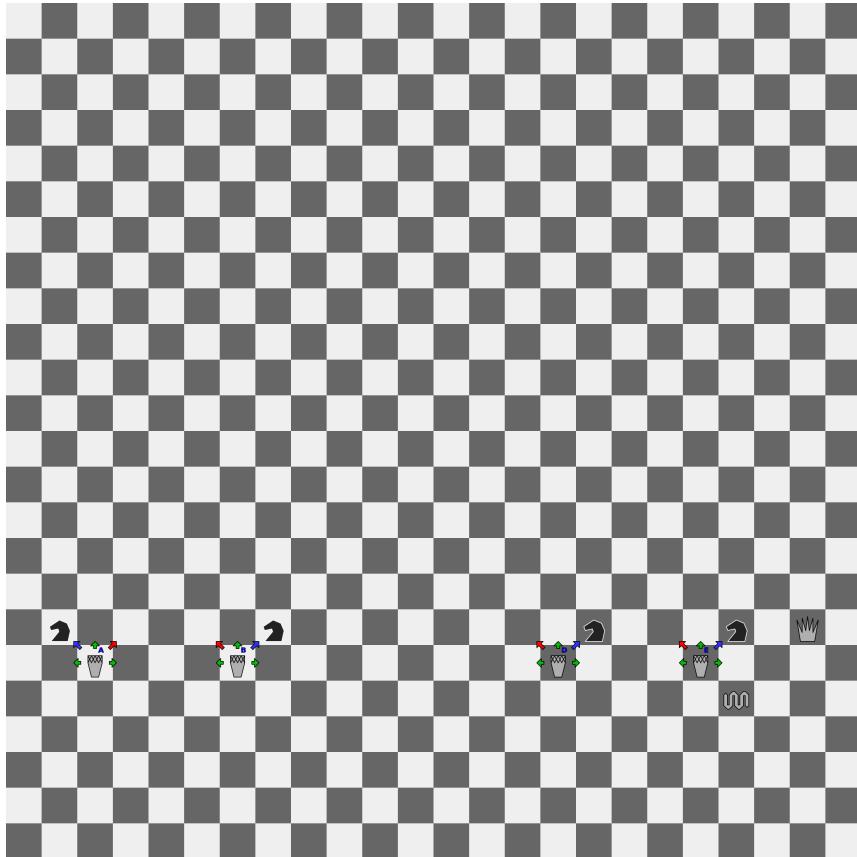


Figure 274: Diverging Pawns end

Image above have all four Pawns "in the air", each can choose its next direction independently of arriving path; each from its own, divergent Shaman.

Diverged Pawn is limited to only one step, regardless how much momentum it had when own Shaman was encountered. Here, activated Pawn E can make only one step after divergence, and can activate own Pyramid or Wave with remaining 3 momentum. Other Pawns don't have any momentum after divergence, so they can't activate own Pyramid, only Wave.

## Diverging rushed Pawn

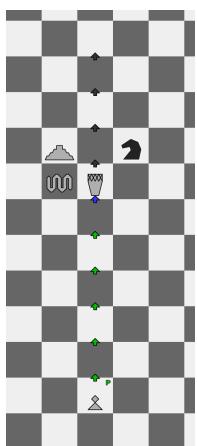


Figure 275: Rushing Pawn to diverge

Rushing Pawn is limited to only one step after divergence, regardless how much momentum it had when encountered divergent Shaman. Diverged Pawn can capture opponent's piece, or it can activate own Wave. Diverged Pawn can also activate own Pyramid, if it has at least one momentum after divergent step.

Note, Shaman is not transparent to Pawns; so, rushing Pawn has to either diverge, or stop before Shaman is reached.

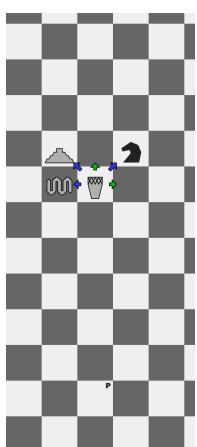


Figure 276: Diverging rushed Pawn

Here, rushing light Pawn after divergence can step for only one field forward or sideways. Just like any other, non-rushing Pawn would be able to, it could also capture dark Knight, or it could activate either Wave or Pyramid with remaining five momentum.

The same applies to rushing Pawn which has been activated, only difference is that Pawn has to receive enough momentum for a step after divergence in addition to momentum for moving towards Shaman.

## Diverging Unicorn

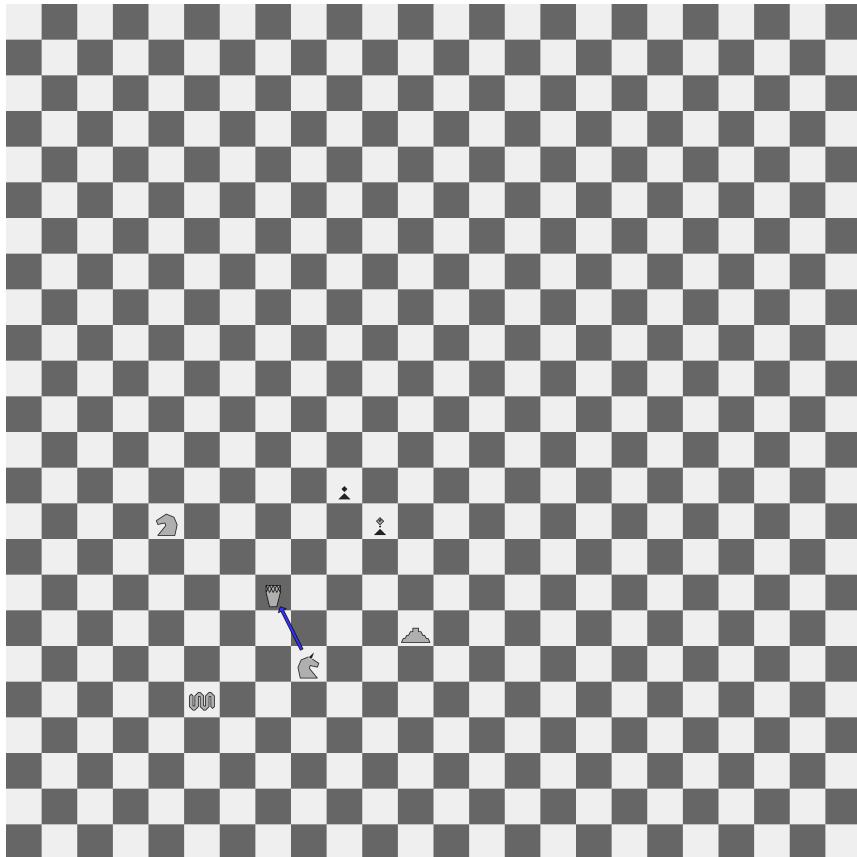


Figure 277: Diverging Unicorn start

Like any other single-step piece (King, Pawn), Unicorn can diverge from own Shaman, and make one step more; direction can be chosen independently of previous choice. Available directions **depend on colors of Unicorn and its field**; if both are in the same color, Unicorn can do short jump; if colors are different, Unicorn can do long jump. Just like Knight, after each jump, Unicorn changes color of its field. So, long jump after divergence would be followed by short one,

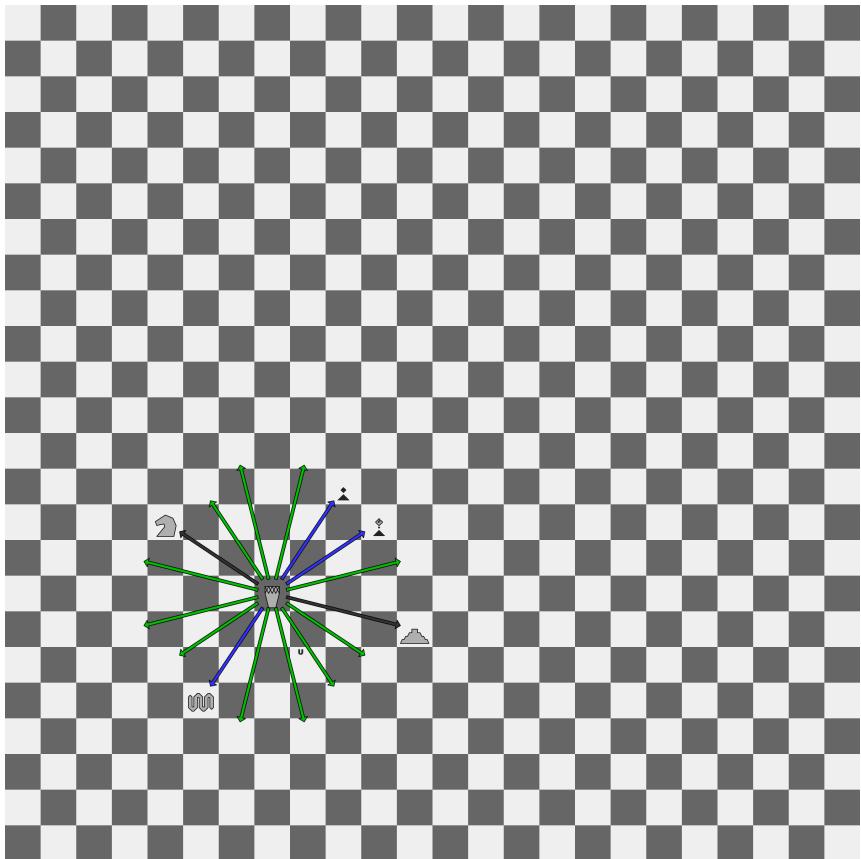


Figure 278: Diverging Unicorn end

and vice versa.

In previous example, light Unicorn made a short jump from its starting, same-color field U. Here, it's "in the air" after diverging from Shaman on a dark field; color of field is now opposite to Unicorn's, so Unicorn will do long jump. After divergence Unicorn doesn't have momentum, so it can activate only own Wave, but not Pyramid, nor Knight; or, it can capture one of opponent's pieces.

## Diverging activated Unicorn

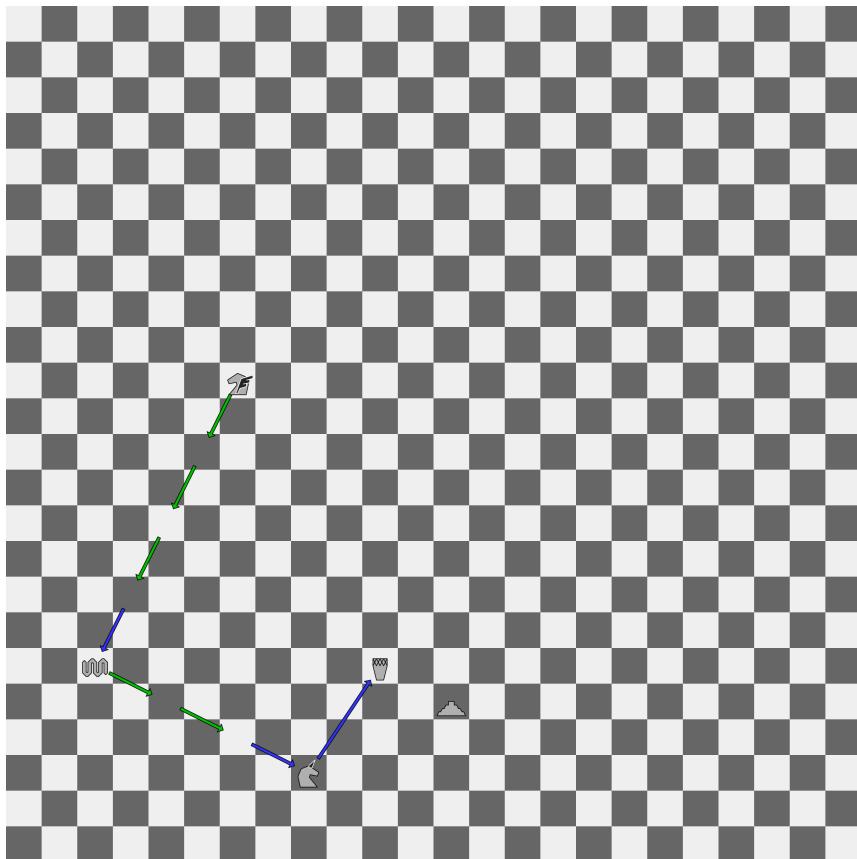


Figure 279: Activating Unicorn

Single-step pieces (e.g. Knight or Unicorn) can be activated with more than 1 momentum, **they still can make only one step**. If diverging, single-step piece can make **only one additional step**; this also applies to a diverging single-step piece activated with more than 1 momentum.

Here, light Unicorn is about to be activated with 4 momentum, it can then reach light Shaman, and diverge from there.

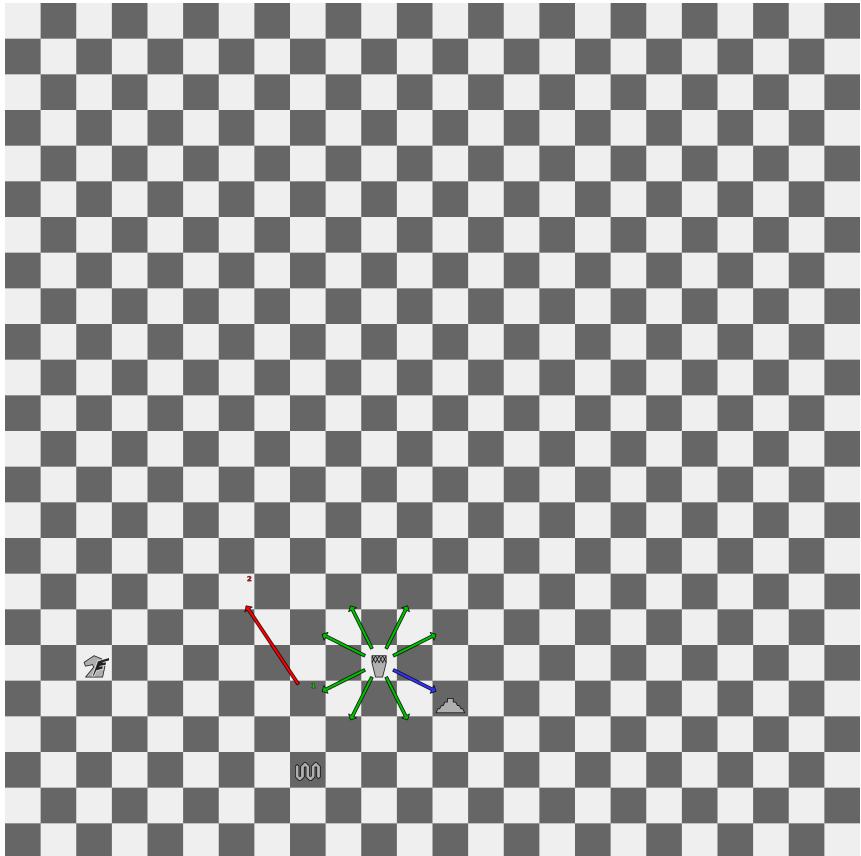


Figure 280: Diverging activated Unicorn

Here, light Unicorn after divergence can make only one step, even though it still has 3 unspent momentum. For instance, after reaching field 1, Unicorn cannot choose additional direction, and make long jump onto field 2, even though it still has 2 momentum when settling onto field 1.

Here, light Unicorn can also activate own Pyramid with 2 remaining momentum.

## Centaur cannot diverge

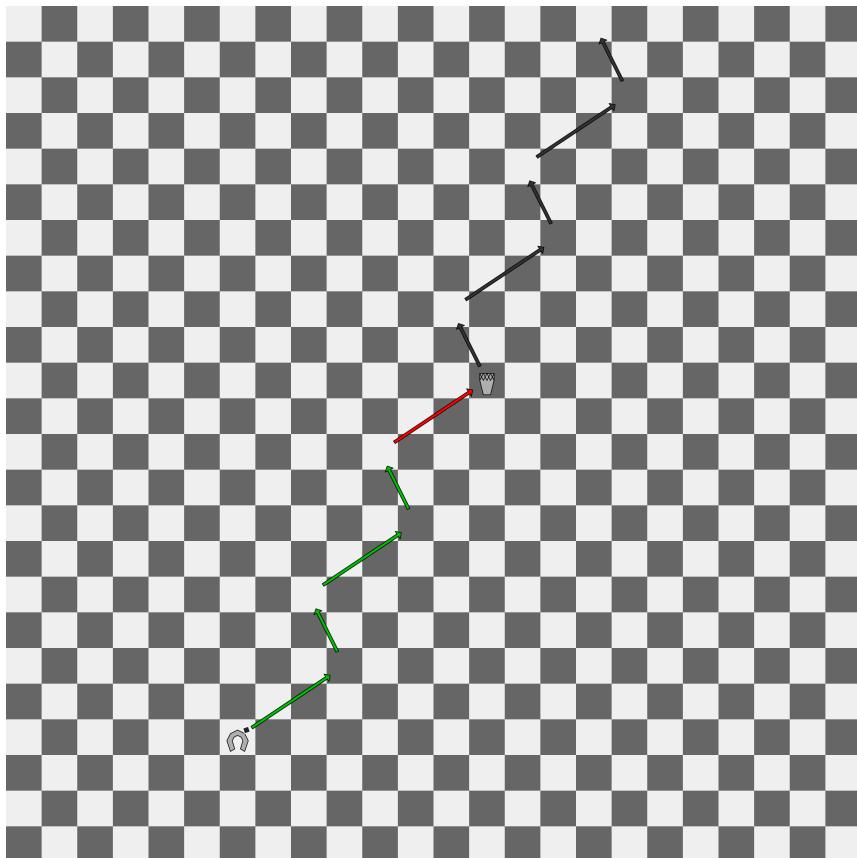


Figure 281: Centaur cannot diverge

Centaurs cannot diverge, so, it's blocked by own Shaman located on its step-field, and has to stop before Shaman is reached; this also applies to activated Centaurs.

# Serpent cannot diverge

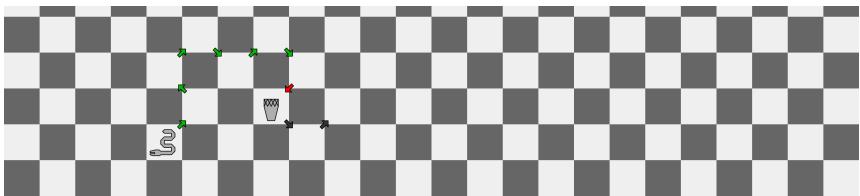
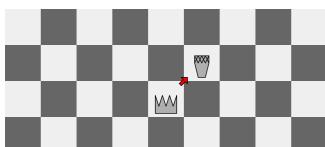


Figure 282: Serpent cannot diverge

Serpent cannot diverge, so it's blocked by own Shaman located on its step-field, and has to stop before Shaman is reached, or find alternative route to its destination field. This also applies to activated Serpents.

## King cannot diverge



King cannot diverge, so it's blocked by own Shaman located on its step-field, and has to find alternative route to its destination field.

Figure 283: King cannot diverge

## Diverging Shaman

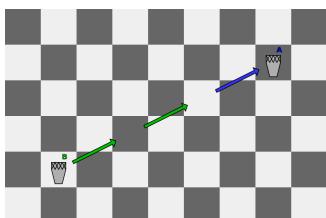


Figure 284: Stepping Shaman

Shaman can diverge from own Shaman, regardless if it has been moving over ordinary or capture-steps; similar to **diverging Pawns**.

Kind of steps before and after divergence do not need to match; Shaman can choose any ordinary or capture-step as its new direction of movement, regardless how it moved prior to divergence.

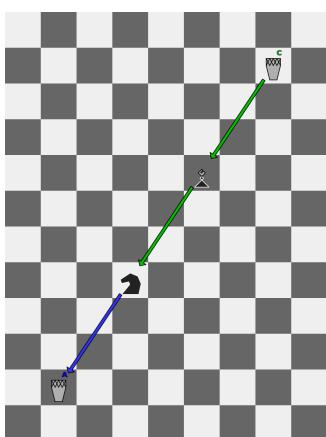


Figure 285: Capturing Shaman

After divergence, Shaman is using momentum for movement, and so is **limited by momentum it had when encountered diverging Shaman**.

In related examples on the left and above, two Shamans are about to diverge from the same Shaman A; Shaman B by making ordinary steps, while Shaman C is making capture-steps.

## ... into stepping divergence

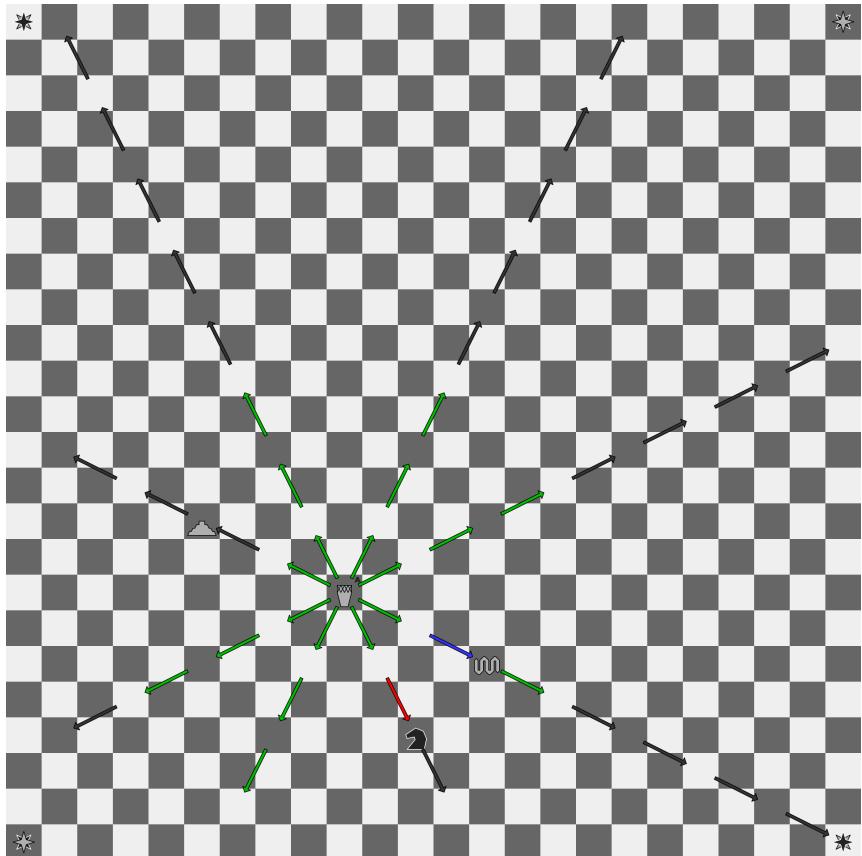


Figure 286: Steps after divergence

Both Shaman B and C can choose one direction of all ordinary steps depicted above for its next movement. Light Shaman (now "in the air") is limited by 3 momentum it had when diverged.

Since Shaman is now moving over step-fields, it cannot neither capture opponent's Knight, nor activate own Pyramid. Shaman can activate own Wave; it could also teleport, if it have enough momentum to reach the Star.

## ... into capturing divergence

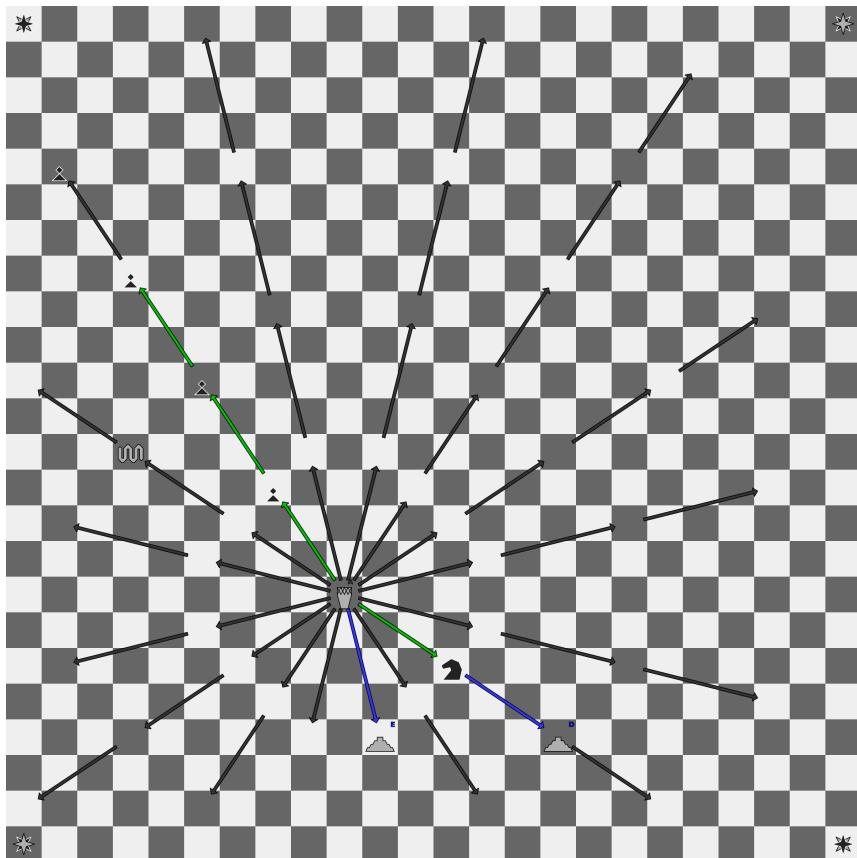


Figure 287: Capture-steps after divergence

Alternatively, both Shaman B and C could choose one direction of all capture-steps depicted above as its next movement. Shaman can move over capture-fields only as long as it keeps capturing opponent's pieces, and here it's limited by 3 momentum it had when diverged.

Light Shaman (now "in the air") can also activate Pyramid in addition to Wave, either at the end of a string of captures, or as the only action after divergence.

... if activated

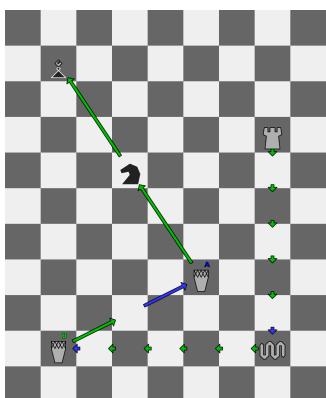


Figure 288: Diverging activated Shaman

Activated Shaman diverges the same way as before, except it now uses momentum before divergence, not just afterwards.

As before, activated Shaman must have momentum to be able to diverge.

On the left, light Shaman B can reach Shaman A, diverge from there, and capture two dark pieces, since it was activated with enough momentum.

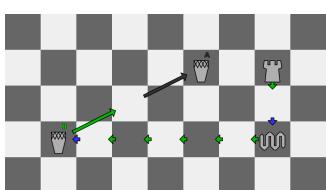


Figure 289: Cannot diverge activated Shaman

Here, light Shaman B is activated with only two momentum, which are then used to reach divergent Shaman A, so there will be no momentum left to diverge, and so Shaman B is blocked by Shaman A.

... from opponent's Shaman

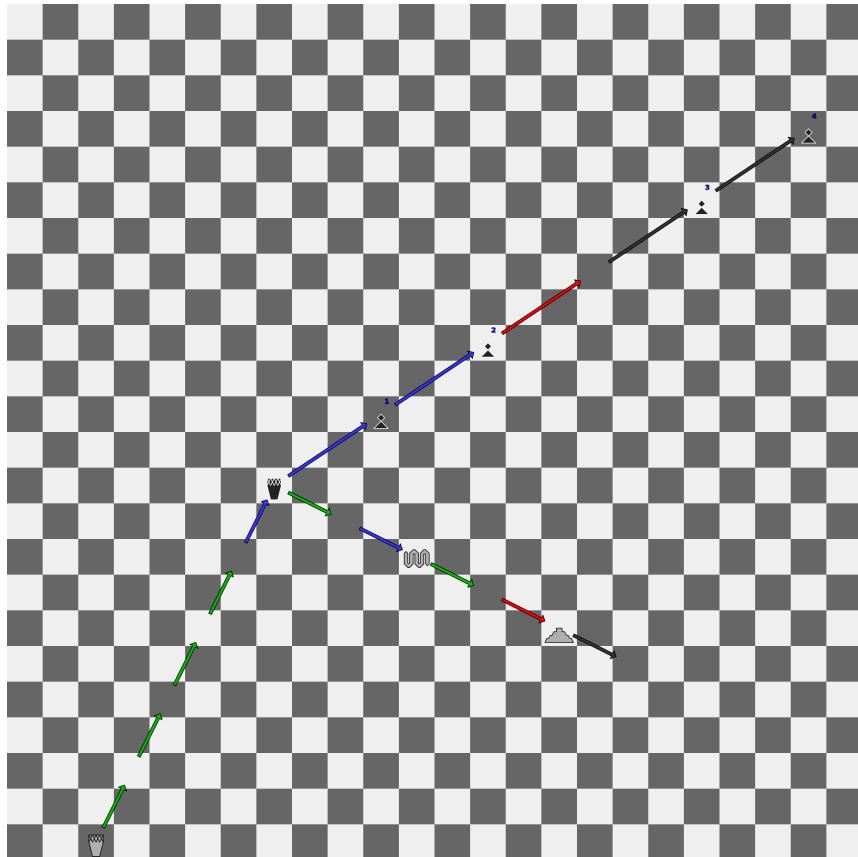


Figure 290: Diverging from opponent's Shaman

Shaman is the only piece which can diverge from opponent's Shaman. As before, after divergence Shaman can choose any direction as if starting a ply, and is limited by momentum it had when diverged.

Here, diverging Shaman can e.g activate light Wave; Pyramids cannot be activated on step-fields. Or, Shaman could capture dark Pawns on its capture-fields; only two can be captured since others are behind an empty capture-field.

## Diverging Wave

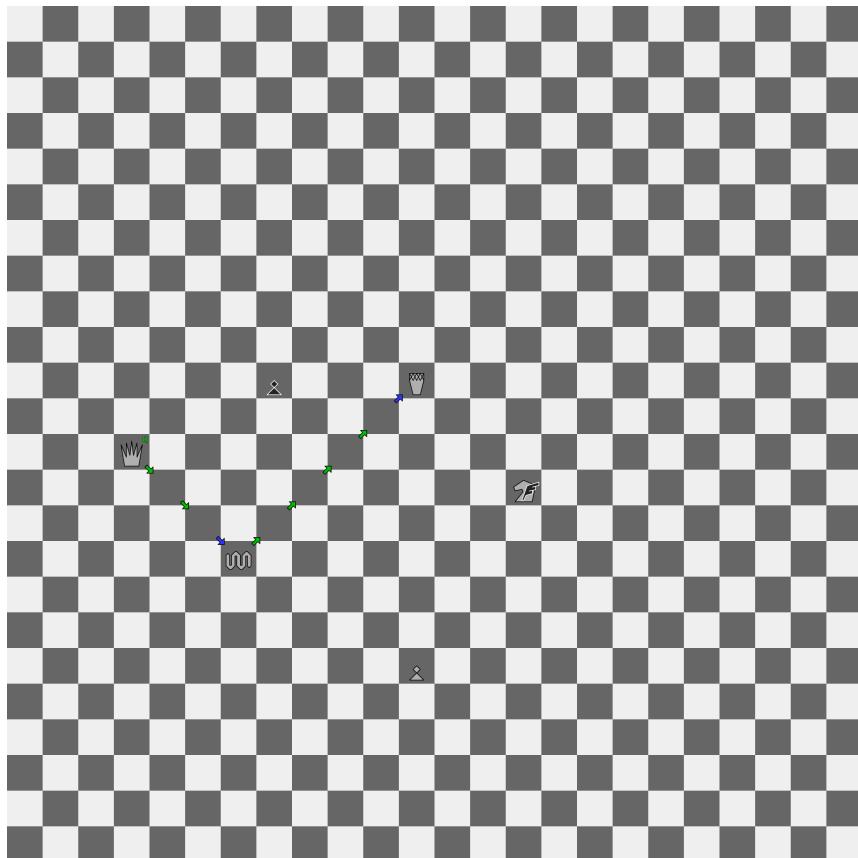


Figure 291: Diverging Wave

After divergence, Wave can choose any direction its **activator** can; that is, last material (i.e. non-Wave) piece preceding it in a cascade.

Here, light Wave is activated by Queen with 3 momentum, and is about to diverge from Shaman.

Again, **divergence** is optional, Shaman could be activated, instead.

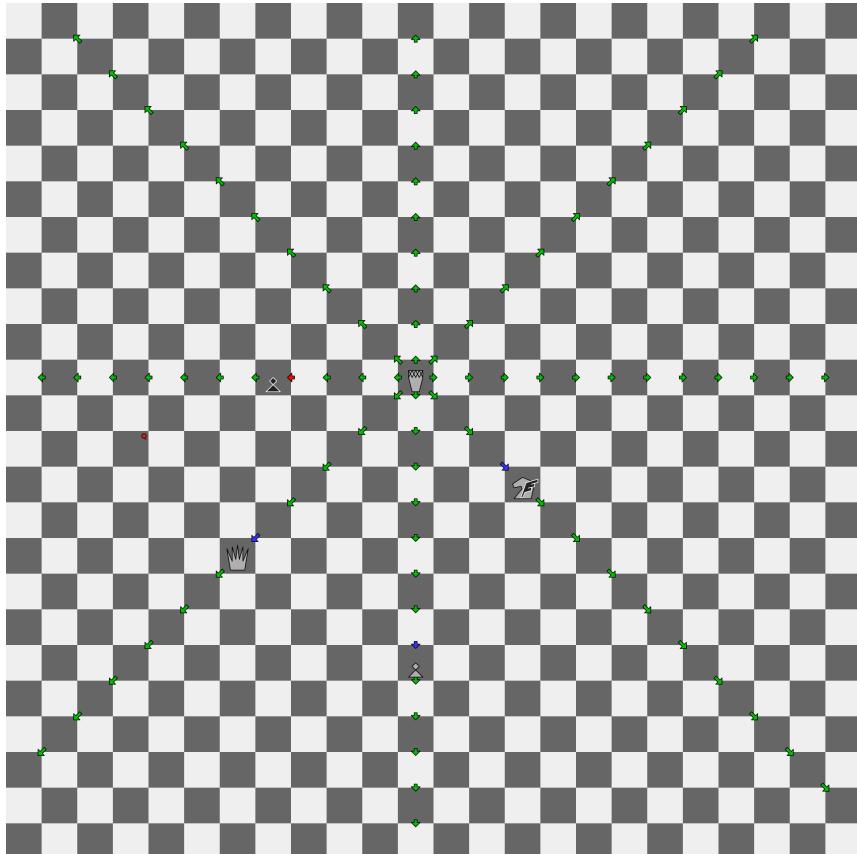


Figure 292: Wave diverted

Here, light Wave (now "in the air") can pick one of eight directions its activator (light Queen) could choose. After divergence, light Wave could activate one of light pieces with received 3 momentum. If light Queen is reactivated, just as with any piece starting a cascade, it's illegal to return to its starting field Q.

... illegal, if activated by Unicorn

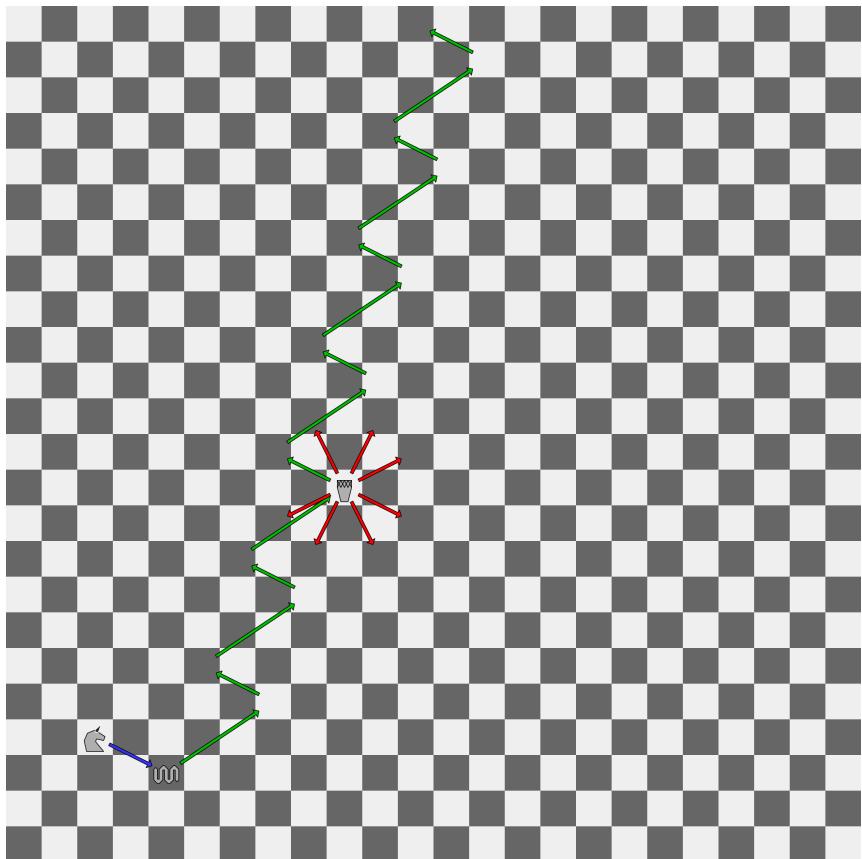


Figure 293: Wave cannot diverge, if activated by Unicorn

Wave cannot diverge, if **activated by Unicorn**, neither from own, nor from opponent's Shaman.

Here, light Wave activated by light Unicorn, upon reaching own Shaman cannot change its next step; light Wave has to follow its two initially chosen steps for the remainder of a ply.

... illegal, if activated by Centaur

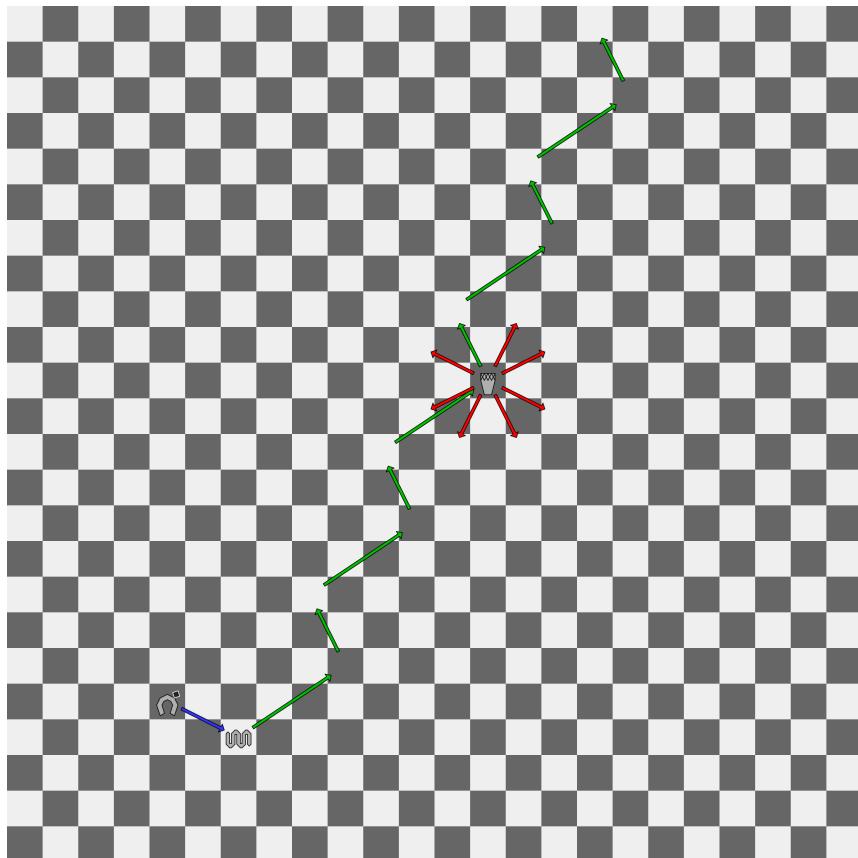


Figure 294: Wave cannot diverge, if activated by Centaur

Wave cannot diverge, if activated by Centaur, neither from own, nor from opponent's Shaman.

Here, light Wave activated by light Centaur, upon reaching own Shaman cannot change its next step; light Wave has to follow its two initially chosen steps for the remainder of a ply.

... illegal, if activated by Serpent

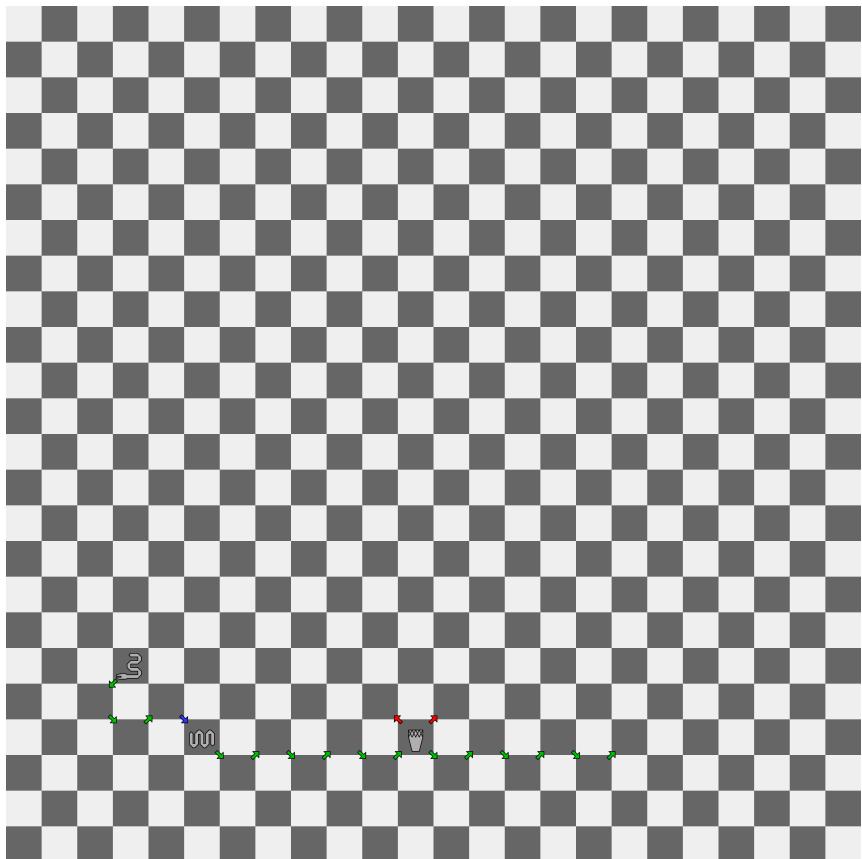


Figure 295: Wave cannot diverge, if activated by Serpent

Wave cannot diverge, if activated by Serpent, neither from own, nor from opponent's Shaman.

Here, light Wave activated by light Serpent, upon reaching own Shaman cannot change its next step; light Wave has to follow its two initially chosen steps for the remainder of a ply.

## Multiple divergences

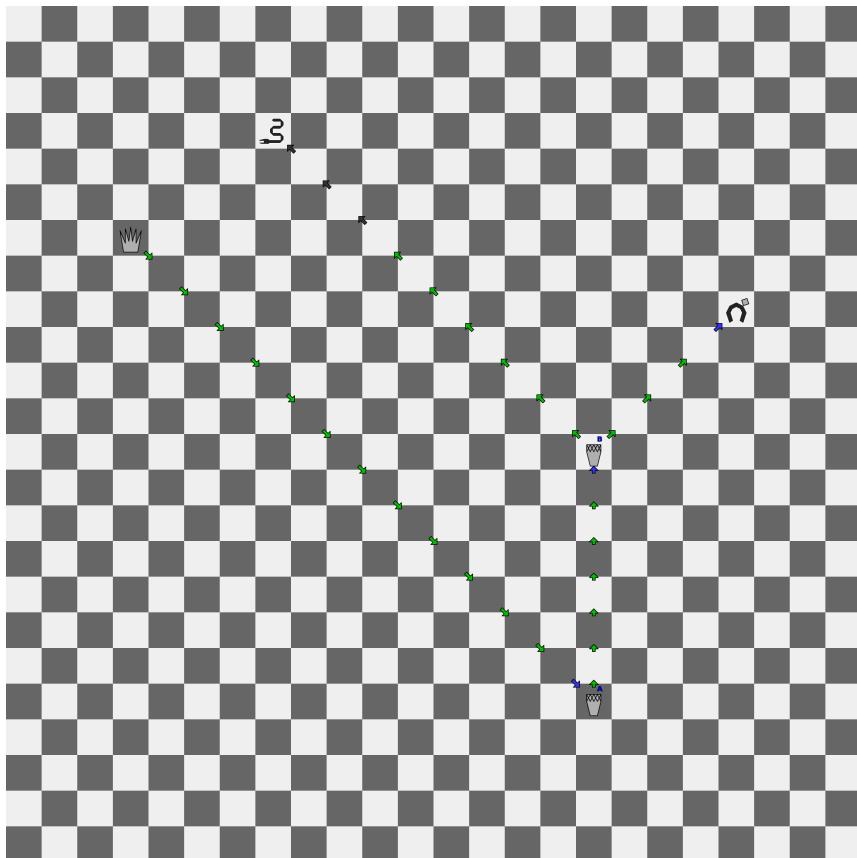


Figure 296: Multiple divergences

There is no limit to the number of divergences a piece can perform, neither in a ply, nor in a move. The only limitation is that after first divergence piece is moving only on momentum.

Here, light Queen can diverge from own, light Shamans A, then B, and then capture dark Centaur, since it's within range of accumulated momentum. Dark Serpent couldn't be captured, even if light Queen would take different path after second divergence, because it's out of range.

## Diverging opponent's pieces

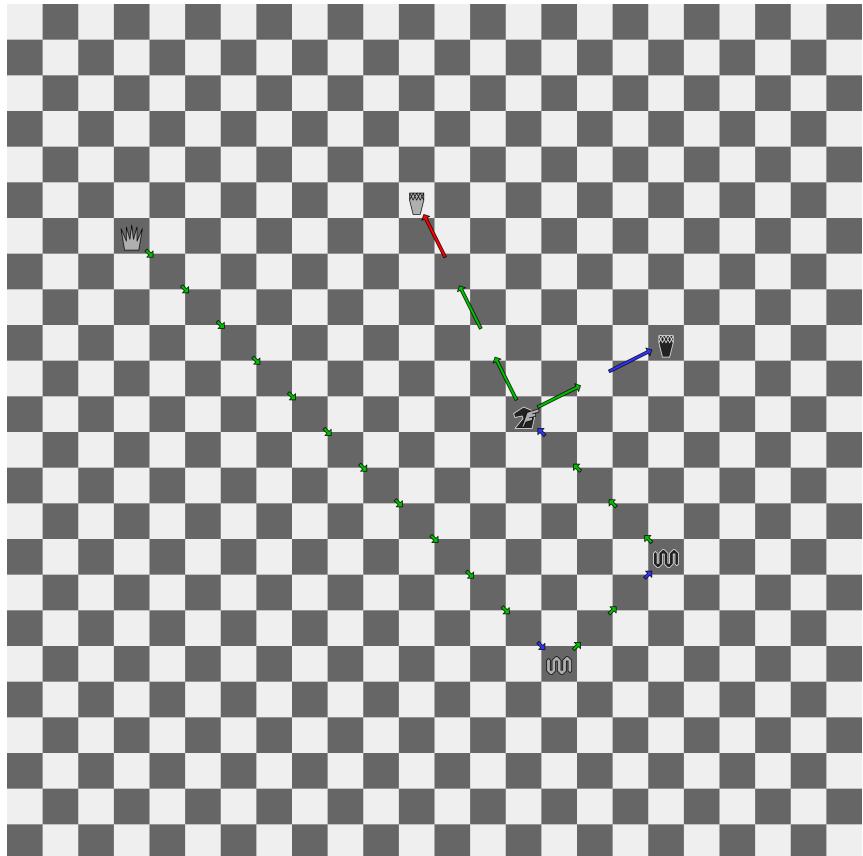


Figure 297: Diverging opponent's pieces

Opponent's pieces activated in a cascade can only diverge from their own Shaman. That is, dark pieces can only diverge from dark Shaman, while light pieces can only diverge from light Shaman; regardless which player activated a piece.

Here, light player started a cascade with light Queen; activated dark Pegasus can only diverge from own, dark Shaman; light Shaman can only be captured.

## Diverging to starting position

The same as in an ordinary cascade, diverging piece **cannot return to its starting field**, if it's first piece in a cascade (or, the only one in a move). Diverging piece which was **not the first in a cascade can return to its starting field**, just like activated piece in an ordinary cascade would be able.

... illegal, if starting a move

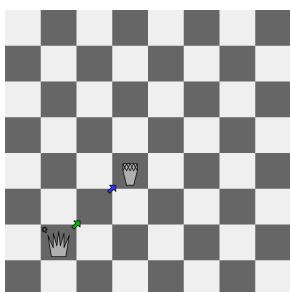


Figure 298: Diverging move starter

As mentioned above, piece starting a move cannot return to its starting position after divergence.

Here, light Queen is starting a move, and is about to diverge from own, light Shaman.

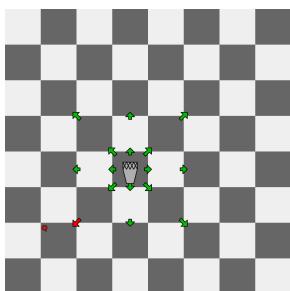


Figure 299: Diverged move starter

Here, light Queen (now "in the air") is about to choose direction after diverging from light Shaman. Even though it has enough momentum, light Queen cannot return to its starting position, i.e. field Q.

... legal, if activated

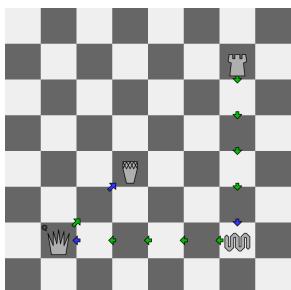


Figure 300: Diverging activated piece

Piece which did not start a move (for instance, one that has been activated in a cascade) can return to its starting position after diverging.

Here, light Queen is about to be activated, and is going to diverge from own, light Shaman.

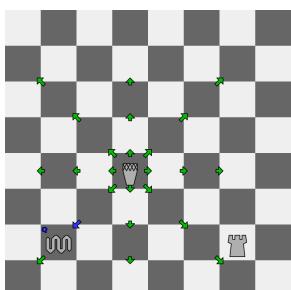


Figure 301: Diverged activated piece

Here, light Queen (now "in the air") after diverging from light Shaman can return to its starting position (i.e. field Q), and it can e.g. reactivate light Wave with remaining 1 momentum.

## Diverging check, checkmate

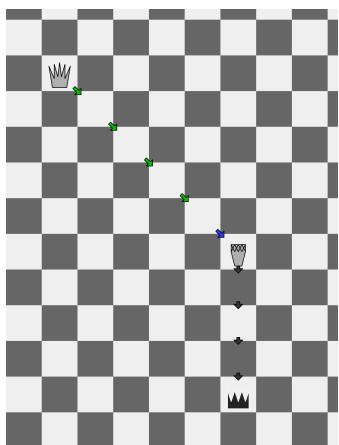


Figure 302: King is not in check

Opportunity to check (or checkmate) after divergence is still not an attack on opponent's King. Again, opponent's King can be checked (or checkmated) only if it's located on a capture field of active piece **when move is finished**.

On the left, light Queen can diverge from own, light Shaman (here, green, blue arrows). Still, dark King is not in check, even if it would be located on light Queen's capture-field as she diverges from light Shaman (grey arrows).

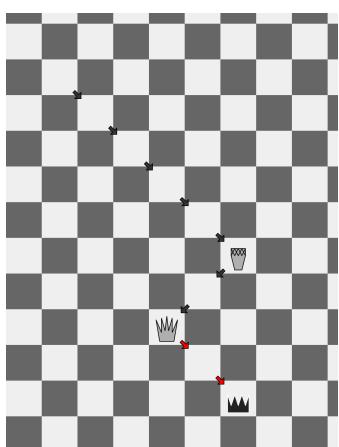


Figure 303: King is in check

Again, only after all pieces in cascade has settled, and move has finished, can a piece check (or checkmate) opponent's King.

On the left, grey arrows show path traveled over by light Queen, both before and after divergence from own, light Shaman. Light player's move has been finished, now is dark player's turn. Dark King is now positioned on light Queen's capture-field, so now it's in check.

# Trance-journey

Trance-journey is initiated by stationary Shaman activating another Shaman on its trance-field. Initiating Shaman is also called entrancing Shaman, the one taking trance-journey is entranced Shaman. Colors of Shamans do not need to match.

## Trance-fields

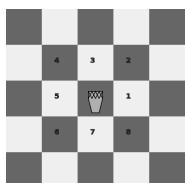


Figure 304: Trance-fields

Trance-fields are all fields immediately neighboring Shaman horizontally, vertically, and diagonally. They are the same fields as step-fields of a King.

## Entrancement

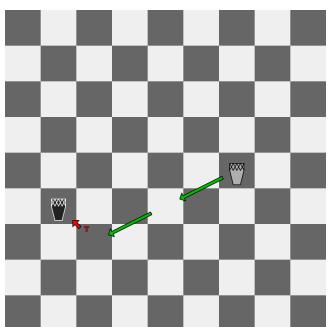


Figure 305:  
Entrancement prepara-  
tion

In a single ply, Shaman can travel over only one of step-, capture- or trance-fields; choice can be made only on the very first step, and cannot be changed for duration of the ply.

Here, light Shaman can be moved onto field T, so that its trance-field is occupied by dark Shaman. It's illegal to change course during the ply, so light Shaman cannot entrance dark Shaman outright.

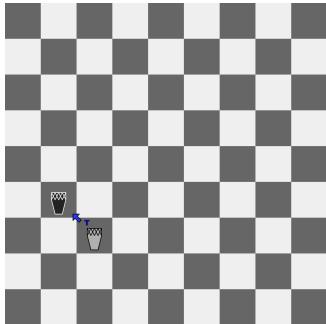


Figure 306:  
Entrancement step

Once in a position, stationary Shaman can entrance the other Shaman by simply stepping onto its occupied trance-field; entranced Shaman then has to go onto trance-journey.

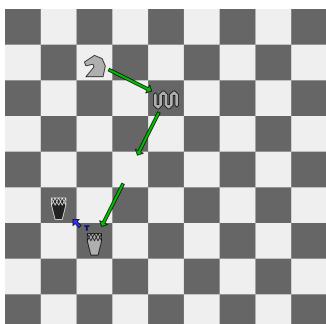


Figure 307:  
Entrancement by ac-  
tivated Shaman

Activated Shaman can also entrance the other Shaman. This is so, even if entrancing Shaman has no momentum; like in the example on the left.

Note, trance-journey is mandatory; once a Shaman is entranced it has to make trance-journey.

## Entrancement cascade

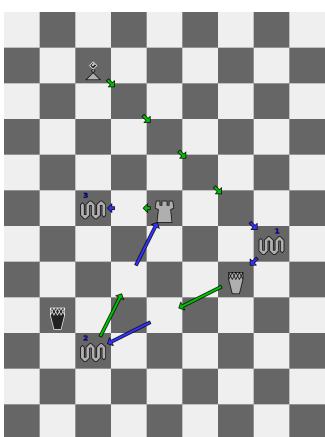


Figure 308:  
Repositioning  
Shaman

It is possible to reposition entrancing Shaman, and then entrance the other Shaman in a single, cascading move.

On the left, light Shaman is about to be repositioned next to dark Shaman; first part of the cascade ends with light Wave 3 being activated.

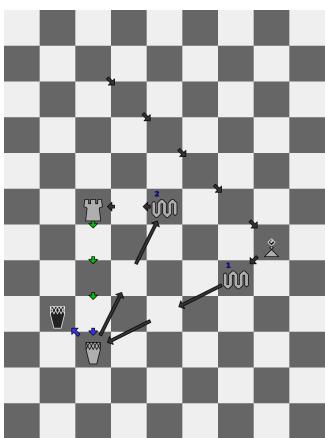


Figure 309: Entrancing  
dark Shaman

Here, grey arrows show path traveled over by a piece they point to; taken together they show first part of the cascade, which is already done.

Light Wave 3 (now "in the air") has been activated, and is about to reactivate light Shaman, which will then entrance dark Shaman, which then must end this cascade with trance-journey.

## Movement

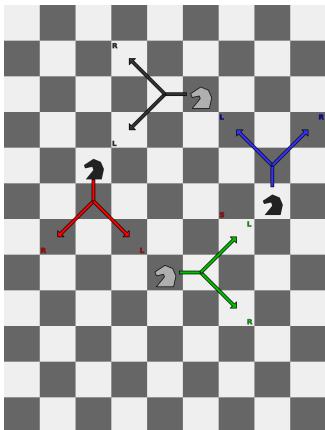


Figure 310: Knight directions

If we look from Knight's position forward, then one direction would be to the left, and the other to the right (here, dark Knight on the right).

Now, we can take all left steps, and arrange them so that step-field of one Knight ends up on starting field of another, with red arrow ending at field S.

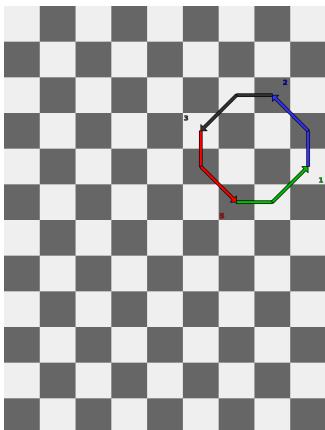


Figure 311: Stop sign pattern

Result is a stop sign pattern. It can be traversed by Knight in 4 left-only steps (moves), starting from field S.

Each step starts with horizontal or vertical leg, and finishes with diagonal leg. Legs are referred to by relative position of its end point.

So, starting step (green) has right and up-right legs, while last step (red) has down and down-right legs.

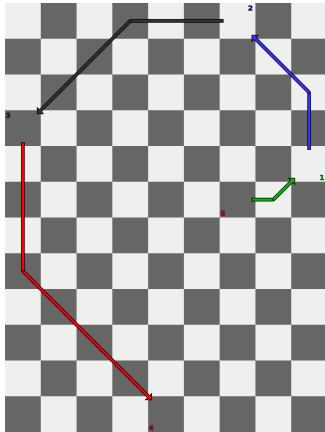


Figure 312: Stop sign pattern unwinded

To untangle this pattern, after each step both legs (horizontal or vertical, and diagonal) gets longer by 1.

So, starting step (green) has both legs with length of 1. Next step (blue) has up and up-left legs both with length of 2, third step (dark grey) has legs' lengths of 3, and so on. Pattern never ends.

Complementary to pattern starting with right leg (in the example to the left), there is also symmetrical pattern starting with left leg, i.e. rotated by  $180^\circ$ .

## Light Shaman

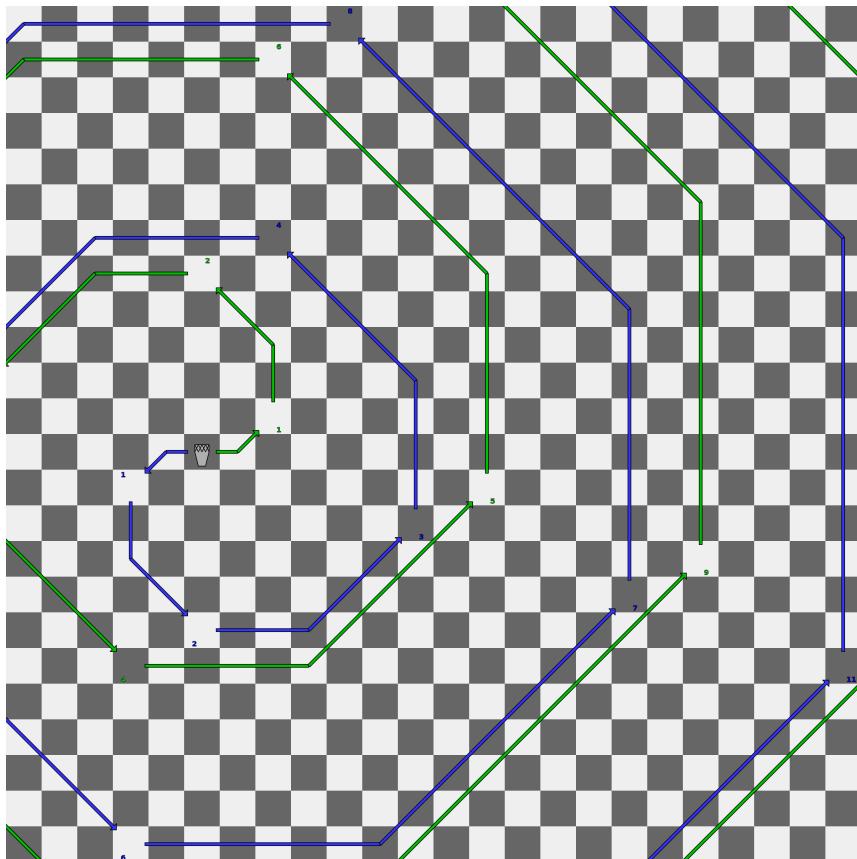


Figure 313: Light Shaman trance-journey

Together, left (blue) and right (green) hand pattern make a complete movement pattern of light Shaman. After choosing direction (color), light Shaman continues its movement from starting position outwards. Shaman can stop at any step-field on chosen colored pattern, even if previous step-fields lay outside of a chessboard. Length of trance-journey is not limited by received momentum, and can be started even if none has been received.

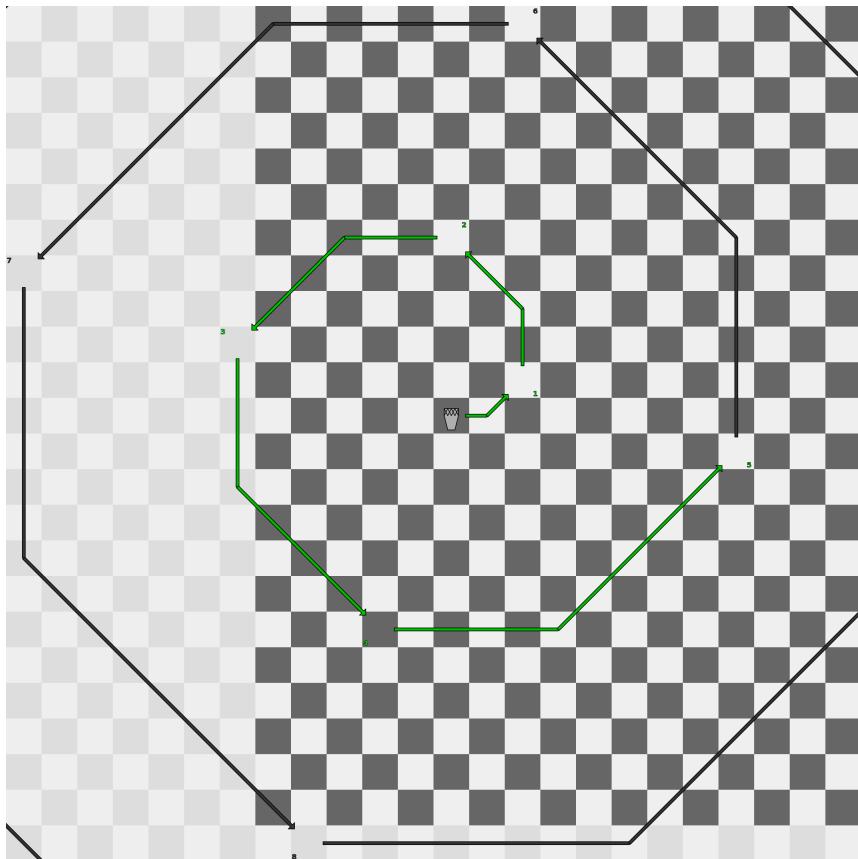


Figure 314: Light Shaman trance-journey with offset

Again, light grey fields are virtual fields extending existing chessboard.

Based on a previous example, direction chosen was right (green) hand pattern. If destination is field 5, traversed step-fields are 1, 2, virtual field 3, fields 4 and 5, in that order. All other (step-)fields are not affected.

## Dark Shaman

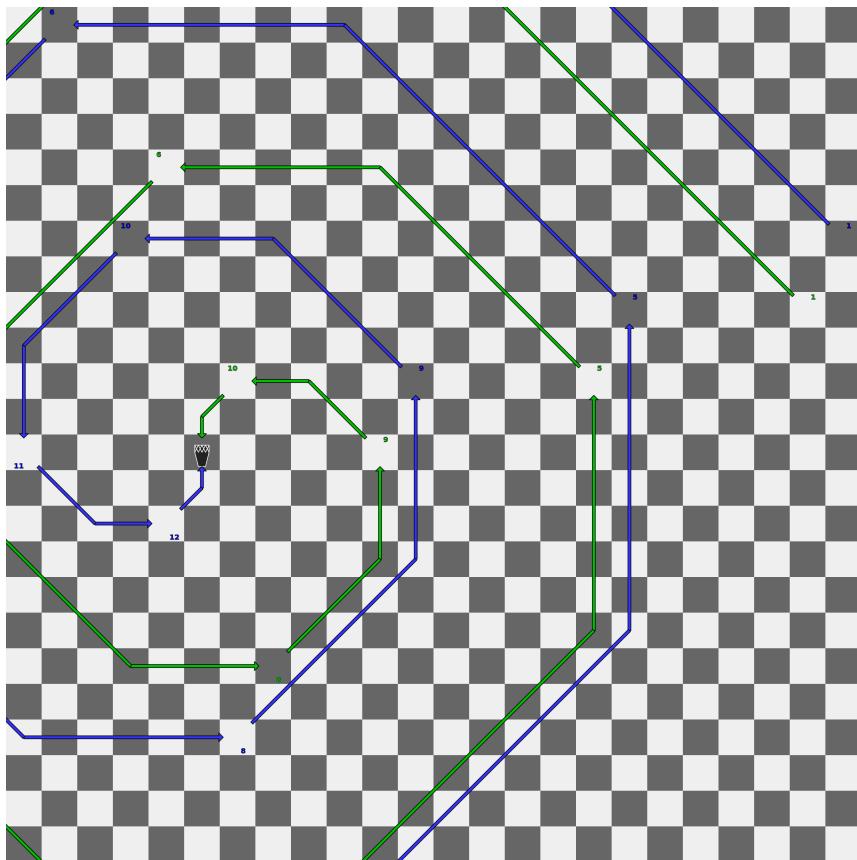


Figure 315: Dark Shaman trance-journey

Dark Shaman's pattern is the same as light one's, except:

- complete pattern consists of up (green) and down (blue) hand pattern
- both patterns use Knight's right steps, instead of left ones
- every step now starts with diagonal leg and ends with either vertical or horizontal leg
- dark Shaman starts moving from outermost step-field towards starting position.

Note that dark Shaman must settle on enumerated step-field, it cannot end its trance-journey on a starting field.

## Interactions

Again, entranced Shaman is the one undertaking trance-journey, entrancing Shaman is the one preceding entranced Shaman in a cascade. Interactions with other pieces found on step-fields depends on a color of entrancing Shaman. During trance-journey, all pieces are transparent to entranced Shaman, regardless if Shaman is light or dark, so all displacements, captures are optional.

If entrancing Shaman is light, pieces found on affected step-fields can optionally be displaced (i.e. moved to an empty displacement-field). If there is no empty displacement-field, piece is not moved.

If entrancing Shaman is dark, all pieces, own or opponent's, found on affected step-fields can optionally be captured.

Pieces on step-fields not reached by entranced Shaman are not affected. In all cases, Kings and Stars on a step-fields are ignored, they cannot be displaced nor captured. Entranced Shaman can continue its trance-journey past all Kings and Stars, regardless of colors of pieces.

In all cases, entranced Shaman cannot activate neither Pyramid nor Wave. Just like any other piece when reached upon, they can be displaced or captured.

As a special case, if both Shamans are dark, entranced Shaman can optionally undertake double trance-journey, capturing all pieces, own and opponent's (except Kings and

Stars), on all step-fields of both up- and down-hand patterns. All captures in double trance-journey are mandatory, not optional; after which entranced Shaman is oblationed (i.e. removed from chessboard as if captured by the opponent).

## Displacement-fields

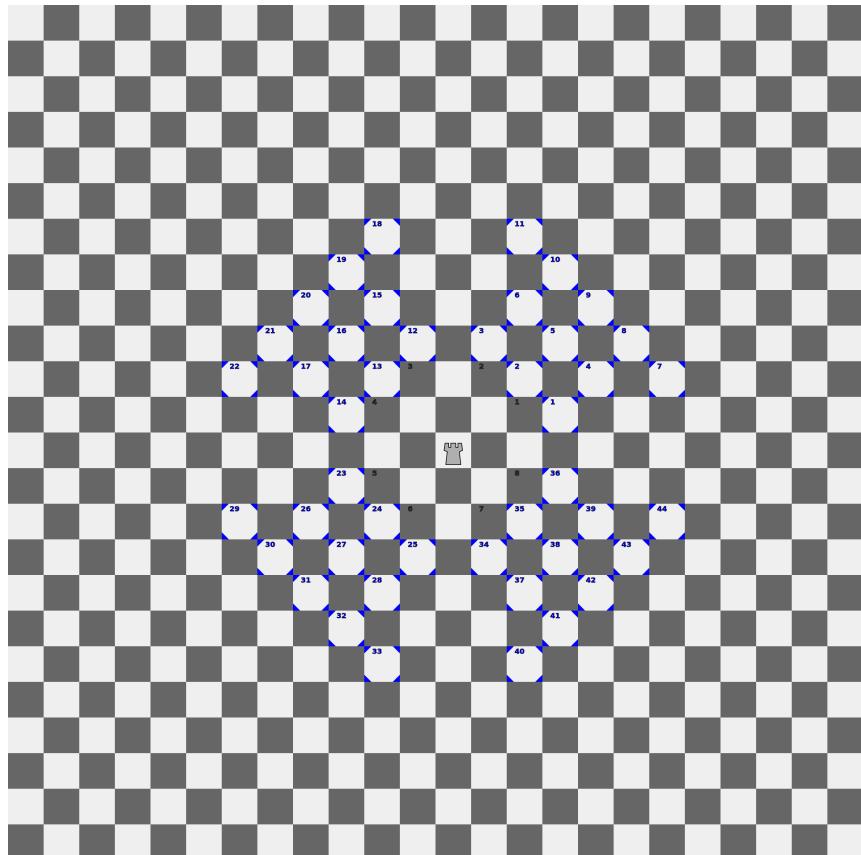


Figure 316: Displacement-fields

Displacement-fields are all marked fields (blue). For com-

parison, Knight's step-fields are also enumerated (grey).

Displacement is a movement of a piece (here, Rook) from Shaman's step-field directly onto any enumerated field, regardless of how displaced piece moves otherwise.

Displacement can be performed regardless of any pieces surrounding starting or destination fields, it is enough if destination field is empty. Destination field must exists on chessboard, i.e. it's not possible to displace piece onto a virtual field outside of a board.

Piece is displaced immediately after step in which entranced Shaman reaches that piece, but before Shaman continues its trance-journey. Thus, displacement of pieces follows order of trance-journey steps.

Multiple pieces, if not too far away, can share displacement fields. So, a piece displaced earlier in trance-journey can block one later on from being displaced onto the very same field.

## Light → light Shaman

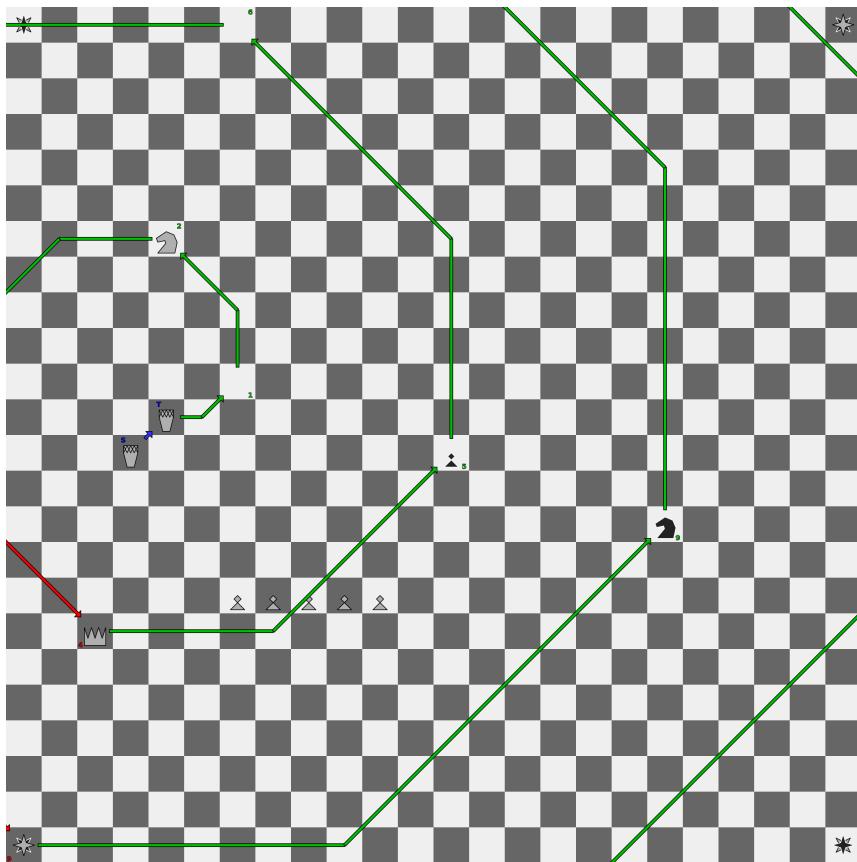


Figure 317: Light → light Shaman interaction start

Light Shaman is about to do trance-journey along right-hand pattern. While it's illegal for entranced Shaman to displace King or a Star, Shaman can continue its trance-journey past them. Pieces not on a step-fields of an entranced Shaman (here, light Pawns) can't be displaced either.

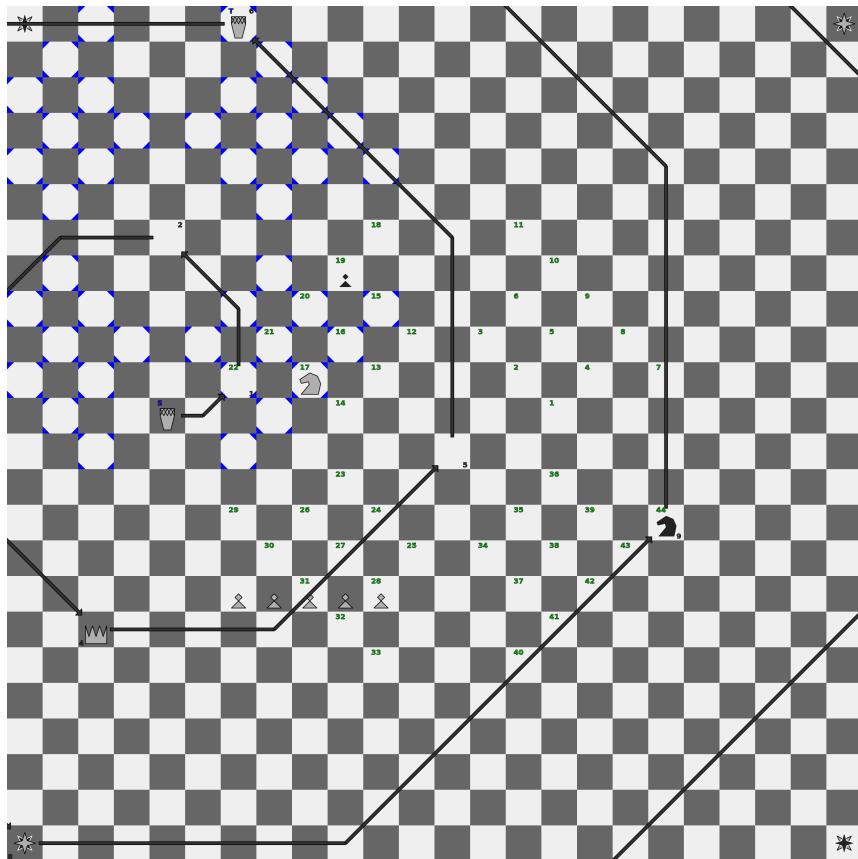


Figure 318: Light → light Shaman interaction end

Here, displacement-fields of light Knight are marked (blue), while for dark Pawn they are enumerated (green). Each displacement immediately follows Shaman's step which initiate it. So, displacements are performed in the same order in which steps are performed. Light Knight is displaced from field 2 early into trance-journey onto shared displacement-field 17. This prevents dark Pawn to be displaced from field 5 onto the same field later, during the same trance-journey.

## Dark → light Shaman

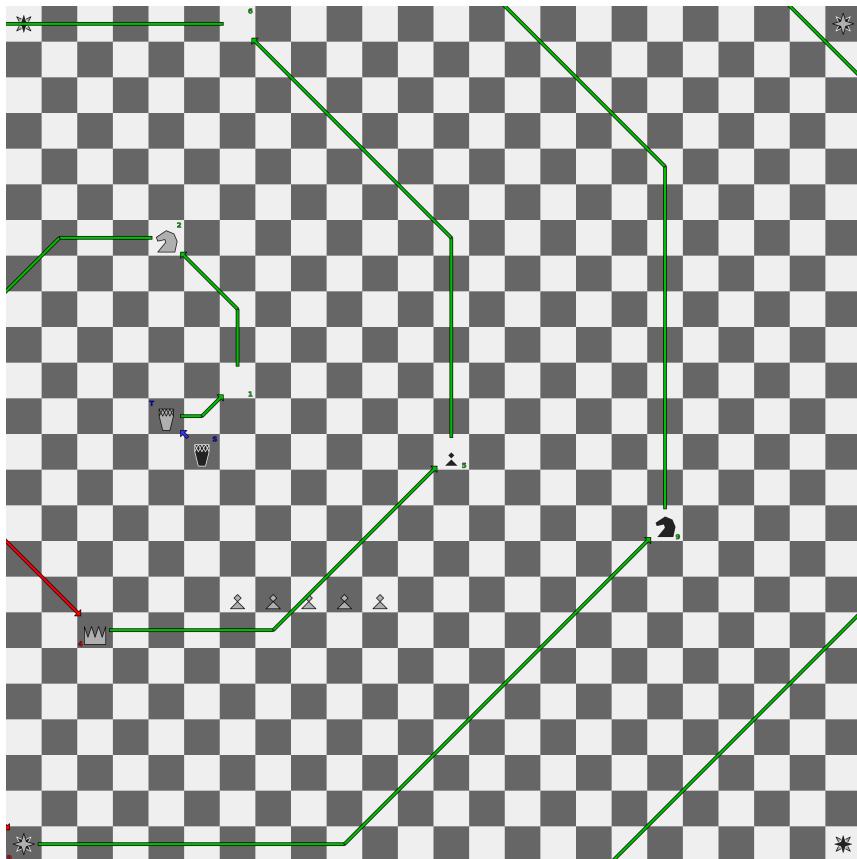


Figure 319: Dark → light Shaman interaction start

Light Shaman is about to be entranced by dark Shaman, and so can capture pieces on step-fields along chosen (here, right-hand) pattern. While it's illegal for entranced Shaman to capture King or a Star, Shaman can continue its trance-journey past them. Pieces not on a capture-fields of an entranced Shaman (here, light Pawns) can't be captured either.

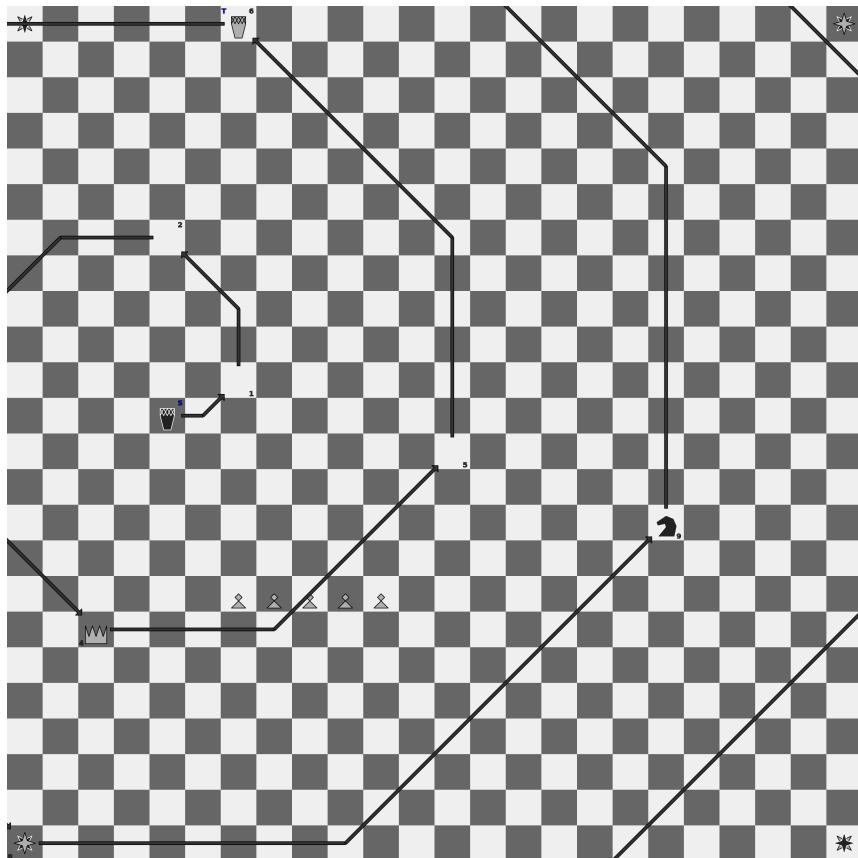


Figure 320: Dark → light Shaman interaction end

Like in [the previous example](#), entranced Shaman received only 1 momentum, but it performed multiple steps during trance-journey. There is no limit on a trance-journey length due to received momentum, it can be started even if no momentum is received.

Note, entranced Shaman settled on a field 6, and so dark Knight (on field 9) is not captured.

## Dark → dark Shaman

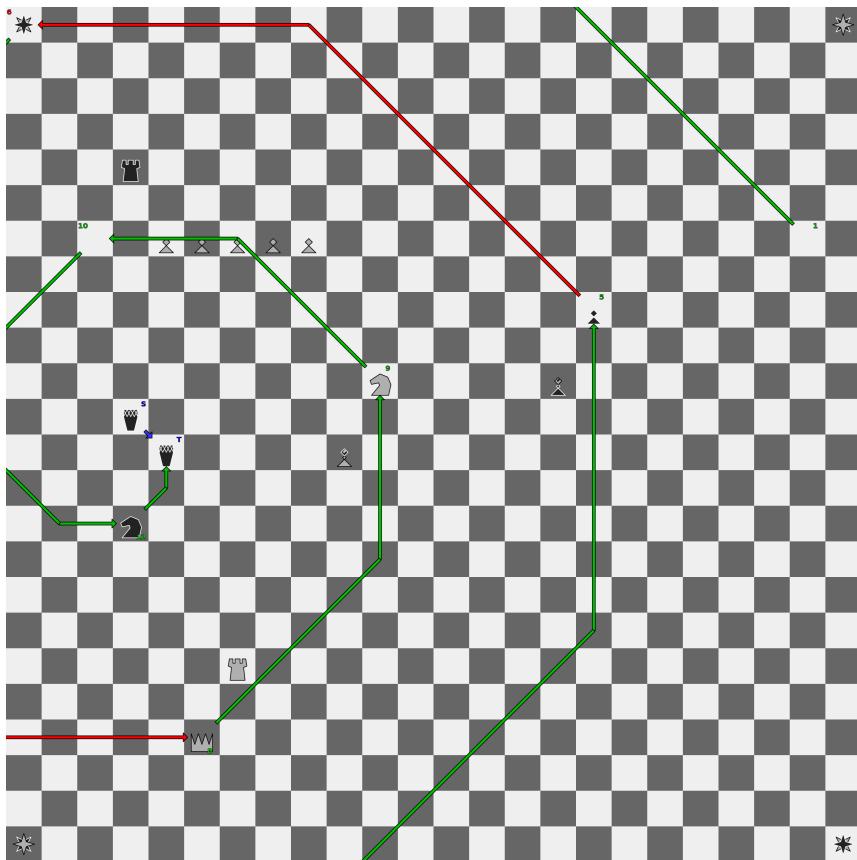


Figure 321: Dark → dark Shaman interaction start

Shaman entranced by dark Shaman is about to start capturing pieces along down-hand pattern inwards, i.e. from field 1 in upper right corner of chessboard towards its starting position.

King and Star can't be captured, but pieces past them can (here, light Knight on field 9, dark Knight on field 12). Other pieces not on a capture-fields of an entranced Shaman can't be captured either (light Pawns).

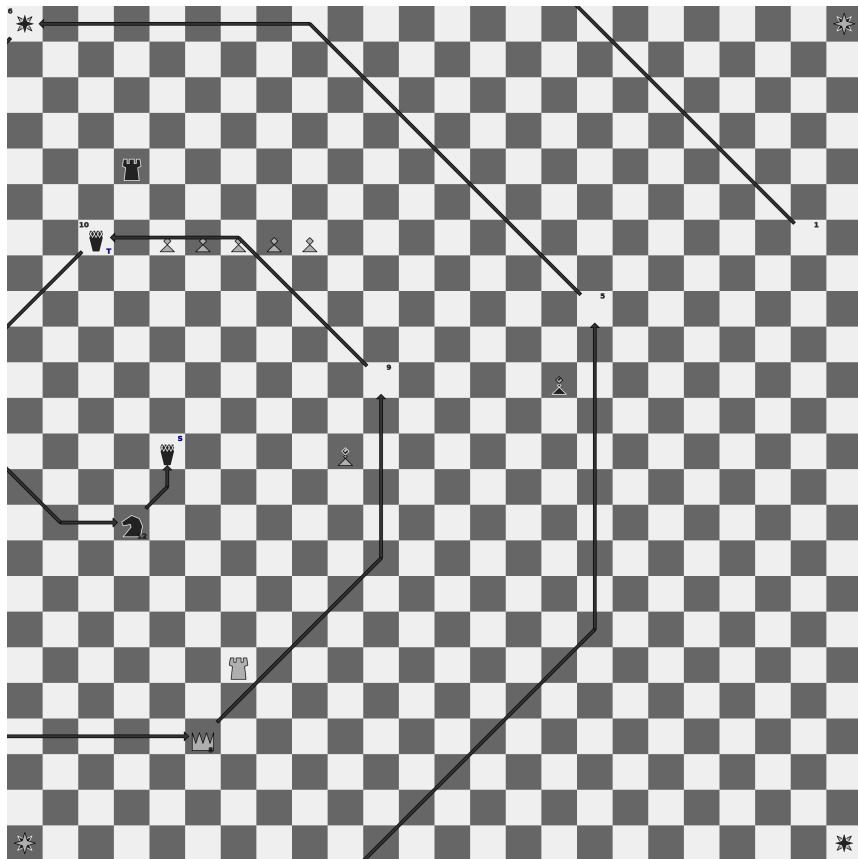


Figure 322: Dark → dark Shaman interaction end

All pieces on capture-fields up-to and including destination field in a trance-journey initiated by dark Shaman can be optionally captured. All pieces, both own and opponent's can be captured, except Kings and Stars.

Here, entranced Shaman settled on a field 10, and so piece closer to starting position (here, dark Knight on field 12) cannot be captured.

## Dark → dark Shaman double

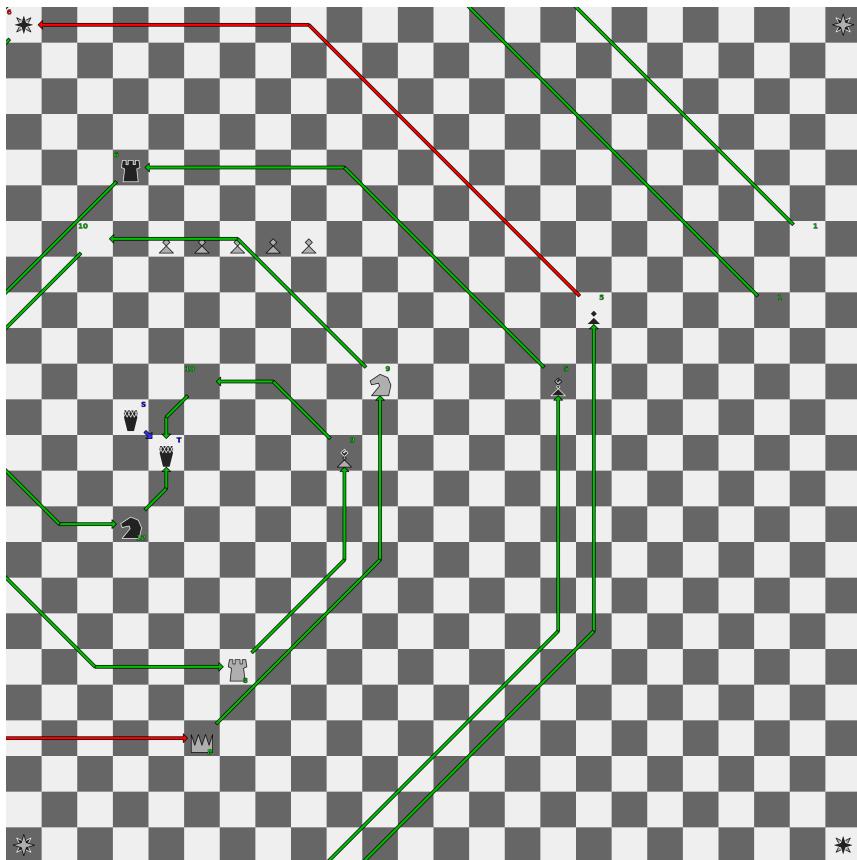


Figure 323: Dark → dark Shaman double start

Dark Shaman entranced by other dark Shaman is about to undertake double trance-journey, where it captures all own and opponent's pieces, on both up- and down-hand patterns.

Just like in previous examples, King and Star can't be captured, even though pieces past them can. Pieces not on capture-fields (here, light Pawns) can't be captured either.

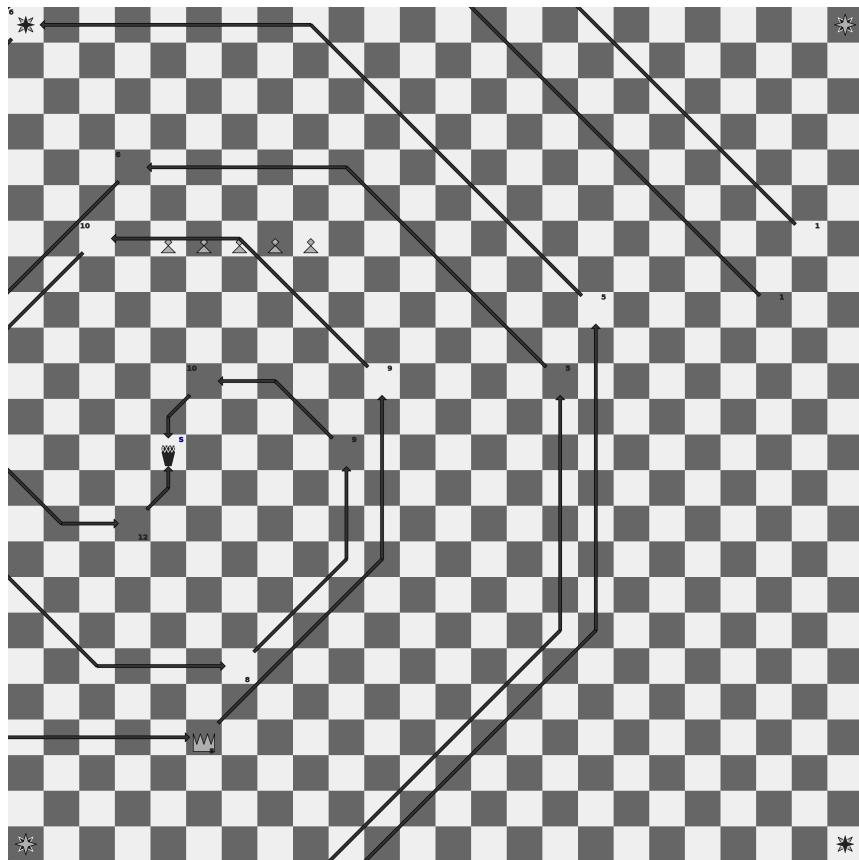


Figure 324: Dark → dark Shaman double end

All pieces (except Kings and Stars) on capture-fields in both up- and down-hand trance-journey patterns have been captured, entranced Shaman is now oblationed.

## Light → dark Shaman

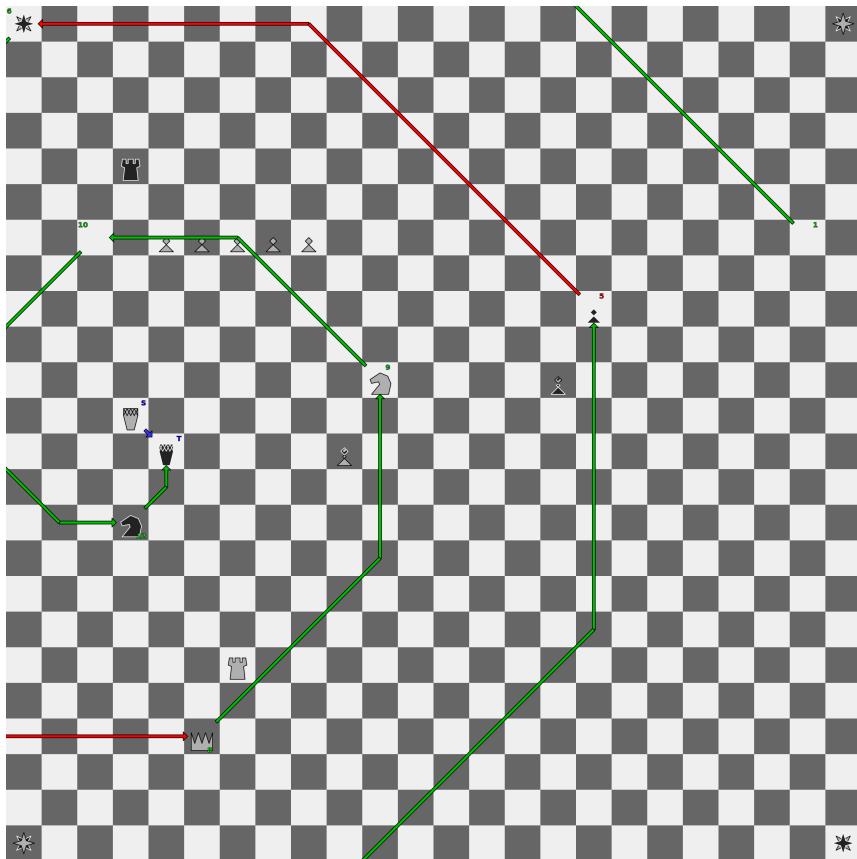


Figure 325: Light → dark Shaman interaction start

Dark Shaman entranced by light Shaman is about to start displacing pieces along down-hand pattern inwards, i.e. from field 1 in upper right corner of chessboard towards its starting position.

King and Star can't be displaced, but pieces past them (here, light Knight on field 9, dark Knight on field 12) can be displaced. Other pieces not on a step-fields of an entranced Shaman (light Pawns) can't be displaced either.

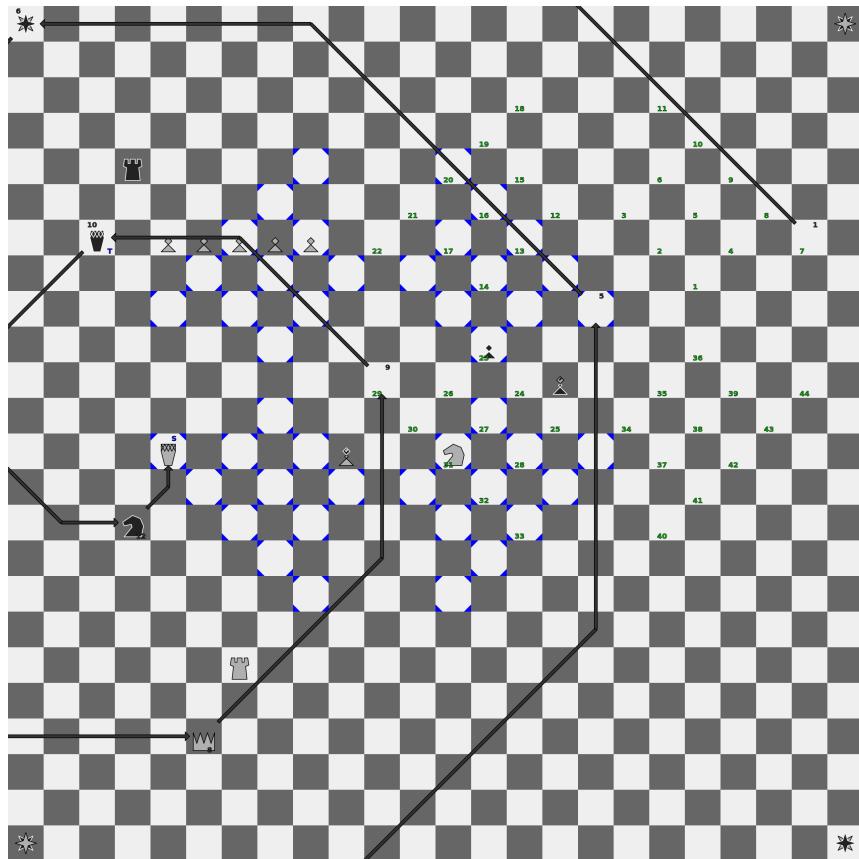


Figure 326: Light → dark Shaman interaction end

Here, displacement-fields of light Knight are marked (blue), while for dark Pawn they are enumerated (green). Again, displacements follow order of entranced Shaman's steps.

Dark Pawn is displaced from field 5 early into trance-journey onto shared displacement-field 23. This prevents light Knight to be displaced from field 9 onto the same field.

## Backward displacements

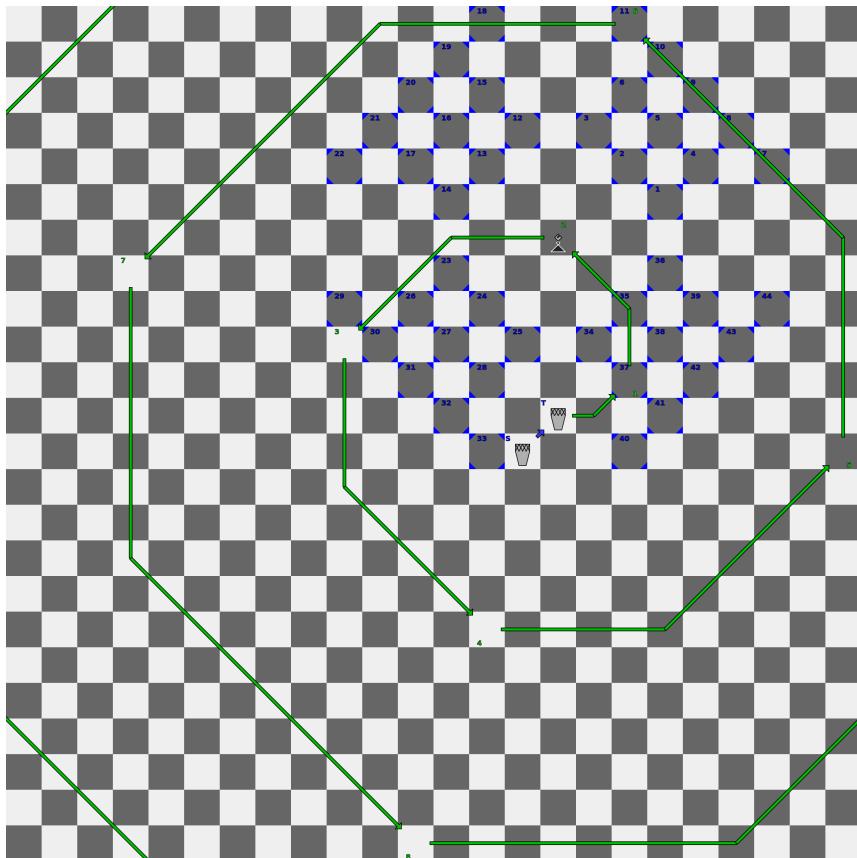


Figure 327: Backward displacement start

It's possible to displace piece between step-fields of an entranced Shaman. In the example above, dark Bishop could be displaced from field 2 back onto field 1 (i.e. displacement field 37). Since piece is displaced only after it has been reached by entranced Shaman, field 1 has been already traveled over by the Shaman.

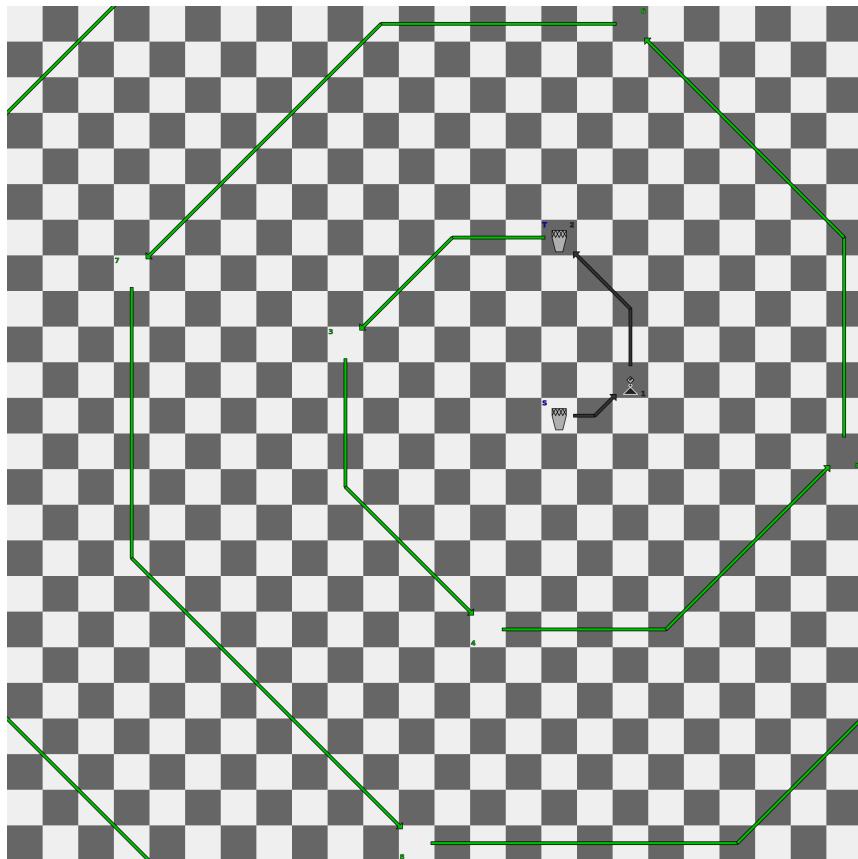


Figure 328: Backward displacement end

Such a displacement (when piece is displaced onto field already traveled over by entranced Shaman) is called backward displacement.

Above, entranced Shaman can only continue to move forward (green), backward displaced piece (here, dark Bishop) is now on a traveled-over path (grey), and thus out of reach for the remainder of the trance-journey.

## Forward displacements

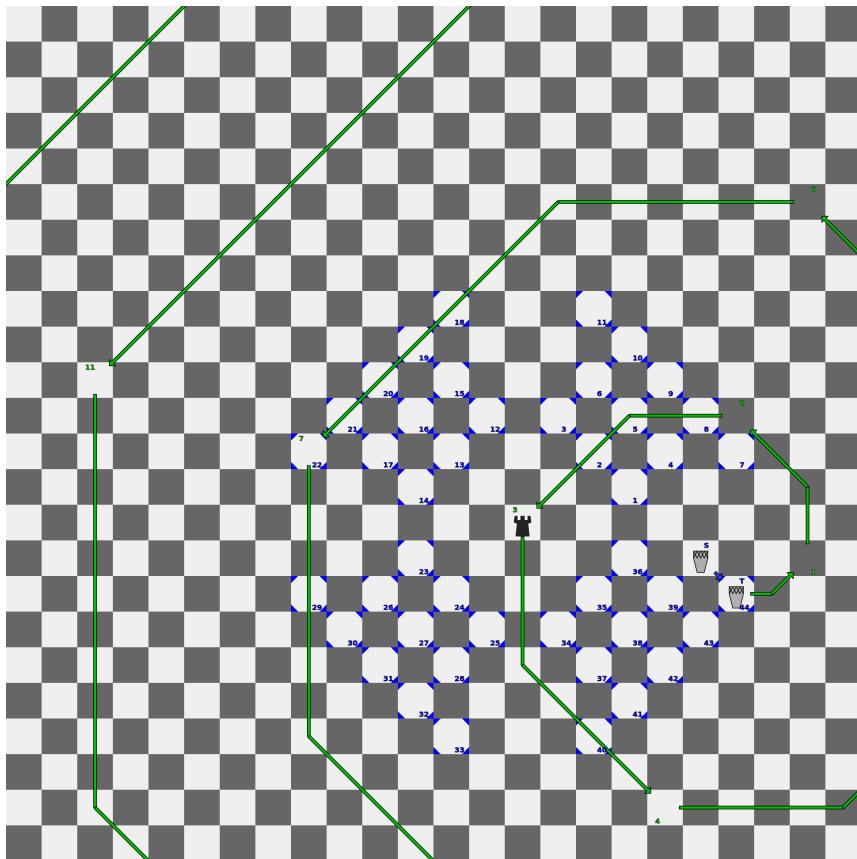


Figure 329: Forward displacement start

Here, dark Rook can be displaced from step-field 3 onto step-field 7 (displacement field 22), which hasn't been traveled over by the Shaman yet.

Such a displacement (when piece is displaced onto field not yet traveled over by entered Shaman) is called forward displacement.

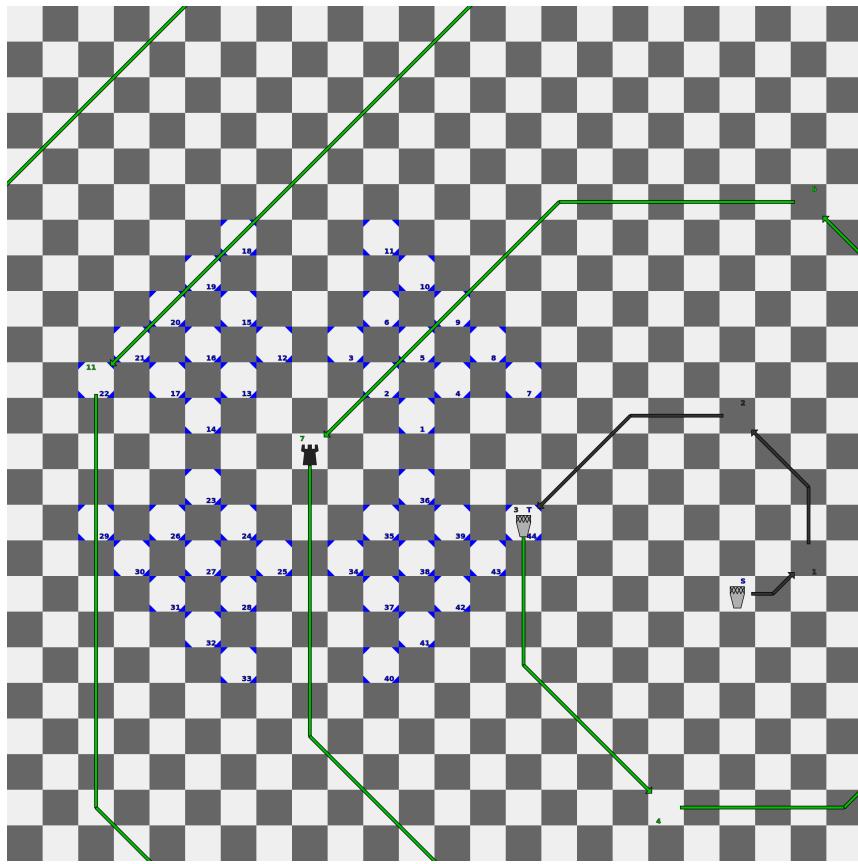


Figure 330: Forward displacement, step 2

Dark Rook can be forward-displaced again, onto step-field 11 (displacement field 22).

Note, dark Rook can also be displaced back onto its starting position, i.e. step-field 3 (displacement field 44), because displacement takes place only after being reached by entranced Shaman, and so step-field 3 by the time of displacement would be empty.

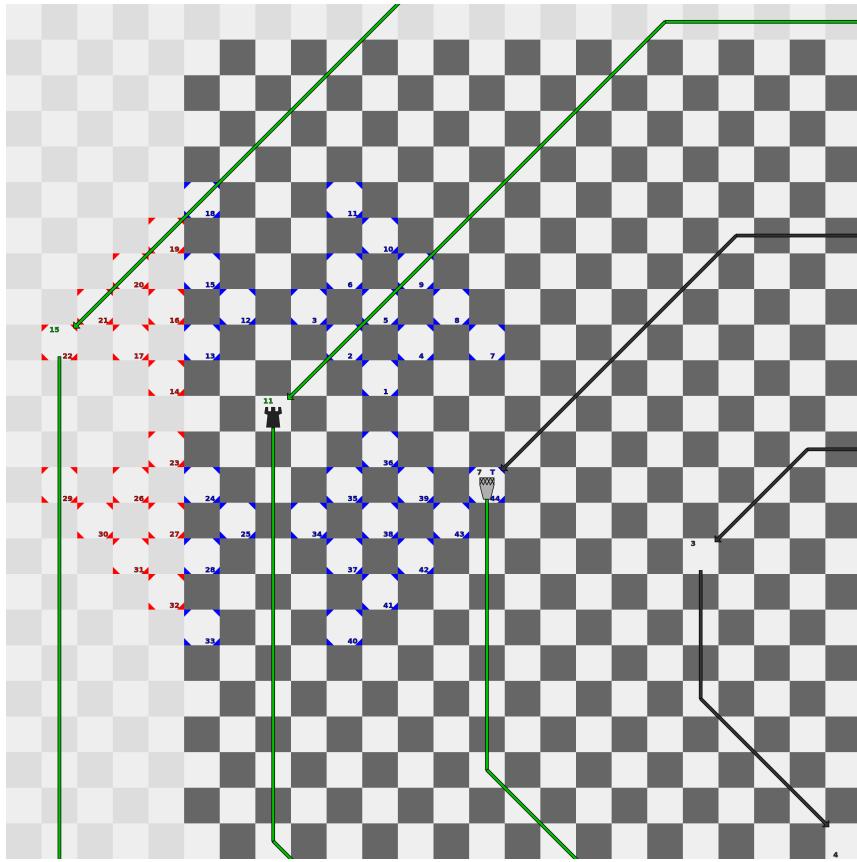


Figure 331: Forward displacement end

Again, light grey fields are virtual fields extending existing chessboard.

Piece can only be displaced onto existing, empty field on chessboard. So, dark Rook can't be forward-displaced any more, as next step-field 15 (displacement field 22) lies outside of chessboard, together with all fields marked red. Dark Rook can still be displaced onto fields marked blue.

## Added troopers

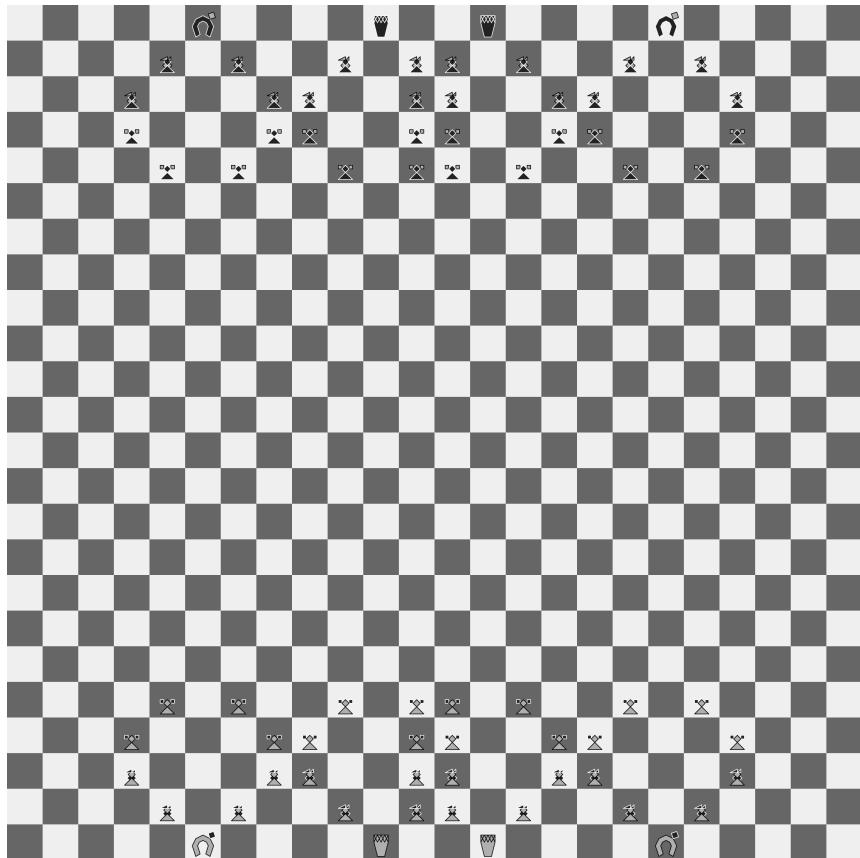


Figure 332: Initial positions of Scouts, Grenadiers

In this variant an additional set of Scouts, Grenadiers are added to [the initial setup](#), to cover Shamans' initial positions.

Together with [already added troopers](#) there are now 16 Scouts and 16 Grenadiers for each player in the initial setup.

## Rush, en passant

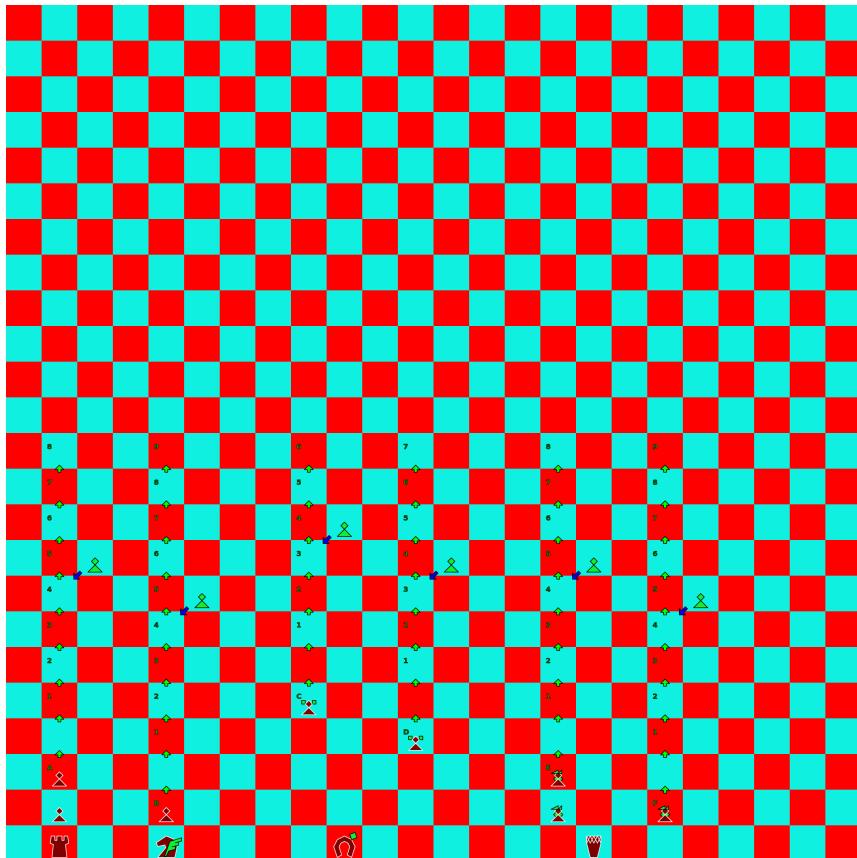


Figure 333: En passant

Image above have 6 examples presented in parallel: one for each Pawns A, B, Scouts C, D, and Grenadiers E, F.

Rush and en passant are identical to those in [Hemera's Dawn variant](#). Own privates (i.e. Pawns, Scouts, and Grenadiers) can be rushed for up to 10 fields in this variant.

## Promotion

Promotion in this variant is enforced, immediate. So, Pawns cannot be tagged for promotion. Pawn has to be promoted immediately upon reaching **opponent's figure row**, just like in a Classical Chess.

Alternatively, Pawn has to be promoted immediately when reached by own Pyramid on opponent's side of a chessboard, like in **Mayan Ascendancy variant**.

Promotion in this variant is polygamous, more than one Queen in the same color can be present on chessboard at any given time.

# Castling

Castling is **the same as in Nineteen variant**, only difference is that King can move between 2 and 9 fields across. All other constraints from Nineteen variant still applies.



Figure 334: Castling

In example above, all valid King's castling moves are numbered.



Figure 335: Castling long right

In this example King was castling long to the right. Initial King's position is marked with "K". After castling is finished, right Rook ends up at field immediately left to the King.

## Initial setup

Compared to initial setup of Tamoanchan Revisited, Shaman is inserted between King (or Queen) and Pyramid symmetrically, on both sides of chessboard. More Scouts are added before first row of Pawns, and more Pawns are replaced by Grenadiers. This can be seen in the image below:

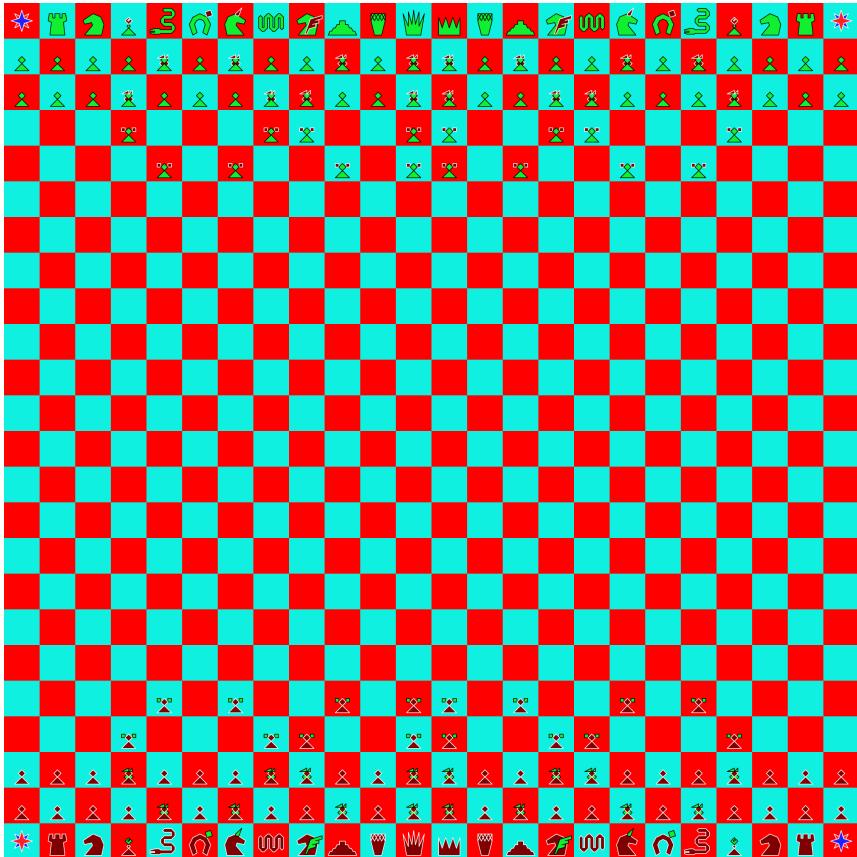


Figure 336: Conquest of Tlalocan board

# Discovery

*I don't believe in God but I'm very interested in her.*  
... Arthur C. Clarke

Discovery is chess variant which is played on 24 x 24 board, with light (pastel!) yellow and gray fields and darker gray and dark teal pieces. Star colors are bright orange and dark violet. A new piece is introduced, Monolith.

# Monolith

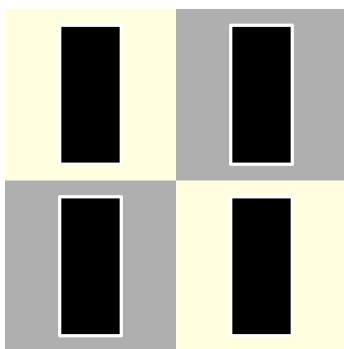


Figure 337: Monolith

Monolith does not belong to any player, but can be moved by both of them. Monolith cannot be captured, converted, activated, or displaced. Pawns cannot be promoted to Monolith.

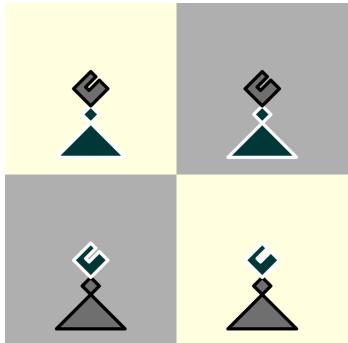
Monolith is a teleportation device, much like moveable Star. Piece can initiate teleportation either by touching a Monolith or a field at which it stands.

Piece, if not Wave, then reappears on a chosen empty portal-field around any Star or the other Monolith. Wave teleported from a Monolith can emerge only from the other Monolith. Kings, Monoliths cannot be teleported.

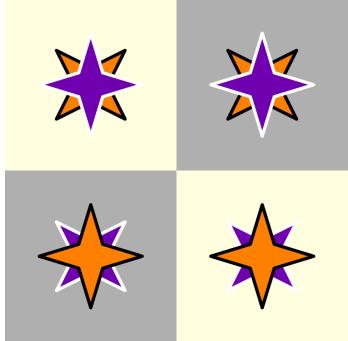
Piece teleported from a Star, if not Wave, can reappear on a chosen empty portal-field around the 2 Stars in opposite color, or around any Monolith. Wave teleported from a Star can only emerge from the other Star in the same color.

Monolith cannot interact with (capture, activate, ...) any piece on its own; all of its step-fields must be empty. Each step of a Monolith is longer Knight-like jump than in a previous step. Monolith can make one step more than the number of Pawns owned by a player moving that Monolith.

Alternative move for Monolith is syzygy, which optionally can demote one own figure (or trooper, either Scout or Grenadier) to a Pawn.



Piece colors in this variant are presented on the left.



Star colors in this variant are presented on the left.

Figure 338: Bishop

Figure 339: Star

## Movement

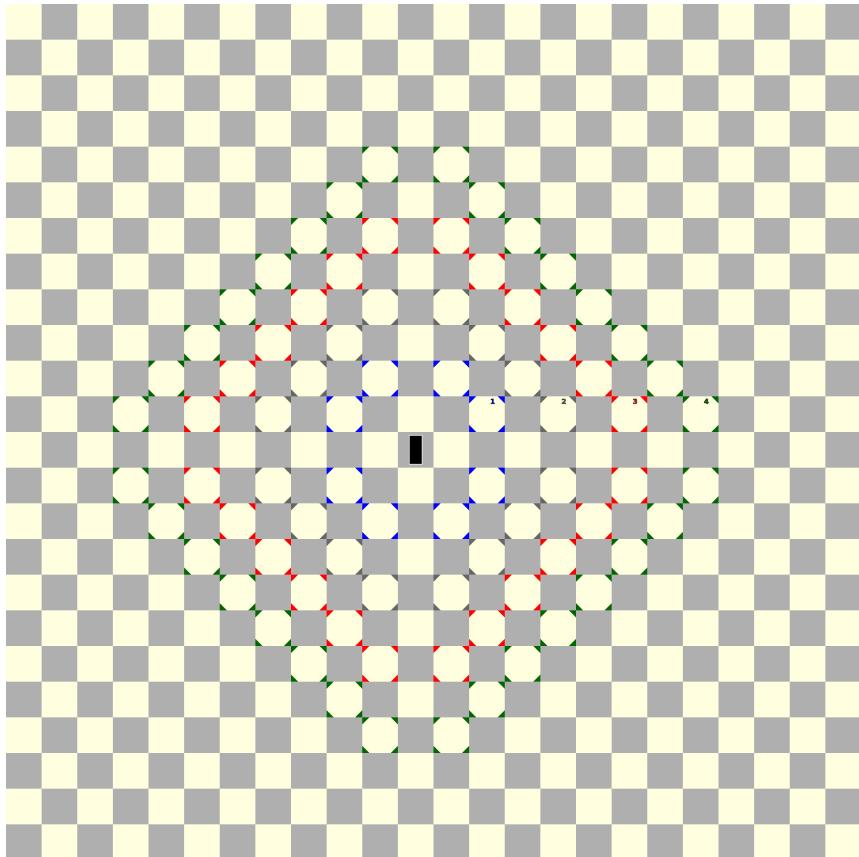


Figure 340: Diamond-shaped patterns

Monolith has its first step the same as Knight's, each consecutive step is slightly longer than previous. Here, step-fields of starting Monolith's steps are marked; blue for first step, grey for second, red for third, and green for fourth. All step-fields are always in a color opposite to the color of Monolith's current field. Taken together, step-fields of a single step form a diamond-shaped pattern. Pattern growth is not limited, Monolith can take steps beyond the four shown here.

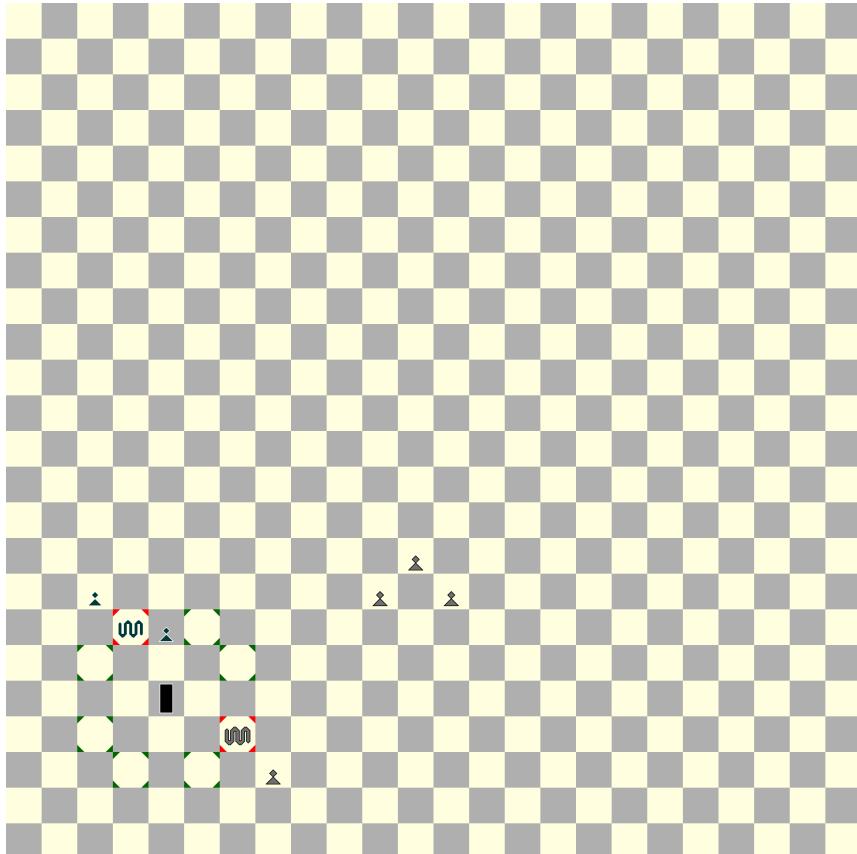


Figure 341: Monolith's first step

Monolith does not belong to any player, and can be moved by either. Step-fields of Monolith's first step are identical to Knight's. Monolith cannot interact with pieces at all; so, a step-field must be empty for a Monolith to step onto it. Monolith is not restrained by any piece outside of its step-fields.

Here, Monolith on its first step is blocked by two Waves, so cannot access already occupied step-fields. This is so, regardless if light or dark player is moving a Monolith.

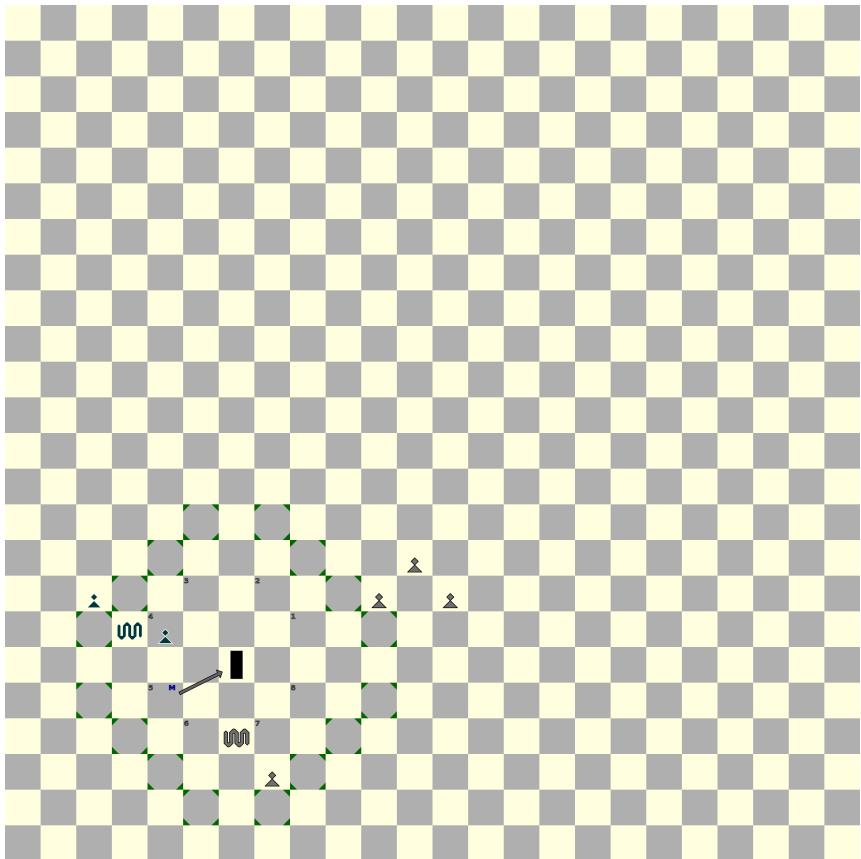


Figure 342: Monolith's second step

In this, and next two examples grey arrows show path covered by Monolith in previous steps, from its starting field M. For Monolith's second step, step-fields are identical to [Unicorn's long jump](#); step-fields of first step are enumerated.

Step-fields are always in color opposite to current Monolith's field; each new step is slightly larger, and covers fields neighboring to previous step; so, every new diamond-shaped pattern has its sides longer by two fields.

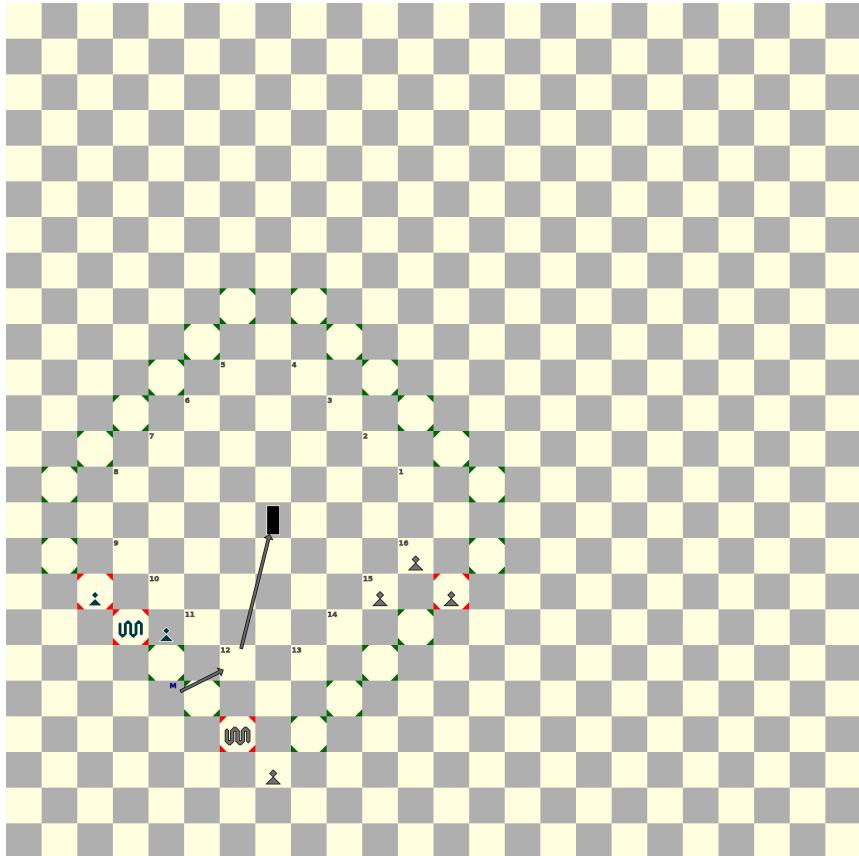


Figure 343: Monolith's third step

Here, step-fields of a Monolith's third step are marked; step-fields of a second step are enumerated. New diamond-shaped pattern contains fields neighbouring previous pattern, and is larger by two fields on all four sides.

Again, any empty step-field can be chosen freely, regardless of any previous choice. Monolith is not obstructed by any piece that is not sitting in its step-fields. Here, four step-fields are blocked by both light and dark pieces, equally so for either light or dark player moving a Monolith.

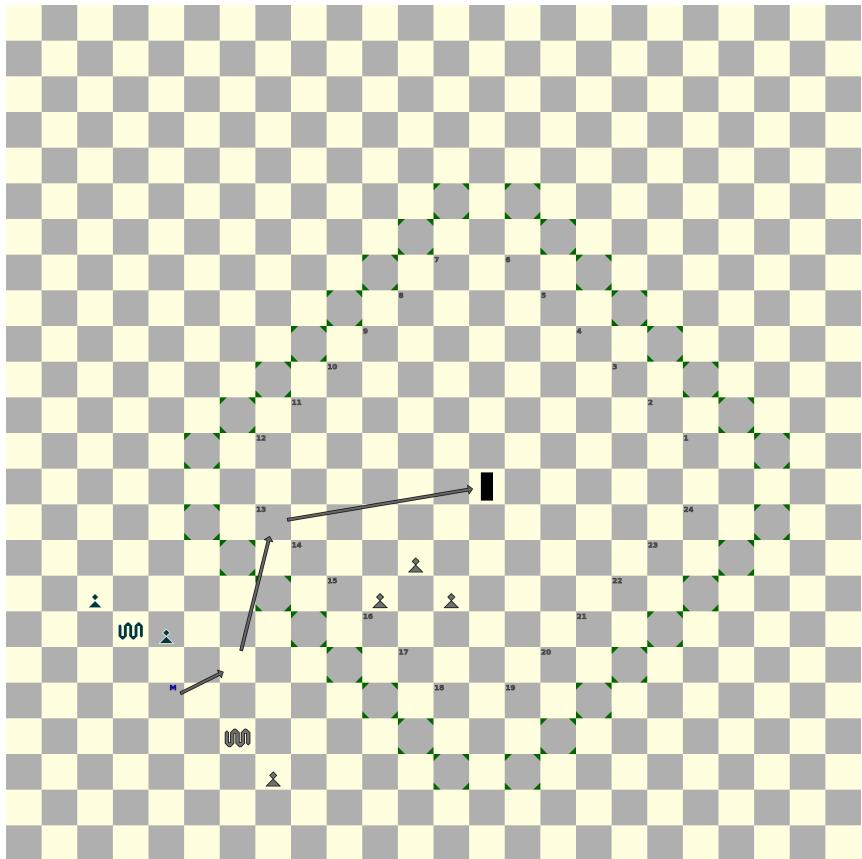


Figure 344: Monolith's fourth step

Here, step-fields of a Monolith's fourth step are marked; step-fields of a third step are enumerated. Again, new pattern is larger than previous by two fields on each side. Each consecutive step has larger pattern, pattern growth is not limited.

Number of steps Monolith can make is one more than count of Pawns owned by a player moving that Monolith. Here, Monolith moved by light player could take fifth step; should it be moved by dark player only three steps would be allowed.

## Off-board Monolith

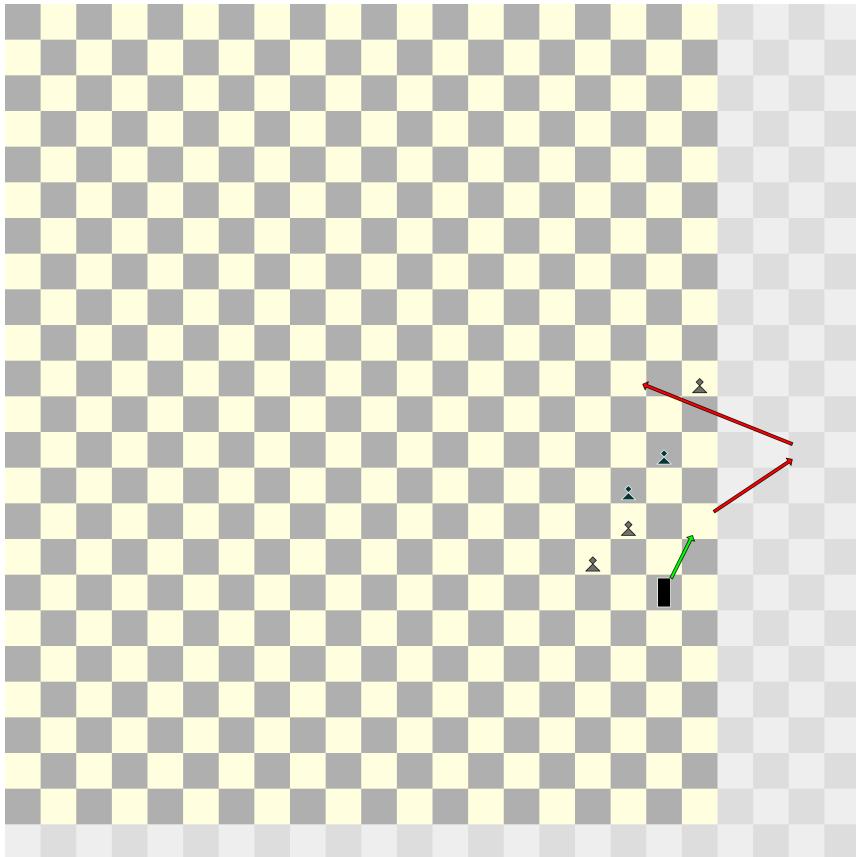


Figure 345: Monolith off-board

Here, light grey fields are virtual fields extending existing chessboard. Monolith, similarly to [Centaur](#), cannot leave chessboard, and all subsequent steps are also illegal.

## Monolith is noble

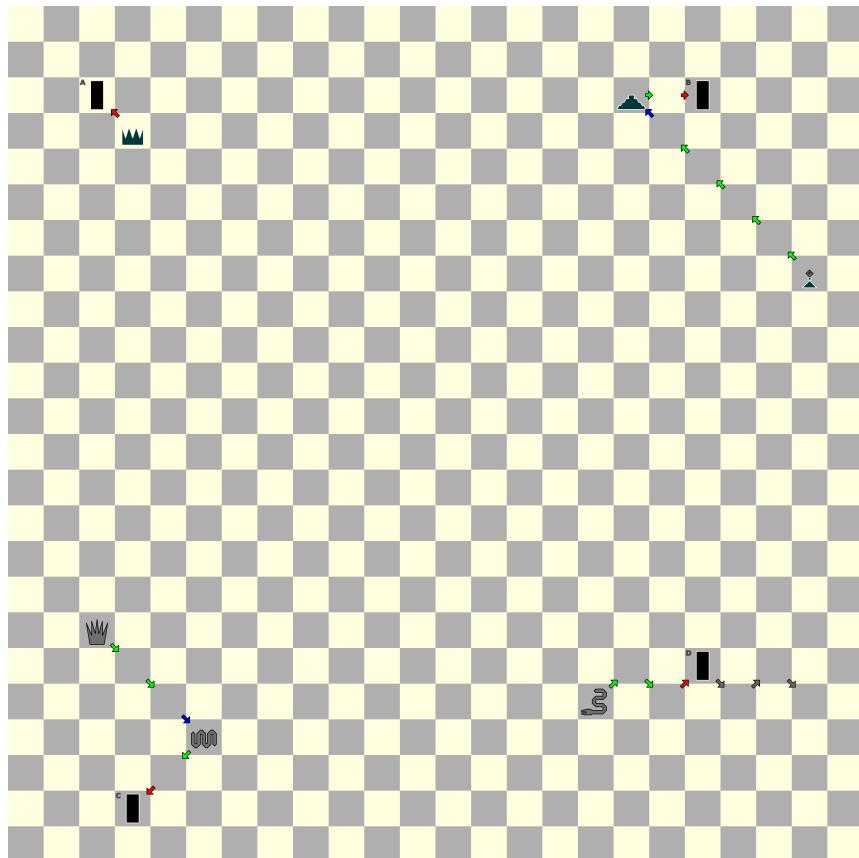


Figure 346: Monolith is noble

Image above have four examples in parallel; each in its own corner.

Monolith cannot be captured, converted, activated, or displaced; in examples A, B, C, and D, respectively.

Pieces can only teleport from a Monolith; except for Kings, Stars, and Monoliths which cannot teleport.

## Trance-journey interaction

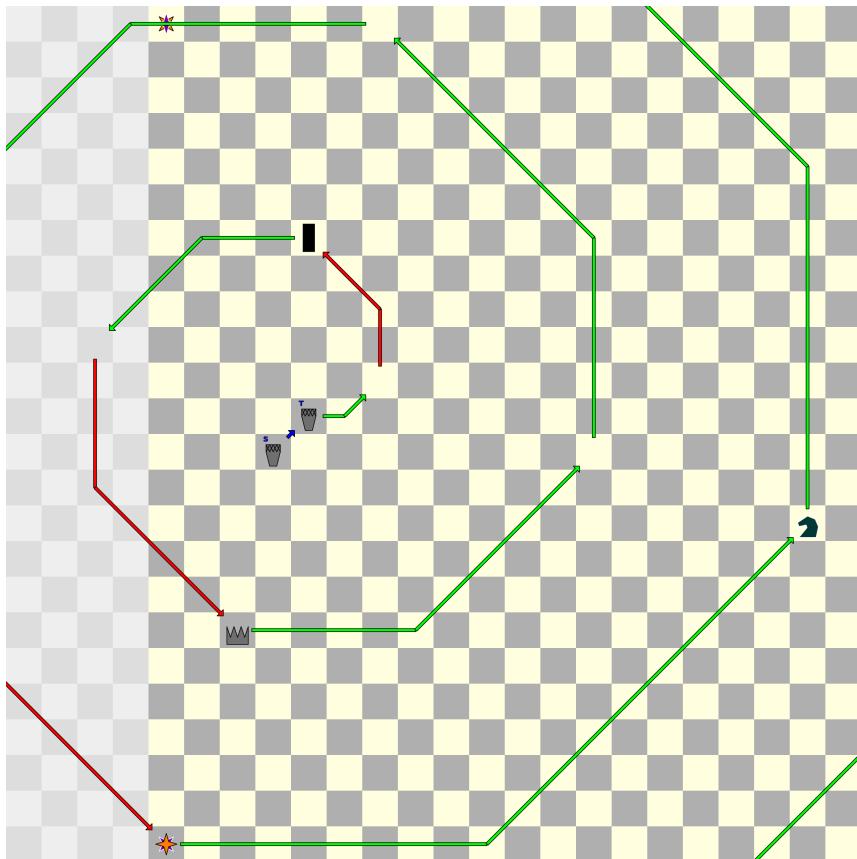


Figure 347: Trance-journey interaction

Like with Stars (and Kings) in [the previous variant](#), entranced Shamans cannot interact with Monolith, but can continue to move past it. This is so regardless of colors of both entrancing (S) and entranced (T) Shamans. Here, entranced light Shaman can displace dark Knight, which it can reach after passing all non-interacting pieces.

## Monolith is opaque

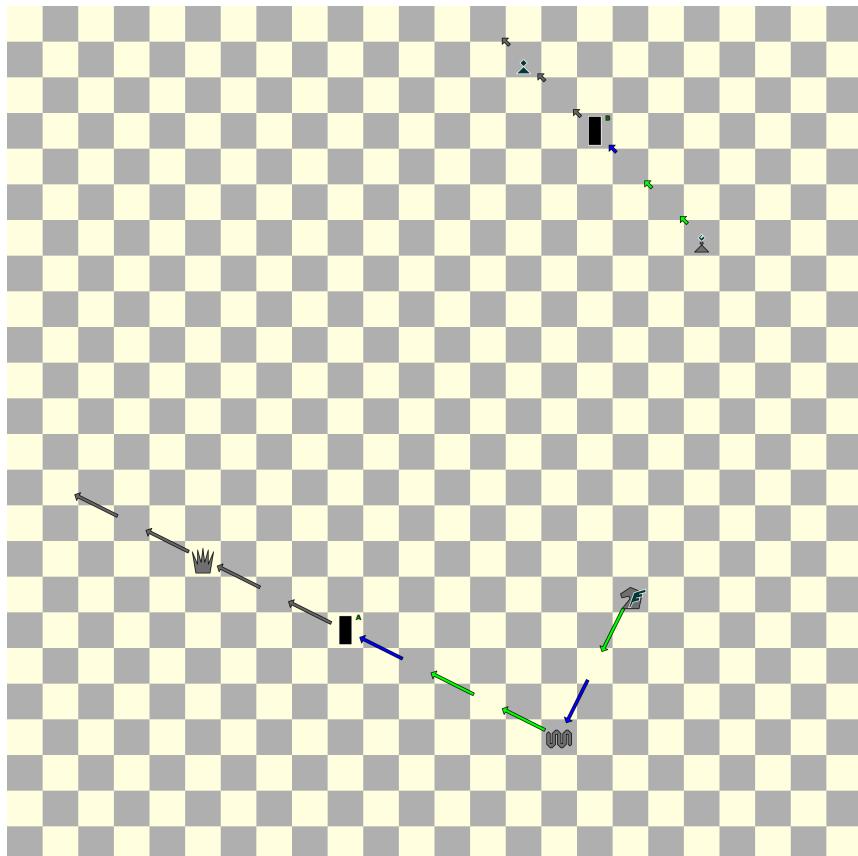


Figure 348: Monolith is opaque

Image above have two examples in parallel; at the top, and to the bottom.

Monolith is opaque, and blocks all pieces traveling over step- and capture-fields. No piece can move past (pass over) Monolith; neither material pieces, nor Waves. Here, light Bishop cannot capture dark Pawn, because Monolith B is in the way. Similarly, light Wave cannot activate Queen, since Monolith A is on a step-field between the two.

## Rerouting Scout

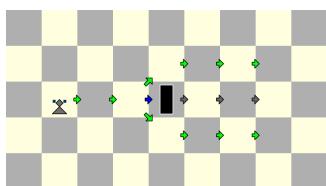


Figure 349: Rerouting Scout

Just like any other piece, Scout is blocked by Monolith on its step-fields, and cannot access fields behind Monolith.

The same as with **other pieces blocking it**, Scout can be rerouted around Monolith using appropriate **forking step**, after which it continues in initially chosen direction.

Steps (arrows) are referred to by relative position of its end field (point). Here, after taking a few right steps, Scout is blocked by Monolith, and can be rerouted using either right-up or right-down forking step, after which Scout can continue making initially chosen (right) steps.

## Teleporting

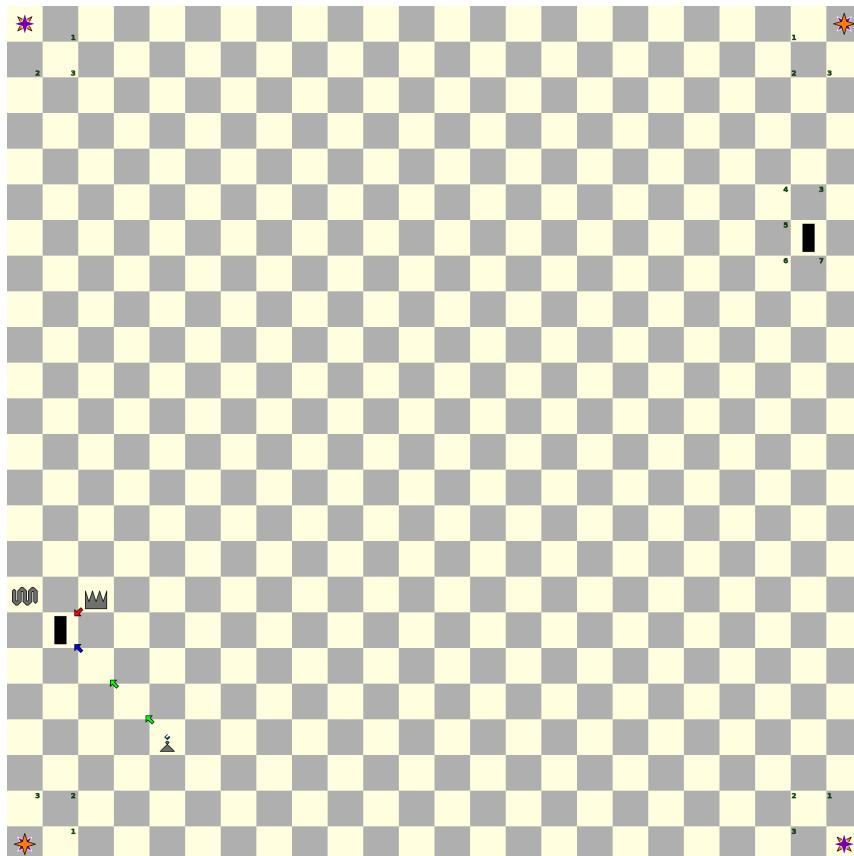


Figure 350: Teleporting piece via Monolith

Teleportation using Monoliths is similar to one using Stars in [previous variant, Nineteen](#). Pieces, if not Waves, teleporting from Monolith can reappear near any Star or the other Monolith. All momentum carried is lost. Again, Kings and Monoliths cannot be teleported. Here, all empty portal-fields where Bishop can be teleported to are enumerated.

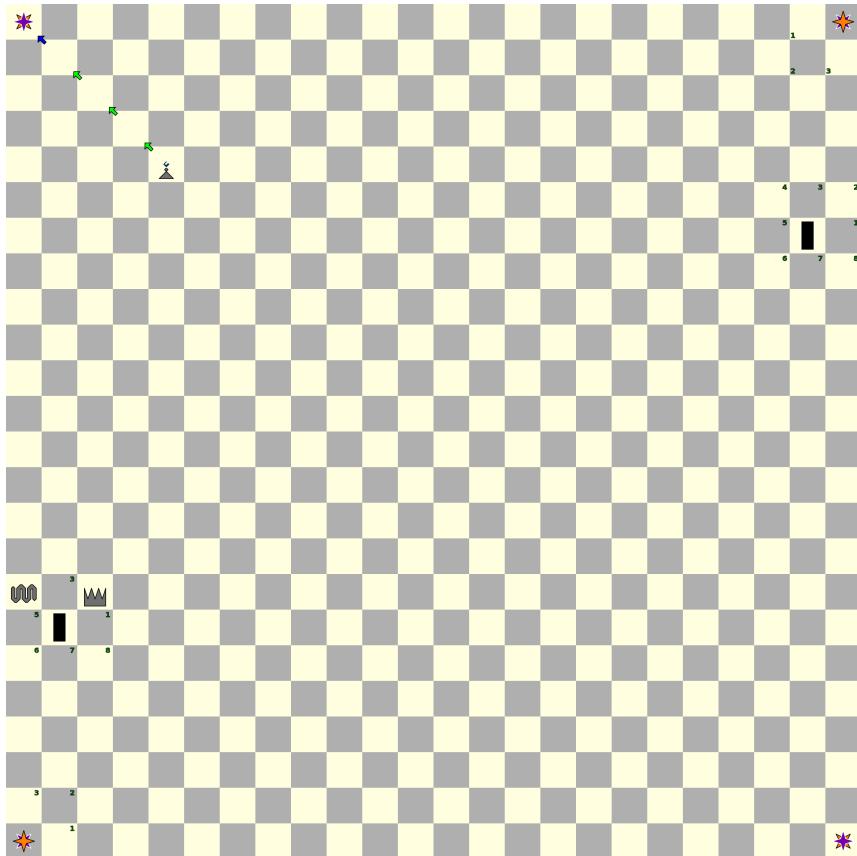


Figure 351: Teleporting piece via Star

All pieces, except Waves, teleporting from a Star can reappear on an empty portal-field near Stars in opposite color, or near any Monolith. Here, all empty portal-fields where Bishop can be teleported to are enumerated.

## Teleporting Wave

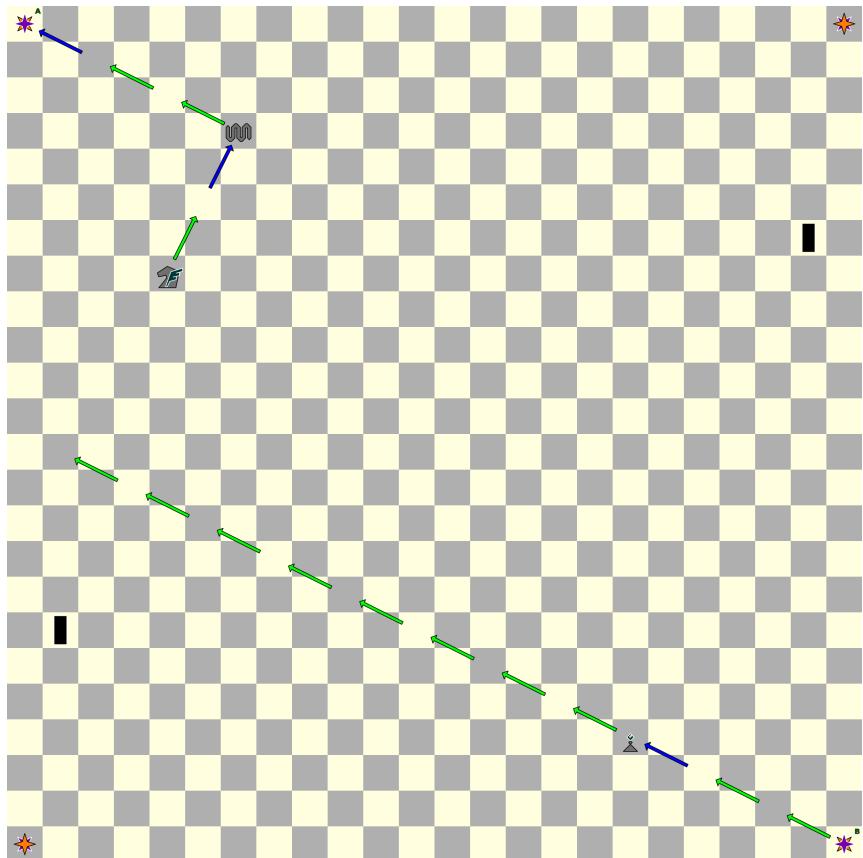


Figure 352: Teleporting Wave via Star

Teleporting Wave using Star is the same as in [previous variant, Nineteen](#). Wave teleported from a Star emerges from the other Star in the same color, and continues to move from position of a destination Star in the same direction as before teleportation. Teleported Wave retains momentum carried. Here, light Wave could activate own Bishop after teleporting with 2 momentum.

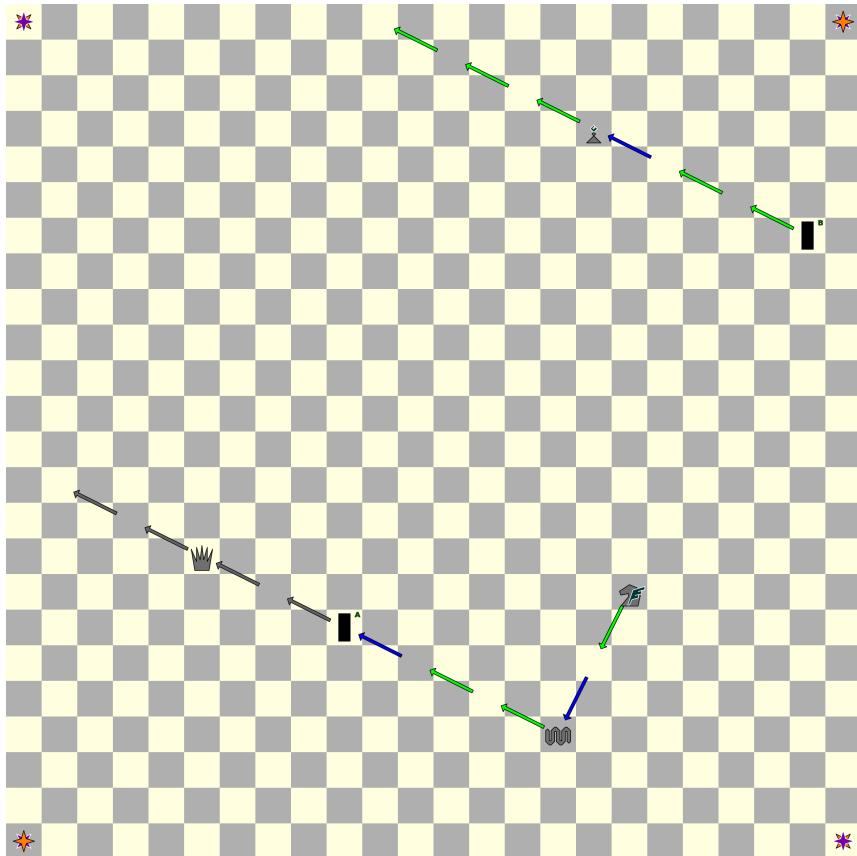


Figure 353: Teleporting Wave via Monolith

Wave teleported from a Monolith emerges from the other Monolith, and continues movement from position of a destination Monolith in the same direction as before teleportation, while retaining momentum carried into teleportation. Here, light Wave could activate own Bishop after teleporting with 2 momentum.

Since **Monolith is opaque**, Wave cannot pass beyond it, as it can do with all the other pieces. So, teleportation is mandatory for Wave when it reaches Monolith.

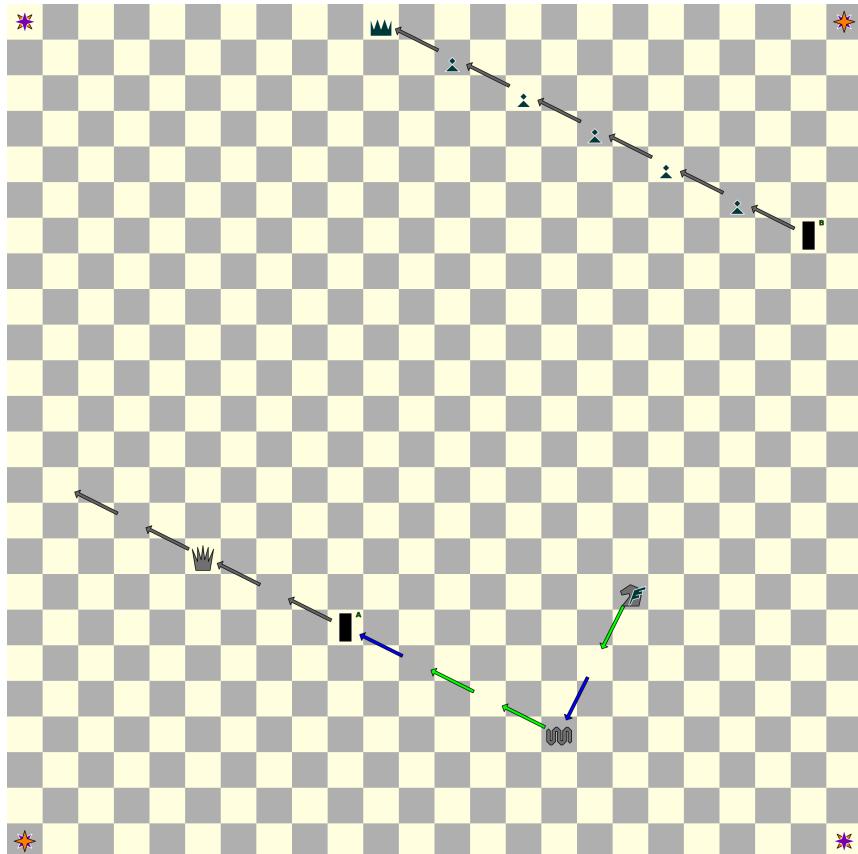


Figure 354: Teleported Wave blocked

In case where all step-fields of a teleported Wave are blocked, it is obliterated, like in [previous variant, Nineteen](#).

The same applies to all other material (i.e. non-Wave) pieces. If all portal-fields where teleported piece could reappear are occupied, piece is removed from chessboard.

Here, Wave cannot neither activate light Queen, nor reach any step-fields beyond Monolith; Wave has to teleport when it reaches Monolith.

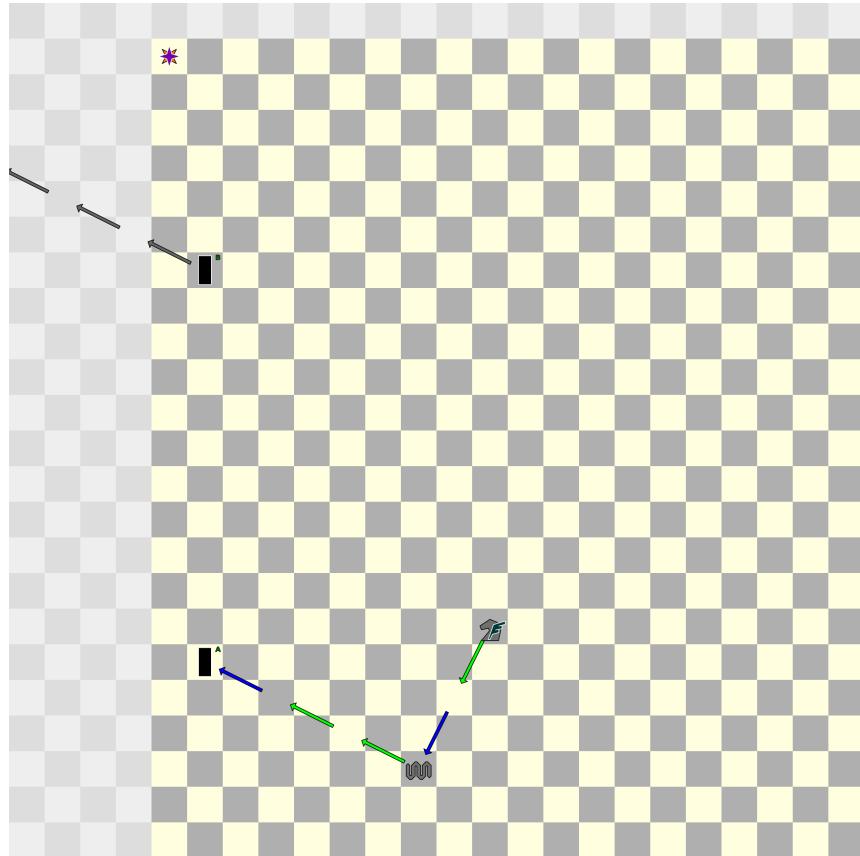


Figure 355: Wave teleported off-board

Teleported Wave with all of its step-fields located off-board is also oblationed.

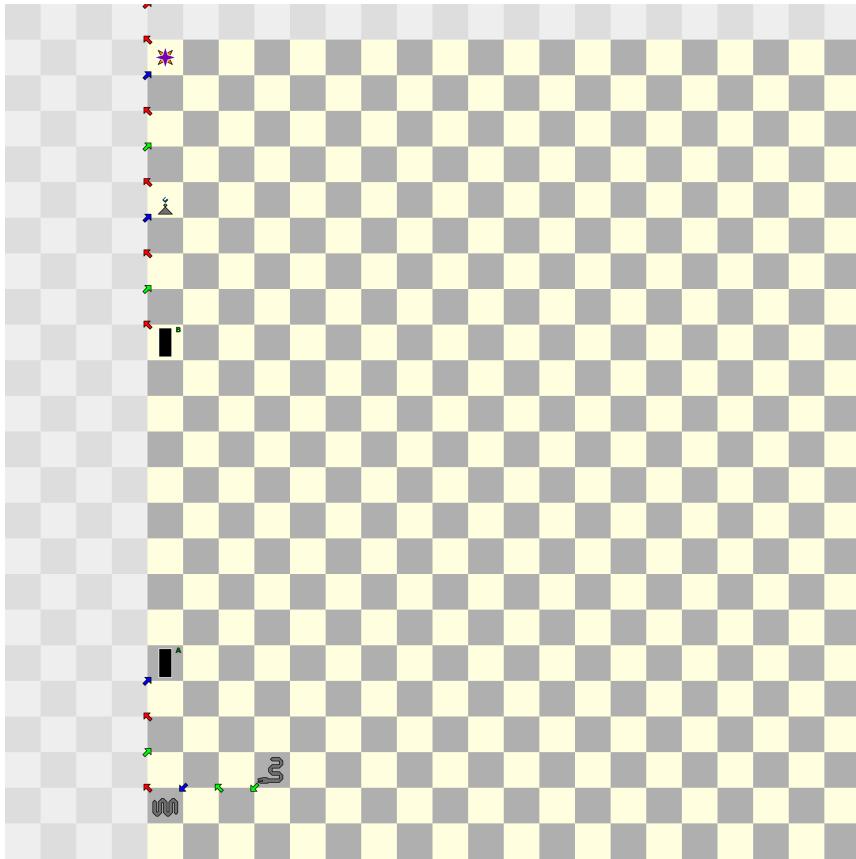


Figure 356: Teleporting Wave on- and off-board

Before and after teleportation, Wave can step outside of a board, as long as its ply ends on a board. Like in [previous variant, Nineteen](#), Wave has to continue alternating steps after teleportation; if teleported off with up-right step, Wave has to emerge from the other Monolith with up-left step. Here, light Wave could also activate own Bishop after teleportation with 3 momentum, or have a teleportation cascade.

## Teleportation cascade

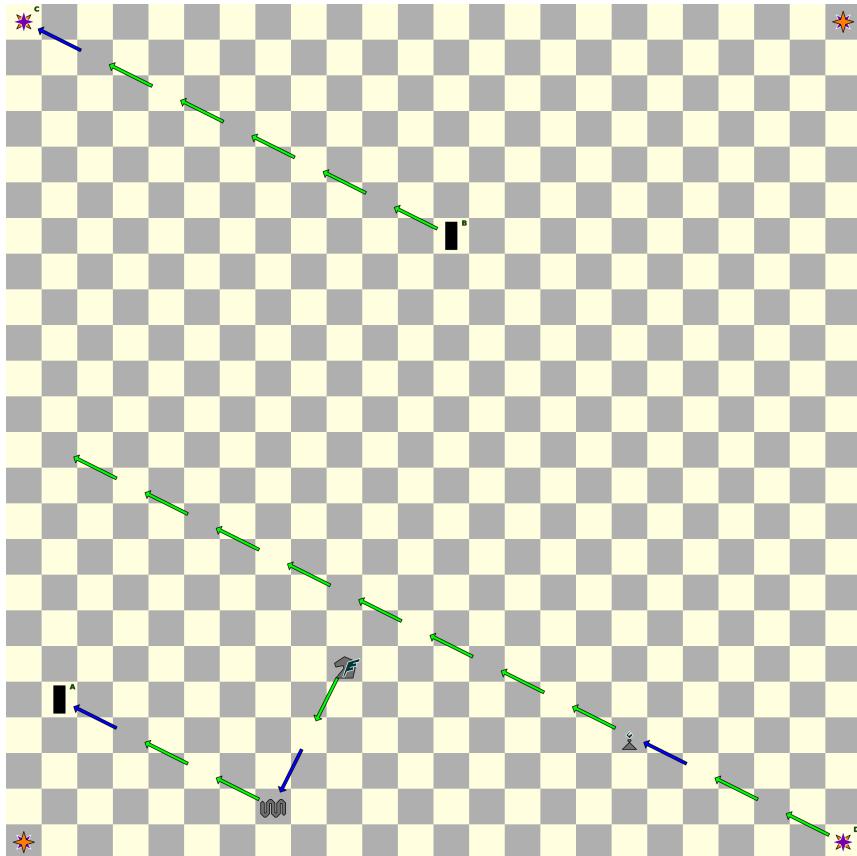


Figure 357: Cascading teleportations

Teleportation cascade refers to Wave being teleported at least twice in the same ply; other pieces can't cascade teleportations. Unlike in a previous variants, thanks to Monolith, teleportation cascade is now useful in granting access to otherwise unreachable places. Here, light Wave can activate own Bishop only after second teleportation ( $A \rightarrow B$ , then  $C \rightarrow D$ ).

## Steps after teleportation

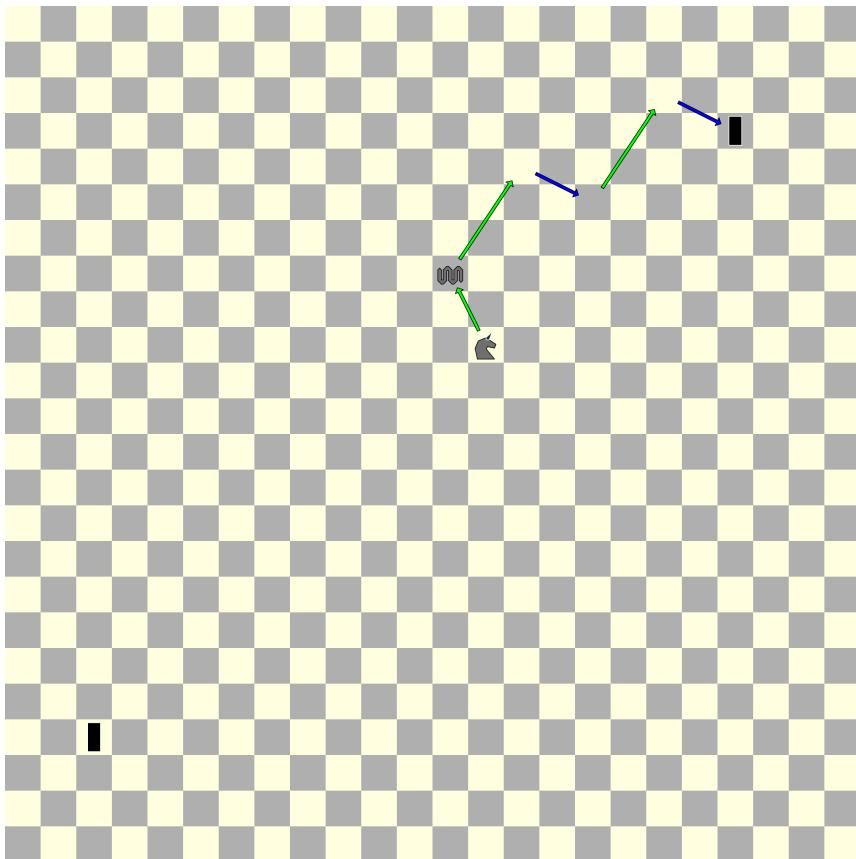


Figure 358: Steps before teleportation

Wave, activated by Unicorn (or Centaur), at the beginning of a ply has to choose two different steps (long and short jump) depending on a color of a step-fields; once chosen they can't be changed for the duration of that ply. Teleported Wave, activated by Unicorn (or Centaur), still has to follow two initially chosen steps, according to a color of a field of emerging Star (or Monolith).

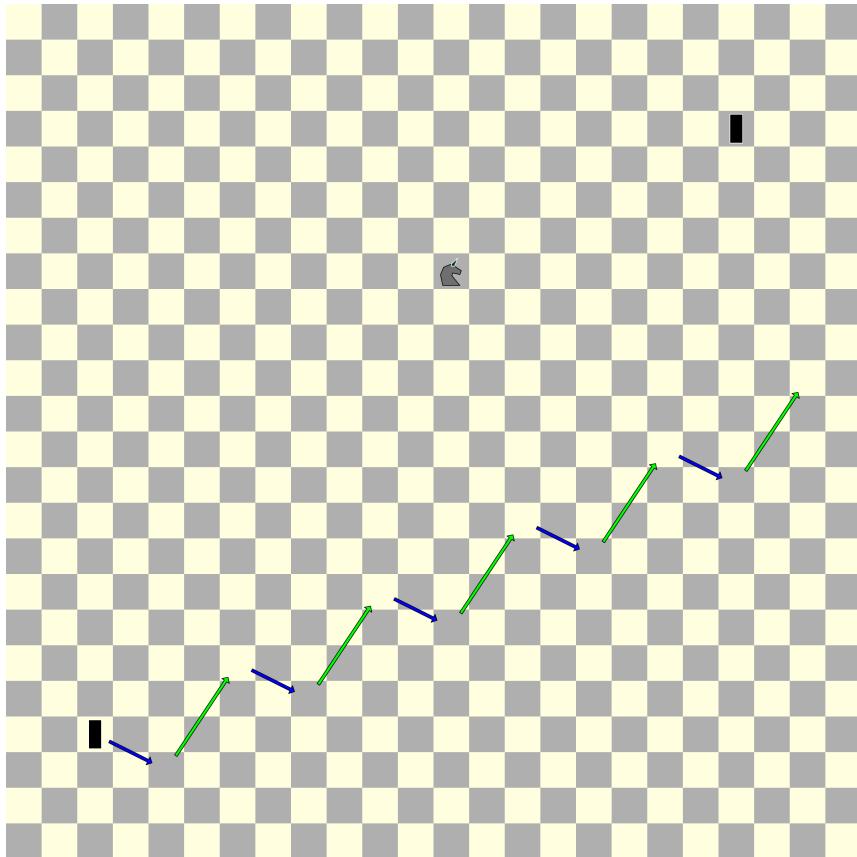


Figure 359: Steps after teleportation

Monoliths can be moved by both players, and they can be positioned on a fields in opposite colors. If so, teleported Wave, activated by Unicorn (or Centaur), still has to follow initially chosen steps; two-step pattern remains the same, only steps are reversed, i.e. first step after emerging is the same as last step before teleporting.

Here, emerging step is the same as teleporting step (blue arrow); two-step pattern otherwise is the same, only order of steps is reversed.

## Syzygy

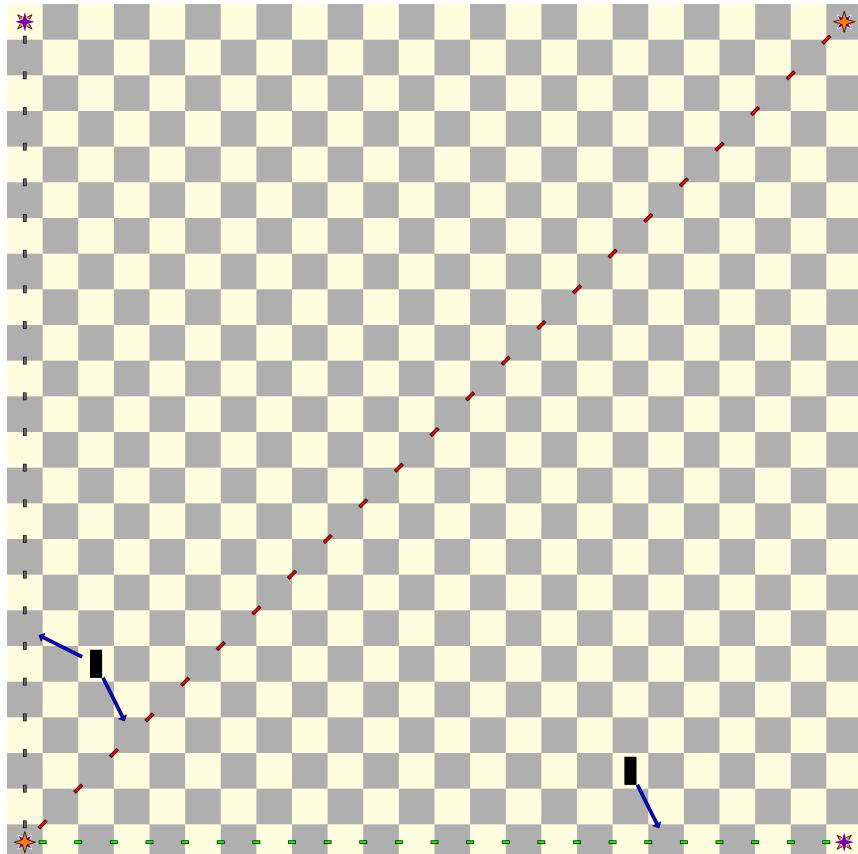


Figure 360: Syzygy with Stars

Syzygy is alignment in one straight line of at least 3 celestial bodies, Stars and Monoliths. It's initiated by Monolith stepping onto horizontal, vertical or diagonal line connecting 2 Stars. Syzygy-fields are all fields where Monolith would be in syzygy. For horizontal and vertical syzygy, syzygy-fields are the same as Rook step-fields; for diagonal syzygy, syzygy-fields are the same as Bishop step-fields.

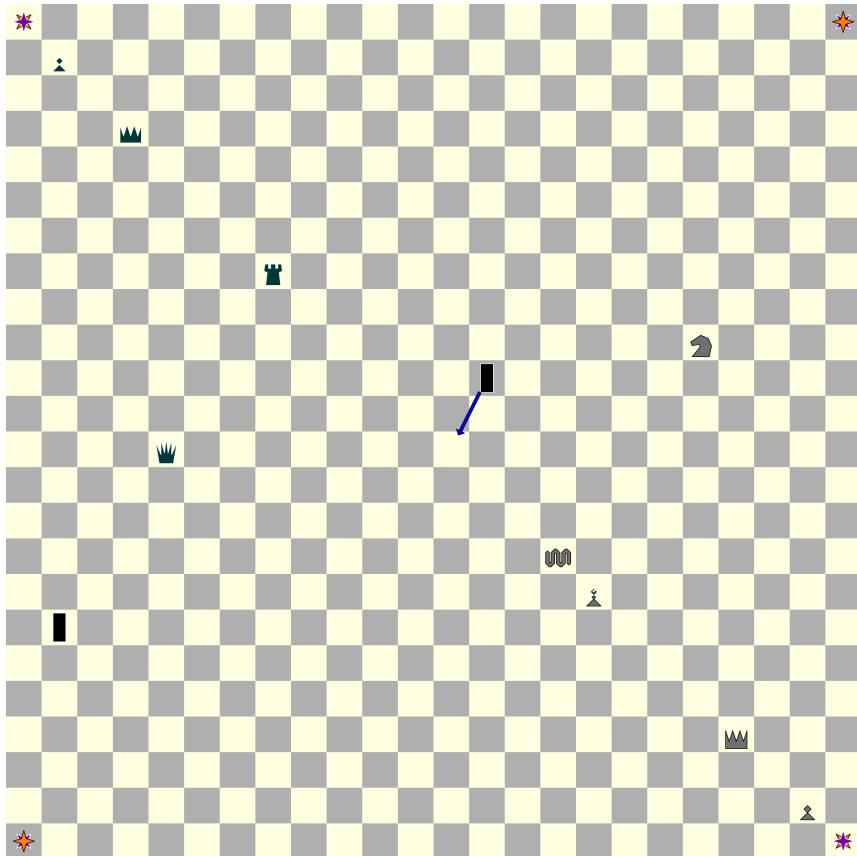


Figure 361: 2-Stars syzygy start

Immediately after Monolith has stepped into syzygy, one own figure can then be (but don't have to be) demoted to Pawn. Demoting to Pawn can be done even if no own Pawn has been captured yet. Opponent pieces, Kings, Stars, Monoliths cannot be demoted. Unlike promotion, demoting to Pawn cannot be saved for later. If player chooses to demote own figure, it must happen in the very same move in which Monolith has stepped into a syzygy.

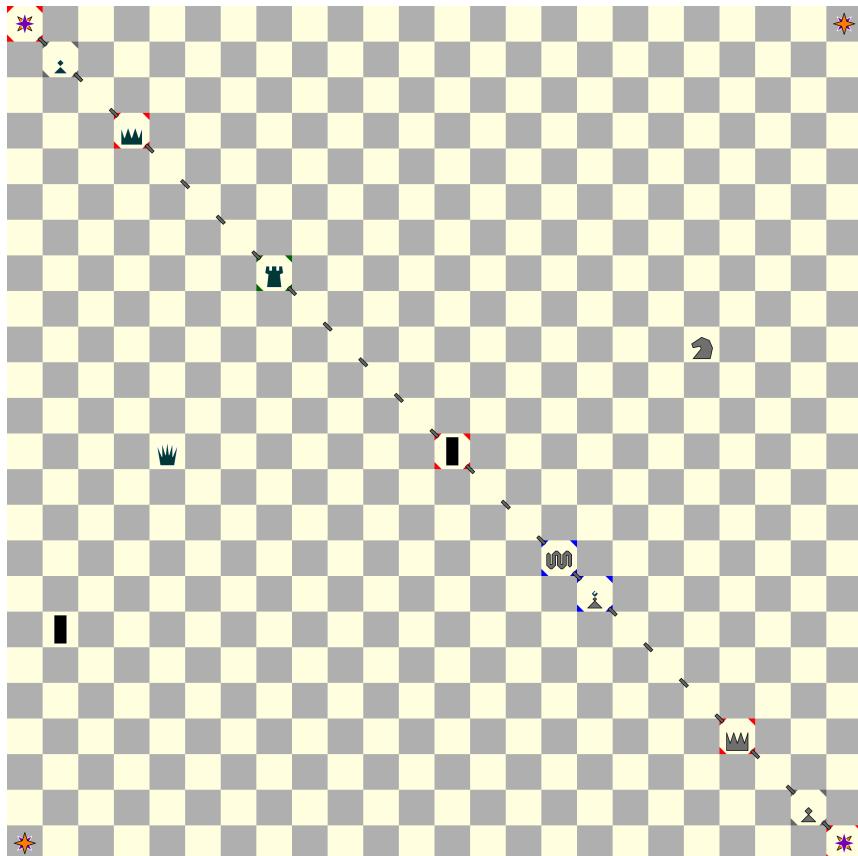


Figure 362: 2-Stars syzygy steps

If Monolith was moved into syzygy by light player, light Wave or Bishop could be demoted (blue); if moved by dark player only dark Rook could be demoted (green). Demoting to Pawn can only be done after Monolith stepped into alignment; once in it, no additional figures can be demoted on subsequent turns. To demote again, the same Monolith has to step outside of alignment in one move and then back in another (or the other Monolith has to step-in).

## Two-Monoliths syzygy

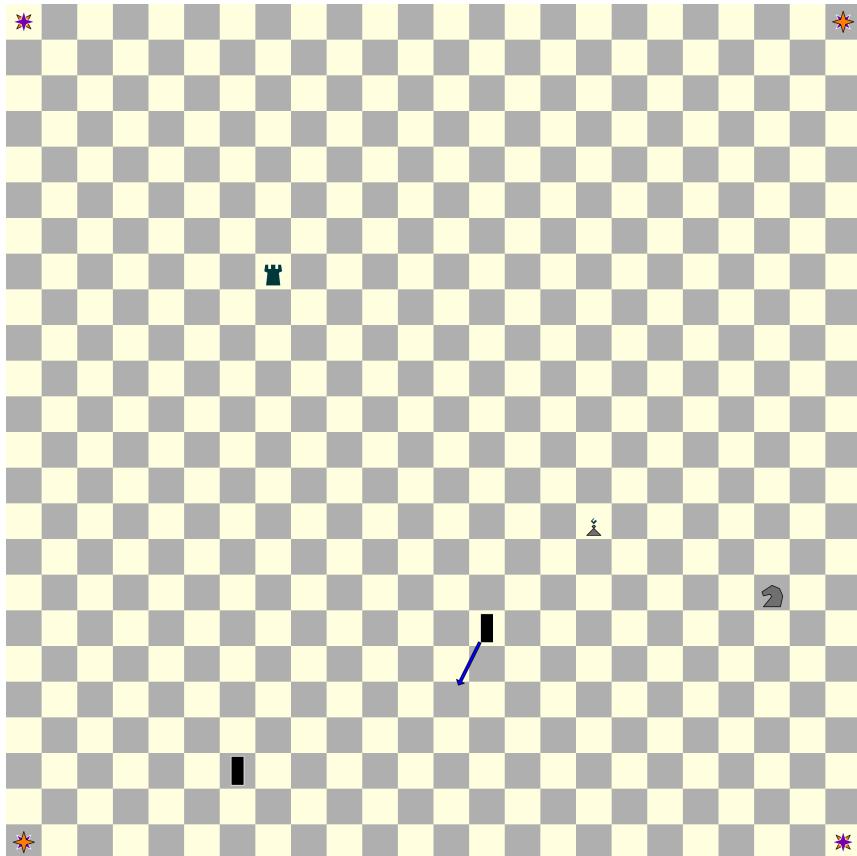


Figure 363: 2-Monoliths syzygy init

For a Star and 2 Monoliths to be in syzygy there has to be a step which, when applied repeatedly (from a Star) connects fields at which those celestial bodies are located. Connecting step doesn't have to correspond to the movement of any piece, it's enough if it connects celestial bodies. Shortest such a step is called syzygy-step, fields which are connected by syzygy-steps are called syzygy-fields.

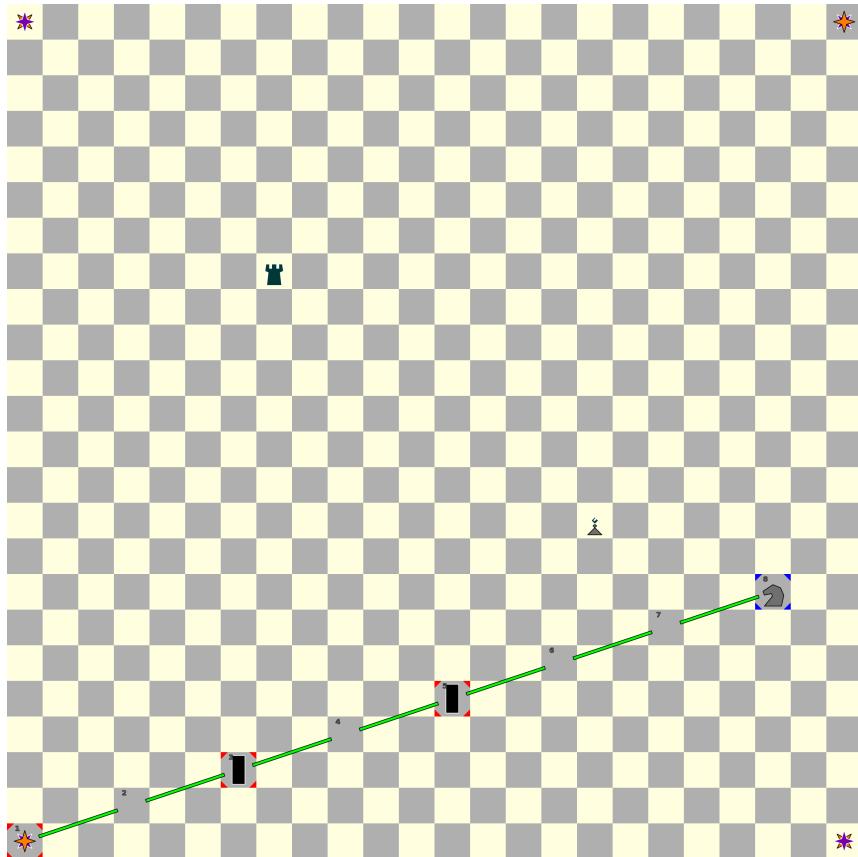


Figure 364: 2-Monoliths syzygy steps

All own figures (except King) on a syzygy-fields are then eligible to be demoted to Pawn. Here, there is a connecting step between fields 1-3 and 3-5. There is an equivalent, shorter step connecting fields 1-2, 2-3, etc.; this is actual syzygy-step, because it is the shortest one possible. Light Knight does lay on a syzygy-field, and so is eligible to demotion, if Monolith was moved by light player.

## Existing syzygy

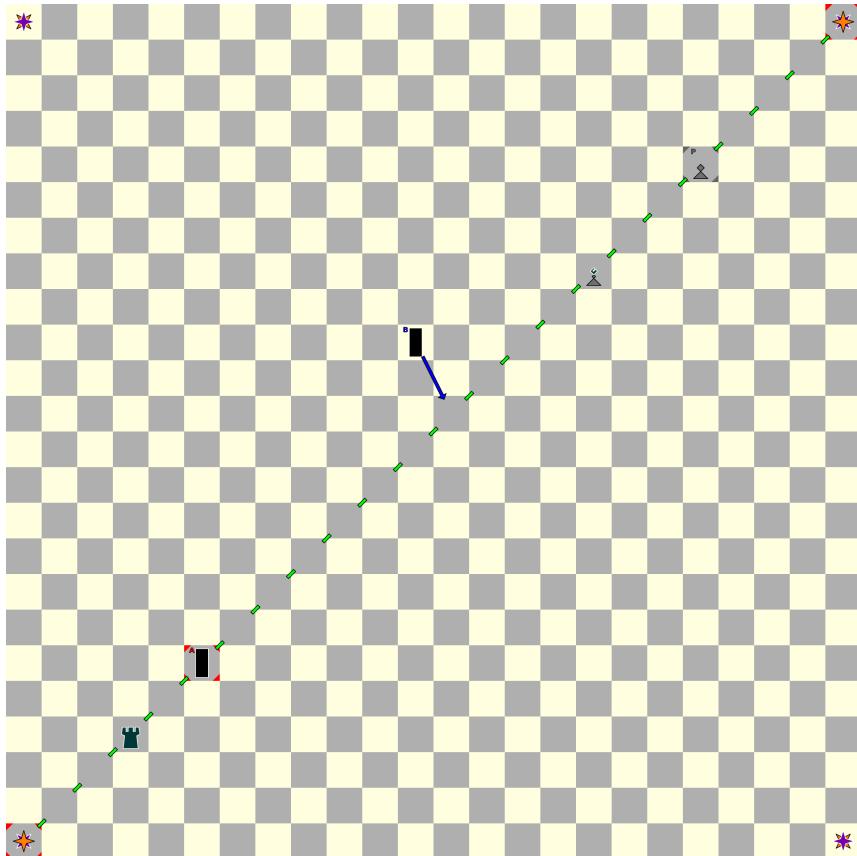


Figure 365: Entering existing syzygy

Monolith can enter already existing syzygy, and demote one piece, even if a piece has already been demoted in that syzygy, in a previous turn.

Here, Monolith A initiated syzygy in previous move, and one light piece was demoted to marked Pawn P. Monolith B is about to enter already existing, and used syzygy; depending on which player is making a move, either light Bishop or dark Rook can be demoted to a Pawn.

## Reentering syzygy

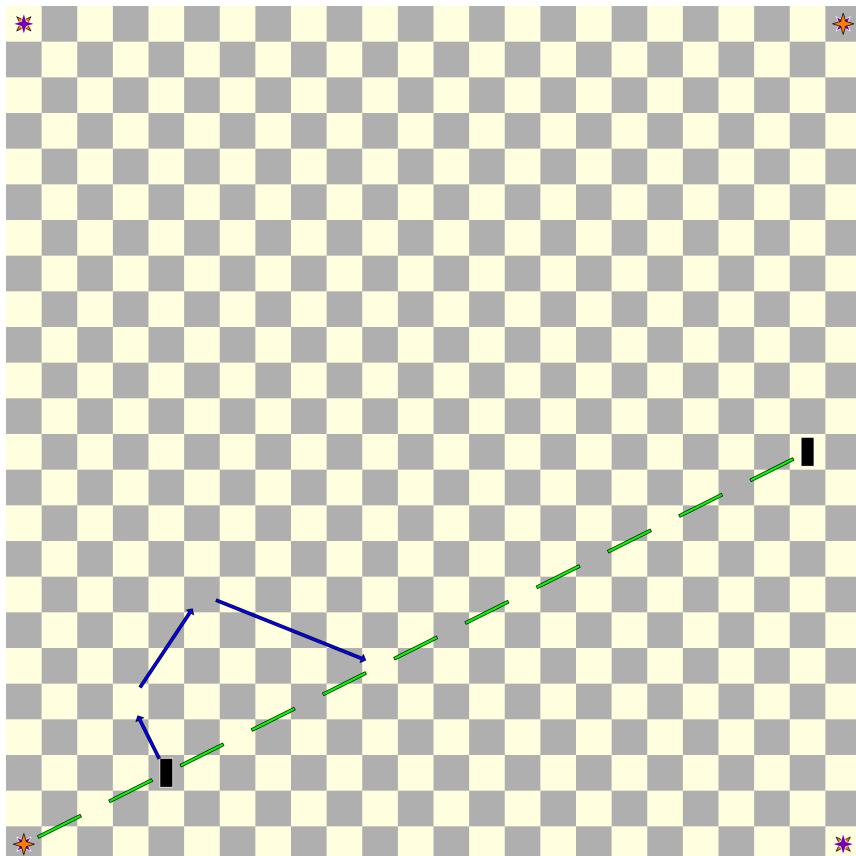


Figure 366: Reentering syzygy in the same move

To be granted option to demote own figure, Monolith must move from an ordinary, non-syzygy field into syzygy. It is not enough if Monolith in a syzygy stepped out of alignment, and then back into it, in the very same move. Monolith which is already in a syzygy can move into the same alignment, but cannot demote any figure.

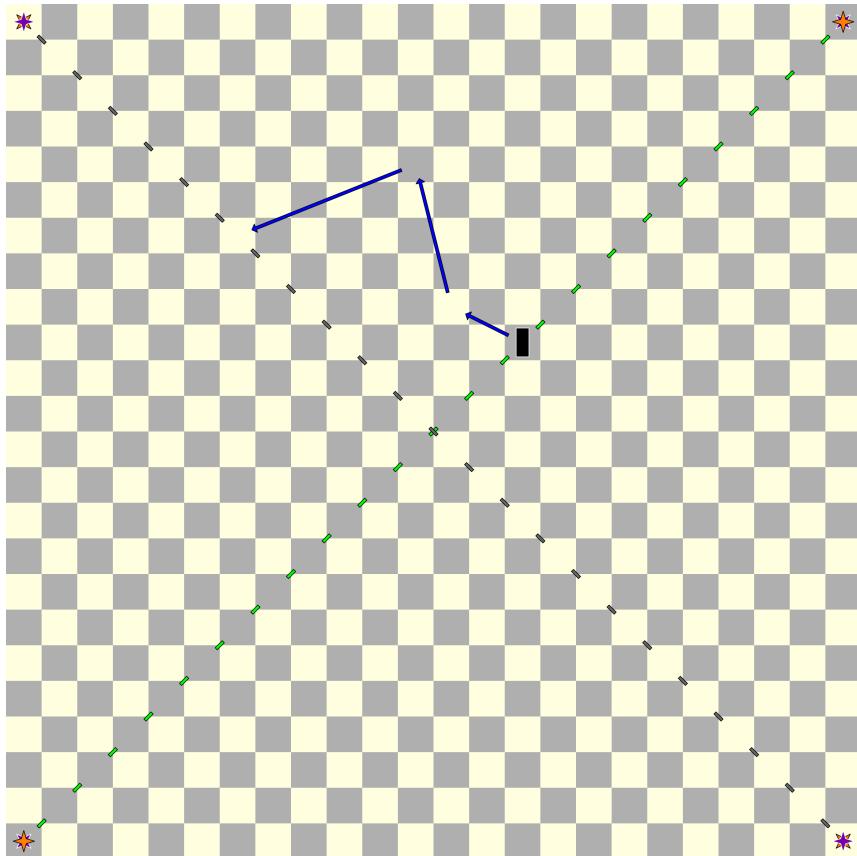


Figure 367: Reentering independent syzygy

The same applies even if Monolith moves into an alignment from completely independent syzygy, i.e. even if the two does not share neither any syzygy-fields nor celestial pieces.

In short, to get option to demote again, Monolith has to move out of alignment onto an ordinary, non-syzygy field in a first move, and then on a next move Monolith can **reenter the same syzygy**, or enter the other syzygy.

## In opponent's figure row

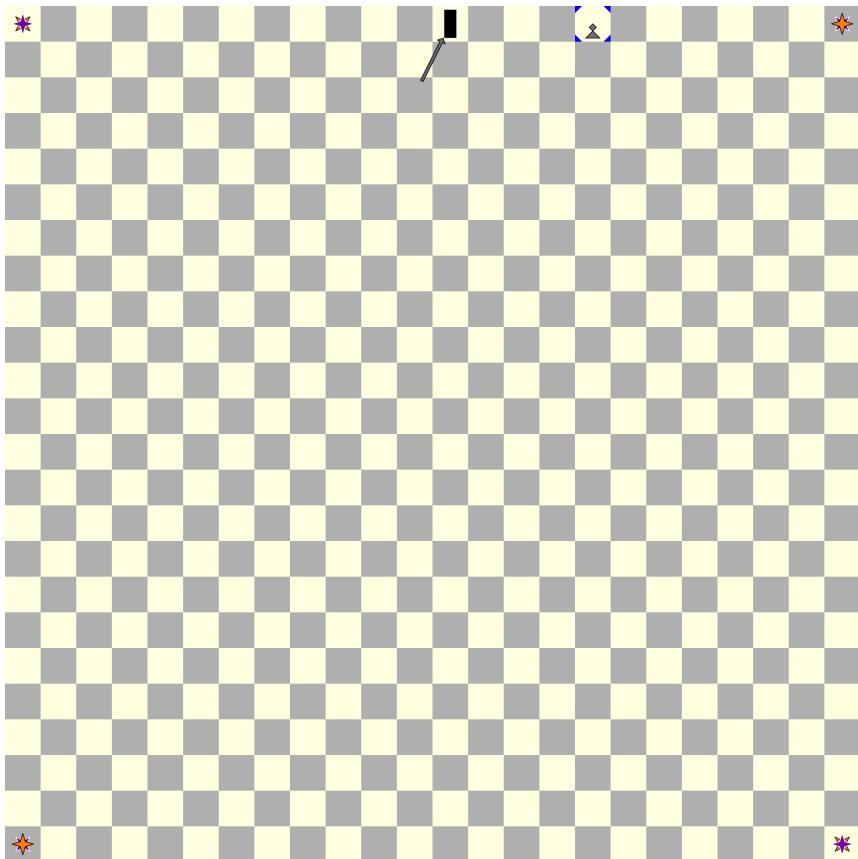


Figure 368: Syzygy ends with Pawn tagged for promotion

Pawns which were demoted after syzygy in **opponent's figure row** are then either **tagged for promotion**, or promoted straight away, in the same move, similar to **previous variant, Nineteen**.

## Rush, en passant

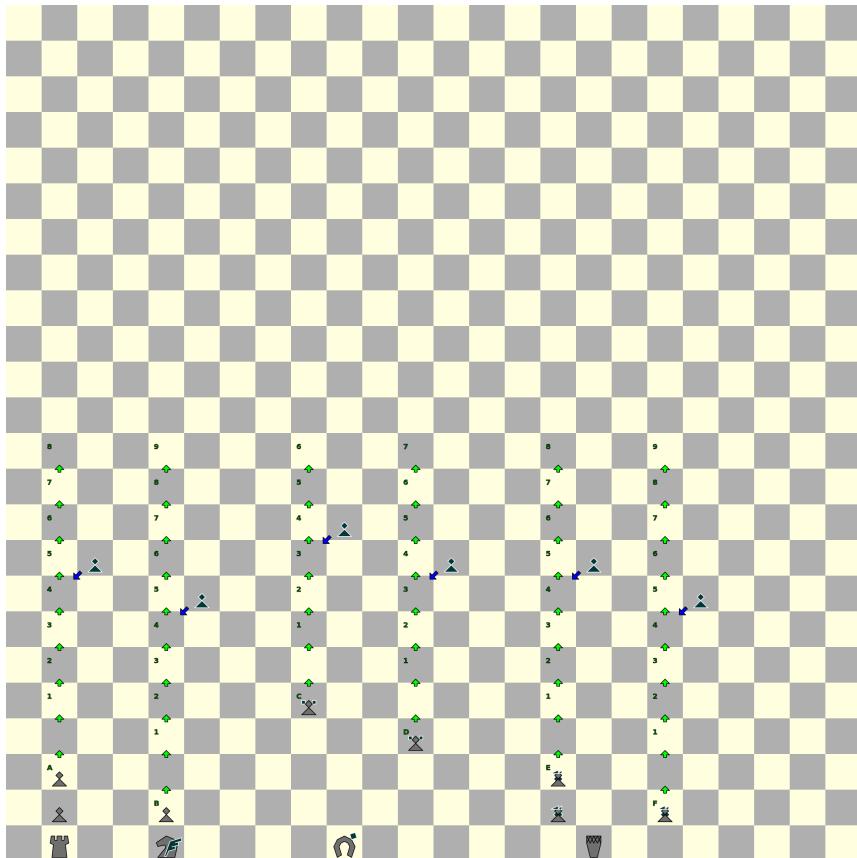


Figure 369: En passant

Image above have 6 examples presented in parallel: one for each Pawns A, B, Scouts C, D, and Grenadiers E, F.

Rush and en passant are identical to those in [Hemera's Dawn variant](#). Own privates (i.e. Pawns, Scouts, and Grenadiers) can be rushed for up to 10 fields in this variant.

# Promotion

Promotion is non enforced, delayed variety, i.e. it's the same as in [previous chess variant](#), Age of Aquarius.

Promotion in this variant is polygamous, more than one Queen in the same color can be present on chessboard at any given time.

Again, Pawn cannot be promoted to Monolith.

# Castling

Castling is [the same as in Nineteen variant](#), only difference is that King can move between 2 and 9 fields across. All other constraints from Nineteen variant still applies.



Figure 370: Castling

In example above, all valid King's castling moves are numbered.



Figure 371: Castling long left

In this example King was castling long to the left. Initial King's position is marked with "K". After castling is finished, left Rook ends up at field immediately right to the King.

# Initial setup

Compared to initial setup of Conquest of Tlalocan, just 2 Monoliths are placed in to the open, symmetrically, on both sides of chessboard. This can be seen in the image below:

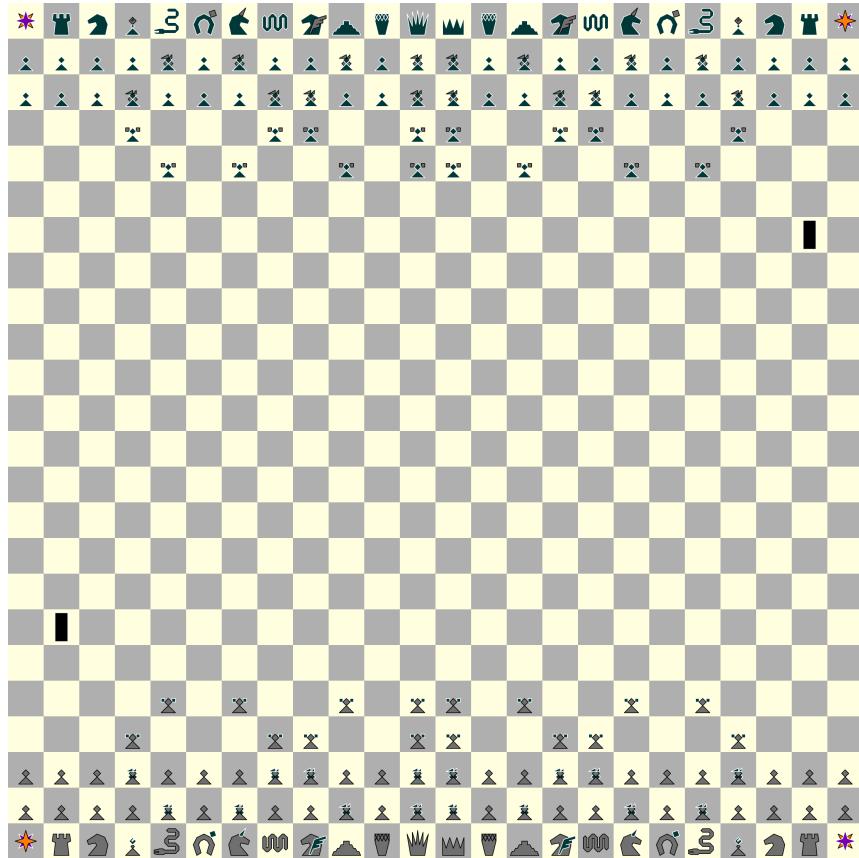


Figure 372: Discovery board



# One

*God is not external to anyone, but is present with all things, though they are ignorant that he is so.*

... Plotinus

One is chess variant which is played on 26 x 26 board, with white and darker violet fields, and with light purple and fuchsia pieces. Star colors are reversed colors of ordinary pieces, i.e. fuchsia and light purple. A new piece is introduced, Starchild.

## Starchild

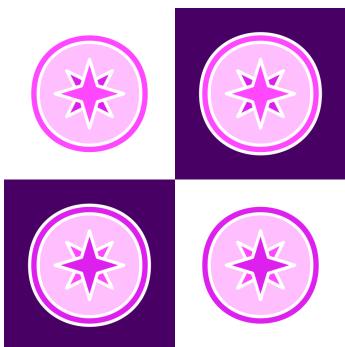


Figure 373: Starchild

activate any own piece (except King), opponent's Starchild and any Star on its miracle-fields. Activated Starchild does not use momentum while moving.

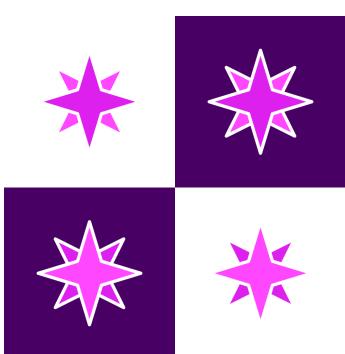


Figure 374: Star

Starchild can take any own piece, except Kings, Waves, Stars, Starchilds and Monoliths, for a sense-journey.

Star colors in this variant are the opposite of colors of other pieces.

## Movement

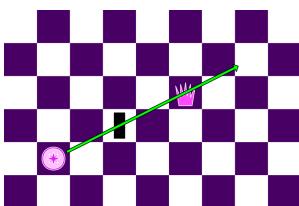


Figure 375: Starchild movement

In a single ply, Starchild can make only one step. Starchild can move to any empty field in opposite color to its starting position, regardless how far away destination field is located. Starchild's movement is not obstructed by any piece standing between starting and destination field.

## Activating on step-fields

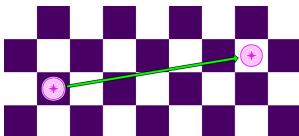


Figure 376: Activating Starchild

Starchild can activate own Starchilds on its step-fields, with 1 momentum. Activated Starchild moves the same as activating Starchild. Activated Starchild does not spend momentum for its movement.

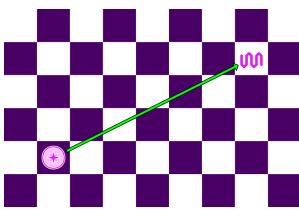
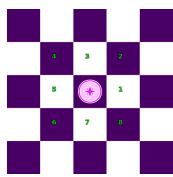


Figure 377: Activating Wave

Starchild can activate own Waves on its step-fields, with 1 momentum. Activated Wave moves the same as Starchild, i.e. to any empty field in opposite color to its starting field, without being limited by distance to its destination.

Activated Wave can also activate opponent's Waves in addition to own Starchilds and Waves.

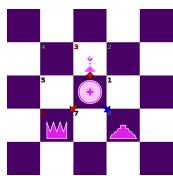
## Miracle-fields



Miracle-fields are all fields immediately surrounding Starchild horizontally, vertically and diagonally. They are the same as step-fields of a King.

Figure 378: Miracle-fields

## Activating on miracle-fields



Fields at which Starchild can activate a piece are miracle-fields; pieces that can be activated are all own pieces (except King), and opponent's Starchild.

Figure 379: Activating piece

Note, Starchild cannot move to empty miracle-fields, if they're not in opposite color to starting field; it can only activate a piece on its miracle-field.

Here, Starchild's activation fields are enumerated. Opponent's Bishop and own King can't be activated, so only own Pyramid can be, with 1 momentum.

## Starchild cannot teleport

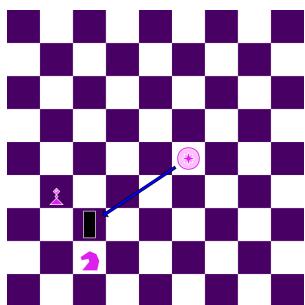


Figure 380: Moving into a Monolith

Starchild cannot teleport. Starchild trying to capture either step- or miracle-field at which Monolith (or a Star) is located, will emerge on an empty portal-field surrounding that same Monolith (or a Star).

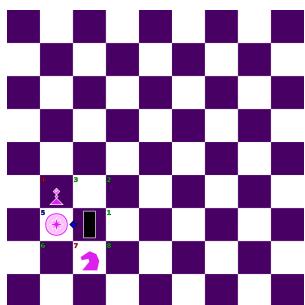
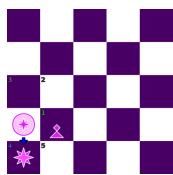


Figure 381: Moving out of a Monolith

In previous example Starchild moved into a Monolith; here, it emerges on an empty portal-field of that same Monolith.

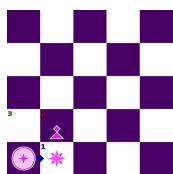
If there were no empty portal-fields, Starchild would be oblationed, i.e. removed from chessboard as if captured by opponent.

## Moving a Star



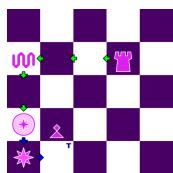
Starchild can activate a Star the same way as any other piece, i.e. by capturing miracle-field at which Star is located. Activated Star receives 1 momentum.

Figure 382: Moving into a Star



Once activated, Star can move to any empty miracle-field of activating Starchild, which all are enumerated in example on the left.

Figure 383: Star moving



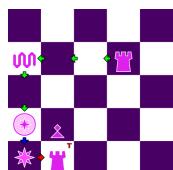
Note, even if activated Starchild received more than 1 momentum, Star can move for only one step.

Figure 384: Activating Starchild

Here, Star received all of initial 3 momentum gathered by the Rook, since neither Wave nor Starchild expend momentum for its movement. Nevertheless, activated Star can move for only one field.

Note that Star movement is optional, Starchild could emerge on an empty portal-field around Star in question; if there are none, Starchild would be obliterated.

## Star movement blocked



If there is no empty field around Star at actual activation, Star is not activated (it remains at the same field), and Starchild is oblationed.

Figure 385: Activating Star

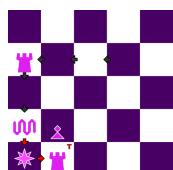
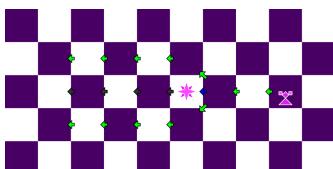


Figure 386: Star blocked

Here, Starchild (now "it-the-air") is about to activate Star; grey arrows show path traveled over by the piece they point to. There is no empty field around Star, so it cannot be activated; instead, Starchild is oblationed.

## Rerouting Scout



In this variant, Star can be activated, and moved onto any field on a chessboard, and so it can also block other pieces from stepping over field it occupies.

Figure 387: Rerouting Scout

The same as around Monolith, Scout can be rerouted around a blocking Star, using appropriate **forking step** (here, either left-up, or left-down), then continuing in initially chosen direction (here, left).

## Starchild is completely transparent

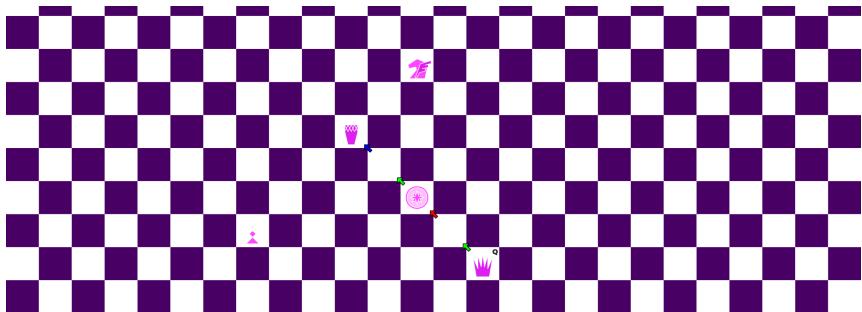


Figure 388: Starchild is transparent

Like Wave, Starchild is transparent to all pieces, both own and opponent's. Above, light Queen is not blocked by dark Starchild on its step-field, and can continue moving past it, and could also e.g. diverge from light Shaman.

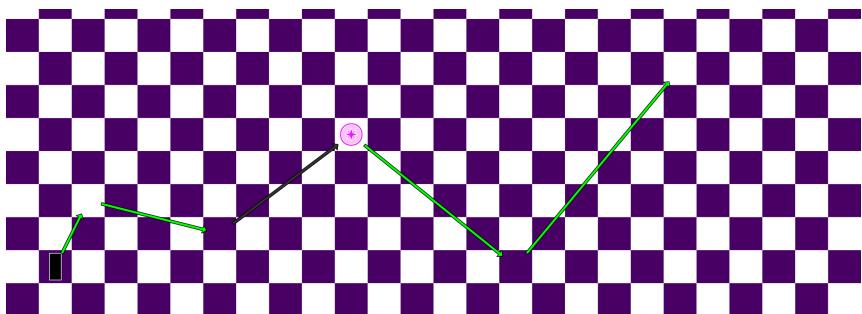


Figure 389: Starchild is completely transparent

Unlike Wave, Starchild is completely transparent. While Monolith cannot interact with any piece on its step-fields, it's not blocked by encountered Starchild, and can continue its movement beyond such an encounter.

## Conversion immunity

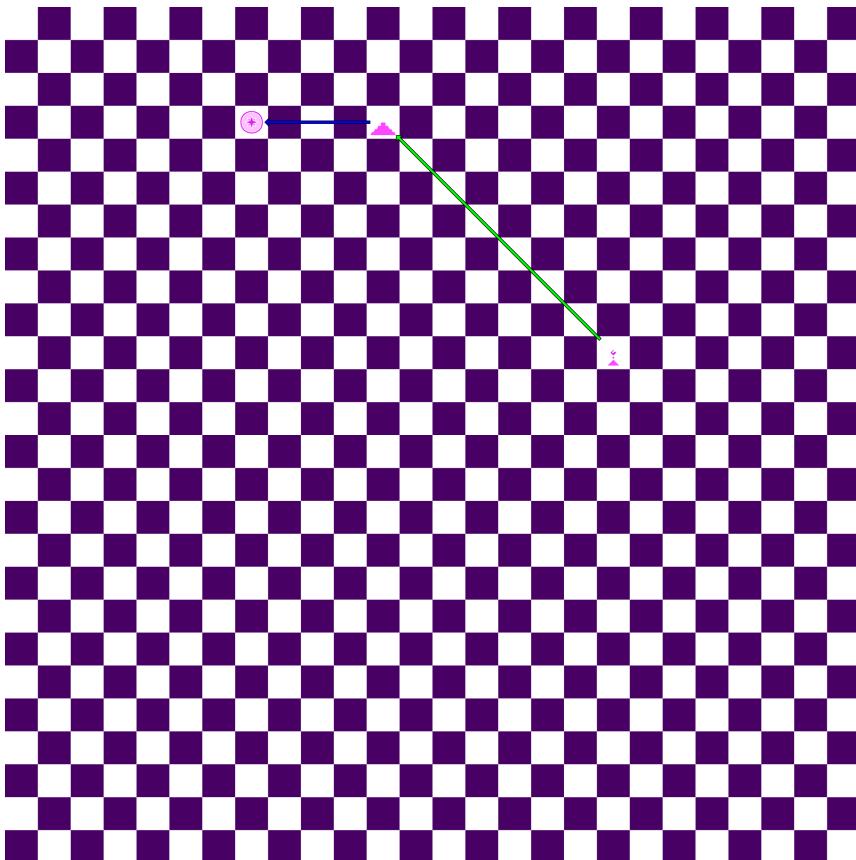


Figure 390: Conversion immunity

**Conversion** is a move in which activated Pyramid reaches opponent's piece, if it's not King, on own side of board. Pyramid is then oblationed, and reached piece is replaced by the same piece in own color. Starchild cannot be converted, instead, original Starchild remains on chessboard; conversioning Pyramid is still oblationed.

## Divergence

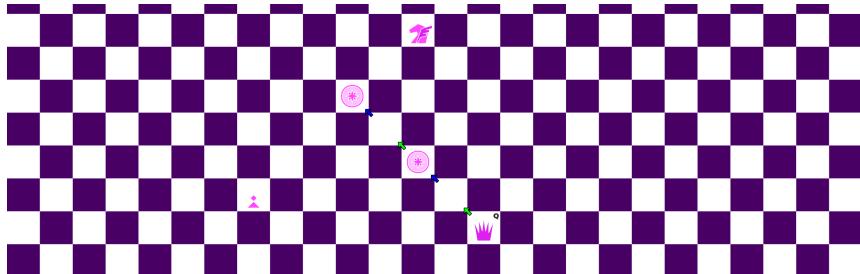


Figure 391: Starchild is divergent

Pieces can diverge from Starchild, similarly [from Shaman](#). Unlike Shaman, Starchild is divergent for all pieces that can diverge, own and opponent's. Kings, Stars, Monoliths, Centaurs, Serpents, Starchilds cannot diverge, in addition to Waves activated by Unicorns, Centaurs, or Serpents. Here, light Queen can diverge from first dark Starchild, or (due to Starchild's total transparency) second Starchild.

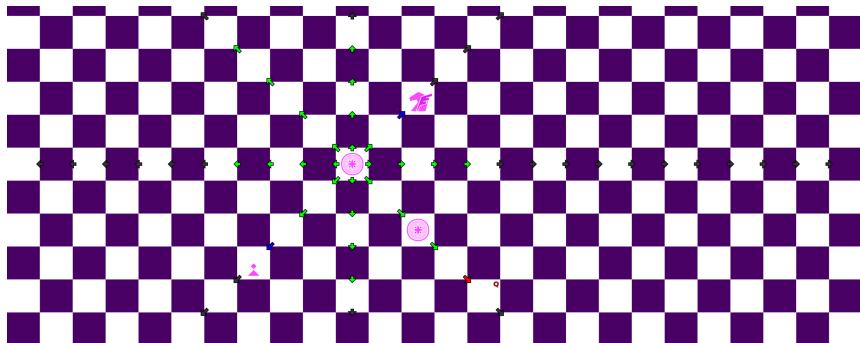


Figure 392: Diverging Queen

[As before](#), first piece in a move cannot return to its starting position. Here, light Queen (now "in the air") has reached own Starchild, and can choose any shown direction as a new one. Light Queen cannot return to its starting position, i.e. field Q.

## Diverging limits

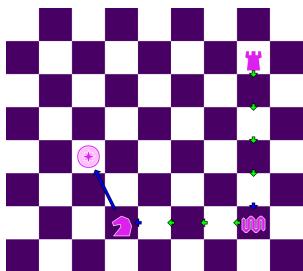


Figure 393: Activating with surplus momentum

When diverging, pieces are restricted by both how much momentum they have, and how many steps they can make in a single ply.

Similar to **pieces activated with surplus momentum**, diverging pieces also transfer all remaining momentum to a piece they activate.

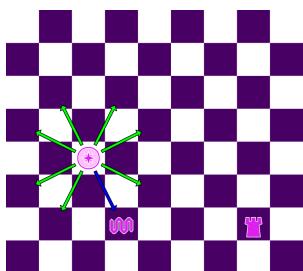


Figure 394: Diverging limits

In previous example light Knight reached Starchild with 4 momentum. Here, Knight is about to diverge from light Starchild, and can perform only one additional step regardless of how much momentum it has. If Knight would reactivate light Wave, it would transfer all 3 remaining momentum.

## Starchild cannot diverge

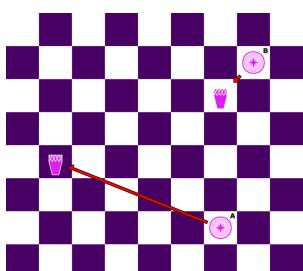


Figure 395: Starchild cannot diverge

Image on the left have two examples presented in parallel; at the top, and to the bottom.

Starchild cannot diverge, neither from step- (here, bottom example) nor miracle-fields (top example).

## Activating Wave

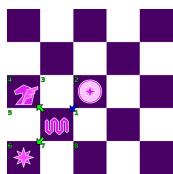


Figure 396: Activating Wave

Wave activated by Starchild on its miracle-fields can activate a piece, with 1 momentum; any own piece (except King), and opponent's Waves can be activated.

Wave can also move to any empty miracle-field, regardless of color.

## Wave cannot move a Star

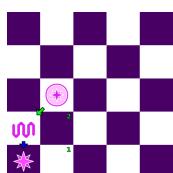


Figure 397: Not moving a Star

Wave cannot move a Star, even if activated by Starchild on its miracle-field. Instead, Wave would emerge on any empty portal-field around a Star which it tried to activate (here, fields 1 and 2). If there is no empty portal-field, Wave is obliterated.

## Wave cannot teleport

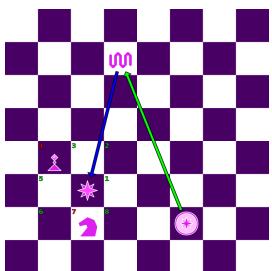


Figure 398: Moving into a Star

Wave activated by Starchild cannot teleport, regardless if Wave was activated on Starchild's step- or miracle-field.

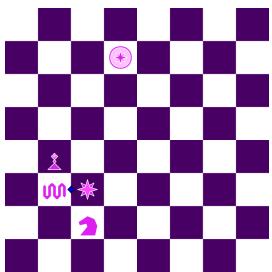


Figure 399: Moving out of a Star

Instead of teleporting, Wave emerges on an empty portal-field around Monolith or a Star through which it tried to teleport.

If there is no empty portal-field around Monolith (or a Star), Wave is obliterated.

## Teleporting Wave

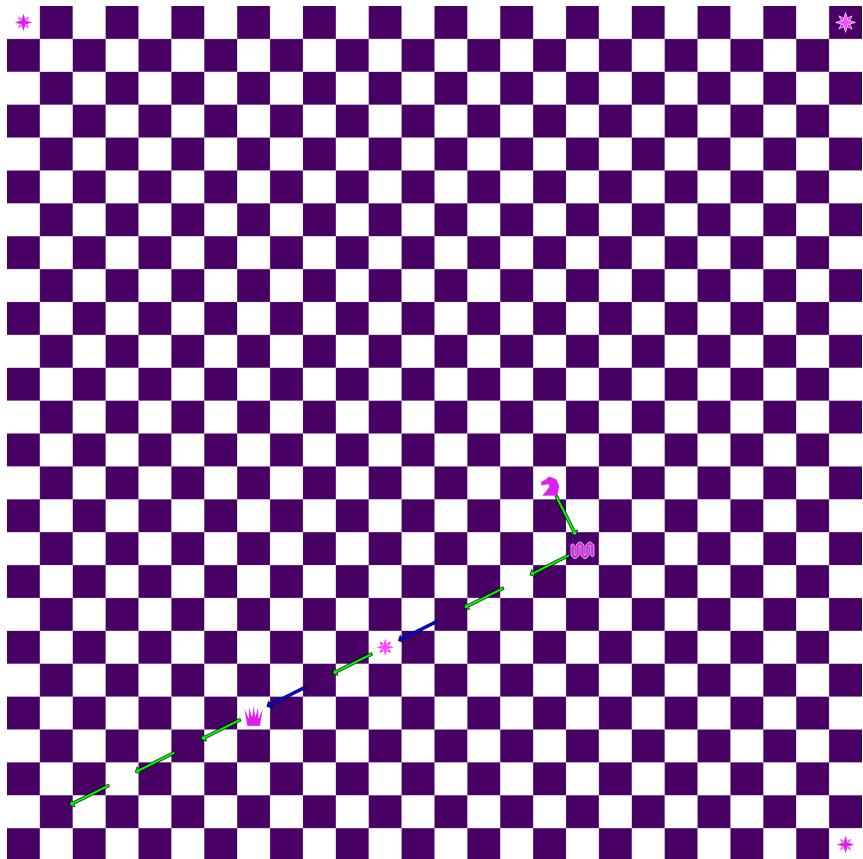


Figure 400: Optional Wave teleportation

Wave activated by pieces other than Starchild can still teleport as usual. Stars in this variant can be moved out of their default positions. Teleportation for Wave reaching a Star is optional, step-fields behind a Star are still accessible. Here, light Wave could also activate light Queen. So, **Monolith is the only piece Wave cannot pass over**, i.e. ignore as all the other pieces on chessboard.

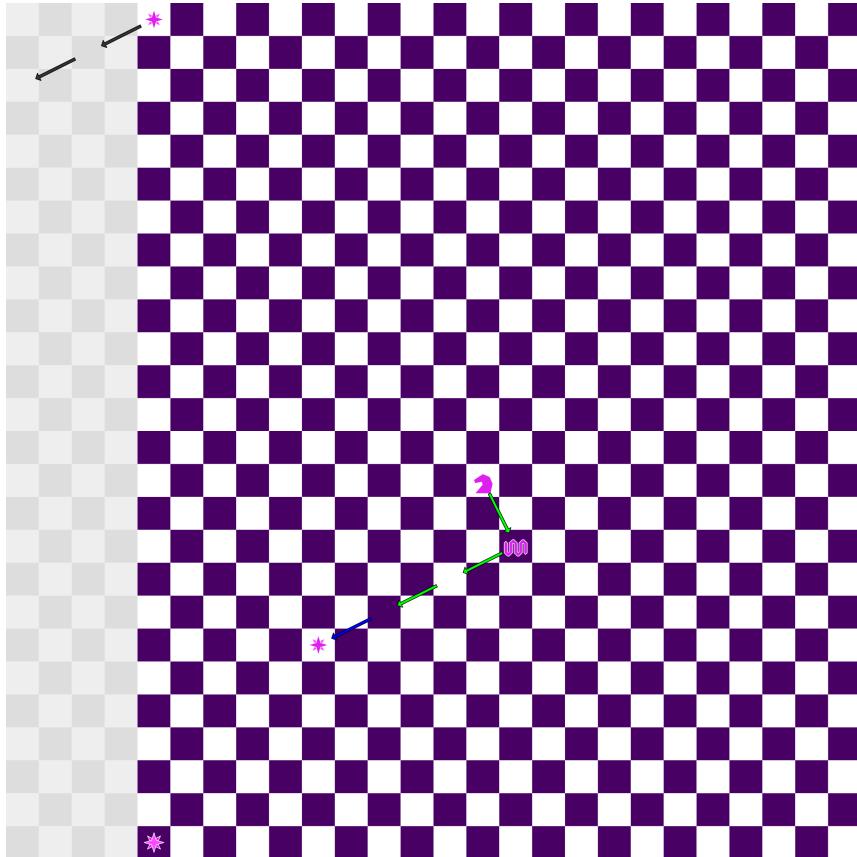


Figure 401: Wave teleported off-board

Wave can end up with all step-fields off-board after teleportation, due to one or both Stars moved out of their initial positions. In such a case, Wave is obliterated, the same as in [previous variant, Discovery](#).

Wave is also removed from chessboard if, after teleportation, all of its step-fields are blocked; this is again similar to [previous variant, Discovery](#).

## Steps after teleportation

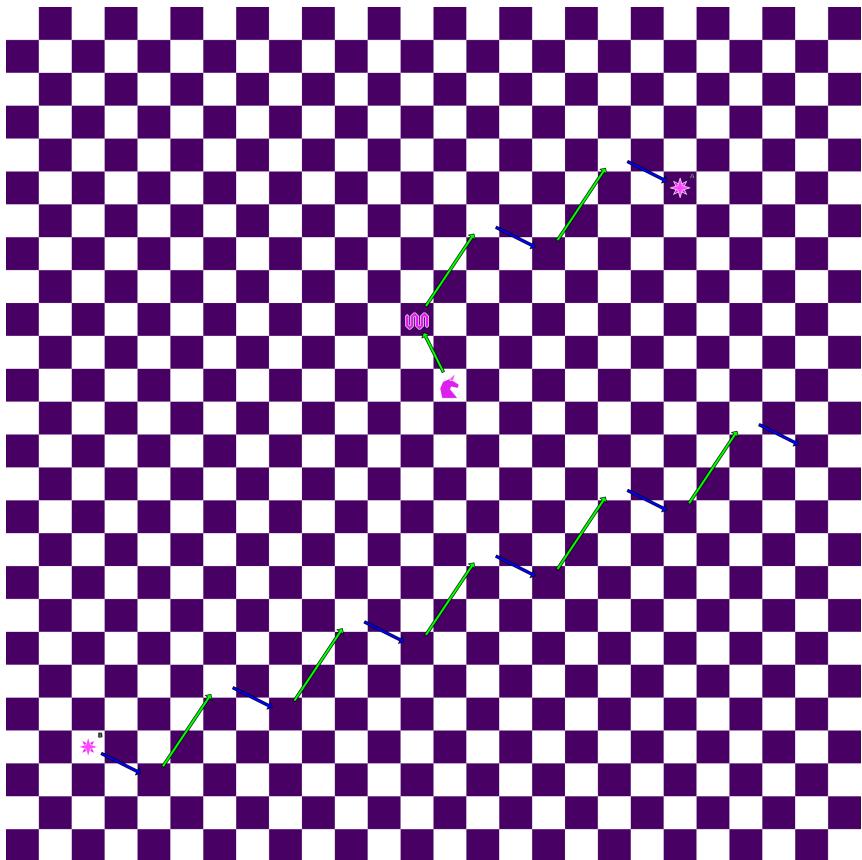


Figure 402: Steps after teleportation

Wave, activated by Unicorn (or Centaur) after teleportation has to follow two initially chosen steps (long and short jump) according to a color of step-fields. Similar to [previous example with Monoliths](#), two same-color Stars can be moved onto opposite-color fields. So, a two-step pattern after teleportation remains the same, but order of steps is reversed. Here, after teleporting into Star A, Wave emerges from Star B using the same two initial steps, only in reversed order.

## Failed trance-journey

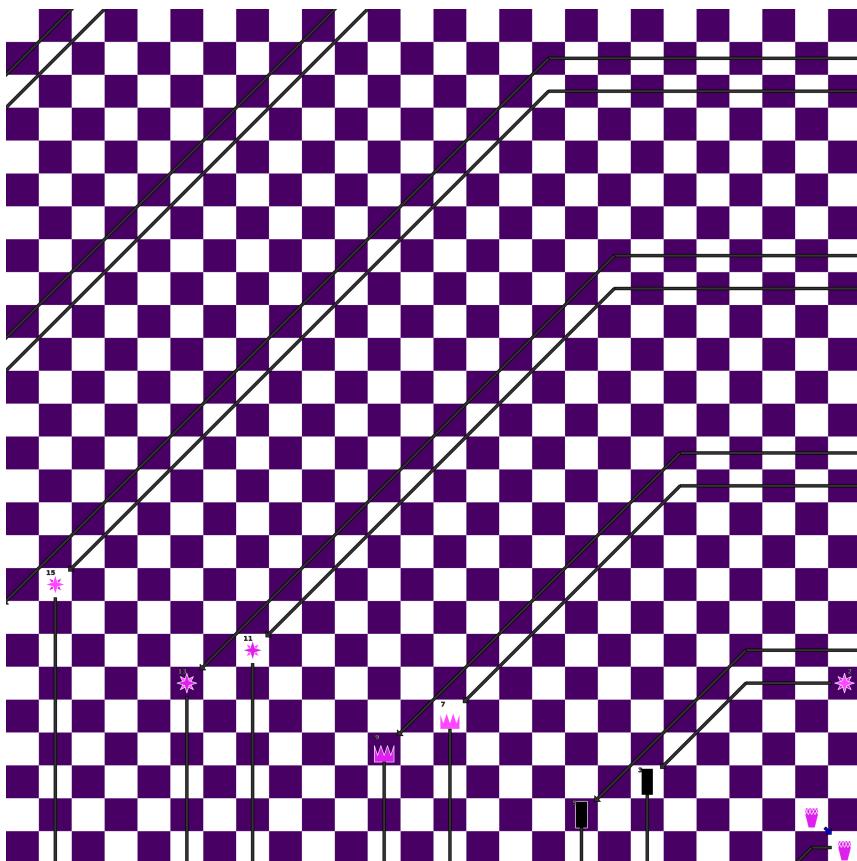


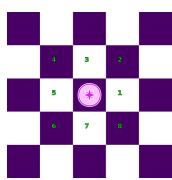
Figure 403: Failed trance-journey

In **trance-journey**, entranced Shaman cannot interact with Kings, Stars, and Monoliths; so, step-fields occupied by those pieces are blocked. In this variant **Stars can be moved**, and could potentially block step-fields. Since trance-journey is mandatory, if all step-fields are blocked, entranced Shaman is **obliterated**, i.e. removed from chessboard as if captured by opponent.

## Sense-journey

Sense-journey is initiated by stationary Starchild activating another Starchild on its uplifting-field; activated Starchild can then activate a piece on its uplifting-field, which then takes on sense-journey. Activated Starchild is also called uplifting Starchild, a piece taking on sense-journey is uplifted piece. Initiating piece can be Shaman instead of a Starchild; stationary Shaman would activate uplifting Starchild on its **trance-fields**. Colors of Starchilds, Shaman do not need to match; uplifted piece has to be in the same color as uplifting Starchild.

### Uplifting-fields



Uplifting-fields are all fields immediately neighboring Starchild horizontally, vertically, and diagonally. They are the same fields as step-fields of a King.

Figure 404: Uplifting-fields

### Uplifting

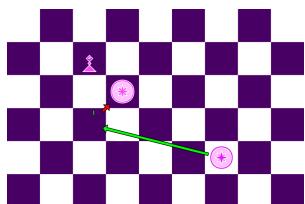


Figure 405: Uplifting preparation

In a single ply, Starchild can travel over only one of step-, miracle- or uplifting-fields; choice can be made only on the very first step, and cannot be changed for duration of the ply.

Here, light Starchild can be moved onto field I, so that its uplifting-field is occupied by dark

Starchild. It's illegal to change course during the ply, so light Starchild cannot uplift dark Starchild outright.

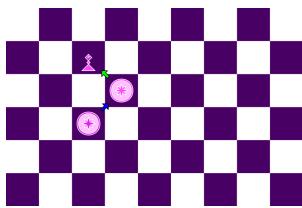


Figure 406: Uplifting step

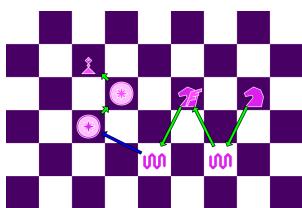


Figure 407: Activated uplifting step

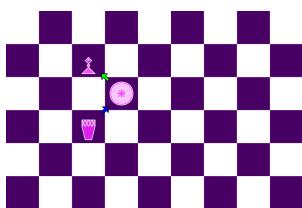


Figure 408: Shaman initiated uplifting

Once in a position, stationary Starchild can initiate sense-journey by simply stepping onto its uplifting-field occupied by the other Starchild; uplifting Starchild can then uplift any piece on its uplifting-field; uplifted piece then has to go onto sense-journey.

Activated Starchild can also initiate sense-journey. This is so, even if initiating Starchild has no momentum; like in the example on the left.

Note, sense-journey is mandatory; once a piece (here, dark Bishop) is uplifted it has to make sense-journey.

Instead of a Starchild, stationary Shaman can initiate sense-journey, by activating uplifting Starchild on its **trance-fields**; this is so regardless if initiating Shaman has been activated or not.

Uplifting Starchild and uplifted piece must belong to the same player; initiating piece can belong to opponent, regardless if it's Shaman or Starchild. King, Waves cannot be uplifted; Stars, Monoliths do not belong to any player; Starchilds cannot take on sense-journey.

Sense-journey has the same movement pattern as trance-journey. If uplifted piece is light, it can take sense-journey in one chosen direction from **light Shaman's pattern**, otherwise from **dark Shaman's pattern**.

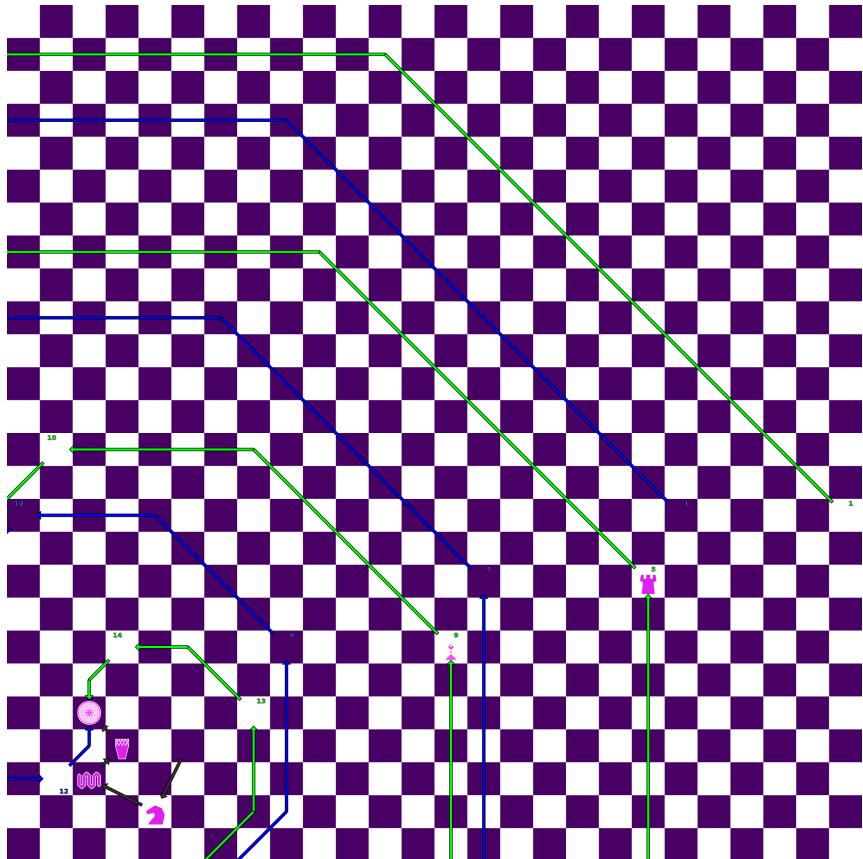


Figure 409: Dark piece sense-journey

Uplifted piece (here, dark Bishop) can end its sense-journey on any empty step-field, of chosen direction (color). Occupied step-field (here, by light Rook) does not block uplifted piece from ending its sense-journey on any empty step-field behind it. Uplifted piece has to take on sense-journey because it's mandatory, even if it received no momentum; length of sense-journey does not depend on received momentum. Above, activated Shaman initiated sense-journey; grey arrows show path traveled over by piece they point to.

## Failed sense-journey

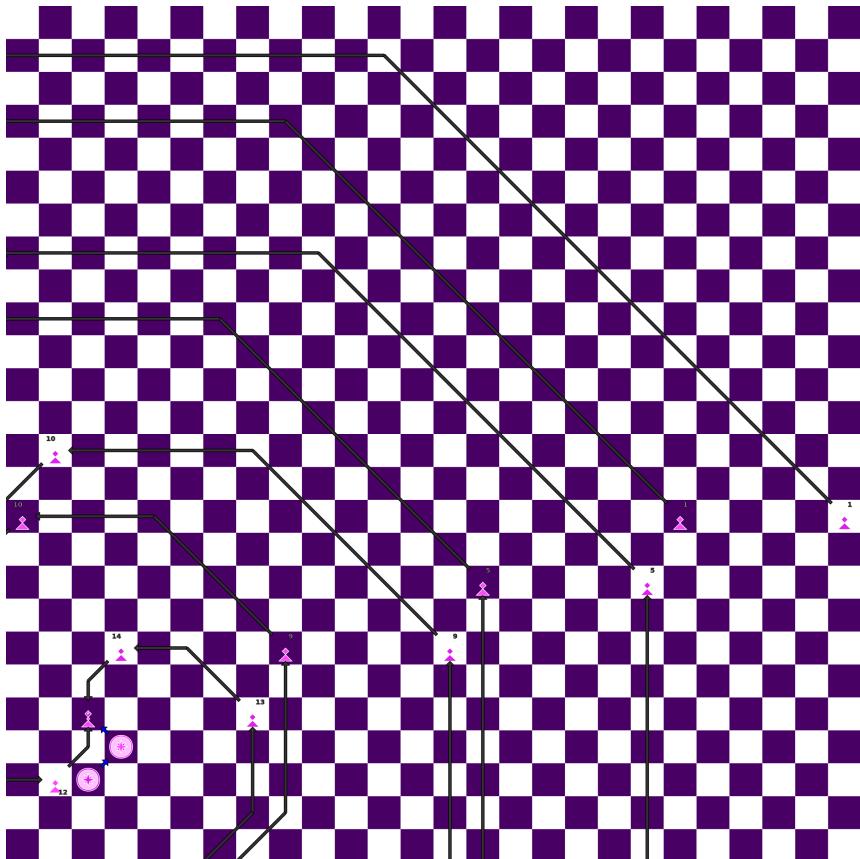


Figure 410: Failed sense-journey

In sense-journey, uplifted piece cannot interact with pieces; so, step-fields are blocked, if not empty. Since sense-journey is mandatory, if all step-fields are blocked, uplifted piece is **obliterated**, i.e. removed from chessboard as if captured by opponent.

Here, sense-journey is completely blocked by own and opponent's Pawns; dark Bishop after uplifting would be obliterated.

## Syzygy

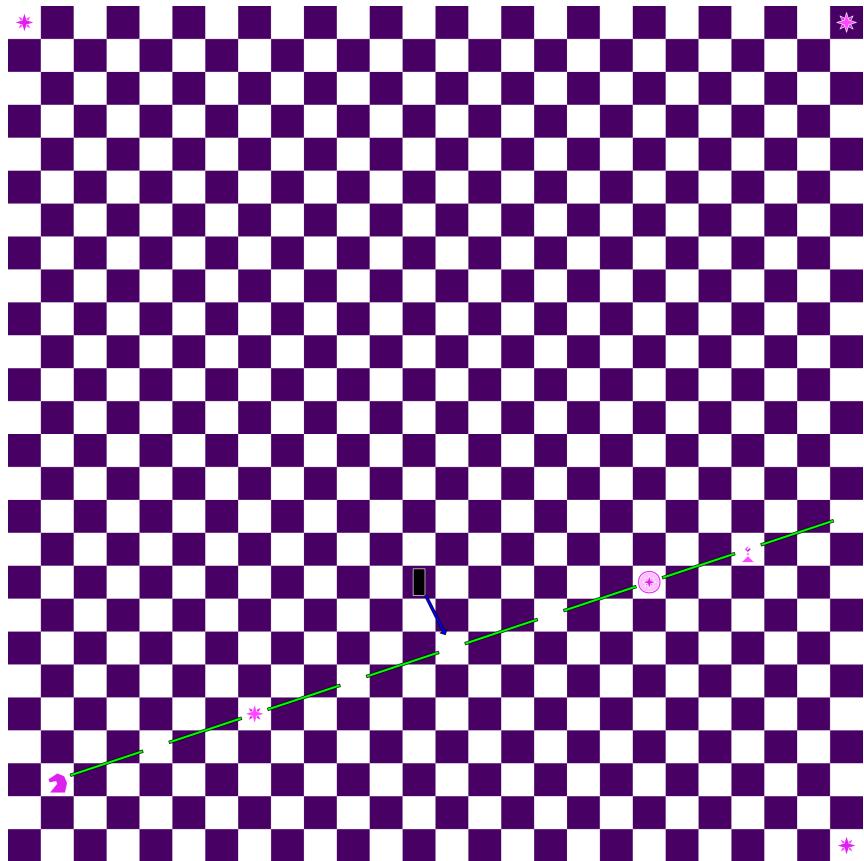


Figure 411: Demoting-to-Pawn syzygy

Starchild is celestial piece, it can participate in **demoting-to-Pawn syzygy** in place of Stars and Monoliths. Starchild can also be demoted.

Again, shortest step connecting Stars, Monoliths, Starchilds is called syzygy-step, fields which are connected by syzygy-steps are called syzygy-fields.

## Resurrection syzygy

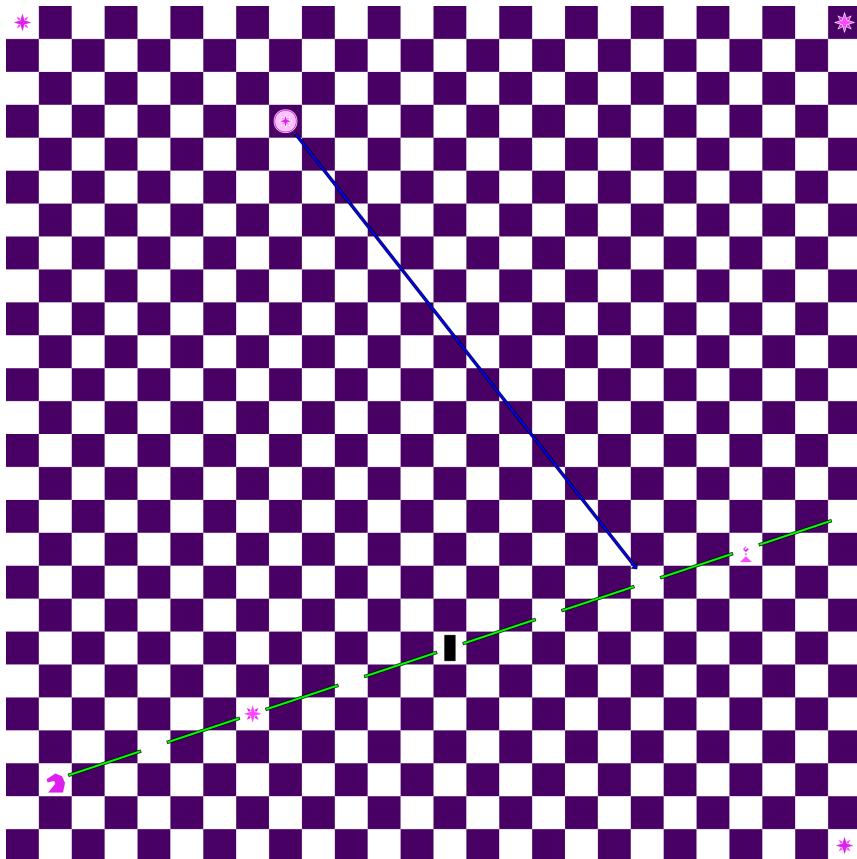


Figure 412: Resurrection syzygy start

If Starchild moves into syzygy, from a field not in any alignment, onto an empty syzygy-field, it's granted option to resurrect one captured piece. A piece is resurrected by replacing initiating Starchild, Starchild itself is then oblationed. Only captured pieces can be resurrected. Kings, Stars and Monoliths cannot be resurrected.

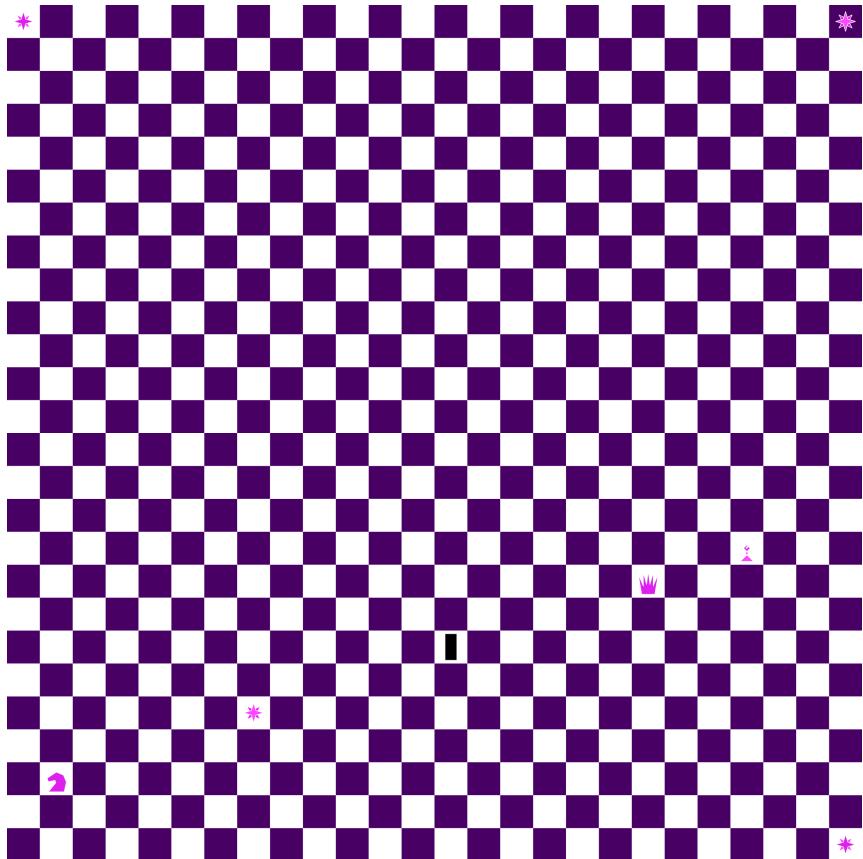


Figure 413: Queen resurrected

Here, resurrected Queen replaced initiating Starchild. Note, in this variant **promotion is monogamous**, so the only light Queen had to be captured, before it could be resurrected.

Resurrecting is not limited to player's own pieces, opponent's pieces can be resurrected as well. For instance, dark Queen could be resurrected instead of the light one. Again, only captured pieces can be resurrected. In this variant, to resurrect Queen, a Pawn must not be promoted to one.

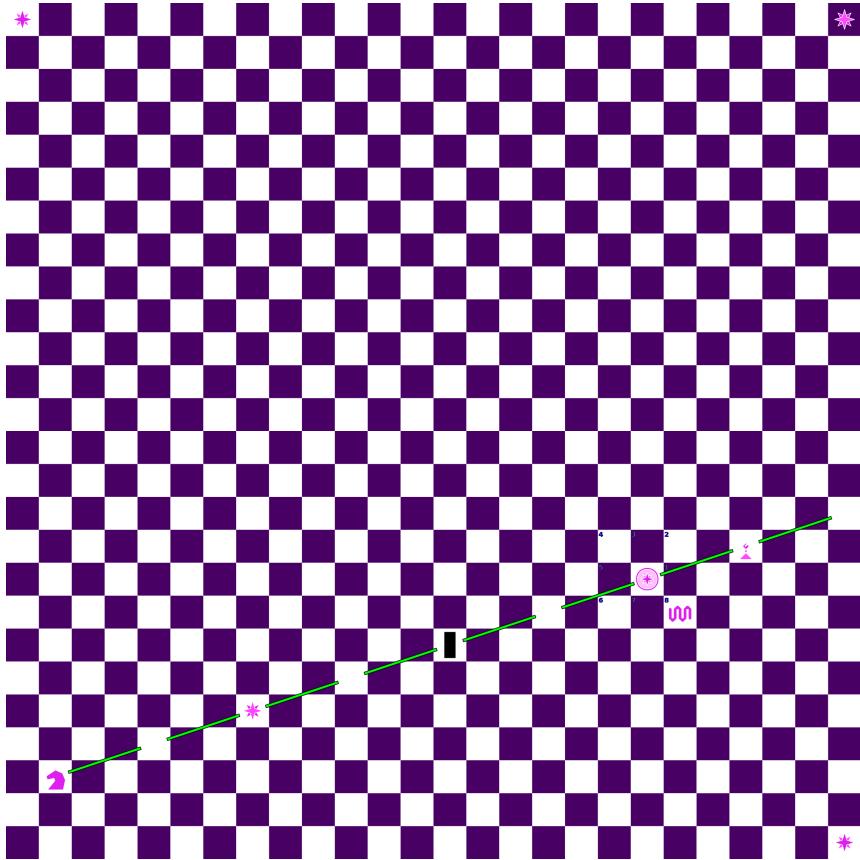


Figure 414: Starchild resurrected

Captured Waves and Starchilds can be resurrected, without initiating Starchild being oblationed. Chosen piece can emerge on any empty **miracle-field** around initiating Starchild in syzygy (here, enumerated fields). If all miracle-fields are occupied, resurrection is not performed.

## Existing syzygy

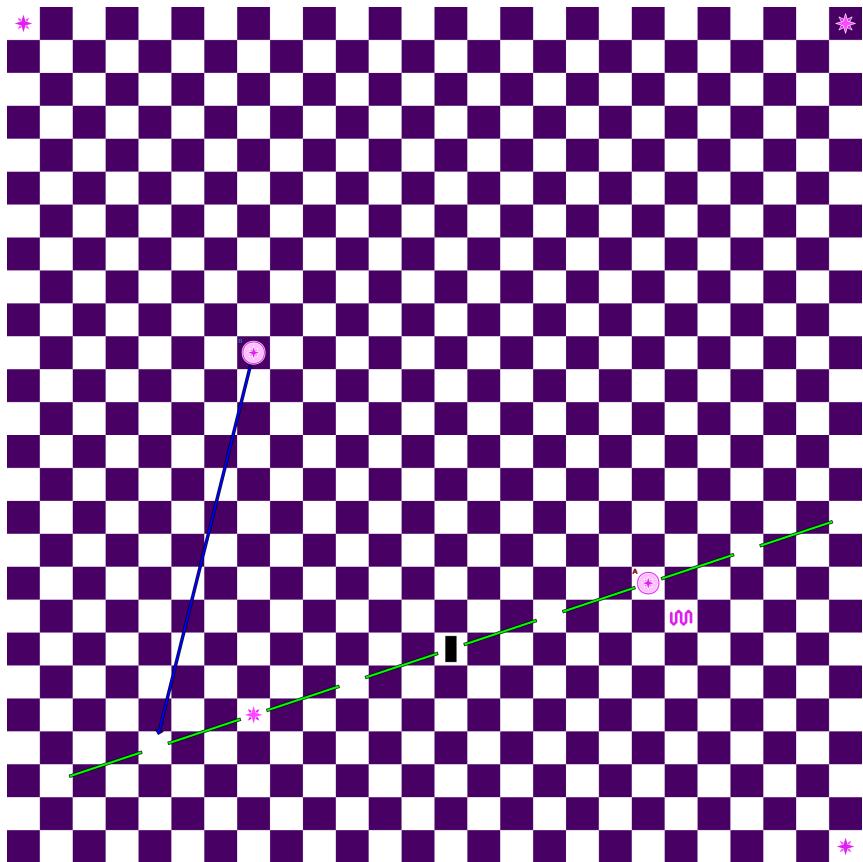


Figure 415: Existing syzygy

Similar to [Monolith entering existing syzygy](#), Starchild too can enter already existing, and used syzygy, and resurrect one captured piece, even if a piece has been resurrected in that syzygy, in a previous turn.

Here, light Wave has been resurrected by Starchild A in a previous turn; regardless, Starchild B can enter the same syzygy, and resurrect one captured piece.

## Reentering syzygy

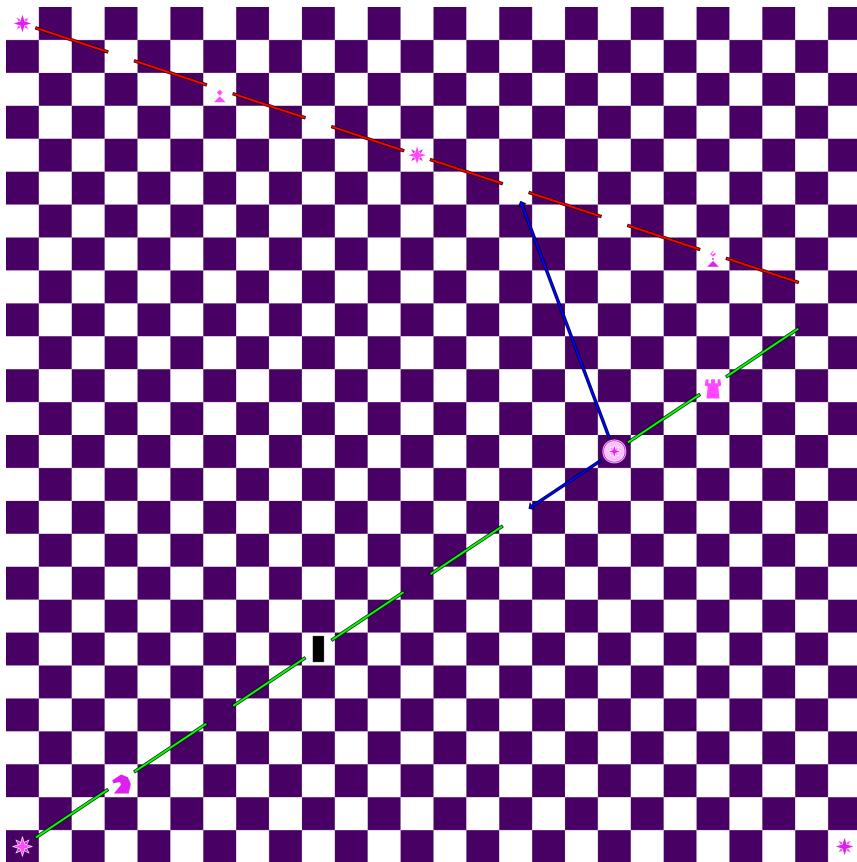


Figure 416: Reentering syzygy

Similar to [Monolith reentering syzygy](#), to get option to resurrect captured piece, Starchild has to move from a normal, non-syzygy field into syzygy. Starchild already in syzygy can move into the same (or the other) alignment, but cannot resurrect any piece. To be able to resurrect, Starchild has to move out of alignment in a first move, and then on a next move it can move into resurrecting syzygy.

## Cascading syzygy

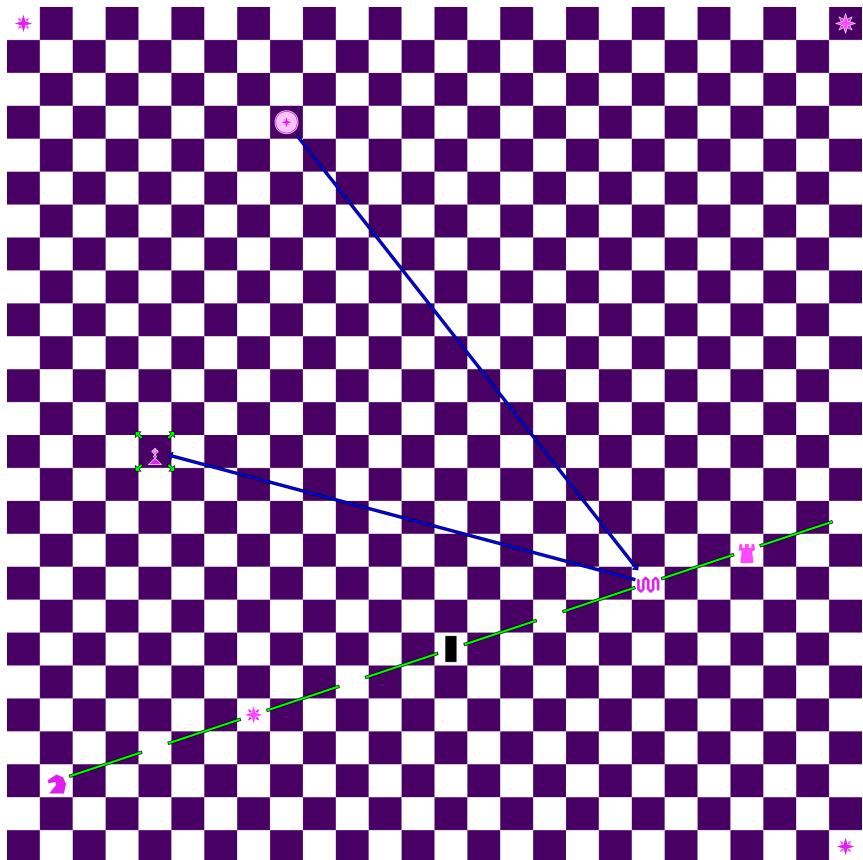


Figure 417: Starchild cascading

Starchild moving into syzygy can activate pieces on a destination syzygy-field, and start a cascade; this move does not grant option to resurrect. To be able to resurrect, Starchild has to move onto empty syzygy-field, from a field out of any alignment.

## Double syzygy

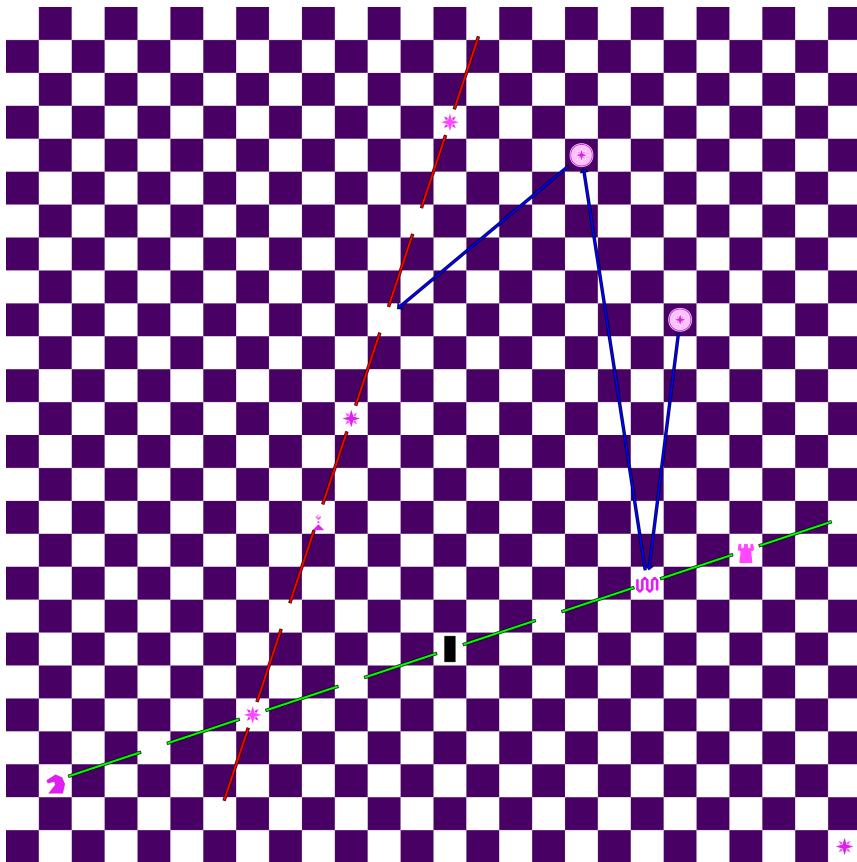


Figure 418: Shared celestial piece

Starchild initiating syzygy can activate another Starchild, creating double (triple, ...) syzygies in the same move; only the very last Starchild in a cascade can resurrect a captured piece, if it stepped onto an empty syzygy-field. This is so regardless if syzygies share celestial piece (pictured here), just a syzygy-field, or are completely independent.

## Opponent's Starchild

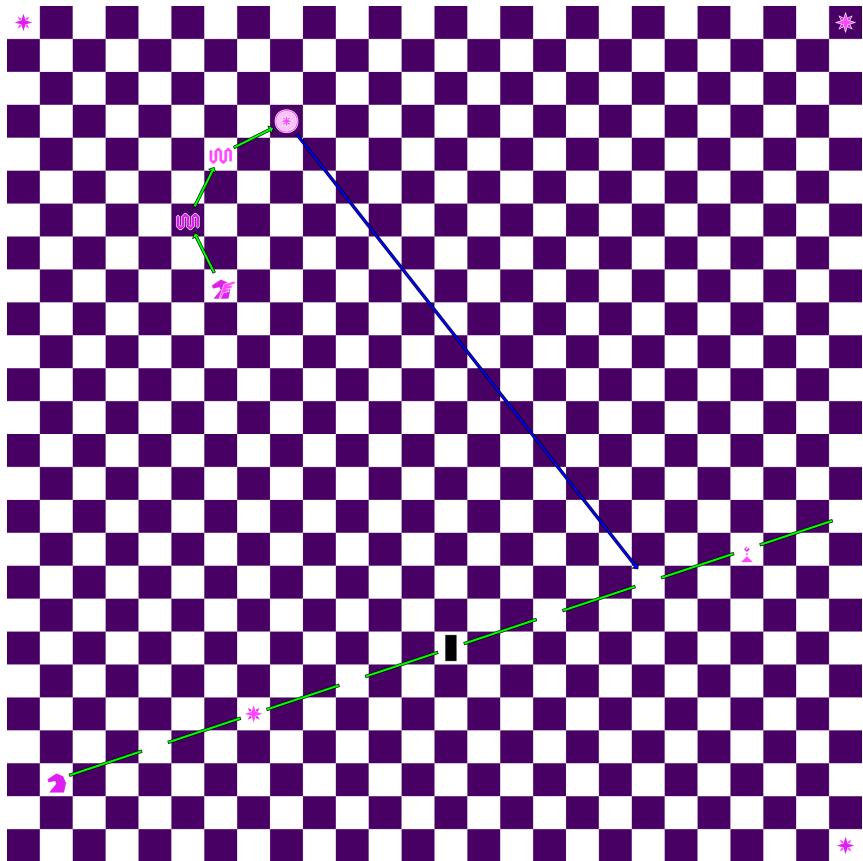


Figure 419: Opponent's Starchild in syzygy

Opponent's Starchild can be activated, and pushed into syzygy, this will also initiate resurrection. Here, light player is moving dark Starchild into syzygy.

Any Starchild can resurrect any captured piece, regardless of their respective colors. Here, light player can resurrect any captured piece, regardless if it's light or dark.

## Star-initiated syzygy

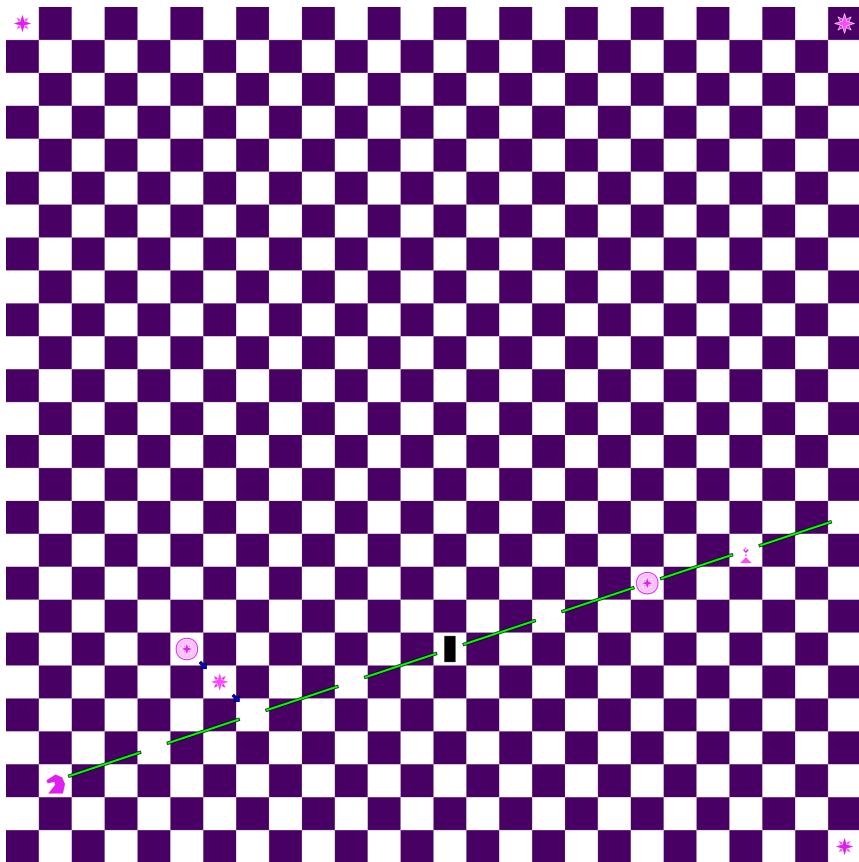


Figure 420: Star-initiated syzygy

Pushing Star into a syzygy brings no additional interactions, i.e. it neither can demote own figure to Pawn, nor it can resurrect any captured piece.

## Starchild and castling

Starchild is transparent, and so it does not block castling when it's positioned between castling pieces and their destination fields. **The same as Wave**, Starchild cannot be activated by castling pieces; so Starchild blocks both King and Rook from castling onto a field it occupies.

### Castling is not blocked

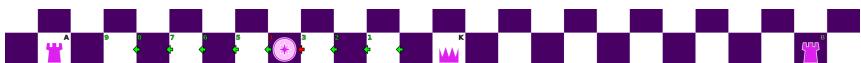


Figure 421: Castling King not blocked



Figure 422: Castling Rook not blocked

In example at top, King can choose to castle to any enumerated field, except to field occupied by Starchild. Above, King castled two fields past Starchild, leaving empty field for castling Rook, so the whole castling move is legal.

### Castling is blocked



Figure 423: Castling blocked

Castling Rook always ends on a field immediately next to King, closer to its starting position (here, field K). Here, King castled immediately next to Starchild, so there is no room for castling Rook. Starchild cannot be activated by castling pieces, so it blocks the complete move.

## Rush, en passant

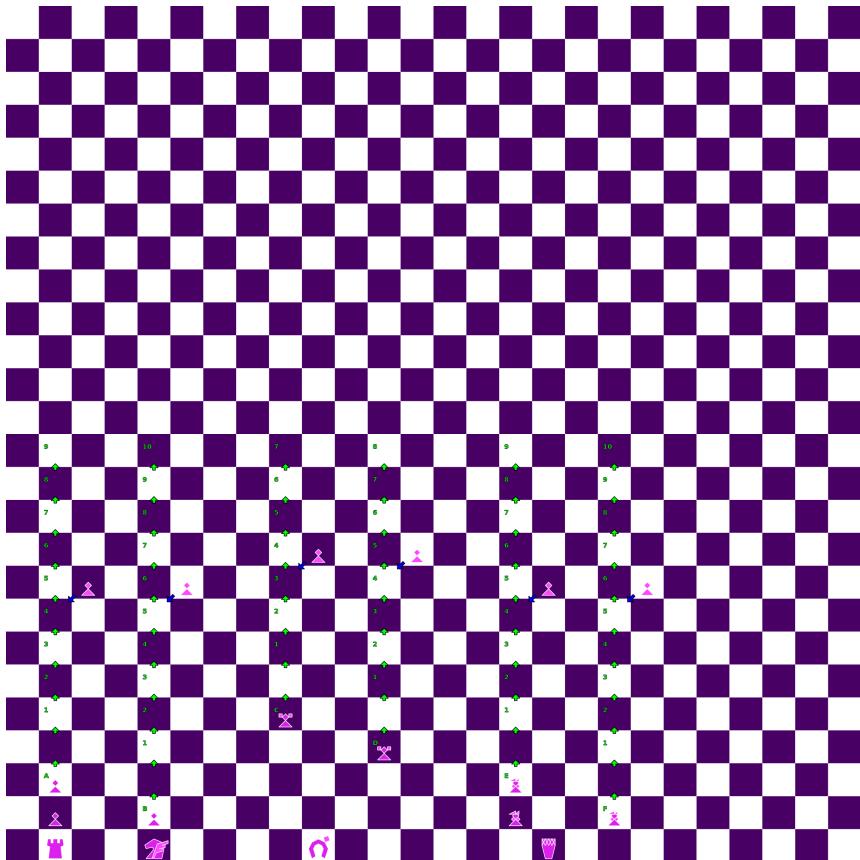


Figure 424: En passant

Image above have 6 examples presented in parallel: one for each Pawns A, B, Scouts C, D, and Grenadiers E, F.

Rush and en passant are identical to those in [Hemera's Dawn variant](#). Own privates (i.e. Pawns, Scouts, and Grenadiers) can be rushed for up to 11 fields in this variant.

# Promotion

Promotion is non enforced, delayed variety, i.e. it's the same as in [previous chess variant](#), Age of Aquarius.

Additionally, promotion in this variant is monogamous. Only one Queen in the same color can be present on chessboard at any given time.

[Similarly to previous variant, Nineteen](#), if own Queen is present on a chessboard, opponent's Queen cannot be converted, and has to be captured instead.

# Castling

Castling is [the same as in Nineteen variant](#), only difference is that King can move between 2 and 10 fields across. All other constraints from Nineteen variant still applies.



Figure 425: Castling

In example above, all valid King's castling moves are numbered.



Figure 426: Castling short right

In this example King was castling short to the right. Initial King's position is marked with "K". After castling is finished, right Rook ends up at field immediately left to the King.

## Initial setup

Compared to initial setup of Discovery, Starchild is inserted between Centaur and Serpent symmetrically, on both sides of chessboard. This can be seen in the image below:

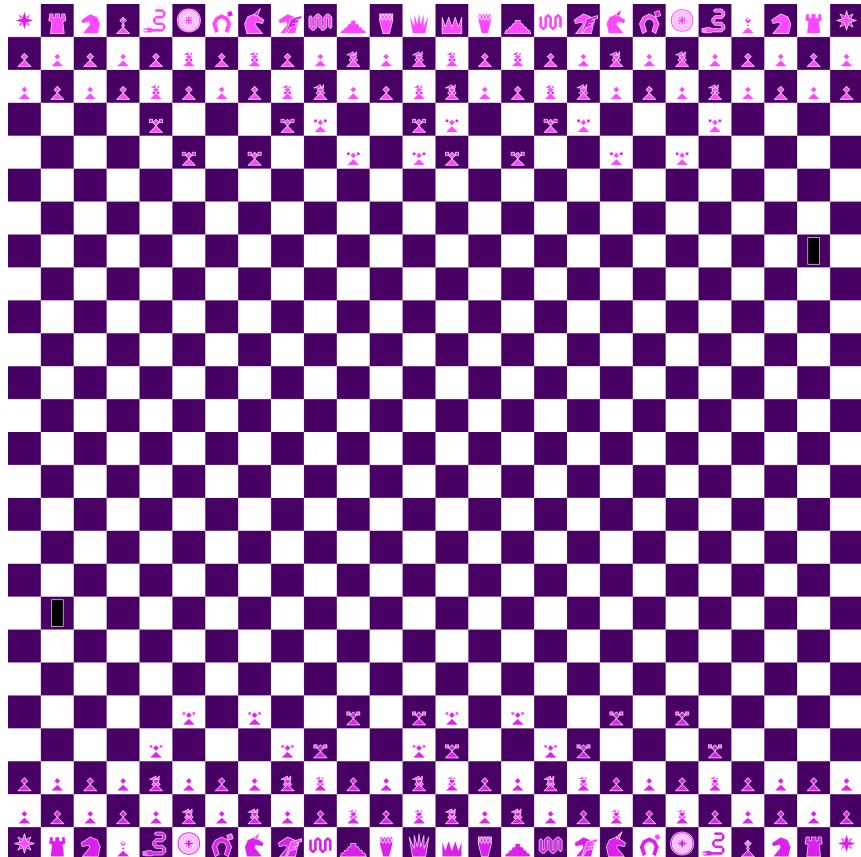


Figure 427: One board



# Terms

This chapter defines some terms as used in this book.

## Turn

Turn denotes player who hasn't finished his (or her) move, i.e. the one who "has the move", the one who "is on the move", [see FIDE 1.2, 1.3.](#)

## Chip

Chip is any item on a chessboard not movable by any player, used to denote various states of a game. For instance, it could be used to denote King's ability to castle, which Pawn is tagged for promotion, or which player's turn is ongoing.

## **Piece**

Piece is any item on a chessboard movable by one or both players, i.e. piece is any item except chips.

In later variants, not every piece is owned by a player. Pieces without owner are Stars and Monoliths.

## **Material**

Material is any piece, except Wave.

## **Materiel**

Materiel is any owned piece which can capture opponent's pieces.

Materiel is any piece except Wave, Starchild (those cannot capture), and Star, Monolith (those are not owned, and cannot capture).

## **Trooper**

Trooper is either a Scout or a Grenadier.

## **Private**

Private is one of Pawn, Scout, or Grenadier; i.e. private is either a Pawn, or a trooper.

## **Figure**

Figure is any piece, except Pawn.

## **Move**

Move is completed movement of chosen and all affected pieces, performed sequentially, by one player, in one turn.

## **Cycle**

Cycle consists of light player's move, followed by dark player's move.

## **Game score**

Game score is a numbered list of cycles, in order in which they were played during a game.

## **Momentum**

Momentum is count of fields traveled over by a piece.

## **Cascade**

Cascade is a move where at least 2 pieces have moved.

## **Ply**

Ply is completed movement of a piece, from its starting position to its destination field.

## **Path**

Path is list of all fields traveled in a single ply, and in the same order.

## **Oblation**

Oblation is removal of a piece from chessboard by rules or circumstances, without being captured by opponent.

## **Activation**

Activation is act of capturing field at which piece stands, without capturing that piece itself. Activating piece transfers all of its momentum to activated piece. Activated piece then has to move to some other field, or it's obliterated.

## **Passive piece**

Passive piece is any which needs to be activated, before it can move. These are Pyramid, Wave, and Star.

## **Push-pull activation**

Activation of a piece which in the same move started a cascade.

## **Step-fields**

Step-fields are all fields where a piece can end its movement.

## **Capture-fields**

Capture-fields are all fields where a piece can capture opponent's piece. Usually, these are the same as step-fields, except for Pawn, Scout, Grenadier, and Shaman.

Some pieces cannot capture opponent's pieces, so they have only step-fields but no capture-fields; these are Wave, Star, Monolith, and Starchild.

## **Neighboring-fields**

Neighboring-fields are all fields immediately surrounding a particular field horizontally, vertically and diagonally.

## **Portal-fields**

Portal-fields are neighboring-fields around a Star or a Monolith. Empty portal-fields can be used as a destination after a material (i.e. non-Wave) piece teleported.

## **Miracle-fields**

Miracle-fields are neighboring-fields around a Starchild, where any own piece can be activated (except King), opponent's Starchild, or any Star.

Empty miracle-fields can also be used as a destination, in case of resurrecting a Wave or a Starchild.

## **Activator**

Activator is any material piece in a cascade.

Wave inherits its (step-, capture-, or miracle-) fields from activating piece; activating piece itself can be Wave with inherited fields; inheriting chain starts with an activator.

Usually, activator refers to last material piece in a cascade preceding Wave, from which that Wave ultimately inherited (step-, capture-, or miracle-) fields.

## **Step**

Step is a movement of a piece from one step- or capture-field to the next of the same kind; or from a starting field to a destination (step-, capture-, or miracle-) field.

## **Rush**

Rush is initial movement of a private longer than its usual, i.e. from its starting position, for at least 2 fields forward. Rushing private presents opponent with en passant opportunity.

# **Displacement-fields**

Displacement-fields are all fields where a piece can be displaced.

Displacement-fields are different from step-, and capture-fields, and form a fixed pattern regardless which piece is being displaced.

# **Displacement**

Displacement is act of moving a piece onto an empty displacement-field.

Displacement can be initiated when a piece encounters another on its step-, or capture-fields. No momentum is transferred to, or used by, displaced piece. Displacement can be performed even if initiating piece does not have any momentum. After displacement, initiating piece can continue its movement as if no action has been taken.

For instance, Serpent can displace Pawns it encounters; Shaman can displace all pieces, except Kings, Stars, Monoliths during its trance-journey.

# **Tag**

Tag is a delayed opportunity link between a piece and a field at which it stands. Only one tag at any given time can be

applied to a piece.

Piece can be tagged for castling, promotion or rushing; doing any of these things consumes tag, and cannot be repeated again. For instance, Pawn can be rushed for less than maximum allowed in a variant; regardless, rushed Pawn cannot be rushed again.

Tag, and opportunity it represents, is definitely lost when tagged piece is moved, captured, converted, activated or displaced.

Initially, all privates are tagged for rushing, and all Rooks and Kings are tagged for castling. Later in game, Pawns can be tagged for promotion.

As a special case, Serpent can be tagged for Pawn-sacrifice; this tag is not delayed, so it has to be used in the same move in which it has been obtained.

## Pawn row

Pawn row is any row which contains Pawns on initial setup of chessboard.

In early variants (up to Nineteen), for light player that is second row, for dark player second to last row. In Nineteen variant an additional rank of Pawns was added, and so Pawns rows are second and third for light player, second to last and third to last for dark player.

## **Private row**

Private row is any row which contains privates on initial setup of chessboard.

Privates are added in Hemera's Dawn variant; for light player Scouts are positioned onto third and fourth row, Grenadiers replace some of Pawns on second and third row; changes are mirrored for dark player.

So, private rows contain rows with Scouts, in addition to Pawn rows.

## **Figure row**

Figure row is row that contains figures on initial setup of chessboard. For light player that is first row, for dark player it is last row.

## **Piece row**

Piece row is either private row or figure row.

# Definitions

## Chessboard sides, navigation

In canonical representation, which is used throughout this book, light player starts from bottom of a chessboard, while dark player starts from top.

Light side of chessboard is bottom half of chessboard, it includes all fields closer to light player's initial positions. Similarly, dark side of chessboard is upper half.

Queen's side is left half of chessboard, it contains both Queens in their initial positions. Similarly, King's side is right half of chessboard.

Forward movement is towards opponent's initial positions. For light player that is up, for dark player it's down. Similarly, backward movement is towards own initial positions. For light player that is down, for dark player it's up.

Steps (arrows in examples) are referred to by relative position of its end point (field). For instance, light Pawn can move by stepping up, and can capture by stepping up-left or up-right.

# Movement limits

Maximum number of steps Serpent, Scout, and Grenadier can make is determined by the size of a chessboard.

$$sml = \lfloor \left( \sqrt{\frac{n^2}{1 + \sqrt{2}}} \right) \rfloor \quad (1)$$

$$oml = \lfloor \left( \sqrt{\frac{n^2}{7 + \sqrt{6}}} \right) \rfloor \quad (2)$$

$$ghml = oml - 2 \quad (3)$$

$$gVML = \lfloor \left( \sqrt{\frac{n^2}{1 + \sqrt{n}}} \right) \rfloor - 2 \quad (4)$$

$$ghcqml = 1 + copgf \quad (5)$$

$$mml = 1 + coop \quad (6)$$

where:

$n$  is size of chessboard for a given variant

$\lfloor \rfloor$  is floor function, giving the largest integer smaller than or equal to its argument

$sml$  - Serpent's movement limit, i.e. maximum number of steps Serpent can make

*oml* - Scout's movement limit, i.e. maximum number of steps Scout can make

*ghml* - Grenadier's horizontal movement limit, when not surrounded by opponent's pieces

*gvml* - Grenadier's vertical movement limit, when not surrounded by opponent's pieces

*copgf* - count of opponent's pieces on grenadier-fields

*ghcqml* - Grenadier's horizontal movement limit in close quarters, i.e. when surrounded by opponent's pieces

*mml* - Monolith's movement limit, i.e. maximum number of steps Monolith can make

*coop* - count of owned Pawns, i.e. number of Pawns player moving a Monolith has

# Monolith initial positions

Monolith initial positions are calculated from the size of a chessboard.

$$dx = \lfloor \frac{n}{11} \rfloor \quad (7)$$

$$dy = \lfloor \frac{7 \times n}{22} \rfloor \quad (8)$$

Monolith on light side of chessboard has coordinates:

$$mls = (dx - 1, dy - 1) \quad (9)$$

Monolith on dark side of chessboard has coordinates:

$$mds = (n - dx, n - dy) \quad (10)$$

where:

$n$  is size of chessboard for a given variant

$\lfloor \rfloor$  is floor function, giving the largest integer less than or equal to its argument

$dx, dy$  are offsets along x- and y-axis, respectively

$mls, mds$  are  $(x, y)$  coordinates of Monolith, both  $x$  and  $y$  starts from 0

## Promotions

Pawn can be promoted to any piece except Pawn, King, Star or Monolith. Pawn can only be promoted to a piece of the same color.

Promotions are forced, i.e. Pawn has to be promoted immediately, in the following variants: Classical Chess, Croatian Ties, Mayan Ascendancy and Conquest of Tlalocan. Forced promotion means that Pawn has to be promoted in the same move in which it reached opposite end of chessboard. If it was promoted by Pyramid, it has to be promoted in the very same ply in which it was reached by that Pyramid.

Promotions are not forced in all the other variants. Additionally, Pawn can be promoted at some point later in game. Promotion in that case is whole move, i.e. move in which only promotion is made. During that time (between being tagged for promotion and actual promotion itself), Pawn must not move, i.e. it has to be actually promoted on the same field it was tagged for promotion. If tagged Pawn moves before it gets promoted, it loses its tag, i.e. can no longer be promoted.

Pawn can be promoted to Queen if and only if existing Queen has been captured, in Nineteen and One variants. In these variants only one Queen, in the same color, is ever allowed to be present on chessboard. In all the other variants, each side can have multiple Queens present on chessboard at the same time.



# Appendix

Appendix contains description of algebraic notation, extended from the base described here:

[https://en.wikipedia.org/wiki/Algebraic\\_notation\\_\(chess\)](https://en.wikipedia.org/wiki/Algebraic_notation_(chess)).

This description mostly covers short notation, and is written in monospace font, e.g. **Nc3**.

Parts of classic notation clashes with new developments, and so had to be covered with exceptions made specifically for Classical Chess, so that algebraic notation retains compatibility with its classic form. These exceptions are written in monospace italics, e.g. **Nxb3**.

For instance, **0–0**, **0–0** and their Queen's side siblings for castling had to go in extended algebraic notation, since there are multiple castling choices available. Another example, **x** as annotation for a capturing move, e.g. **Nxv3**, since this might also be interpreted as disambiguation.

# Introduction

Symbol	Description
AN	algebraic notation, in general
CAN	classic AN, as described by FIDE handbook and Wikipedia, can be long, short or minimal
LAN	classic AN, long form
SAN	classic AN, short form
MAN	classic AN, minimal form
NAN	new, extended AN, can be long or short
EAN	new, extended AN, short form
XAN	new, extended AN, long form
FIDE	FIDE handbook
FIDE point	point in FIDE handbook

Table 1: Abbreviations

FIDE Handbook used in this book is defined in chapter [Prerequisites](#), as is [FIDE point](#).

Here, CAN is used to indicate compatibility with Classical Chess notation, even if examples are written on chessboards for other variants. CAN almost always means short notation, and only occasionally long, if appropriate.

## Variants

Variant	Contains
Classical chess	Pawn Knight Bishop Rook Queen King
Croatian Ties	Pegasus
Mayan Ascendancy	Pyramid
Age of Aquarius	Unicorn
Miranda's Veil	Wave
Nineteen	Star
Hemera's Dawn	Centaur Scout Grenadier
Tamoanchan Revisited	Serpent
Conquest of Tlalocan	Shaman
Discovery	Monolith
One	Starchild

Table 2: Variants

Each new variant contains all previously introduced pieces. For instance, Age of Aquarius beside Unicorn also contains Pyramid and Pegasus, on top of all classical pieces.

## Chessboards

Variant	Files		Ranks	
	<i>min</i>	<i>max</i>	<i>min</i>	<i>max/size</i>
Classical chess	a	h	1	8
Croatian Ties	a	j	1	10
Mayan Ascendancy	a	l	1	12
Age of Aquarius	a	n	1	14
Miranda's Veil	a	p	1	16
Nineteen	a	r	1	18
Hemera's Dawn	a	t	1	20
Tamoanchan Revisited	a	v	1	22
Conquest of Tlalocan	a	x	1	24
Discovery	a	x	1	24
One	a	z	1	26

Table 3: Chessboards

Positions on a chessboard are written the same as in base algebraic notation, file + rank, e.g. **m2** is initial position of light Pawn in Nineteen variant.

Maximum rank on a chessboard also represents the size of that board; all chessboards in all variants are squares. For instance, Hemera's Dawn variant is played on a chessboard with maximum rank of 20, so board size for that variant is  $20 \times 20$ .

## Pieces

Piece	Symbol	Introduced in
Pawn	P	
Knight	N	
Bishop	B	
Rook	R	Classical chess
Queen	Q	
King	K	
Pegasus	E	Croatian Ties
Pyramid	A	Mayan Ascendancy
Unicorn	U	Age of Aquarius
Wave	W	Miranda's Veil
Star	T	Nineteen
Centaur	C	
Scout	O	Hemera's Dawn
Grenadier	G	
Serpent	S	Tamoanchan Revisited
Shaman	H	Conquest of Tlalocan
Monolith	M	Discovery
Starchild	I	One

Table 4: Pieces

Each piece is present in variant in which it is introduced, and all subsequent ones. For example, Shaman is introduced in Conquest of Tlalocan variant, so it's also present in succeeding variants, Discovery and One.

# Notation

Simple movement is denoted the same way as in CAN, piece (always written as upper case) + destination field, which consists of rank (always written in lower case) + file (a number).

In this example of **Pegasus moving to destination field 3**, movement of the piece would be written as **Ef8**. The same movement in XAN, would be written as **Ec2-f8**.

When moving Pawn, symbol is omitted, so only destination field is written. In this example of **Pawn rushing to field 2**, movement can be written as **h5**. Long notation would be **h2-h5**.

## Disambiguation

Disambiguation is position notation, shortened to minimum necessary to distinguish from another position(s). It contains one of: just file, just rank, rank + file, in that order of preference. This is the same as in CAN, described in:

[https://en.wikipedia.org/wiki/Algebraic\\_notation\\_\(chess\)](https://en.wikipedia.org/wiki/Algebraic_notation_(chess))  
#Disambiguating\_moves, see also FIDE C.10. Disambiguation is used in a ply, to distinguish starting position of a piece from others of the same kind that can end their movement on the same destination field, or can share portion of a path.

For instance, should **Pegasus simple move example** had another light Pegasus at **i2** field, move to destination field 3 would be written as **Ecf8**.

## Capturing

Capturing move is denoted with \* (asterisk) at the end, usually followed by the captured piece. Only for Classical Chess capturing is denoted with **x**, before destination field. Here, **Pegasus could capture opponent's Pawn**, which would be written as **Eg4\*xP**, or just **Eg4\***, if captured piece is not needed.

In CAN, the same move would be written as **Exg4**. Note, FIDE handbook requires captures made by Pawn to contain starting file, **x**, and then destination field; see FIDE C.9.3. If **Wave activated by Pawn example** had dark Wave instead of light one, light Pawn would be able to capture it, which in CAN would be written as **fxe8**. The same move in new notation is written as **e8\***, and if captured piece is also written **e8\*w**.

## Castling

Castling is noted with & (ampersand), after King's symbol and destination file. This **castling example** would be written as **Kd&**, and this **castling example** as **Kr&**. File at which castling Rook ended can be written after &, the same examples would now be written as **Kd&e** and **Kr&q**.

Only for Classical Chess **o-o** and **o-o** for King's side, **o-o-o** and **o-o-o** for Queen's side are accepted as castling notation.

## Ply

**Ply** is a movement of a single piece in a cascading move. Two plies are separated by ~ (tilde). In the example starting with **Queen activating a Pyramid**, which then activates another Pyramid; example is comprised of series of 4 images, each corresponding to one ply, while last image depicts ending state. This can be written as **Qf7~Ai7~Ai9**.

In XAN, the same would be written as  
**Qk2-f7~Af7-i7~Ai7-i9**. A pair of [ , ] (square brackets) can be used to gather each ply to help tell them apart:  
**[Qk2-f7] ~ [Af7-i7] ~ [Ai7-i9]**.

## Pawn promotion

Pawn promotion is also written the same way as in CAN, as described in detail:

[https://en.wikipedia.org/wiki/Algebraic\\_notation\\_\(chess\)](https://en.wikipedia.org/wiki/Algebraic_notation_(chess))

#**Pawn\_promotion**, with Pawn's destination field + piece to which it was promoted to, like so: **e8Q**. Inserting = (equal sign) between field and promoted-to piece is also supported, e.g. **e8=Q**. If **promotion is being delayed**, usage of = is mandatory, as there is no immediate piece to promote to, e.g. **114=**.

If Pawn has been promoted, after being tagged for promotion, it is promoted on the same field at which it has been tagged. Notation in such a case is similar to normal promotion, only field written is the one already occupied by Pawn being promoted. For instance, Pawn tagged for promotion in previous example would have its actual promotion written as e.g. **114Q**, or as **114=Q**.

Similarly, **Pawn promoted by own Pyramid** just writes chosen piece to promote to, after writing movement of a Pyramid, like so **Ed8~Ah8Q**, or in XAN as **[E14-d8] ~ [Ad8-h8=Q]**.

Pawn capturing opponent's piece can also be promoted, if capture happened on opponent's figure row. For instance, if in first, Classic Chess example light Pawn captured dark Rook before promotion, it would be written as **e8\*RQ**, or better yet **e8\*R=Q** to avoid possible confusion. In CAN, promotion after capture would be written as **xe8Q**, or as **xe8=Q**.

## En passant

En passant is denoted with : (colon), after destination field. In this **en passant example** dark Pawn on the right might capture light Pawn if rushed, which is written as **h3:**. Rank of captured Pawn can be written after :, so our example might now be **h3:5**, if captured Pawn has been rushed to field 2.

If disambiguation is needed, it is written as previously described. Usually, it's enough to add starting file before destination field. If previous example had additional dark Pawn located at **g4**, en passant would be written as **ih3:**, or **ih3:5**.

In CAN, both en passant and its disambiguation form are written as **ixh3 e.p.**, where **e.p.** stands for en passant; see FIDE C.9.3.

## Conversion

Conversion is noted with % (percentage) after destination field. Example starting with **Bishop activating Pyramid**, which then converts opponent's Rook is covered by 3 images, 2 corresponding to 2 plies, and last one is for ending state. This is written as **Bd5~Ah5%**. Optionally, converted piece can be written after % symbol, so it would be **Bd5~Ah5%R**. In XAN, it would be **Bh9-d5~Ad5-h5%**. With both plies gathered and converted piece noted it would be **[Bh9-d5]~[Ad5-h5%R]**.

Starchild is immune to conversion, Pyramid attempting such a thing is **obliterated**. Failed conversion is noted with %% (double percentage) after destination field. This example of **conversion immunity** would be written as **B123~Ah23%%**. In XAN, with ply gathering, it would be **[Bs16-123]~[A123-h23%%]**.

## Complex movement

Individual steps are separated by . (single dot), multiple steps are separated by .. (two dots). In this example, **Centaur has to choose 2 different steps**, which it will then follow for the rest of ply. Lets say that destination is field 8, writing it as just **Cp15** is not good enough since at least 2 different paths lead to the same destination field.

The best way to write it is with both initial steps, i.e. **C.c5.g6..p15**, because this is exactly definition of such a movement, and will contain no ambiguity. Sometimes, it might be enough if only first step is written, i.e. **C.c5..p15**. The one of other paths leading to the same **p15** field would

be **C.f2.g6..p15**. Note also . separating piece and the first step, without it first step would be taken as an initial field.

Not recommended, but still possible is to write *some* step along the way, e.g. **C..i11..p15**. Care must be taken to write step which really differentiate paths, otherwise noted path might inadvertently also denote another. For instance, in addition to original path, **C..j9..p15** might also denote **C.b4.f5..p15**, which happens to cross **j9** as well.

In XAN, example would be best written as **Cd3.c5.g6-p15**. Depending on a situation, it's might be possible to drop either starting field, or one of initial steps, like so **Cd3.c5-p15**, while keeping path unique.

## Capturing-ply

Shaman can capture multiple pieces in one capturing-ply. In this example capture-ply just above horizontal line would be written as **H.h10\*.111\*.p12~Wn8**, if activated Wave is moved down, to the right. In XAN (with starting field, captured pieces and plies gathered), it would be **[Hd9.h10\*p.111\*p.p12]~[Wp12-n8]**.

## Transparency

Passing over a piece is noted by using ^ (caret) after a step, optionally followed by a piece which has been passed-over.

For instance, in this example light Queen could capture dark Pegasus, which would be written as

`Q..m4^..j7^..g10*`, or in XAN as  
`Qo2..m4^W..j7^W..g10*E.`

## Divergence

Diverging a piece is noted by using / (slash) after a step, optionally followed by divergent piece.

For instance, in [this example](#) light Queen could capture dark Pegasus, after diverging from light Shaman. This could be written as `Q..j7/..m10*`, or in XAN as `Qo2..j7/H..m10*E.`

## Displacement

Displacing a piece is noted by using < (less-than) after a step, followed by displacement field. Optionally, displaced piece can be written before displacement field.

For instance, in [this example](#), Serpent ends its ply with two Pawns displaced. This could be written as `S..e5<f5..f4<f3..h4`, or in XAN as `Sb4..e5<Pf5..f4<Pf3..h4.`

## Trance-journey

Trance-journey is noted with @ (at sign), instead of normal ply separator ~ (tilde), before [entranced piece](#) takes off. This [trance-journey example](#), if without any inter-

actions with pieces on entranced Shaman's step-fields, would be written as **Hd12@Hg24**. In XAN, it would be **[Hd12-e13]@[He13-g24]**.

Displacements are noted by writing < (less-than) immediately after step in which a piece was reached, followed by field of displacement. Optionally, displaced piece can be written before displacement-field. The same [trance-journey example](#), now with all interactions taken into account, would be written as **He13@H..e18<i14..m12<j17..g24**. In XAN, with gathered plies and displaced pieces it would be  
**[Hd12-e13]@[He13..e18<Ni14..m12<Pj17..g24]**.

Forward-displacement is written the same as ordinary trance-journey displacement, except entranced Shaman visits a field onto which a piece has been displaced in previous step, and so the same piece can be displaced again. This sharing of the same displacement- and step-field can be seen in [an example](#) which would be written as **Hu8@H..o10<i12..i12<c14..c14<a16**, or in XAN as **[Ht9-u8]@[Hu8..o10<Ri12..i12<Rc14..c14<Ra16]**, if final displacement of a Rook was chosen to be **a16**.

Captures are noted by writing \* (asterisk) immediately after step in which a piece is reached, optionally followed by a captured piece. This [trance-journey example with captures](#) would be written as  
**He13@H..e18\*..m12\*..g24**. In XAN, with gathered plies and captured pieces it would be  
**[Hf12-e13]@[He13..e18\*N..m12\*P..g24]**.

One peculiarity of dark Shaman's trance-journey is that it starts from the far end of a pattern inward, towards its initial position. Still, dark Shaman's trance-journey is noted similar to light's one. For instance, this [dark Shaman's trance-journey](#)

would be written as **He12@H..q16\*..k14\*..c18**. There is no step between Shaman's initial position and distant starting field of trance-journey, , (comma) is used to separate them, like so **He12@He12,w18..q16\*..k14\*..c18**. If initial position is omitted, separator (i.e. comma) is still written, like so **He12@H,w18..q16\*..k14\*..c18**. Now, in XAN with gathered plies and noted captured pieces it would look like so  
**[Hd13-e12]@[He12,w18..q16\*P..k14\*N..c18]**.

Another peculiarity of dark Shaman is dual trance-journey, which is written with @@ (double at-sign), optionally followed by list of captured pieces, each separated by , (comma). Each piece can optionally be followed by location where it was captured. Order of captured pieces in a list is not important. This example of **dark Shaman's dual trance-journey** is written just as **He12@@** or, with captured pieces, as **He12@@P,B,R,R,N,B,N**. In XAN, with gathered plies and capturing locations noted, it would be written as

**[Hd13-e12]@@**

**Pq16,Bp14,Rd20,Rg6,Nk14,Bj12,Nd10.**

Note, sacrificed entranced dark Shaman is *not* to be written in a list of captured pieces.

Failed trance-journey is noted with @@@ (triple at-sign) after entrancing ply. Optionally, oblationed piece can be written after @@@. In this **failed trance-journey example** all step-fields are blocked, so entranced light Shaman is oblationed, which is written as **Hz1@@@**, and in XAN, with plies gathered and oblationed piece, as **[Hy2-z1]@@@H**.

## Sense-journey

Sense-journey is noted with " (quotation mark), instead of normal ply separator ~ (tilde), before **uplifted piece** takes off. This **sense-journey example** would be written as **Ne1~Wc3~Hd4~Ic5"Bn7**. In XAN, it would be **[Nf4-e1] ~ [We1-c3] ~ [Hc3-d4] ~ [Id4-c5] " [Bc5-n7]**.

One peculiarity of sense-journey taken by uplifted dark piece is that it starts from the far end of a pattern inward, towards its initial position. There is no step between initial position of uplifted dark piece and distant starting field of sense-journey, , (comma) is used to separate them, like so **Ne1~Wc3~Hd4~Ic5"Bc5, z11..n7**. If initial position is omitted, separator (i.e. comma) is still written, like so **Ne1~Wc3~Hd4~Ic5"B, z11..n7**. Now, in XAN with gathered plies and noted initial, and starting positions it would look like so

**[Nf4-e1] ~ [We1-c3] ~ [Hc3-d4] ~ [Id4-c5] "  
[Bc5, z11-n7].**

Failed sense-journey is noted with ' (single apostrophe) after uplifting a piece. Optionally, oblationed piece can be written after '. In this **failed sense-journey example** all step-fields are blocked, so uplifted dark Bishop is oblationed, which is written as **Id4~Ic5'**, and in XAN, with plies gathered and oblationed piece, as **[Ic3-d4] ~ [Id4-c5]'B**.

## Syzygy, demoting to Pawn

Demoting to Pawn is noted by writing > (greater-than), optionally followed by disambiguating position, i.e. one of rank,

file or rank + file, in that order. Optional disambiguation can be preceded by piece which was demoted, and demotion-field can be written instead of just a disambiguation. If writing just demoted piece is enough to identify which one is it, and where, demoting position does not need to be written.

In this [syzygy example](#), if Monolith was moved by light player, then either light Wave or light Bishop could be demoted to Pawn. To be able to distinguish which one is it, either demoting position or piece has to be written. If Bishop was chosen, that would be written as **Mm12>p**. Since there is only one light Bishop in demoting-to-Pawn syzygy, the same move could be also written as **Mm12>B**. In XAN, with piece and demotion-field noted it would be **Mn14-m12>Bp8**. There is no plies gathering, since only Monolith moved, so there is only one ply.

## Syzygy, resurrection

Resurrection is written by appending **\$** (dollar sign) after the move, followed by piece which was resurrected. If Wave or Starchild has been resurrected on an empty field, position is appended after piece. If resurrecting opponent's piece, **\$\$** (double dollar) sign is appended after the move, followed by a piece to resurrect.

If there was no suitable empty field at which Wave or Starchild could be resurrected, resurrection is not performed, which could be written by appending **\$\$\$** (triple dollar) after the ply. Since there are no actual side-effects to failed resurrection, **\$\$\$** is optional.

If resurrection by light player ended by resurrecting own,

light Queen, it would be written as **It9\$Q**, and in XAN it would be **Ii23-t9\$Q**.

If, in the same example light player resurrected opponent's, dark Queen instead, it would be written as **It9\$\$Q**, and in XAN it would be **Ii23-t9\$\$Q**.

If previous example ended by **resurrecting Starchild**, it would be written as **It9\$Iu8**. In XAN, it would be **Ii23-t9\$Iu8**.

If all fields suitable for resurrection are occupied, it is written as **It9\$\$\$**, in XAN it would be **Ii23-t9\$\$\$**. Writing it as **It9**, or **Ii23-t9** is fine, it just doesn't note failed intention.

## Teleportation

Teleportation is noted by separating plies with | (vertical bar) instead of usual ~ (tilde), followed by field at which piece emerged. Optionally, teleporting piece can be written before emerging field. If Wave teleported, vertical bar is followed by Wave and its destination field, or movement, optionally followed by activated pieces' plies, if there were any.

If piece teleported, but there was no empty portal-field, teleportation failed, and is noted with ||| (triple vertical bar), optionally followed by oblationed piece. The same notation is used for teleported Wave, if all step-fields are blocked, or located off-board.

This **teleportation example** would be written as **Ba18|q18**, in XAN it would be **Bd15-a18|Bq18**.

This **blocked teleportation example** would be written as **Ra18|||**, or in XAN it would be **Ra13-a18|||R**.

In this **Wave teleporting example**, followed by **Wave teleported example**, if activated Pyramid would move 2 fields upward, complete move would be written as

**Eg15~Wa18|Wl4~Al6.** In XAN, with plies gathering, it would be

**[Ei11-g15] ~ [Wg15-a18] | [Wr1-14] ~ [A14-16].**

If previous example ended with **teleported Wave blocked** example, it would be written as **Eg15~Wa18|||**, and in XAN it would be **[Ei11-g15] ~ [Wg15-a18] |||w**.

This **cascading teleportation example** would be written by sequencing teleportations like so **Eh2~Wb4|Wa24|Wr4~Bt6**, if activated Bishop would take upper-right diagonal. In XAN, with plies gathering, it would be

**[Ej6-h2] ~ [Wh2-b4] | [Wm18-a24] | [Wx1-r4] ~ [Br4-t6].**

Starchild and Wave activated by it cannot teleport, which is written with **||** (double vertical bar), followed by destination field at which piece emerged. Destination field can be optionally preceded by emerging piece. So, **this example** would be written as **Ic3||b3**. In XAN, with ply gathering and emerging piece it would be **[If5-c3] || Ib3**.

Note, if there is no empty portal-field around Monolith (or a Star), piece is oblationed, and is written as failed teleportation, i.e. with **|||**, optionally followed by oblationed piece. So, if Starchild would be oblationed in previous example, it would be written as **Ic3|||**, or, in XAN as **[If5-c3]|||I**.

## Pawn-sacrifice

Pawn-sacrifice is written by separating plies with ; ; (double semicolon) instead of usual ~ (tilde), followed by capturing and displacing steps. All displacing steps must be written; capturing steps can be omitted if only a single path exists; captured and displaced pieces are not needed, as they can only be Pawns.

This **Pawn-sacrifice** followed by **tagged light Serpent's ply** is written as **Sb4~Ab2; ;**

**S..b6\*..b8\*.c9<c10..e9^W..g9\*.h8<h9.**

In XAN, with plies gathering, it would be

**[Sg3-b4]~[Ab4-b2]; ;**

**[Sb4..b6\*..b8\*.c9<c10..e9^W..g9\*.h8<h9].**

If there aren't enough Pawns captured or displaced to isolate only one path an additional, movement-only steps needs to be written as well. In previous example, if Serpent stopped at **b8**, at least two different paths are possible. Previous example started with **Sb4~Ab2; ; Sb4.c5.b6\*.c7.b8\*** path, other possible path is **Sb4~Ab2; ; Sb4.a5.b6\*.a7.b8\***. Again, for longer paths care must be taken to write step(s) which really differentiate paths, otherwise written path might inadvertently also denote others.

Care must also be taken to properly use step separator . (dot), and multiple step separator .. (two dots). Step separator . is for separating two steps, where one step immediately follows the other. Multi-step separator .. is for separating two steps which have at least one unwritten step in-between. For instance, first, short path in previous paragraph (i.e. **Sb4~Ab2; ; Sb4.c5.b6\*.c7.b8\***) shouldn't be shortened to **Sb4~Ab2; ; S..b6\*..b8\***, as it would also

denote **Sb4~Ab2**; ; **Sb4.c3.d4.c5.d6.c7.b6\*.a7.b8\***, a very different path indeed.

## Off-board traversal

Steps onto virtual, off-board fields are not written. For trance-journey, each possible destination field designates unique path on its own, so additional fields are necessary only if there is some kind of interactions between entranced Shaman and pieces on its step-fields.

For a Wave activated by Serpent, noting destination field might be enough, if destination field is on a different file and a different rank than starting field. If destination field is on the same rank or on the same file as starting field, then first step needs to be noted as well. In this **Wave activated by Serpent** example, if destination field is **j4**, then there is only one path leading to it, and it's **Se5~We5.f4.g5.h4.i5.j4**, so it can be noted just as **Se5~Wj4**.

If destination field is **i5**, which is on the same rank as Wave's ply starting field, then **Se5~Wi5** might be interpreted as either **Se5~We5.f4.g5.h4.i5**, or as **Se5~We5.f6.g5.h6.i5**, so first step is needed, like so **Se5~W.f4..i5**.

If Wave activated by Serpent is blocked from reaching destination field using only on-board step-fields, then only one path exists, and only destination field is needed. For instance, if in this **Wave off-board example** dark Knight were located at **u9**, and destination field is **v10** it would block Wave's ply **Sv6~W.u7.v8.u9.v10**, and only path available to Wave would be off-board, i.e. **Sv6~W..v8..v10**.

For a Wave activated by Unicorn or Centaur, noting destination field might be enough, if destination field does not share file, rank or diagonal with starting field. For instance, if destination in this [Wave off-board example](#) is field 2, then it can be noted just as **Uo3~Wp12**. If, in the same example, destination is field 1, then original path is **Uo3~W.m4.p6.n7..o10**, the other available path is **Uo3~W..n6.p7.m9.o10**, so at least one other step is needed to distinguish between the two paths.

## Losing tags

Losing tag is a side-effect of a tagged piece being moved, captured, etc. As such, losing tag can also [accompany some other side-effects](#). So, losing tag is denoted immediately after piece symbol, but before its starting position (regardless, if it's disambiguation or a field), before any steps, or destination field, depending on what is available. Writing lost tag is completely optional, it's meant to remind readers what happened and when.

Losing ability to castle is denoted with **&&** (double ampersand). [Using previous castling examples](#), if Rooks moved to their destination fields without castling, it would be written as **R&&e1**, and **R&&q1**, and in XAN it would be **R&&a1-e1**, and **R&&y1-q1**. Using just disambiguation, it could be written as e.g. **R&&a..e1**, and **R&&y..q1**.

If, in the first example, there were opponent's Bishop on light Rook's neighboring-field capturing it, it would be written as **Ba1\*R&&**, or as **Bb2-a1\*R&&** in XAN.

If [Pawn tagged for promotion](#) moves before actual promotion, it losses its tag, which is denoted with **==** (double equal)

sign), like so  **$\text{==e12}$** . In XAN the same move would be noted as **P==e11-e12**.

If the same example contained e.g. dark Bishop at **f12**, Pawn tagged for promotion could capture it, which would be written as  **$\text{==f12*B}$** , and in XAN as **P==e11-f12\*B**. When just disambiguation is needed, it could be written as  **$\text{==ef12*B}$** , or e.g. as **P==e.f12\*B**.

If, in the same situation, light Pawn instead of moving was captured by dark Unicorn on a field where it was tagged for promotion, it would be written as **Ue11\*P==**, and in XAN it would be **Ud7-e11\*P==**.

Losing ability to rush is denoted with :: (double colon). For instance, in this [teleporting example](#), after dark Rook's failed teleportation, light Bishop could capture dark Pawn on its initial position, which would be denoted as **Br17\*P::**, and in XAN it would be **Bq18-r17\*P::**.

In this [activating Pawns example](#), light Pawn on the left is being activated, and can capture dark Knight. This would be written as **Re2~Wc2~P::b3\*N**, and in XAN it would be **[Re6-e2] ~ [We2-c2] ~ [P::c2-b3\*N]**.

## Combining side-effects

It's possible to have two side-effects accompanying the same step, those can be written in any order, but are usually noted in the order of appearance; so, e.g. capture would be written before promotion, that is action before status.

As an example, light Pawn on a second to last rank could

capture dark Rook, and then promote after the same step. In One variant, if light Pawn and dark Rook occupy **d** and **e** files, respectively, this could be written as **e26\*R=Q** or, in XAN it would be **Pd25-e26\*R=Q**. Equally valid notation would be in reverse order, i.e. **e26=Q\*R**, and in XAN it would be **Pd25-e26=Q\*R**.

Care should be taken when omitting optional parts of notation. For instance, notation for capturing is optional, but it's also possible to omit just captured piece. Notation for immediate promotion is mandatory, but symbol is not. This gives us possibility to rewrite first notation of previous move as **e26\*Q**, which would be interpreted very differently.

## Default pathing

In Classical Chess, all pieces have exactly one path from starting field to destination, so to specify unique path only destination is needed when writing movement of a piece. This is no longer so for newly added pieces. For instance, Serpent can have multiple paths leading to the same destination; even though a single path cannot contain loops different paths can overlap, and they can have different lengths.

In [this Serpent's movement example](#), assuming that starting position is **c3**, and destination **g3**, depicted complete path is **Sc3.d4.c5.d6.e5.f6.g5.f4.g3**. Even with as few steps as possible, to have unique path it would still need to be written as **S..d6..f6..g3**.

However, one of the shortest paths (here, e.g. **Sc3.d4.e3.f4.g3**) would result in exactly the same outcome, namely Serpent moved from **c3** onto **g3**, with no ad-

ditional interactions taking place. Even with additional side-effects, most of the time it does not matter if a piece made long or short path to e.g. capture opponent's piece.

The only time when length of a path is important is in a cascade, when momentum is build-up by first piece, and spent by others. For instance, in a **Serpent activating Pyramid example**, depending on a path taken by Serpent, Pyramid might get 4, 8 or 12 momentum when activated.

Even so, exact path taken by a piece is not important, only amount of a momentum gathered, and spent. To correctly support movement of pieces in a cascade, momentum built by first piece has to be maximized, and momentum spent by activated pieces minimized. So, all movement can be written with just destination field; path is assumed to be the shortest possible for all pieces, except for the first piece in a cascade, which is assumed to be taking the longest path available.

First example here can then be written as **Sg3**, this would be taken as if **Sc3 . d4 . e3 . f4 . g3** is written, i.e. light Serpent would be taking the shortest path available. Next example would be written as **Sc7~Ad7**, if Pyramid moved 1 field to the right; movement is assumed to be

**[Sc3.d2.e3.f2.g3.f4.g5.f6.e5.d6.c5.b6.c7]**

**~[Ac7-d7]**, that is, light Serpent would take the longest path available, since it's the first piece in a cascade.

## Move symbols, annotations

Placeholder for a move is ... (three dots), usually used to resume game score after commentary, see

<https://en.wikipedia.org/wiki/>

## [Algebraic\\_notation\\_\(chess\)](#)#Notation\_for\_a\_series\_of\_moves.

Checks are noted with + (plus sign), checkmates are noted with # (hashtag), these are optional in CAN, see FIDE C.13. Self-checkmates are written as stand-alone # (hashtag) on an opponent's turn as a complete move, which ends a game, like so:

92. . . . # *Light player checkmated self.*

Note, self-checkmate is a claim that opponent checkmated self, it has to be validated by e.g. arbiters. If it's not valid, self-checkmate is rejected as if player tried to perform an invalid move, and game continues with a player putting forward such a claim still "on turn".

Resigns are written with ## (double hashtag) as a complete move, which also ends a game, like so:

92. . . . ## *Dark player resigns.*

Draw offer is noted with (=) (equal sign in brackets), see FIDE C.12; it's written immediately following a completed move notation (which might include check), like so:

71. **Nb3+ (=)** . . . *Light player offers draw.*

Draw offer can be accepted, as long as draw offered by the opponent is valid, i.e. not canceled, by writing ==(two equal signs in brackets) as a complete move, which ends a game, like so:

82. . . . ==) *Dark player accepts draw offer.*

Draw offer can be canceled by writing (-) (minus sign in brackets), after a complete move, like so:

79. **Bc7+ (-) . . .** *Light player cancels draw offer.*

Forced draw, i.e. draw by rules, is written with **(==)** (three equal signs in brackets) as a complete move, this also ends a game, like so:

82. . . . **(==)** *Draw forced, by the rules.*

In NAN checks are optional; checkmates, self-checkmates, resigns, accepted and forced draws are all mandatory, to set game score end. Draw offers, cancelations are mandatory to set limits within which draw offer is valid, and can be accepted by the opponent.

Annotations are written at the end of a complete move, draw offer, e.g. **ef8\*!**, **Nb3 (=)=**. It is recommended to use \_ (underscore) to separate AN and annotations, like so **ef8\*\_!**, **Nb3 (=)\_=**. Usage of underscore is mandatory when annotation can be confused for a regular chess AN.

For instance, **e8=** might be Pawn tagged for promotion, or both players have equal chances of winning, see  
[https://en.wikipedia.org/wiki/Algebraic\\_notation\\_\(chess\)  
#Annotation\\_symbols](https://en.wikipedia.org/wiki/Algebraic_notation_(chess)#Annotation_symbols). In such a case, regular chess AN is assumed, i.e. it is Pawn tagged for promotion. If annotation is meant instead, it has to be written as **e8\_=**.

# Summary

Now that all symbols have been introduced, they're gathered here according to their purpose.

## Side-effects

Symbol	Side-effect	Mandatory?
*	capturing	-
<	displacement	+
==	lost promotion tag	-
::	lost rushing tag	-
&&	lost castling tag	-
:	en passant	-
&	castling	-
=	promotion	+
=	tag for promotion	-
%	conversion	+
%%	failed conversion, oblation	+
^	transparency	-
/	divergence	-
>	syzygy, demoting to Pawn	+
\$	syzygy, resurrection	+
\$\$	syzygy, resurrecting opponent's piece	+
\$\$\$	failed resurrection	-

Table 5: Side-effects

Every side-effect is result of a single step. Most side-effects can occur only on a last step of a ply, these are called ply

side-effects. Capturing, displacement and losing (promotion, rushing, or castling) tags are both step and ply side-effects, others are purely ply side-effects.

In Classical Chess capturing opponent's piece is the most prevalent side-effect, since there aren't all that many, and those can be done once per Pawn (en passant, promotion), or once per whole game (castling). So, in CAN capturing is optional, see FIDE C.9; this is so in NAN as well.

Most mandatory side-effects are marked as such, because otherwise AN would lack information to describe what happened. Displacement has to have a destination field where a piece has been displaced. Promotion needs a promoted-to piece written, otherwise it's assumed that a Pawn has been tagged for promotion. Demoting to Pawn syzygy has to have, at very least, a disambiguation (or piece, if unique) written to be able to find which piece has been demoted, and on which field. Resurrection syzygy must have a piece which has been resurrected, if initiating Starchild was not oblationed then destination field as well.

Other mandatory side-effects are designated as such, because otherwise it could be assumed that targeted piece has been captured. Conversion and failed conversion are such side-effects.

It is recommended to also write optional side-effects and their data, for not much more effort reader is presented with much easier to understand notation. Compare minimalistic notation with slightly more verbose version:

**Re2~Wc2~b3** vs.

**Re2~Wc2~b3\*** vs.

**Re2~Wc2~P : :b3\*N,**

**He12@H..q16..k14..c18** vs.

**He12@H..q16\*..k14\*..c18** vs.

**He12@H,w18..q16\*p..k14\*n..c18,**

**He12@@** vs.

**He12@@P,B,R,R,N,B,N** vs.

**He12@@Pq16,Bp14,Rd20,Rg6,Nk14,Bj12,Nd10.**

## Side-effects on pieces

Piece	Disposable?	Diverging?
Pawn	+	+
Knight	+	+
Bishop	+	+
Rook	+	+
Queen	+	+
King	-	-
Pegasus	+	+
Pyramid	+	+
Unicorn	+	*2
Wave	+	*3
Star	-	-
Centaur	+	-
Scout	+	+
Grenadier	+	+
Serpent	+	-
Shaman	+	+
Monolith	-	-
Starchild	*1	-

Table 6: Side-effects on pieces

Disposable pieces are all that can be captured, that is all

but Kings, Stars and Monoliths. Disposable pieces can also be displaced, oblationed, and resurrected. Pawn can be promoted to any other disposable piece.

All disposable pieces, except Starchild, can also be teleported and converted. Most disposable pieces, except Centaur, Serpent, and Starchild, can also be diverted. Waves activated by disposable pieces can be diverted, except if activated by Unicorn, Centaur, Serpent, or Starchild.

Non-disposable pieces (Kings, Stars and Monoliths) cannot be captured, displaced, teleported, converted, oblationed, resurrected, or diverted. Pawn cannot be promoted to any non-disposable piece.

---

<sup>1</sup>Unlike other disposable pieces, Starchild cannot be neither teleported, nor converted.

<sup>2</sup>While Unicorn can be diverted, Wave activated by Unicorn cannot be diverted.

<sup>3</sup>Wave activated by another Wave can be diverted, if activating Wave could be diverted; that depends on which last material (non-Wave) piece was preceding those Waves in a cascade.

## Accompanying losing tags

Sym.	Side-effect	Accompanying losing tags		
		<i>castling</i>	<i>promoting</i>	<i>rushing</i>
*	capture	+	+	+
<	displacement	+	+	+
:	en passant	-	-	-
&	castle	*	-	-
=	promotion	-	*	-
=	tag for promotion	-	-	-
%	conversion	-	+	-
%%	failed conversion, oblation	-	-	-
^	transparency	-	-	-
/	divergence	-	-	-
>	syzygy, demoting to Pawn	+	-	-
\$	syzygy, resurrection	-	-	-
\$\$	syzygy, resurrecting opponent's piece	-	-	-
\$\$\$	failed resurrection	-	-	-

Table 7: Accompanying losing tags

Table above lists most side-effects in rows. Some of those side-effects could also cause targeted piece to lose its promoting, rushing, or castling tag. Losing tags (accompanying those side-effects) are listed as columns. For instance, Rook still holding its castling tag can be captured, which is indicated by + (plus sign), under column *castling*, and row *capture*.

Some combinations are not possible, which is noted by -

(minus sign). For example, Pawn holding promoting tag cannot be captured by en passant move, as indicated by - at *promoting* column and *en passant* row. This is so because Pawn can get promoting tag only on opponent's side of chessboard, while it can be subjected to en passant only on own side of chessboard.

Two combinations are actually using a tag, those are indicated by \* (asterisk). Using a tag implicitly loses it, since no tag can be repeatedly applied (e.g. Pawn after promotion cannot be promoted again), so using a tag is not written as tag loss in AN. For instance, a Rook having castling tag can castle, as found under *castling* column, and *castle* row. Another instance is a Pawn holding promoting tag which it can use, found in *promoting* column and *promotion* row.

## Path separators

Symbol	Separates
.	single steps
..	multiple steps
-	steps and destination field
~	plies
	teleportation
	failed teleportation, re-emergence
	failed teleportation, oblation
@	trance-journey
@@	dual trance-journey, oblation
@@@	failed trance-journey, oblation
;;	Pawn-sacrifice
"	sense-journey
'	failed sense-journey, oblation
,	items in a list
[, ]	ply gathering

Table 8: Path separators

First 3 symbols (., .., and -) separates steps within a single ply. Other symbols (~, |, @, ;;, and ") are separators between plies; or ply and, by extension, move terminators (||, |||, @@, @@@, and ').

Items separator (,) is used where multiple items needs to be listed for a single step (or a ply), e.g. pieces captured in a dark Shaman's dual trance-journey.

Ply gathering symbols ([, ]) are just wrappers around plies to visually enhance them, making them easier to tell apart, but otherwise does not contribute any new information.

## Move symbols

Symbol	Status
+	check
#	checkmate
#	self-checkmate
##	resign
(=)	draw offered
(-)	draw offer withdrawn
(==)	draw accepted
(==)	draw by rules
_	annotations separator
...	placeholder for a move

Table 9: Move symbols

Check notation is optional in NAN, just like in CAN, see FIDE C.9. Checkmate, self-checkmate and resign notations are mandatory, to note end of a game score (list of moves by both players).

All of draw notations are mandatory in NAN; offering draw and canceling offer because they give an opportunity window within which draw offer can be accepted by the opponent. Accepted draw and draw by rules notations are mandatory, since they also note end of a game score.

Draw offer does not expire, and can be issued multiple times. If a draw offer is not valid anymore it has to be canceled; a single **(-)** cancels draw offer, regardless how many times it was offered prior to cancelation.

## Initial setups

Variant	No. of Pawn rows
	Figure row
Classical chess	1
	<b>RNBQKBNR</b>
Croatian Ties	1
	<b>RENBQKBNER</b>
Mayan Ascendancy	1
	<b>REANBQKBNAER</b>
Age of Aquarius	1
	<b>REAUNBQKBNUAER</b>
Miranda's Veil	1
	<b>REAUWNBQKBNWUAER</b>
Nineteen	2
	<b>TRNBWEUAQKAUEWBNRt</b>
Hemera's Dawn	2
	<b>TRNBCWEUAQKAUEWCBNRt</b>
Tamoanchan Revisited	2
	<b>TRNBSWUECAQKACEUWSBNRt</b>
Conquest of Tlalocan	2
	<b>TRNBSCUWEAHQKHAEWUCSBNRt</b>
Discovery	2
	<b>TRNBSCUWEAHQKHAEWUCSBNRt</b>
One	2
	<b>TRNBSICUEWAHQKHAWEUCISBNRt</b>

Table 10: Initial setups of light figures

Initial setups table contains complete row of figures for light player, at the beginning of a match. In this table, lower case letters are used to denote dark pieces. In later variants, dark Star is positioned in bottom right corner of a chessboard, which is indicated with **t**.

Dark player's setup is mirrored, with all figures switched to opposite of light player's setup. So, for Nineteen variant **TRNBWEUAQKAUEWBNRT** becomes **trnbwguaqkaugwbnrT** for dark player.

Each variant can have 1 or 2 rows of Pawns for each player, in front of its figures. For light player, Pawn rows are rows 2 (and 3, in later variants). For dark player Pawn rows are 2nd to last (and 3rd to last, in later variants).

## Scouts

In addition to two rows of Pawns, most of later variants also feature Scouts.

Variant	Light Scouts setups
Hemera's Dawn	c4, g4, n4, r4, d5, f5, o5, q5
Tamoanchan Revisited	g4, k4, l4, p4, h5, j5, m5, o5
Conquest of Tlalocan	d4, h4, i4, l4, m4, p4, q4, u4, e5, g5, j5, 15, m5, o5, r5, t5
Discovery	d4, h4, i4, l4, m4, p4, q4, u4, e5, g5, j5, 15, m5, o5, r5, t5
One	e4, i4, j4, m4, n4, q4, r4, v4, f5, h5, k5, m5, n5, p5, s5, u5

Table 11: Light Scouts setups

Table above contains initial positions of Scouts for light player.

Variant	Dark Scouts setups
Hemera's Dawn	c17, g17, n17, r17, d16, f16, o16, q16
Tamoanchan Revisited	g19, k19, l19, p19, h18, j18, m18, o18
Conquest of Tlalocan	d21, h21, i21, l21, m21, p21, q21, u21, e20, g20, j20, l20, m20, o20, r20, t20
Discovery	d21, h21, i21, l21, m21, p21, q21, u21, e20, g20, j20, l20, m20, o20, r20, t20
One	e23, i23, j23, m23, n23, q23, r23, v23, f22, h22, k22, m22, n22, p22, s22, u22

Table 12: Dark Scouts setups

Table above contains initial positions of Scouts for dark player.

## Grenadiers

Some of Pawns found in two initial rows are exchanged for Grenadiers, in most of later variants.

Variant	Light Grenadiers setups
Hemera's Dawn	c3, g3, n3, r3, d2, f2, o2, q2
Tamoanchan Revisited	g3, k3, l3, p3, h2, j2, m2, o2
Conquest of Tlalocan	d3, h3, i3, l3, m3, p3, q3, u3, e2, g2, j2, l2, m2, o2, r2, t2
Discovery	d3, h3, i3, l3, m3, p3, q3, u3, e2, g2, j2, l2, m2, o2, r2, t2
One	e3, i3, j3, m3, n3, q3, r3, v3, f2, h2, k2, m2, n2, p2, s2, u2

Table 13: Light Grenadiers setups

Table above contains initial positions of Grenadiers for light player.

Variant	Dark Grenadiers setups
Hemera's Dawn	c18, g18, n18, r18, d19, f19, o19, q19
Tamoanchan Revisited	g20, k20, l20, p20, h21, j21, m21, o21
Conquest of Tlalocan	d22, h22, i22, l22, m22, p22, q22, u22, e23, g23, j23, l23, m23, o23, r23, t23
Discovery	d22, h22, i22, l22, m22, p22, q22, u22, e23, g23, j23, l23, m23, o23, r23, t23
One	e24, i24, j24, m24, n24, q24, r24, v24, f25, h25, k25, m25, n25, p25, s25, u25

Table 14: Dark Grenadiers setups

Table above contains initial positions of Grenadiers for dark player.

## Monolith initial positions

Variant	Side	
	<i>light</i>	<i>dark</i>
Discovery	<b>b7</b>	<b>w18</b>
One	<b>b8</b>	<b>y19</b>

Table 15: Monolith initial positions

Table above contains initial positions of both Monoliths, one located on light side of chessboard, the other on dark side.

## Movement limits

Variant	Scout	Grenadier	Serpent	
		hor.	vert.	
Hemera's Dawn	5	3	2	—
Tamoanchan Revisited	6	4	2	14
Conquest of Tlalocan	6	4	2	15
Discovery	6	4	2	15
One	7	5	3	16

Table 16: Movement limits

Movement limits table contains maximum number of steps Scouts, Grenadiers, and Serpents can make, depending on which variant is being played.

Grenadier's limits in the table above apply when there are no opponent's pieces on its grenadier-fields. Horizontal and vertical movement limits for Grenadier are different, and can be found in columns *hor.*, and *vert.*, respectively.

When there are opponent's pieces on its grenadier-fields, Grenadier can make 1 step up or down. In close quarters, Grenadier can make 1 step more than the count of opponent's pieces on its grenadier-fields to the left or to the right. After each step, Grenadier can end its ply with forking capture-step.

So, in close quarters, Grenadier's movement limits are 2 steps when starting a ply with a vertical step, and 10 steps when starting with a horizontal step, regardless which variant is being played.

Serpent is introduced in Tamoanchan Revisited variant, so its movement limit is not defined for Hemera's Dawn variant.

Monolith can make one step more than the number of Pawns player has. Starchild can make only one step in a ply.

## Rushing limits

<i>Ranks</i>	Light		Dark	
<b>Variant</b>	<i>min</i>	<i>max</i>	<i>min</i>	<i>max</i>
Classical chess	4	4	5	5
Croatian Ties	4	5	6	7
Mayan Ascendancy	4	6	7	9
Age of Aquarius	4	7	8	11
Miranda's Veil	4	8	9	13
Nineteen	4	9	10	15
Hemera's Dawn	4	10	11	17
Tamoanchan Revisited	4	11	12	19
Conquest of Tlalocan	4	12	13	21
Discovery	4	12	13	21
One	4	13	14	23

Table 17: Rushing limits, ranks

Table above contains minimum and maximum rank a rushing private can reach. All privates can rush up to, and including, the farthest rank on their own side of a chessboard. So, destination ranks reachable by light and dark players do not overlap when rushing.

Rank limits are based on movement of privates closest to initial rank of own figures. For light player table contains limits for privates on the second rank, and for dark player on the second to last rank.

In later variants, as more privates are added to initial setup, those on more forward positions cannot reach all of destination ranks listed above when rushing.

For instance, in Discovery variant light Scouts at initial rank 5 can only rush between, and including, ranks 7 to 12.

## Castling limits

<i>Files</i>	Queen-side		King	King-side	
<b>Variant</b>	<i>min</i>	<i>max</i>	<i>pos</i>	<i>min</i>	<i>max</i>
Classical chess	c	c	e	g	g
Croatian Ties	c	d	f	h	i
Mayan Ascendancy	c	e	g	i	k
Age of Aquarius	c	f	h	j	m
Miranda's Veil	c	g	i	k	o
Nineteen	d	h	j	l	p
Hemera's Dawn	d	i	k	m	r
Tamoanchan Revisited	d	j	l	n	t
Conquest of Tlalocan	d	k	m	o	v
Discovery One	d	k	m	o	v
	d	l	n	p	x

Table 18: Castling limits, files

Table above contains minimum and maximum files a castling King can reach, separated for Queen-side and King-side castling. Light and dark Kings share the same file at the beginning of a game, listed in the middle column.

Rook always ends on a field immediately to the right of a King in Queen-side castling, and immediately to the left in King-side castling. This can be seen in [previous castling](#) examples, if they are rewritten in full notation. For instance, [Queen-side castling Kd&e](#) could be written as **Kh1-d1&Ra1-e1**, and [King-side castling Kr&q](#) could be written as **Kn1-r1&Ry1-q1**.

## Movement of Wave

Activated		Moves like
by piece	at field	
Pawn		Pawn, unlimited steps
Knight		Pegasus
Bishop		Bishop
Rook		Rook
Queen		Queen
King		Queen
Pegasus		Pegasus
Pyramid		Rook
Unicorn		Centaur, unrestricted 2 initial step choices
Wave		activating Wave
Star		—
Centaur		Centaur
Scout		Scout, unlimited steps
Grenadier	step- capture-	Rook Bishop
Serpent		Serpent, 2 alternating directions, unlimited steps
Shaman		Shaman
Monolith		—
Starchild		Starchild

Table 19: Movement of Wave

Wave generally moves the same way as activating piece in the moment of activation, with ability to make multiple steps in chosen direction (until end of a chessboard is reached), even if activating piece can make only a single step. For in-

stance, Wave activated by Knight moves like a Pegasus. **Wave activated by Serpent** is an exception, it moves by alternating between 2 diagonal steps, which, once chosen, can't be changed for the remainder of Wave's ply.

Wave moves over the same kind of fields (step- or capture-fields) as activating piece in the moment of activation, and has the same choice of directions over those fields regardless of any previous choice. An example, Wave activated by Shaman on a capturing-field moves over that Shaman's capturing-fields, even if it can't capture any piece.

Wave activated by Pawn moves toward opponent's figure row, either in a straight line (if **activated on a step-field**), or diagonally (if **activated on a capture-field**); once direction is chosen, it can't be changed for the remainder of Pawn's ply. In later variants (Nineteen, and onwards) **Pawn can move laterally by one step-field**; Wave activated on a step-field can now move either straight forward as before, or sideways.

Wave activated by Unicorn moves similar to Centaur, it has to keep alternating between two initially chosen steps, but it's not restricted in choosing second step based on a choice of the first one. Wave can choose any two steps Unicorn could make from its starting field and first step-field.

Wave activated by Scout moves as if activated by a sideways-moving Pawn, with only difference that Wave activated on capture-fields now moves diagonally backwards, towards own initial positions.

Wave activated by Grenadier moves like a Rook, if activated on Grenadier's step-fields; or like a Bishop, if activated on its capture-fields.

Wave cannot be activated by a Star or a Monolith. Wave can teleport, if activated by any piece, but Starchild. Wave activated by Starchild cannot neither teleport, nor activate a Star.

All other properties of Wave movement remains the same, regardless which piece activated it, and on which (step- or capture-) field: ability to move past (pass over) pieces on a chessboard as if they're not there (except Monoliths), inability to capture any piece, ability to activate any own piece (except King, Pyramid can't be activated on step-fields), ability to activate opponent's Wave, ability to move over the edge of a board as long as Wave's ply ends on it, and ability to transfer all of received momentum to activated piece.

## Piece activations

	<b>Activating</b>	<b>Activated</b>
<i>Piece</i>	<i>At field</i>	
any	capture or miracle	own Pyramid
any	any	own Wave
Wave	any	any own, except King, Pyramid
Wave <sup>1</sup>	capture or miracle	any own, except King
Wave	any	opponent's Wave
Starchild	any	own Starchild
Starchild	miracle	any own, except King
Starchild	miracle	opponent's Starchild
Starchild	miracle	any Star

Table 20: Piece activations

Here, activated own piece means it's in the same (dark or light) color as activating piece, activated opponent's piece means it's in the opposite color to activating piece.

Wave does not have any of step-, capture-, or miracle-fields on its own; fields are inherited from an activating piece, in the moment of activation. Activating piece itself can be a Wave,

---

<sup>1</sup>If activated on capture-fields, or Starchild's miracle-fields.

which inherited fields from a piece preceding it in a cascade. Every inheritance chain starts with a material (i.e. non-Wave) piece, such a piece is called activator.

Wave inherits (step-, capture-, or miracle-) fields from an activator as a whole set of fields over which to move. Distinction is important when those sets of fields are different from each other, as they are for Pawns, Scouts, Grenadiers, Shamans, and Starchilds.

For instance, Wave activated by Pawn on its step-field has to move only over that Pawn's step-fields (from activating field straight forward, towards opponent), and cannot move over Pawn's capture-fields (diagonally, towards opponent). Later, a sideways step-fields are added to Pawn's repertoire; from then on, activated Wave can also choose to move laterally, regardless if Wave was activated on a forward, or a side step-field.

With inherited fields, Wave does not inherit what interactions it can do on those fields. For instance, Wave cannot capture opponent's pieces, even if activated on a capture-field.

Wave can also activate the same pieces as activating piece could activate, in the moment of activating that Wave; with addition of activating opponent's Wave.

So, when saying that Wave can activate own Pyramid on a capture-fields, it does not mean that Wave can now capture opponent's pieces; it just means that Wave is moving over its activator's capture-fields; and with capture-fields Wave also got an option to activate own Pyramid.

## Transparency of pieces

Stationary piece	is ... to	Moving piece
material <sup>1</sup> , except Starchild	opaque	material <sup>1</sup> , except Starchild
Wave all, except Monolith	transparent transparent	all, except Monolith Wave
Monolith all, except Starchild	opaque opaque	all, except Starchild Monolith
Starchild	transparent	all

Table 21: Transparency of pieces

A stationary **piece is transparent** if moving piece is not blocked by it, and can continue movement past it; otherwise, it's opaque. Transparency does not define if a moving piece can interact in any other way with stationary piece, or not.

To utilize transparency, moving piece has to be able to make at least two steps; one towards stationary piece, and one away. So, a single-step piece (e.g. Knight, King, ...) cannot use transparency, even if it encounters transparent piece (e.g. Wave). The same applies to activated pieces which don't have at least two momentum. This is also the reason why in the table there is no record with Starchild listed under *moving piece* column.

---

<sup>1</sup>Material is any piece, except Wave.

## Piece actions

Piece	Fields	Action at ... step	
		<i>any</i> <sup>1</sup>	<i>last</i>
King	<i>any</i> <sup>2</sup>	—	step, capture, castling, activate own Wave, Pyramid
Knight, Unicorn	<i>any</i> <sup>2</sup>	—	step, capture, teleport, activate own Wave, Pyramid
Bishop, Rook, Queen, Pegasus	<i>any</i> <sup>2</sup>	step, transparency, divergence	step, capture, teleport, activate own Wave, Pyramid

Table 22: Piece actions in a single ply, part 1

Table on this and next few pages shows what actions a piece can do, and on what fields. Actions are usually side-effects to a step (e.g. a capture), and sometimes ply separators if more than just a simple cascade (e.g. teleportation). Steps without side-effect are written just as *step* in *action* columns.

Usually, actions on the last step in a ply are different than those on preceding steps. For instance, most pieces can capture opponent's piece only on the last step. Some pieces can make only one step in a ply, if so available actions are listed in the last step, and preceding steps are left empty, i.e. containing just — (long dash).

---

<sup>1</sup>Any step except the last one.

<sup>2</sup>Step- and capture-fields are the same.

Piece	Fields	Action at ... step	
		<i>any</i> <sup>1</sup>	<i>last</i>
Pawn	step-	— <sup>3</sup> , step <sup>4</sup> , transparency <sup>4</sup> , divergence <sup>4</sup>	step, teleport, promotion, activate own Wave
Pawn	capture-	—	capture, teleport, promotion <sup>5</sup> , en passant, activate own Wave, Pyramid
Pyramid	any <sup>2</sup>	step, transparency, divergence	step, capture, teleport, Pawn-sacrifice, promoting <sup>6</sup> Pawn, conversion, activate own Wave, Pyramid

Table 23: Piece actions in a single ply, part 2

Some actions are not available to pieces which can make only one step in a single ply, these include transparency and divergence. Pawn is one such a piece; however, when rushing, Pawn can make more than one step, and then it can diverge and use transparency.

<sup>1</sup>Any step except the last one.

<sup>2</sup>Step- and capture-fields are the same.

<sup>3</sup>When not rushing.

<sup>4</sup>Only when rushing.

<sup>5</sup>Including capture + promotion as side-effects of a single step.

<sup>6</sup>Includes tagging Pawn for promotion.

Piece	Fields	Action at ... step	
		any <sup>1</sup>	last
Wave	step <sup>2</sup> -	step, transparency, divergence <sup>5</sup>	step, teleport, activate any Wave, own pieces except King, Pyramid
Wave	capture <sup>3</sup> -	step, transparency, divergence <sup>5</sup>	step, teleport, activate any Wave, own pieces except King
Wave	miracle <sup>4</sup> -	—	step, teleport, activate any Wave, own pieces except King
Star	step-	—	step

Table 24: Piece actions in a single ply, part 3

Wave cannot capture, and so all fields it's traversing are actually step-fields. In the table above, *fields* column for Wave notes over which kind of fields activating piece was traveling. For instance, if activated by rushing Pawn, Wave cannot activate Pyramid, because rushing Pawn moves over its own step-fields, and so first row applies.

<sup>1</sup>Any step, except the last one.

<sup>2</sup>Activated on a step-field.

<sup>3</sup>Activated on a capture-field.

<sup>4</sup>Activated on a miracle-field.

<sup>5</sup>Cannot diverge if activated by Unicorn or Centaur.

Piece	Fields	Action at ... step	
		<i>any</i> <sup>1</sup>	<i>last</i>
Centaur	any <sup>2</sup>	step, transparency	step, capture, teleport, activate own Wave, Pyramid
Scout, Grenadier	step-	step, transparency, divergence	step, teleport, activate own Wave
Scout, Grenadier	capture-	—	capture, teleport, en passant, activate own Wave, Pyramid
Serpent	any <sup>2</sup>	step, transparency, displacement <sup>3</sup> , capture <sup>45</sup>	step, capture <sup>5</sup> , teleport, displacement <sup>3</sup> , activate own Wave, Pyramid

Table 25: Piece actions in a single ply, part 4

Only after Pawn-sacrifice Serpent can capture at any step; only Pawns can be captured, regardless if opponent's or own. Otherwise, Serpent (without Pawn-sacrifice tag) can capture any opponent's piece, but only at the very last step in its ply, just like all the other **materiel pieces** except Shaman.

Unlike other **material pieces**, Centaur and Serpent cannot diverge.

<sup>1</sup>Any step, except the last one.

<sup>2</sup>Step- and capture-fields are the same.

<sup>3</sup>Serpent can displace only Pawns.

<sup>4</sup>Only after Pawn-sacrifice.

<sup>5</sup>After Pawn-sacrifice, Serpent can capture only Pawns.

Piece	Fields	Action at ... step	
		<i>any</i> <sup>1</sup>	<i>last</i>
Shaman	step- <sup>2</sup>	step, transparency, divergence	step, teleport, activate own Wave
Shaman	capture-	capture, divergence	capture, teleport, activate own Wave, Pyramid
Shaman	trance-	—	trance-journey
entranced Shaman	step- <sup>3</sup>	step, capture, transparency, displacement	step, capture, transparency, displacement

Table 26: Piece actions in a single ply, part 5

Captures during double trance-journey are mandatory, unlike regular trance-journey during which both captures and displacements are optional.

Note that double trance-journey itself is optional undertaking, dark Shaman entranced by other dark Shaman can choose whether to take on regular or double trance-journey.

---

<sup>1</sup>Any step, except the last one.

<sup>2</sup>Ordinary step, i.e. not during trance-journey.

<sup>3</sup>Only during trance-journey.

Piece	Fields		Action at ... step
		<i>any</i> <sup>1</sup>	<i>last</i>
Monolith	step-	step	step, demoting to Pawn
Starchild	step-	—	step, resurrection, activate own Wave, Starchild
Starchild	miracle-	—	activate any Star, opponent's Starchild, own pieces except King
Starchild	uplifting-	—	sense-journey

Table 27: Piece actions in a single ply, part 6

While Waves, Starchilds are resurrected on miracle-fields, to initiate resurrection Starchild has to step into appropriate syzygy, so resurrection is an action following step onto step-field, not miracle-field.

---

<sup>1</sup>Any step, except the last one.

# Grammar

Entity	Meaning
< >	named entity, to be substituted
	choice between 2 values, can be chained
[ ]	optional item(s)
( )	grouping item(s), scope
{ }	repeating item(s), one or more times
\$	line comment
—	space
<b>value</b>	verbatim AN value
<b>value</b>	compatibility value, for CAN

Table 28: Grammar

Here, notational grammar is described in more formal, concise way. Annotations are not covered, as they are shorthand for non-standardized commentary.

Verbatim values (e.g. **x**) are as they appear in AN, compatibility values (e.g. **x**) are used exclusively for CAN. Empty value is represented just with an empty group, i.e. (); it's used to denote when there is no special move status, like check or checkmate.

Value separator | is used to present choice between 2 values, e.g. **a** | **b**. Choices can be chained, as in **a** | **b** | **c**.

Optional items are enclosed in [ ] for items to appear or not. Items are grouped by enclosing them in ( ), which envelops them into a scope. Repeating items are enclosed in { }, to be repeated at least once.

Formatting and spacing is added to improve legibility, normally AN is written without any gaps. When space is needed, it is written as \_ (underscore). Choices and groups are also valid regardless of formatting, spacing, e.g.

```
<abc> = def
        ghi
        | jk1
```

means `<abc>` is to be replaced with either **defghi** or **jk1**.

Choices are capturing complete values separated by `|`, or to the either end of definition. For instance,

```
<abc> = a | b <cde> f | g
```

has one choice with 3 distinct values, **a**, **b** <cde> **f** and **g**; and *not* two choices, each with 2 distinct values, namely **a** or **b**, **f** or **g**.

Groups can contain other groups, if they do, they are valid until first matching closing bracket. Each closing bracket always closes exactly one group. For instance,

```
<abc> = a [ b [ c ] d ] e
```

gives **abcde**, **abde**, **ae** for `<abc>`. Brackets cannot overlap, i.e. if group contains other group, it must be contained in its entirety. For instance:

```
<abc> = a [ b ( c ] d ) e
```

is not valid example, because first group `[ ]` is closed containing dangling (open, but not closed) second group `( )`.

Choices are fully contained within enclosing group. For instance,

```
<abc> = d | e [ f | g ] h | i
```

has two choices. Choice inside option group [ ] has 2 possible values, either **f** or **g**. Global choice (not contained in any group) has 3 possible values: **d**, **e**[**f|g**]**h** or **i**. This gives **d**, **efh**, **egh**, **eh** and **i** as possible values for **<abc>**.

Choices can be limited in scope by enclosing them in ( ), for instance

```
<abc> = d | e ( f | g ) h | i
```

has two choices. Choice inside group ( ) has 2 possible values, either **f** or **g**; unlike previous example this group is not optional, so one value is guaranteed to appear. Global choice (not contained in any group) has 3 possible values: **d**, **e(f|g)h** or **i**. This gives **d**, **efh**, **egh**, and **i** as possible values for **<abc>**.

Items enclosed in { } brackets are to be repeated at least once. For instance,

```
<abc> = d { e } f
```

gives **def**, **deef**, **deeeef**, **deeeeef**, ... for **<abc>**.

Note, this is different than definition in [Extended Backus–Naur form](#), which states that items are optionally repeated, i.e. zero or more times.

To have the same definition here, repeating group can be enclosed into option group, like so

```
<abc> = d [ { e } ] f
```

which gives **df**, **def**, **deef**, **deeff**, ... for `<abc>`.

Line comments are written using \$, everything from \$ up to the end of line is disregarded. For instance, this example

```
$ Entity <abc> ...
<abc> = $ ... is either value d or e.
| d $ Value can be commented with no
|   $ additional formatting, as in d.
| e $ Value in comment with added weight
|   $ (as in e) shouldn't be confused for
|   $ compatibility value; it's used just
|   $ for additional visual emphasis.
```

is by definition the same as the next one:

```
<abc> = d | e
```

Rule definitions can be chained, so

```
<abc> = <def> = g [ h ] i
```

gives both entities `<abc>` and `<def>` the same definition, i.e. it's just a shorthand for

```
<def> = g [ h ] i
<abc> = <def>
```

Empty value is represented with an empty group (), like so

```
<abc> = () | d
```

While this is effectively the same as optional value, e.g.

```
<abc> = [ d ]
```

or usage of optional entity, e.g.

```
<abc> = d
<def> = g [ <abc> ]
```

the first definition is used when neither value, nor entity is optional, based on external context.

Grammar is written without context, to determine which pieces, files and ranks are available for a particular variant see [Variants](#), [Chessboards](#) and [Pieces](#) tables.

Side-effects, and some path separators are introduced by pieces, and so could be missing, if variant prior to One is being played. For instance, first divergent piece (Shaman) is introduced in Conquest of Tlalocan variant, so any variant before that will not be using divergence side-effect. Similarly, none of teleportation path separators are used before Nineteen variant, when first teleporting piece (Star) is introduced.

```

<pawn> = [P]
<classic-figure> = N | B | R | Q | K
<trooper> = O | G
<private> = <pawn> | <trooper>
<passive-figure> = A | W

<new-active-figure> = E | U | C | S | H
                     | <trooper>

<capturing-active-figure> =
  <new-active-figure> | <classic-figure>

<capturing-active-piece> =
  <capturing-active-figure> | <pawn>

<active-figure> =
  <capturing-active-figure> | I

<active-piece> =
  <active-figure> | <pawn>

<capturing-piece> =
  <capturing-active-piece> | A

<activateable-figure> = N | B | R | Q
                        | <new-active-figure>
                        | <passive-figure>

<activateable-piece> =
  <activateable-figure> | <pawn>

<disposable-figure> =
<promote-to-figure> =
  <activateable-figure> | I

```

```

<disposable-piece> =
  <disposable-figure> | <pawn>

<piece-transparent-to-wave> =
  <disposable-piece> | K | T

<file> = a | b | c | d | e | f | g | h
| i | j | k | l | m | n | o | p | q
| r | s | t | u | v | w | x | y | z

<rank> = 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26

<field> = <file><rank>
<disambiguation> = <file> | <rank> | <field>
<step> = .[.]<field>

<losing-promotion-tag> = [==]
<losing-rushing-tag> = [::]
<losing-castling-tag> = [&&]

<losing-pawn-tag> =
  <losing-rushing-tag>
| <losing-promotion-tag>

<figure-losing-tag> =
  R<losing-castling-tag>
| <trooper><losing-rushing-tag>

<active-figure-losing-tag> =
  <active-figure>
| <figure-losing-tag>

```

```
<active-piece-losing-tag> =
  <active-figure-losing-tag>
| <pawn><losing-pawn-tag>

<capturing-active-figure-losing-tag> =
  <capturing-active-figure>
| <figure-losing-tag>

<capturing-active-piece-losing-tag> =
  <capturing-active-figure-losing-tag>
| <pawn><losing-pawn-tag>

<capturing-piece-losing-tag> =
  <capturing-active-piece-losing-tag>
| <capturing-piece>

<activateable-figure-losing-tag> =
  <activateable-figure>
| <capturing-active-figure-losing-tag>

<activateable-piece-losing-tag> =
  <activateable-figure-losing-tag>
| <pawn><losing-pawn-tag>

<disposable-figure-losing-tag> =
  <disposable-figure>
| <capturing-active-figure-losing-tag>

<disposable-piece-losing-tag> =
  <disposable-figure-losing-tag>
| <pawn><losing-pawn-tag>

<capturing-side-effect> =
  [* [<disposable-piece-losing-tag>]]
```

```

<en-passant-side-effect> =
[ : [ [<private>] (<rank> | <field>) ] ]

<castling-side-effect> =
[ & [ [ R] (<file> | <field>) ] ]

<promoting-side-effect> =
[ = ] <promote-to-figure>

<delayed-promotion-side-effect> = [=]

<converting-side-effect> =
% [<disposable-piece-losing-tag>]
| % %

<pawn-displacement-side-effect> =
<<pawn><losing-pawn-tag><disambiguation>

<displacement-side-effect> =
<<disposable-piece-losing-tag>><field>

<transparency-side-effect> = [ ^ [ W ] ]
<divergence-side-effect> = [ / [ H | I ] ]

<wave-transparency-side-effect> =
[ ^ [ <piece-transparent-to-wave> ] ]

<demoting-side-effect> =
> [ <disposable-figure-losing-tag> ]
    <disambiguation>
| ><disposable-figure-losing-tag>
    [ <disambiguation> ]

```

```

<resurrecting-side-effect> =
  $[$]<disposable-piece>
  | $[$] (W|I)<field>
  | [$$$]

<stepping-no-side-effects> =
  [<disambiguation>]<field>
  | [<disambiguation>]{<step>}[-<field>]
  | [<field>-]<field>

<stepping> =
  <stepping-no-side-effects>
  | [<disambiguation>]
    {<step>[<transparency-side-effect>
      | <divergence-side-effect>] }
    (<step> | -<field>)

<wave-stepping> =
  <stepping-no-side-effects>
  | [<disambiguation>]
    {<step>[<wave-transparency-side-effect>
      | <divergence-side-effect>] }
    (<step> | -<field>)

<serpent-stepping> =
  <stepping-no-side-effects>
  | [<disambiguation>]
    {<step>[<pawn-displacement-side-effect>
      | <transparency-side-effect>] }
    (<step> | -<field>)

```

```

<shaman-stepping> =
  <stepping-no-side-effects>
| [<disambiguation>]
| <step> [<transparency-side-effect>
           | <divergence-side-effect>
           | <capturing-side-effect>] }
| (<step> | -<field>)

<pawn-promotion-ply> =
  <pawn><losing-promotion-tag><stepping>
  (<promoting-side-effect>
   | <delayed-promotion-side-effect>)

<capturing-pawn-promotion-ply> =
  <pawn><losing-promotion-tag><stepping>
  [<capturing-side-effect>]
  (<promoting-side-effect>
   | <delayed-promotion-side-effect>)

<pyramid-promoting-ply> =
A<stepping>
  (<promoting-side-effect>
   | <delayed-promotion-side-effect>)

<pyramid-converting-ply> =
A<stepping><converting-side-effect>

<teleportation-ply> =
  | [<disposable-piece>]<field>
  | || [<disposable-piece>]<field>
  | ||| [<disposable-piece>]

```

```

<pawn-sacrifice-init> =
  S<serpent-stepping>
  ~A<stepping-no-side-effects>
    [* [<losing-pawn-tag>]];;
;

<pawn-sacrifice-steps> =
  S[<disambiguation>]
    {<step>[* [<losing-pawn-tag>]
      | <pawn-displacement-side-effect>
      | <transparency-side-effect>] }
  | S<stepping-no-side-effects>

<pawn-sacrifice-ply> =
  <pawn-sacrifice-init>
  [<pawn-sacrifice-steps>]

<starting-ply> =
  <active-piece-losing-tag><stepping>
  | S<serpent-stepping>
  | H<shaman-stepping>
  | <pawn-promotion-ply>
  | K<losing-castling-tag><stepping>
  | I<stepping-no-side-effects>
    [<resurrecting-side-effect>]
  | <pawn-sacrifice-ply>

<cascading-plies> =
  [ { (~W<wave-stepping> | ~A<stepping>) } ]
  { ~W<wave-stepping> }
  [ [ { ((~| |) W<wave-stepping>
    | ~A<stepping>) } ]
  { (~| |) W<wave-stepping> } ]

```

```
<stand-alone-ply> =
  <capturing-piece-losing-tag><stepping>
  [ (<capturing-side-effect>
      | <teleportation-ply>) ]
  | <private-losing-tag><stepping>
    [ (<en-passant-side-effect>
        | <teleportation-ply>) ]
  | S<serpent-stepping>
    [ (<capturing-side-effect>
        | <teleportation-ply>) ]
  | H<shaman-stepping>
    [ (<capturing-side-effect>
        | <teleportation-ply>) ]
  | <capturing-pawn-promotion-ply>
  | <pawn-sacrifice-ply>[<teleportation-ply>]
```

```
<terminating-ply> =
  <stand-alone-ply>
  | <activateable-piece-losing-tag><stepping>
    [<teleportation-ply>]
  | <pyramid-promoting-ply>
  | <pyramid-converting-ply>
```

```
<cascaded-ply> =
  <activateable-piece-losing-tag><stepping>
  | S<serpent-stepping>
  | H<shaman-stepping>
  | <pawn-promotion-ply>
  | <passive-piece><stepping>
  | <pawn-sacrifice-ply>
```

```

<trance-journey-init> =
  H<stepping-no-side-effects>

<journey-start> =
  [<disambiguation>] [, <field>]

<trance-journey> =
  <trance-journey-init>@H<journey-start>
  {<step>
    [ (<[<disposable-piece-losing-tag>]<field>
        | * [<disposable-piece-losing-tag>]) ]
  | <trance-journey-init>@H
    [<disambiguation>]<field>
  | <trance-journey-init>@@
    [<disposable-piece-losing-tag> [<field>]
      [{, <disposable-piece-losing-tag>
        [<field>]}]]
  | <trance-journey-init>@@@ [H]

<sense-journey-init> =
  (I | H)<stepping-no-side-effects>
  ~I<stepping-no-side-effects>

<sense-journey> =
  <sense-journey-init>""
  <activateable-piece-losing-tag>
  <journey-start>
  <stepping-no-side-effects>
  | <sense-journey-init>'
    [<activateable-piece-losing-tag>]

```

```

<star-movement-ply> =
I<stepping-no-side-effects>
  [<resurrecting-side-effect>]
~T<stepping-no-side-effects>

<monolith-ply> =
M<stepping-no-side-effects>
  [<demoting-side-effect>]

<king-castling-ply> =
K(<file> | <stepping-no-side-effects>)
  [<castling-side-effect>]

<cascade> =
  <stand-alone-ply>
| <starting-ply>
  [{<cascading-plies>~<cascaded-ply>}]
  [<cascading-plies>
    [&(<terminating-ply>
      | <star-movement-ply>)]]
| <starting-ply>
  [{<cascading-plies>~<cascaded-ply>}]
  <cascading-plies>~]
  (<trance-journey> | <sense-journey>)
| <star-movement-ply>
| <monolith-ply>
| <king-castling-ply>

```

```

<status> = ()
| [+]
| [+] (=)
| [+] (-)
| #
| ++
| (=)
| (-)

<compatibility-capture> =
<classic-piece>[<disambiguation>] [x]
<field>[<status>]
| <pawn>[<disambiguation>] [x]<field>
    <promoting-side-effect>[<status>]
| <file>[x]<field>[<status>] [_e.p.]

<compatibility-castling> =
O-O-O
| O-O-O
| O-O
| O-O

<move> =
<cascade><status>
| <compatibility-capture>
| <compatibility-castling>
| #
| ##
| (==)
| (==)

```

Notational grammar isn't exact, some things are difficult to formalize, some are too cumbersome. For instance, any ply can be gathered in [ ] (square brackets); adding them to all ply definitions would make grammar significantly more complex. Also, compatibility notation for capture, castling, and checkmate is valid only for Classical Chess, and nowhere else.

Another example, Shaman stepping between divergences consists of ordinary steps interspersed with transparency, or it's all capture-steps. However, all three side-effects (diverging, transparency, and capturing) are always optional to write down, and so the two sets of different steps can be indistinguishable.

Additionally, grammar does not have access to an external context. So, defining entity and values which are not optional, but might not be present is not really possible. Move status is one such example; except for checks, all other values are mandatory to write, but most of the time there is no status to report. So, move status could be optimized out as e.g. an optional entity; while technically true, this would not be entirely correct.



# Remarks

This chapter contains some suggestions to improve gameplay, chessboard designs.

## Well-defined game

Well-defined game is one where all information related to game is plainly visible on a board. Chess in its origin is very close to that goal, with the exceptions being ability of pieces to castle, rush, and notation for turn; later, tag for promotion is added to the mix. Pawn-sacrifice tag does not belong to this list, because it has to be used in the very same move in which it's obtained.

## Chips

Chip is device, similar in appearance to poker chip, which can be put underneath a piece to denote its status. For instance, yellow chip can be put under Pawn to denote its inherited ability to rush. When that Pawn is moved (or captured) its

chip is removed from chessboard.

Similarly, if Pawn is tagged for promotion, e.g. red chip is placed underneath it, which is removed from chessboard when that Pawn gets promoted, moved, captured, or converted.

For castling, nominally 3 chips has to be used, 2 for Rooks and 1 for King. It's enough if just Rooks have their chips, if King ever moves, both Rooks would lose their chips.

Chip for denoting turn is different, it is placed on an empty field in the same color to the player which turn is ongoing. This is meant more for readers to have indicated which player is to play, on a chessboard positions printed in books, magazines, etc.

In casual games coins or small paper clips could be used instead of chips.

## Chessboard

Small markings can be placed onto initial positions of Scouts, Monoliths or whole set of pieces, to ease setting up pieces before match.

Due to chessboard being relatively large in later variants, it might help to write AN position onto each field, twice, each oriented towards one player's seat, to speed-up finding positions.

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*No FPS and racing sim [is a real challenge]. That is for dummies. This will make players of the game into new super-geniuses. Challenge to the max[imum] ... how much combinations there are in that [last variant] with teleportation, unicorn, pyramid, winged horse [Pegasus] and wave. How much more challenging it is compared to classic [chess]. Just Croatian [Ties] doubled number of possible combinations ...*

**Slavko Štefanić** [via e-mail]

