

# 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>  
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*Third, revised edition*  
2021-05-31  
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  
Slavko Štefanić

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).

Here, I use term move defined as one player's complete move. There are also some other terms redefined, and new terms defined. For details see chapter '**Terms**'.



# Classical Game

*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 for illustration of initial setup, so that you can accustom yourself with rendition of pieces used in this text.

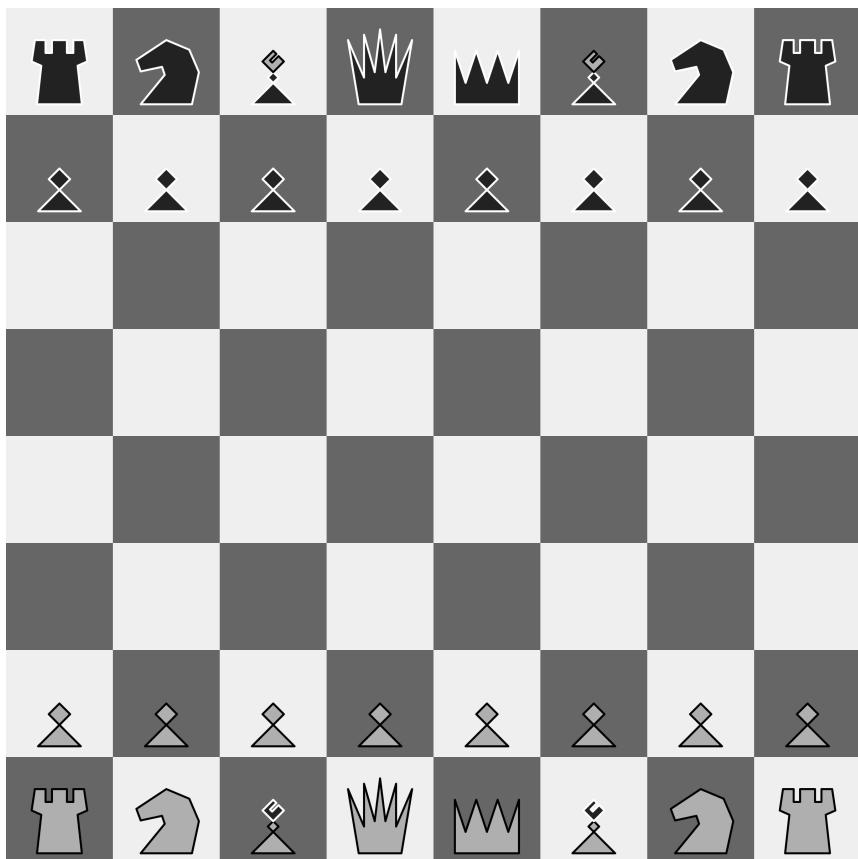


Figure 1: Classical board

# 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. In algebraic notation, columns are enumerated from 'a' to 'j', and rows are enumerated from '1' to '10'. A new piece is introduced, Pegasus.

# Pegasus

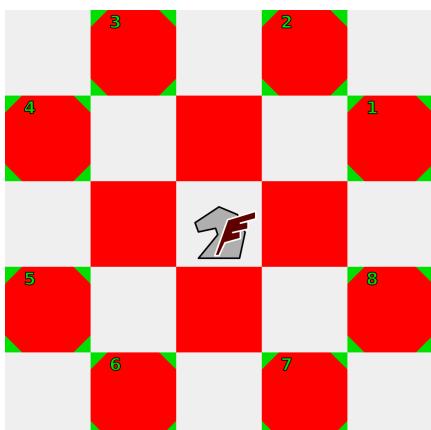


Pegasus moves similarly to Knight, but it can continue its jumpy movement until another piece is encountered, or it runs out of board. Note that once in movement, Pegasus cannot change its heading.

Pegasus symbol in algebraic notation is 'G', to avoid confusion with Pawn.

Figure 2: 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 3: Pegasus initial step

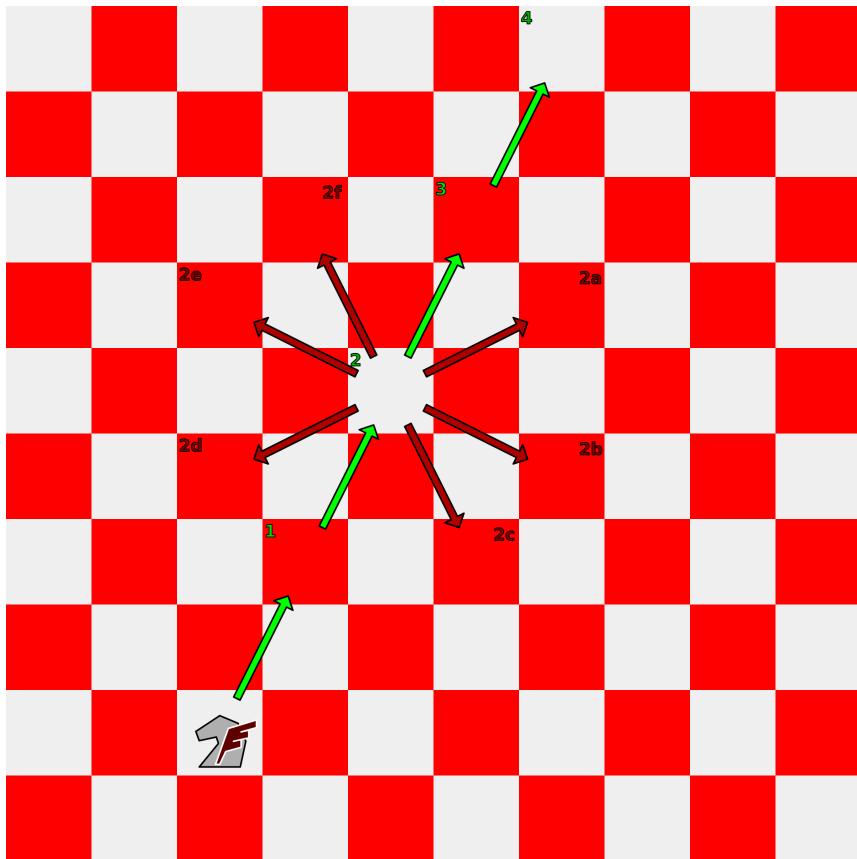


Figure 4: Pegasus move direction

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

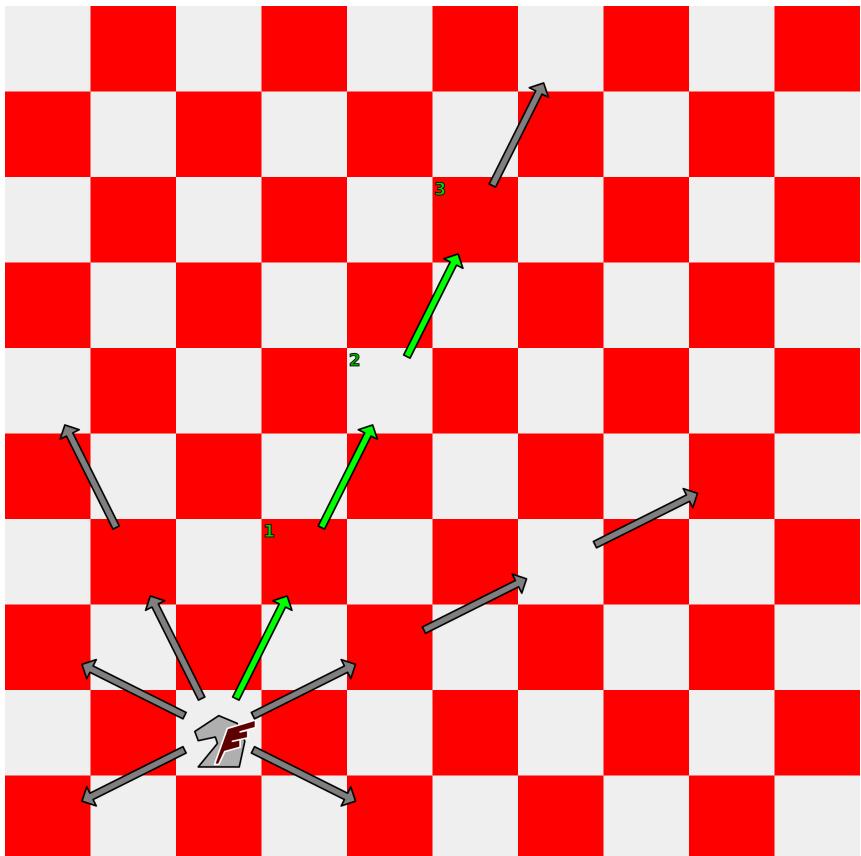


Figure 5: Step-fields, capture-fields, ply

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.)

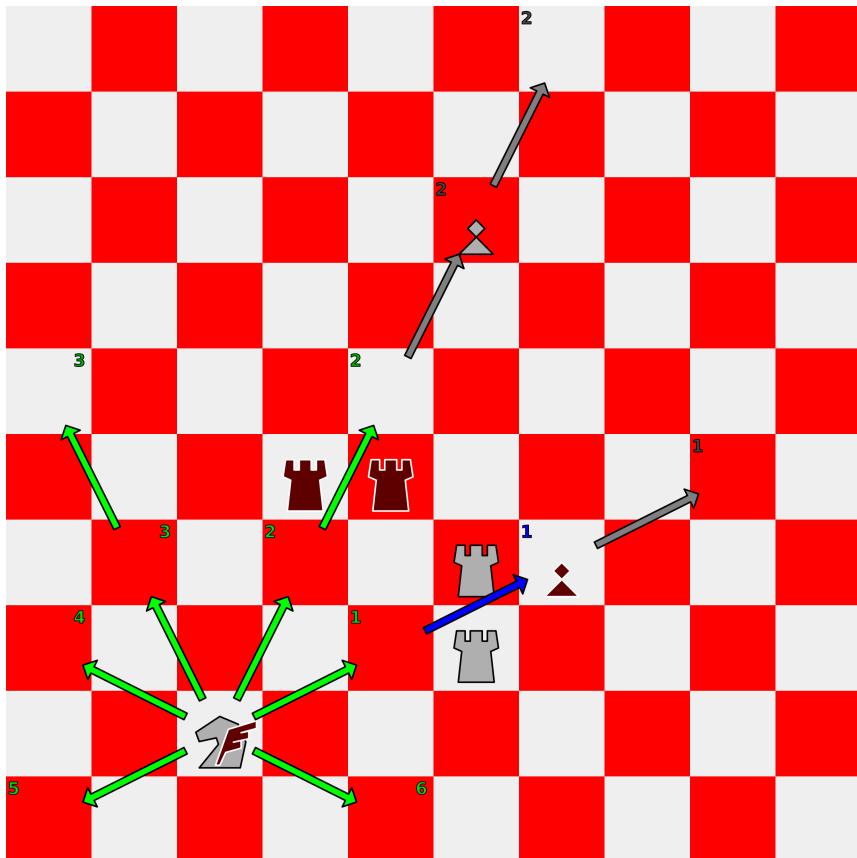


Figure 6: Pegasus moves

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

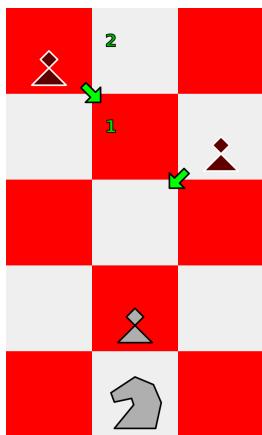


Figure 7: En passant

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 8: 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 9: Castling long left



Figure 10: 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:

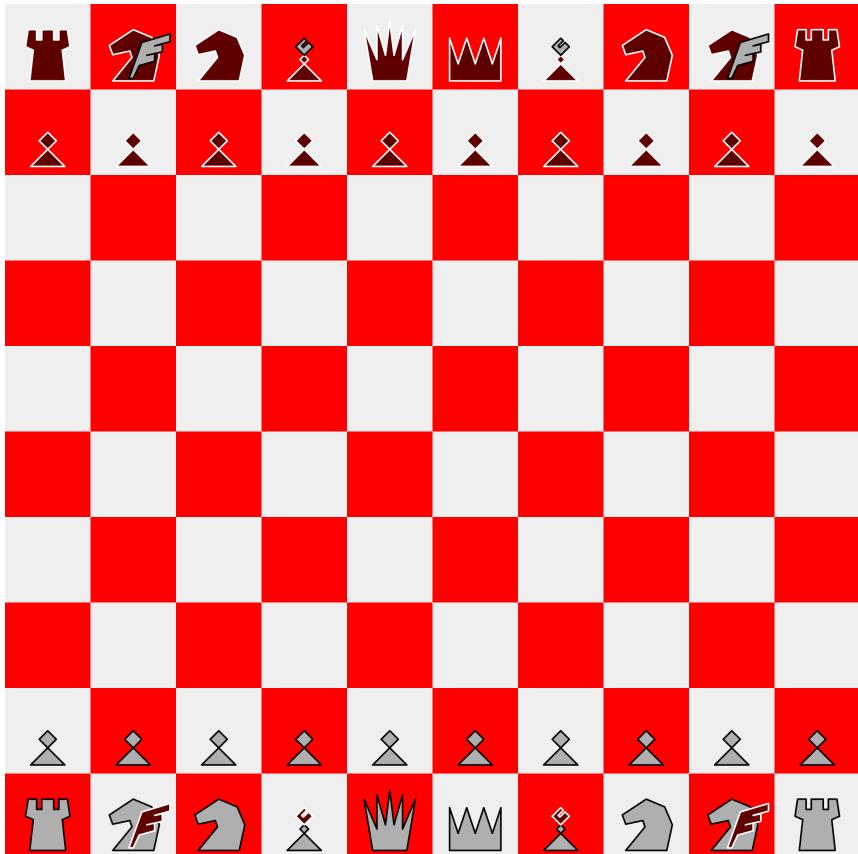


Figure 11: Croatian Ties board

# 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. In algebraic notation, columns are enumerated from 'a' to 'l', and rows are enumerated from '1' to '12'. A new piece is introduced, Pyramid.

# Pyramid

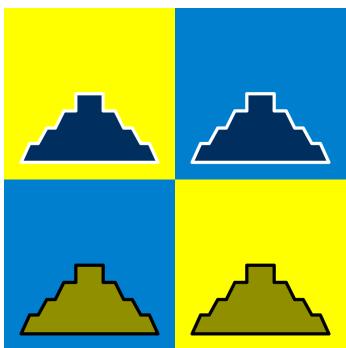


Figure 12: Pyramid

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

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

## 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.

In algebraic notation symbol for Pyramid is 'A', to avoid confusion with Pawn.

## Activation

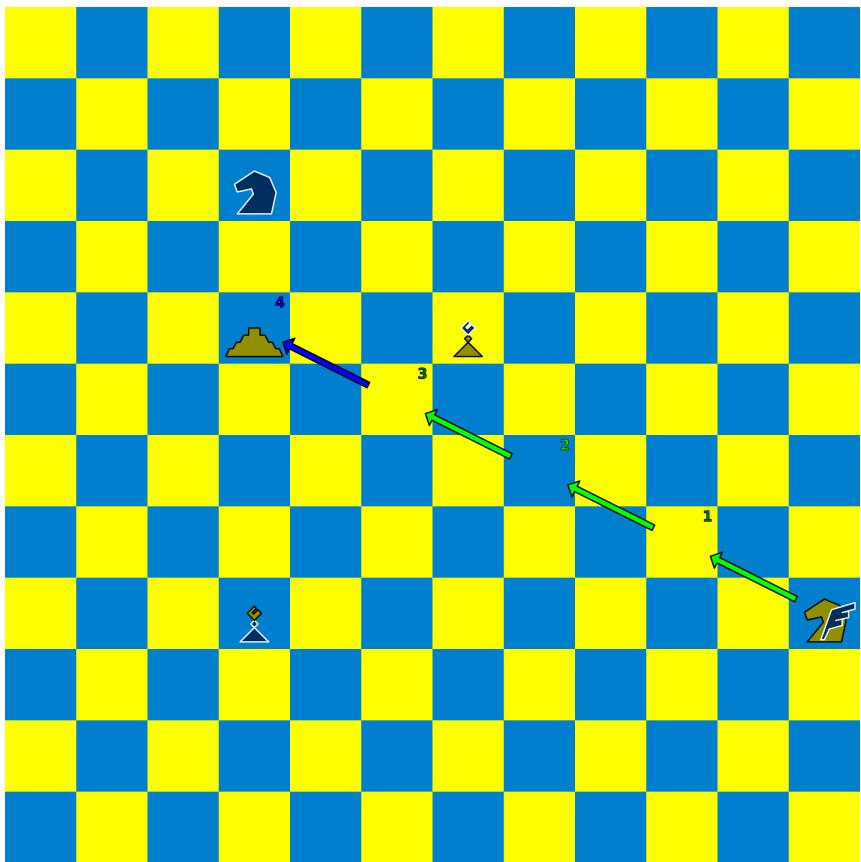


Figure 13: Pyramid activation

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.

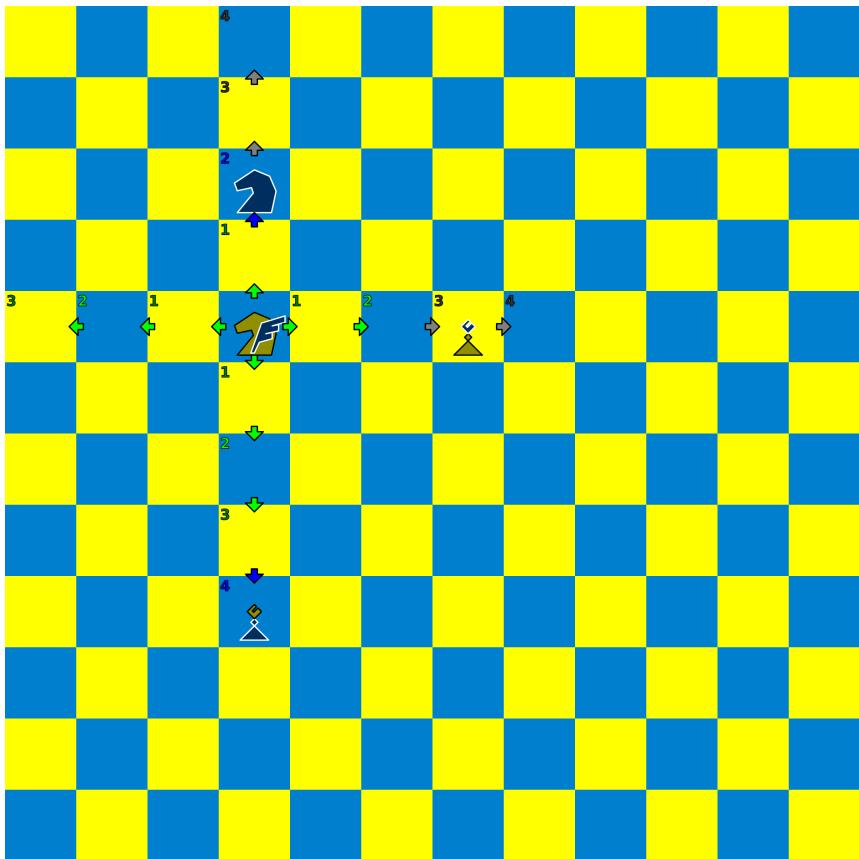


Figure 14: Pyramid activated

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.

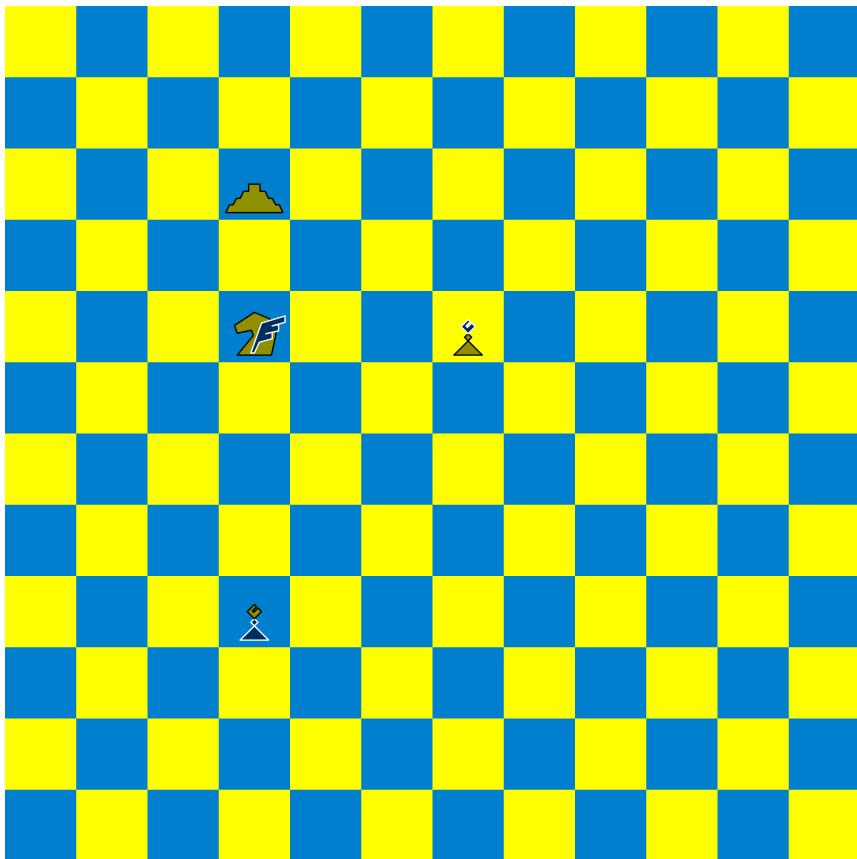


Figure 15: Pyramid activation end

Here, Pyramid movement ends by capturing opponent's Knight, which also ends light player's complete move.

## 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.

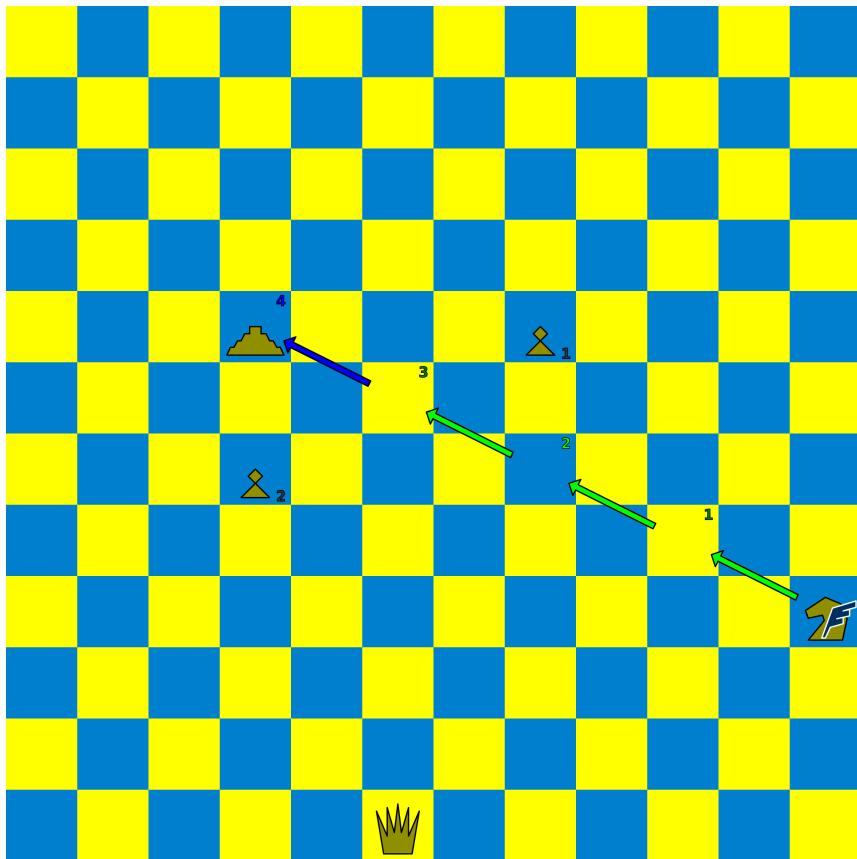


Figure 16: Promotion start

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.

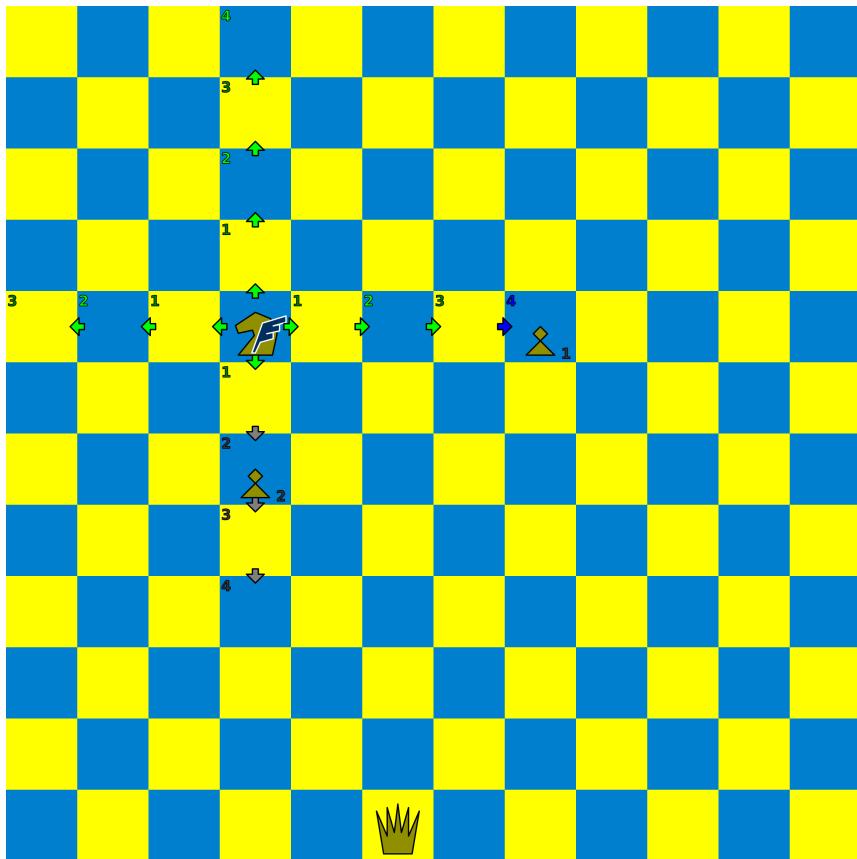


Figure 17: Promotion, Pyramid activated

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.

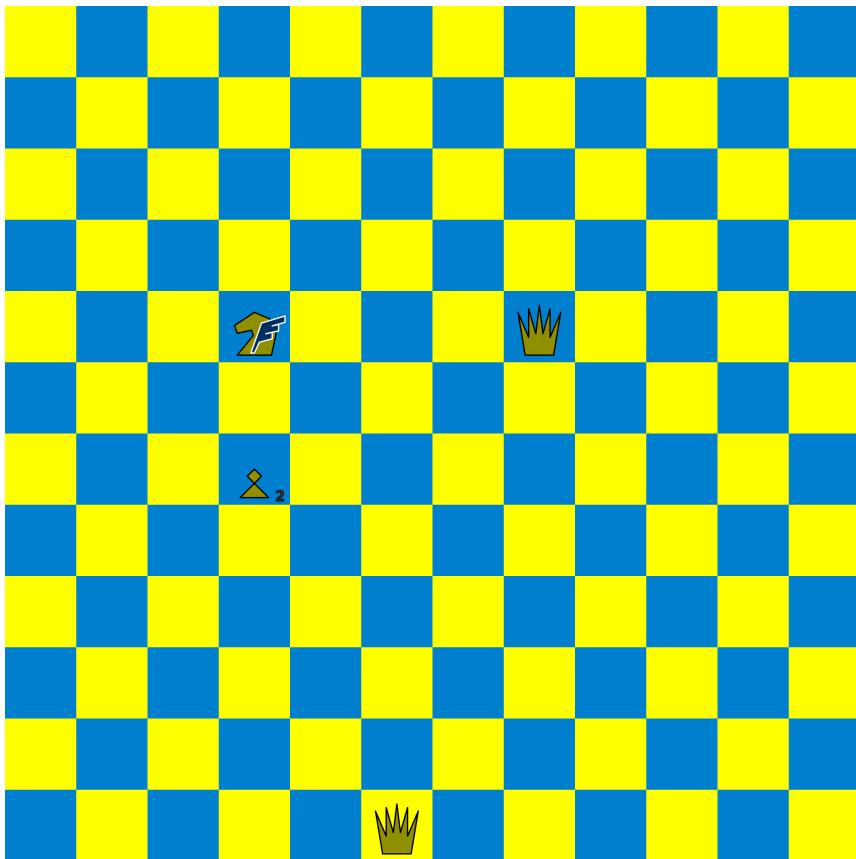


Figure 18: Promotion end

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.

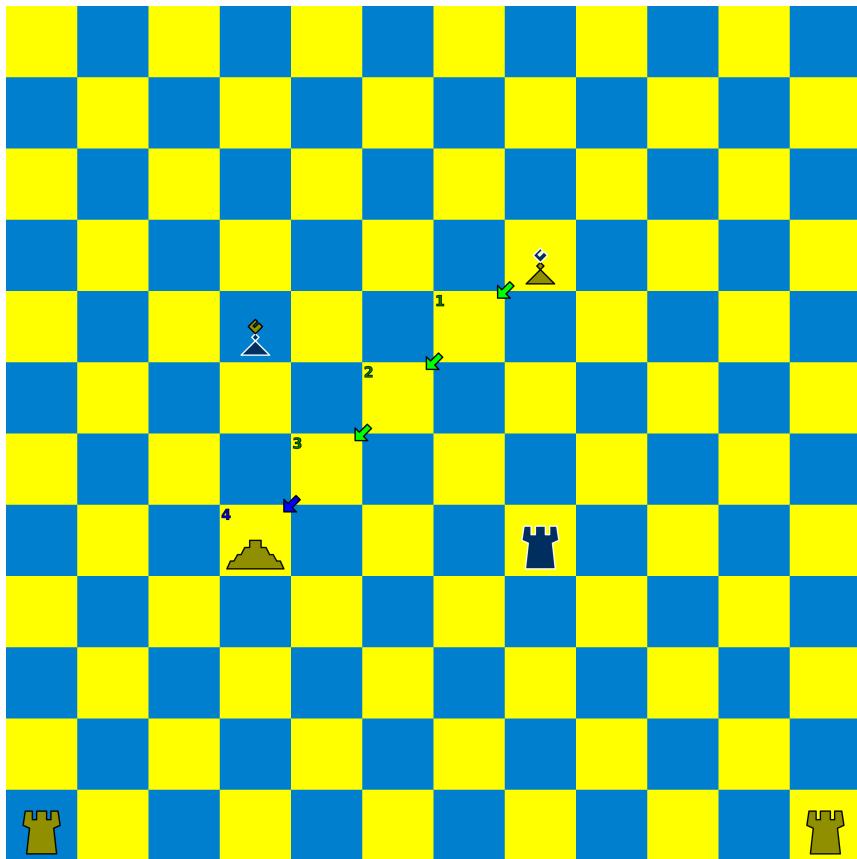


Figure 19: Conversion start

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.

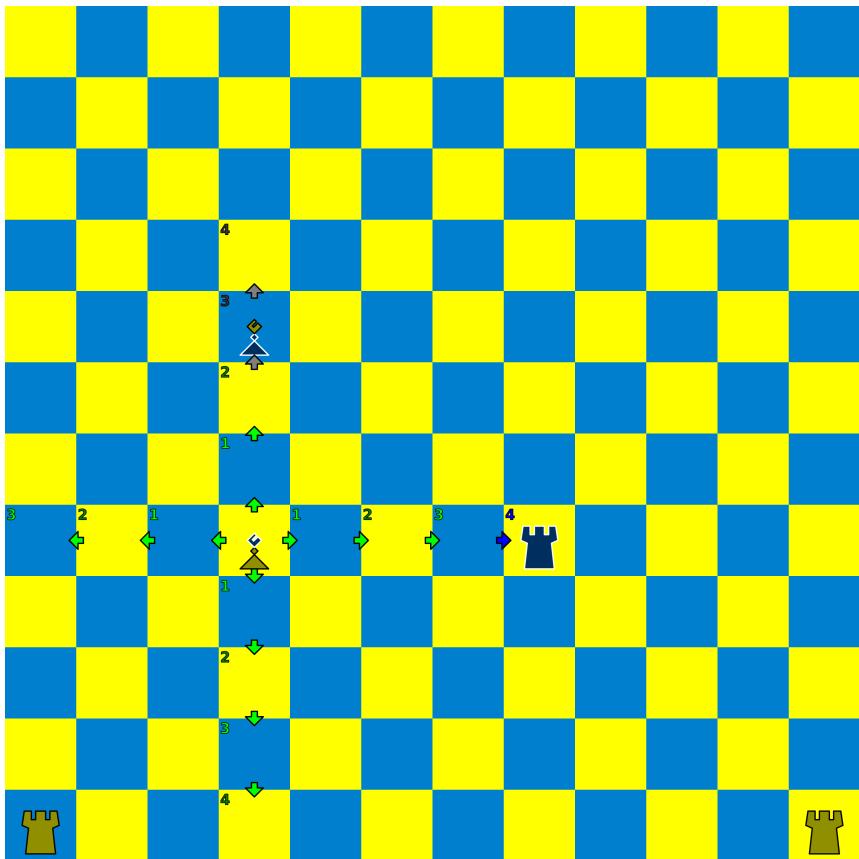


Figure 20: Conversion, Pyramid activated

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.

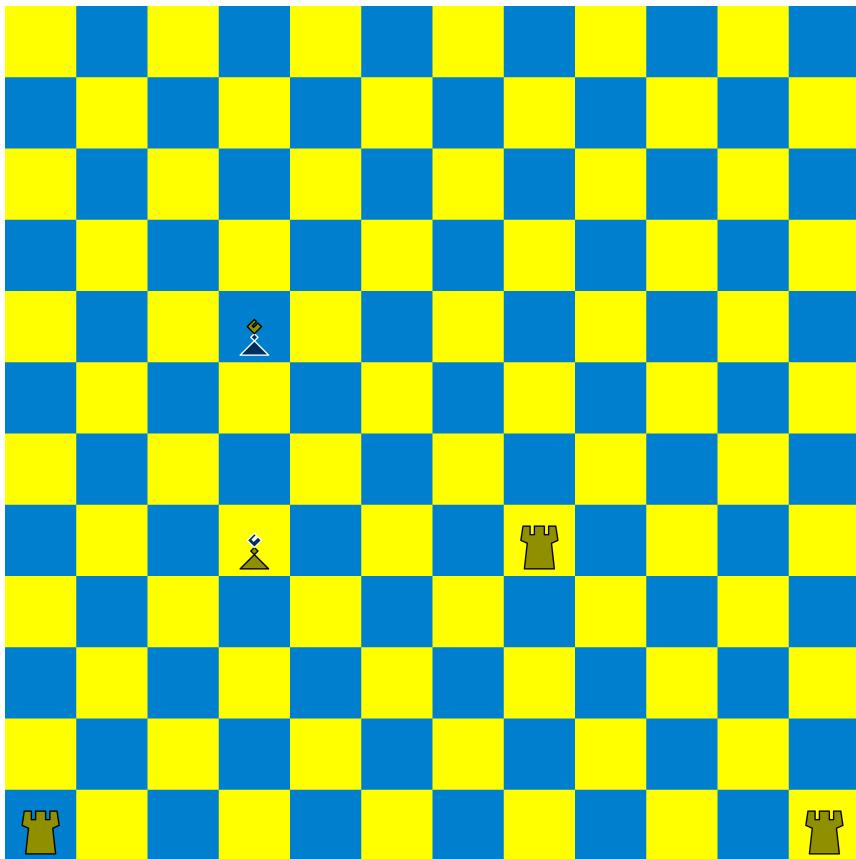


Figure 21: Conversion end

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.

## Cascading

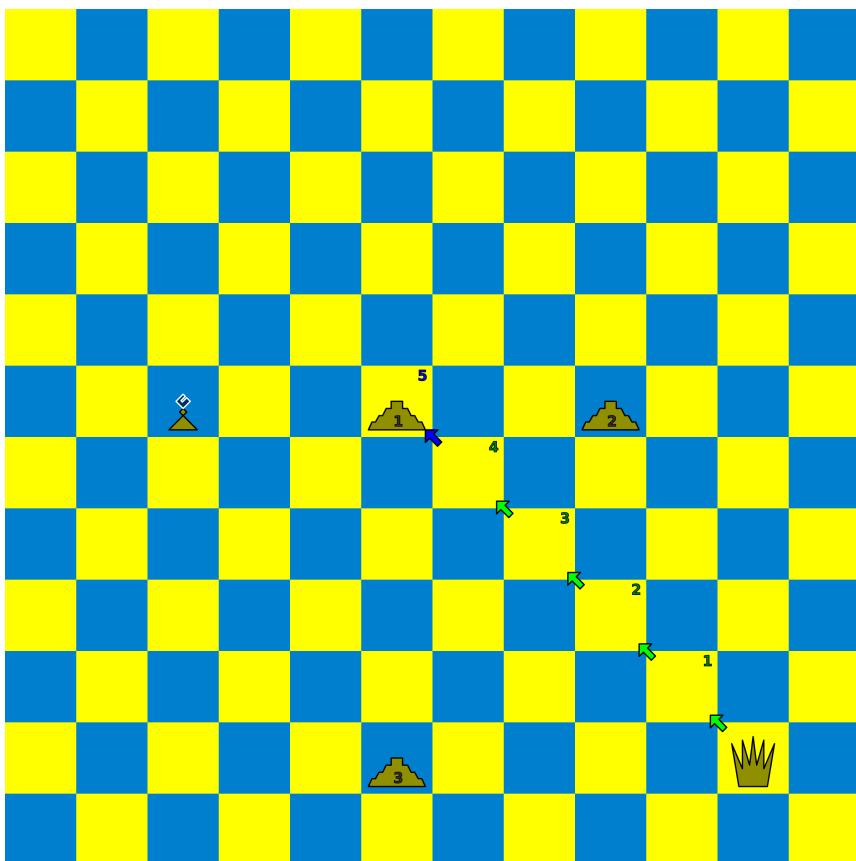


Figure 22: Cascading start

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. activate another Pyramid.

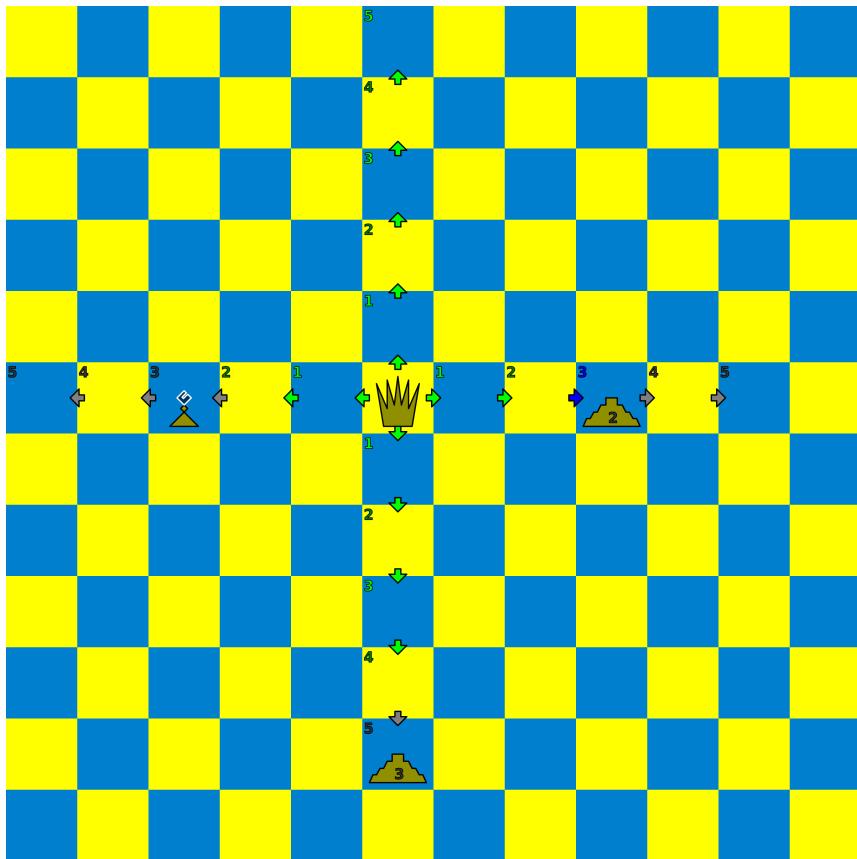


Figure 23: Cascading, 1st Pyramid activated

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.

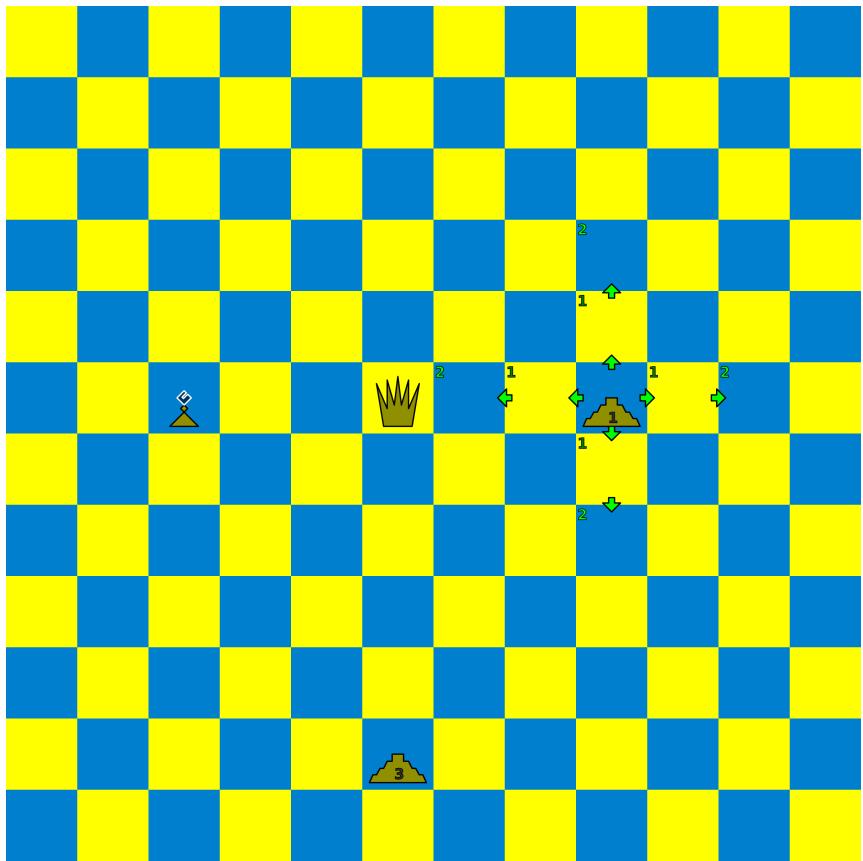


Figure 24: Cascading, 2nd Pyramid activated

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.

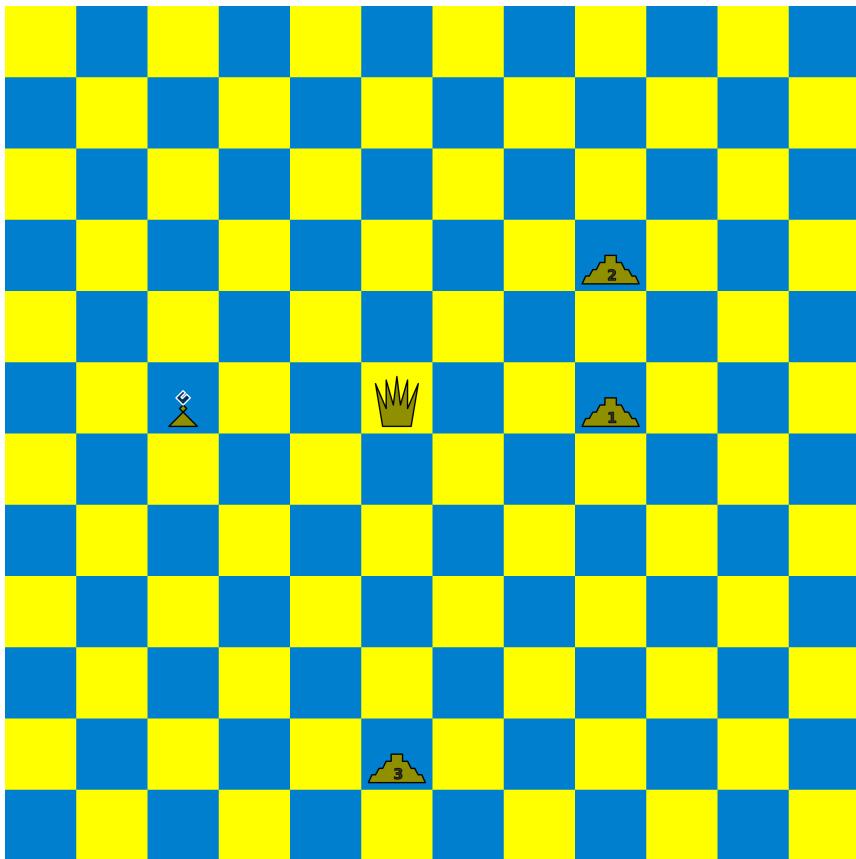


Figure 25: Cascading end

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

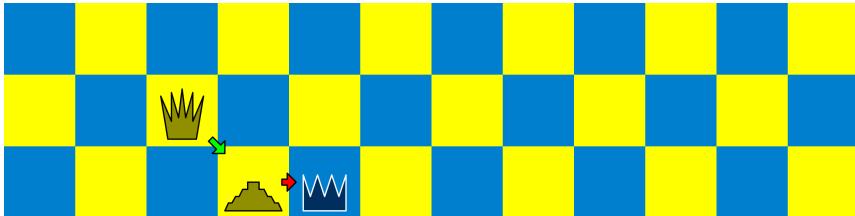


Figure 26: Pyramid vs. King

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

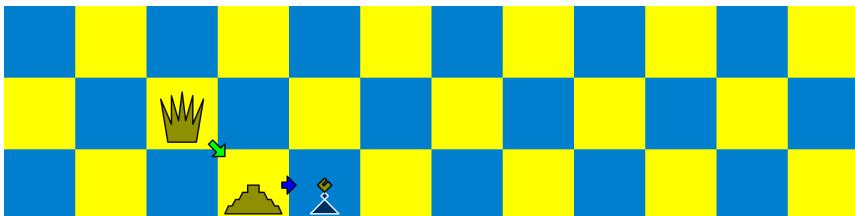


Figure 27: Pyramid vs. Bishop

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

## Activation by Pawn

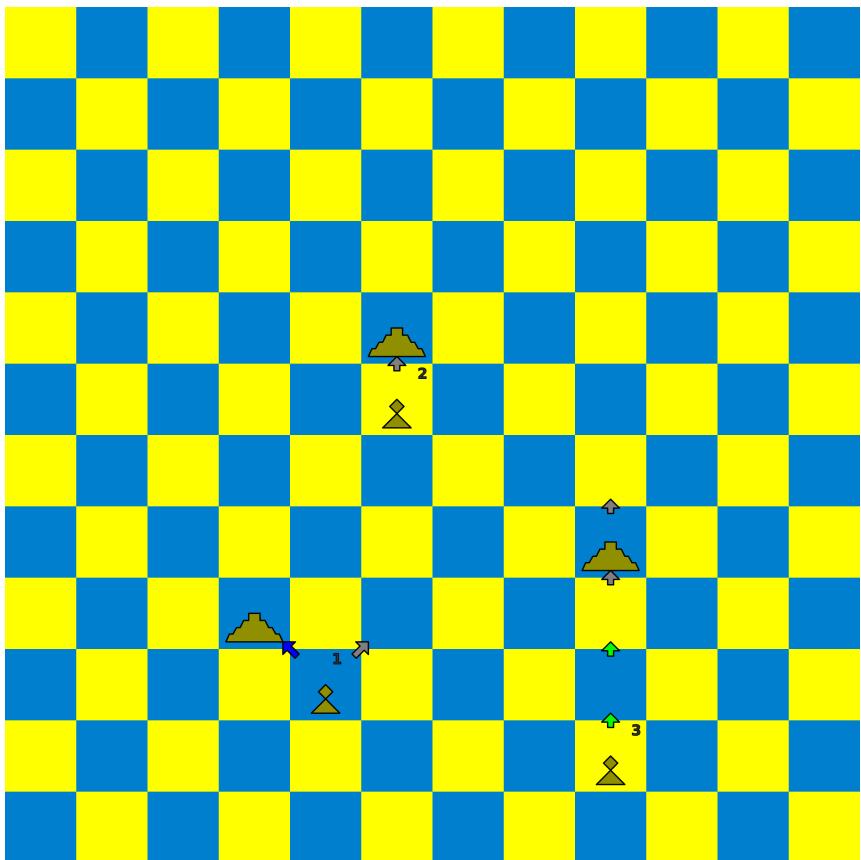
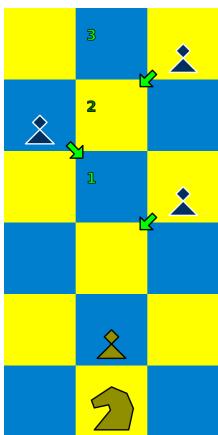


Figure 28: Pyramid activation by Pawns

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.

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

Figure 29: 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 30: 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 31: 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.

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:

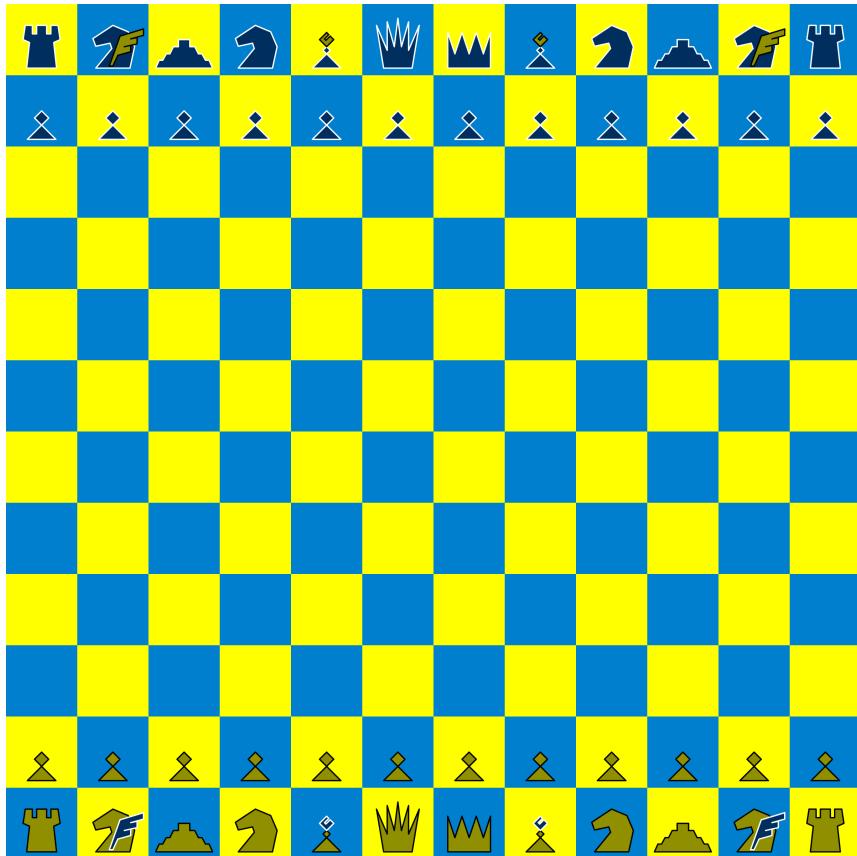


Figure 32: Mayan Ascendancy board



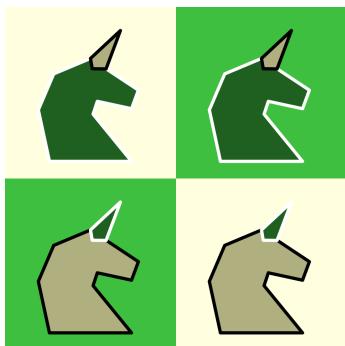
# Age of Aquarius

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

... Roy L. Smith

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. In algebraic notation, columns are enumerated from 'a' to 'n', and rows are enumerated from '1' to '14'. A new piece is introduced, Unicorn.

# Unicorn

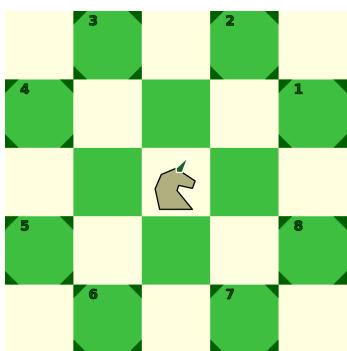


Unicorn is a piece similar to Knight, only it can jump longer on opposite color fields. Just as Knight, Unicorn is not obstructed by any piece in its surroundings.

In algebraic notation, symbol for Unicorn is 'U'.

Figure 33: Unicorn

## Movement



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

Figure 34: Unicorn short jump

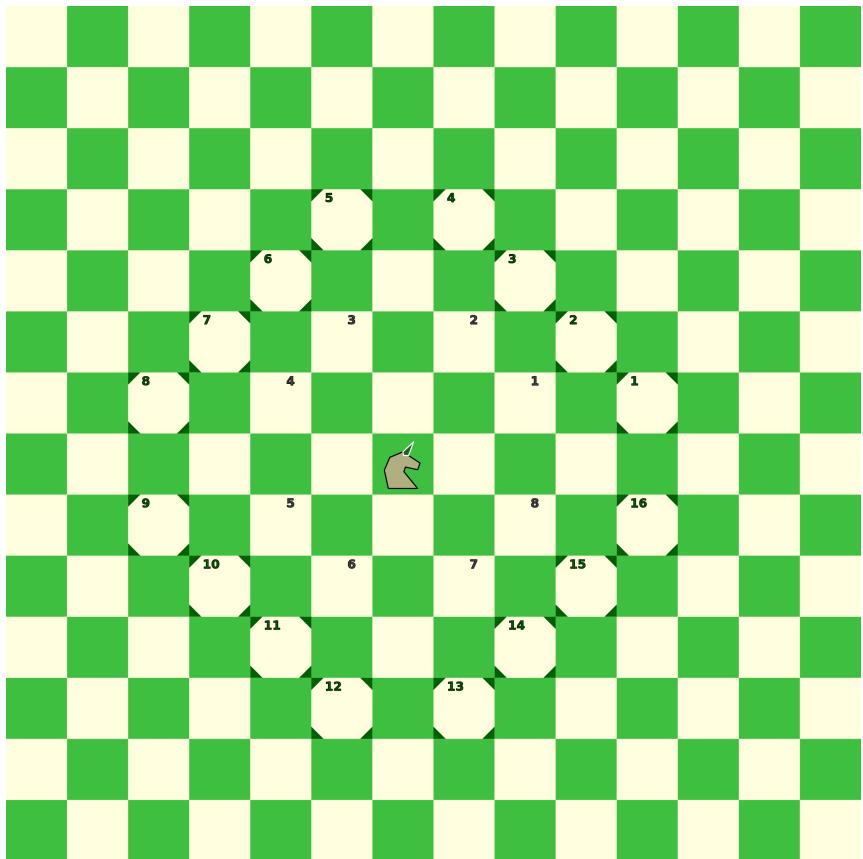


Figure 35: Unicorn long jump

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.

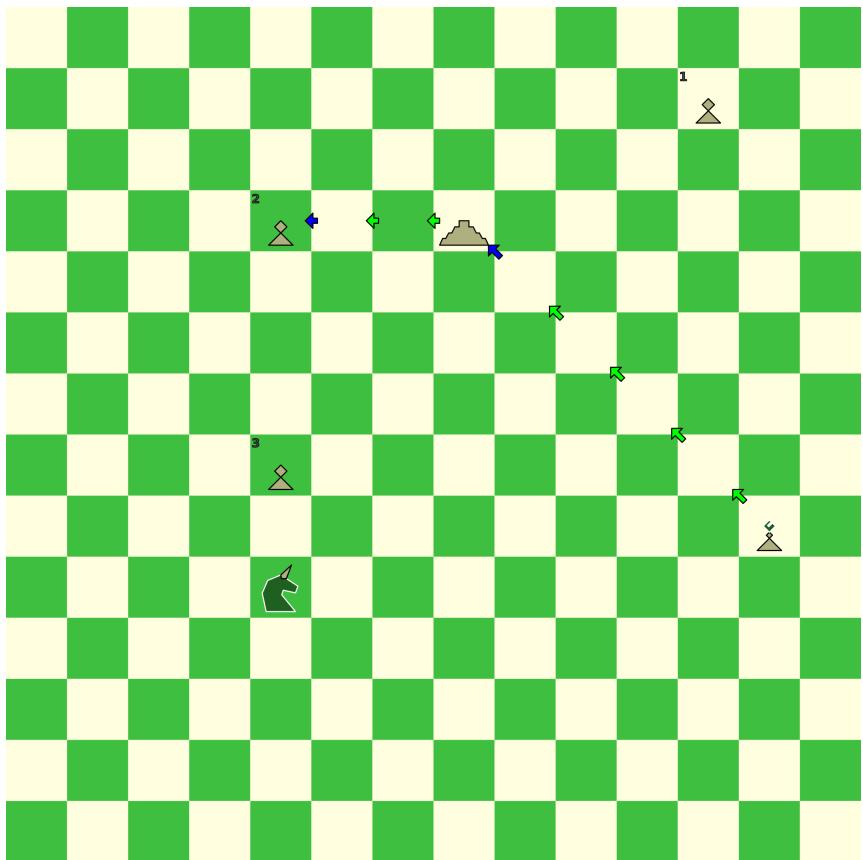


Figure 36: Promotion start

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.

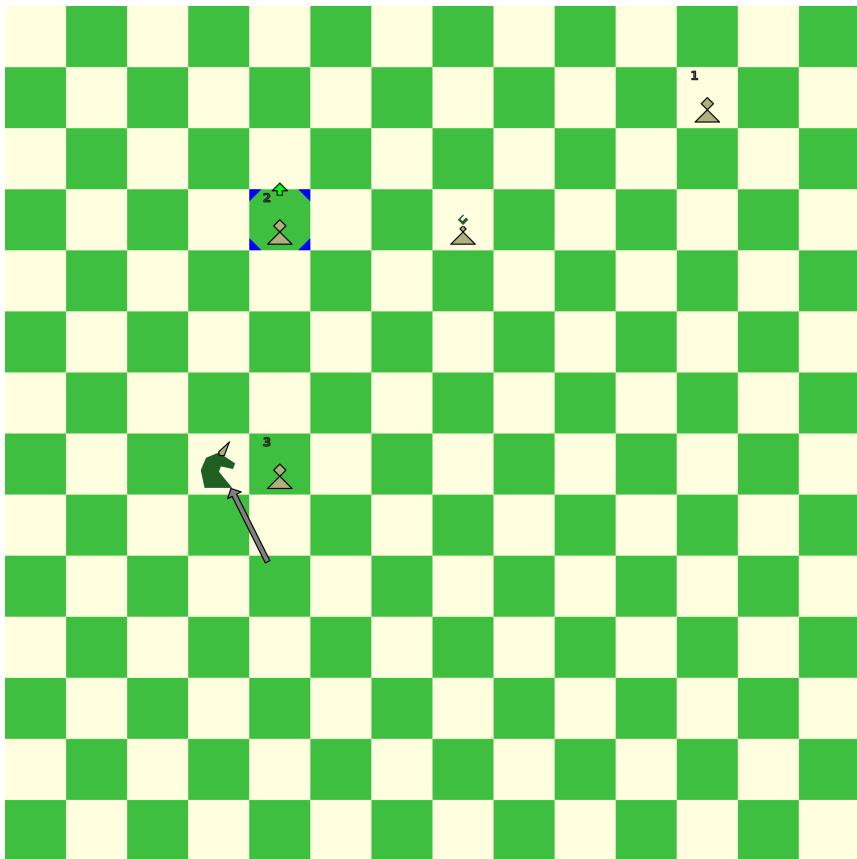


Figure 37: Pawn 2 tagged for promotion

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.

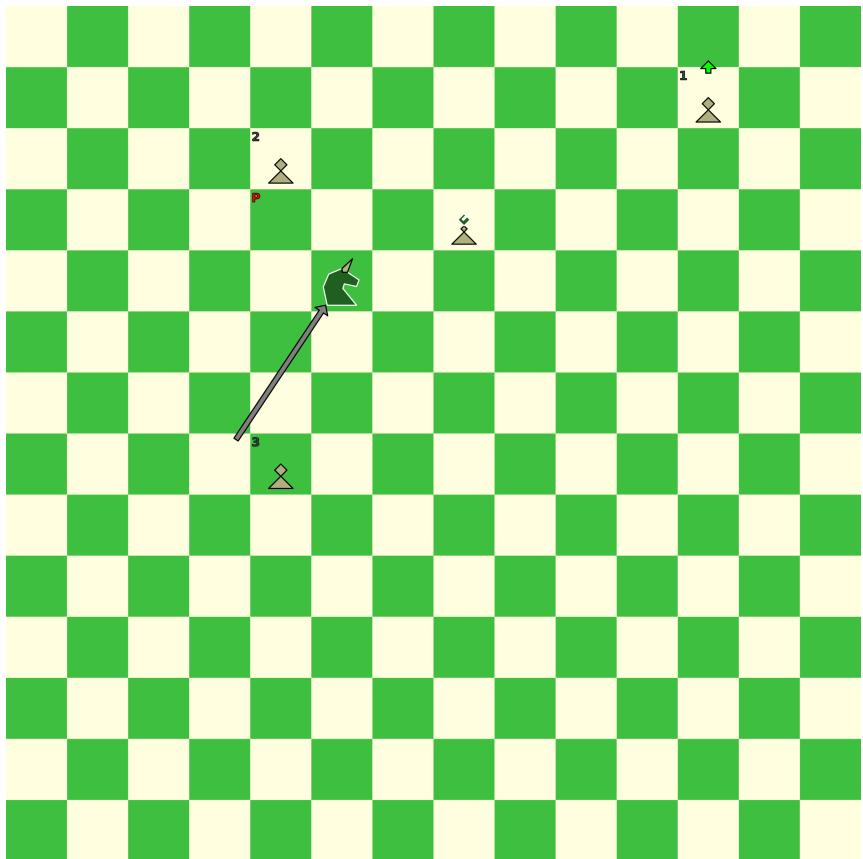


Figure 38: Pawn 1 about to get promotion

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.

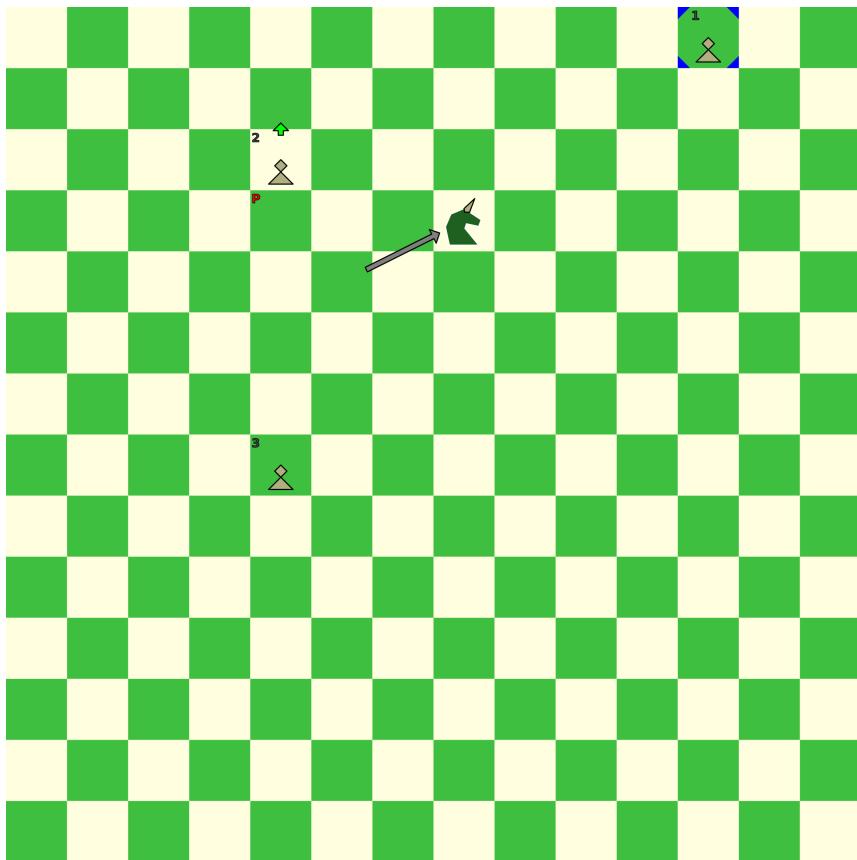


Figure 39: Pawn 1 tagged for promotion

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.

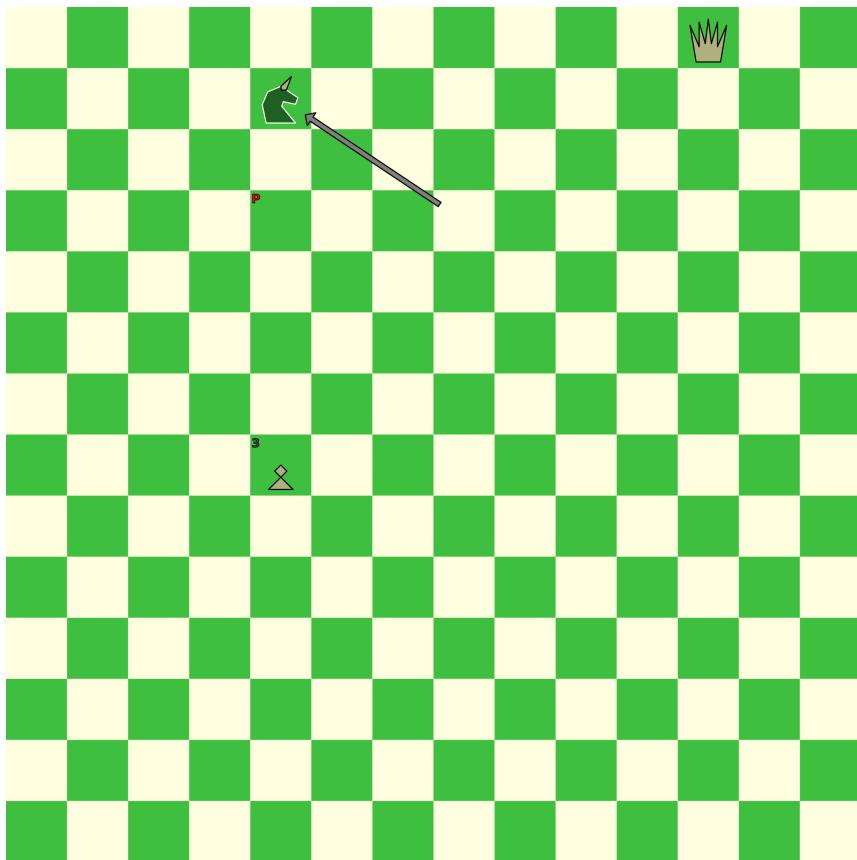


Figure 40: Pawn 1 promoted

Dark Unicorn captures light Pawn 2.

Light Pawn 1 is promoted to Queen.

## Converting tagged Pawn

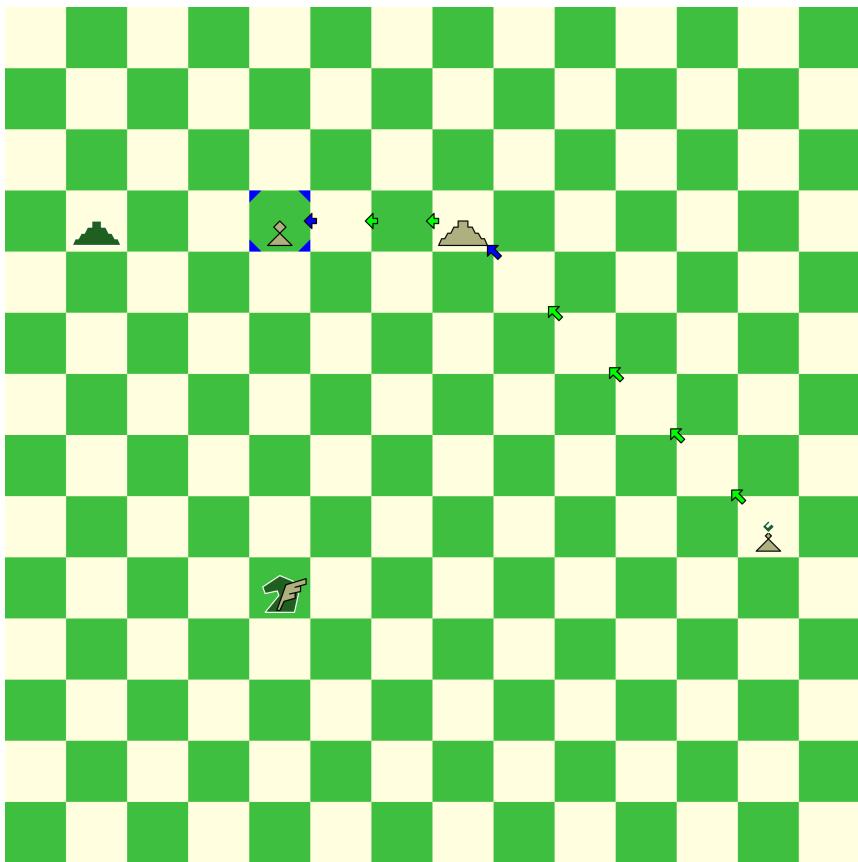


Figure 41: Tagging Pawn for promotion

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.

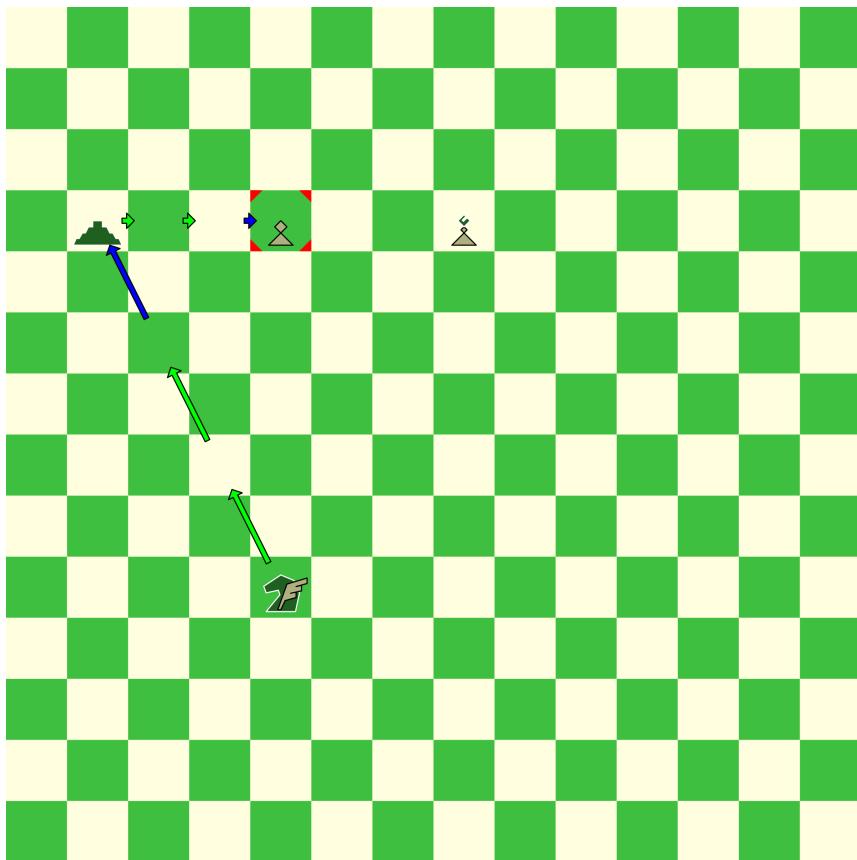


Figure 42: Converting tagged Pawn

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.

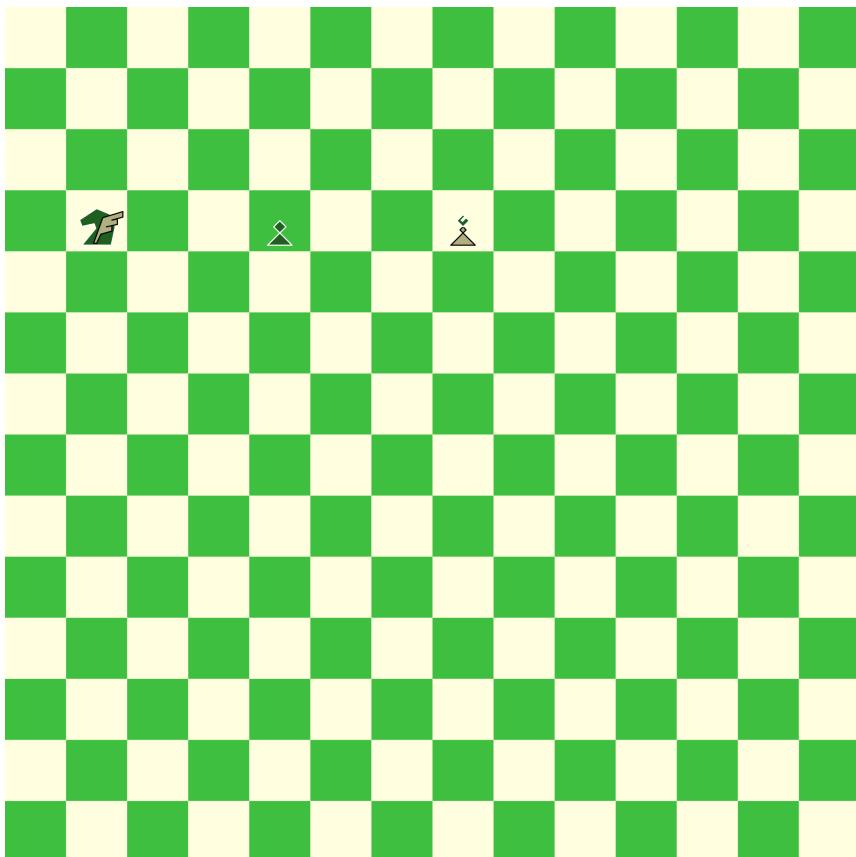
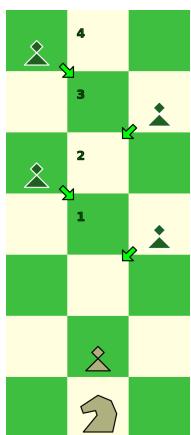


Figure 43: Tagged Pawn converted

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.

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

Figure 44: 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 45: Castling

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



Figure 46: 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.

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

## 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:

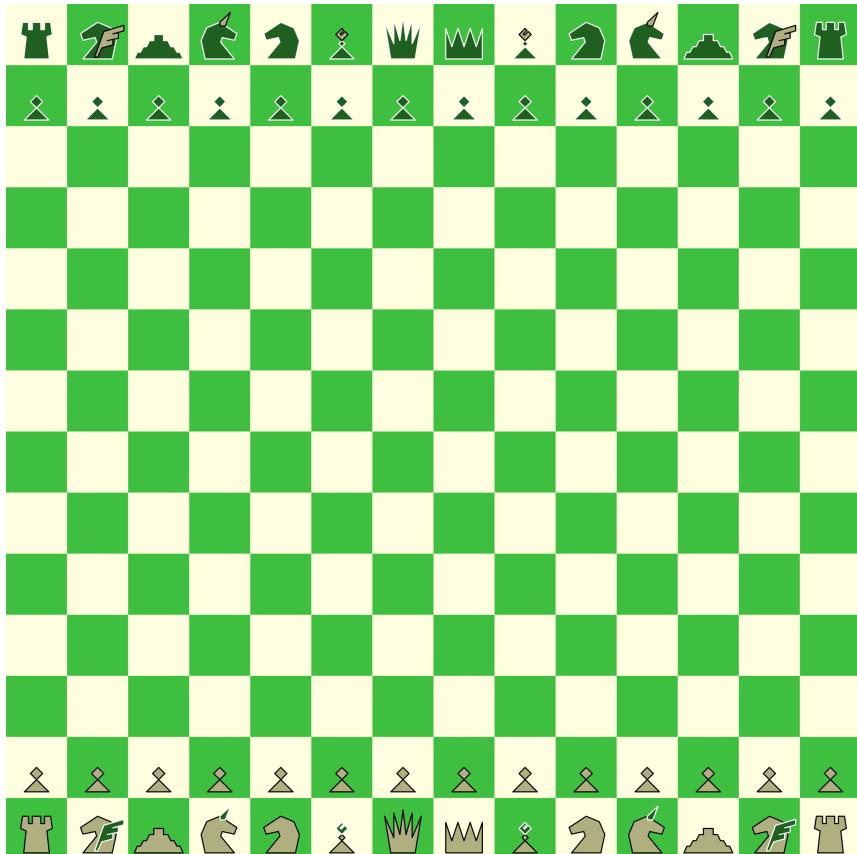


Figure 47: Age of Aquarius board



# 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. In algebraic notation, columns are enumerated from 'a' to 'p', and rows are enumerated from '1' to '16'. A new piece is introduced, Wave.

# Wave

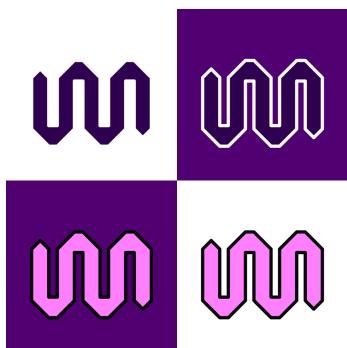


Figure 48: Wave

Wave is passive piece, it has to be activated before it can move. Activation is done in the same way as with Pyramid. Own piece has to capture field at which Wave is located before Wave can move.

Wave can be activated even if activating piece has no momentum. Wave does not use received momentum for moving, and isn't limited by it. Wave can move even if it has no momentum. Wave can move past (pass "through") any piece, as if it isn't there.

After activation Wave moves like activating piece, over piece's step- or capture- fields, depending where it was activated. Wave can make multiple steps, in the same way activating piece does, even if activating piece can make only one. Note, Wave can choose direction on the first 1 or 2 step(s), which cannot be changed later. Wave can step outside of a chessboard, and only has to end its ply on a board. For details see [Movement of Wave](#).

Wave cannot capture any piece. Thus, Wave cannot check nor checkmate opponent's King.

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. In all cases, Wave transfers all received momentum to activated piece.

In algebraic notation symbol for Wave is 'W'.

## Activation

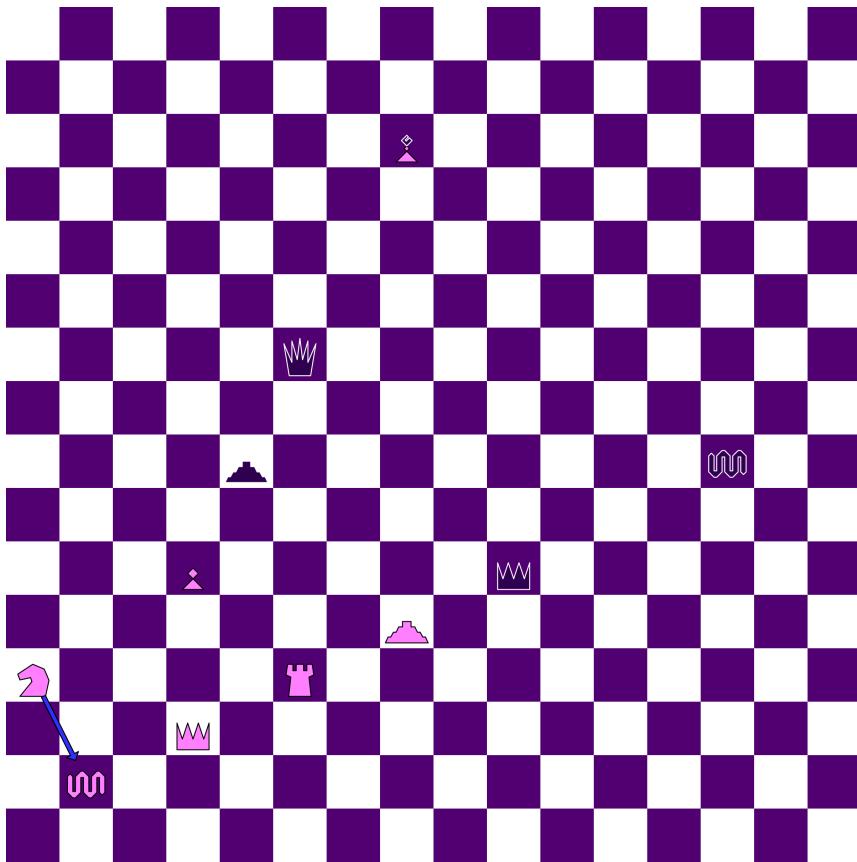


Figure 49: Wave activation

Above, after activation Wave could move the same way Knight does, over multiple step-fields. Once Wave starts moving in a chosen direction, it cannot be changed. So, in this case Wave would move as Pegasus does. Wave does not spend received momentum while moving, and would transfer it entirely to any piece it activates.

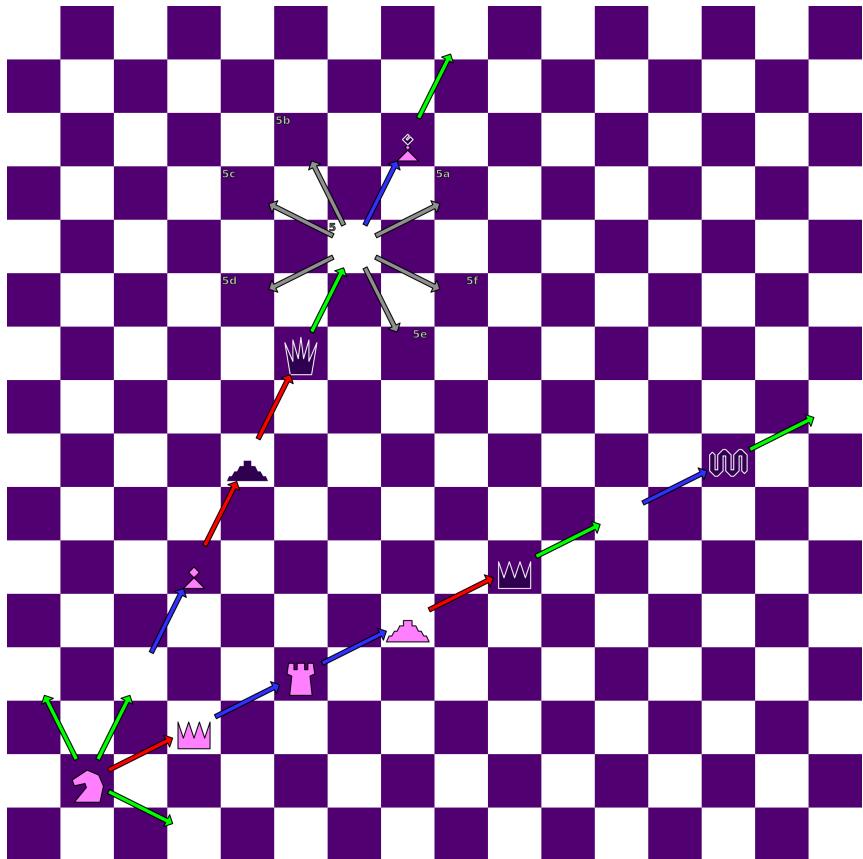


Figure 50: Wave activated

Wave can move unhindered by any piece, even on step-fields (green arrows). Wave can also activate pieces (blue arrows) obscured by others, for instance light Pyramid which is out of reach for regular Pegasus. Wave cannot activate Kings nor opponent's pieces (red arrows), except dark Wave. Again, Wave cannot change direction of movement after first step. For instance, upon reaching step-field 5, it cannot change direction to 5c, or any other greyed-out arrow.

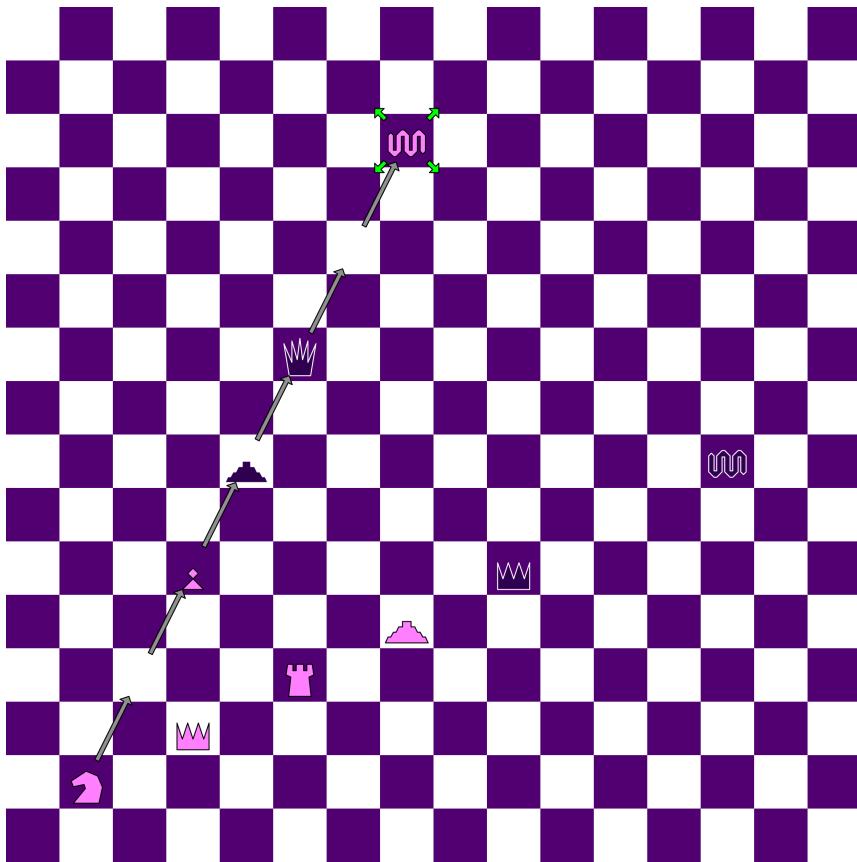


Figure 51: Wave finished

Greyed-out arrows show steps Wave have taken in its ply. Activated Bishop now continues the move according to own rules of movement, i.e. diagonally. Note that it's restricted by momentum received, and thus can make only one step, i.e. can move for only one step.

## Cascading Waves

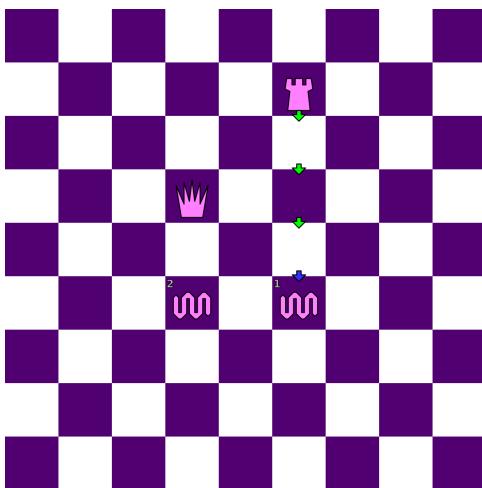


Figure 52: Rook starting cascade

Activated Wave 1 inherits its rules of movement from activating piece, and so now moves as Rook would. It's not obstructed with any piece in its way, nor it's limited by received momentum, i.e. it can move further than just 4 fields away. Wave 1 can also activate Wave 2.

Cascading Waves refers to a move in which two or more Waves have been displaced. For example, Wave can activate another Wave. Wave can also activate active piece (or Pyramid), which can then activate another Wave.

On the left, Rook is about to activate Wave 1, giving it momentum of 4.

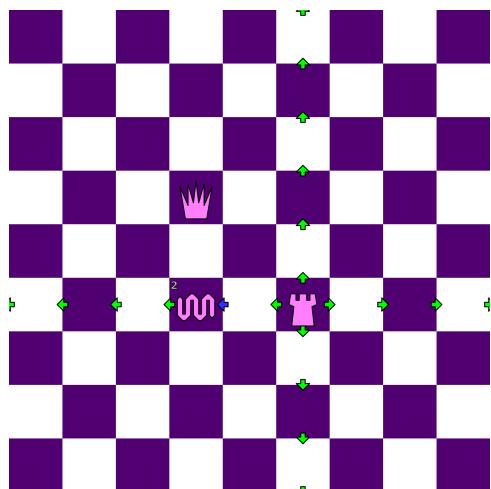
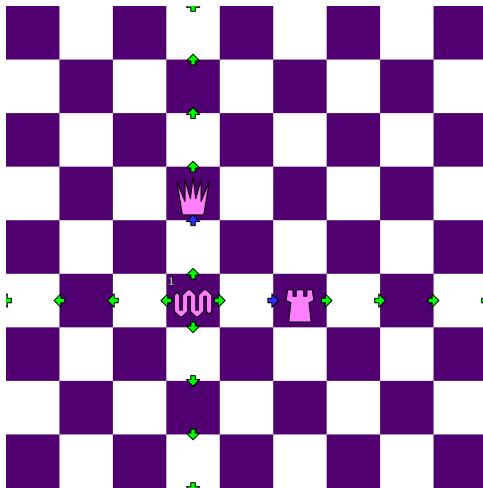


Figure 53: Wave 1 cascading



Activated Wave 2 inherits rules of movement from activating piece (in this case Wave 1), and so too moves as Rook would. Wave 2 also received momentum of 4. Again, it's not obstructed by any piece, nor it's limited by received momentum. Wave 2 can also activate either Queen or Rook.

Figure 54: Wave 2 cascading

Rook is now activated, but it is limited by momentum received, i.e. it can move at most 4 fields away. Naturally, Rook is obstructed by surrounding pieces, i.e. it can't move past Wave 1. Rook can activate Wave 1.

Note, piece for each activation in a cascade can choose any legal direction of movement for that ply, independent of what was chosen for previous plies.

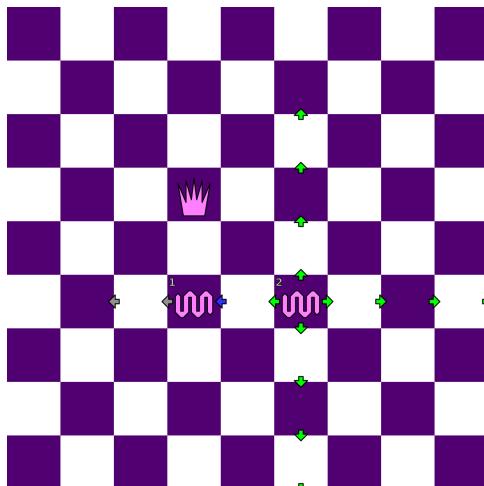
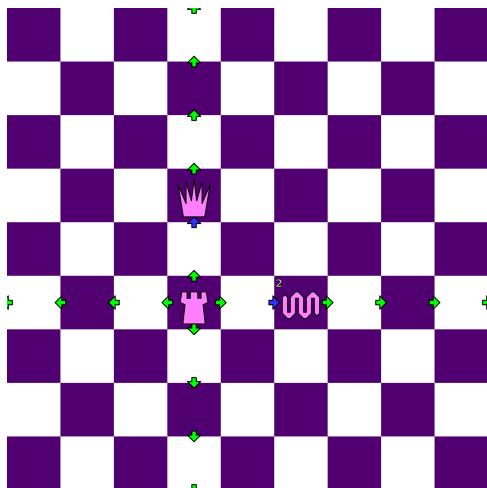


Figure 55: Rook, 2nd cascading



Activated Wave 1 received momentum of 2 and rules of movement from Rook. Again, Wave 1 is not obstructed by any piece, nor it is limited by received momentum. Wave 1 can also activate either Queen or Wave 2.

Figure 56: Wave 1, 2nd cascading

Activated Queen received momentum of 2, it can move at most 2 fields away. Queen can also activate Wave 2, giving it momentum of 0.

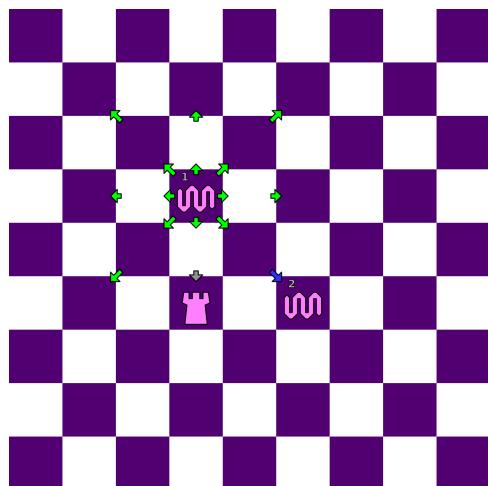
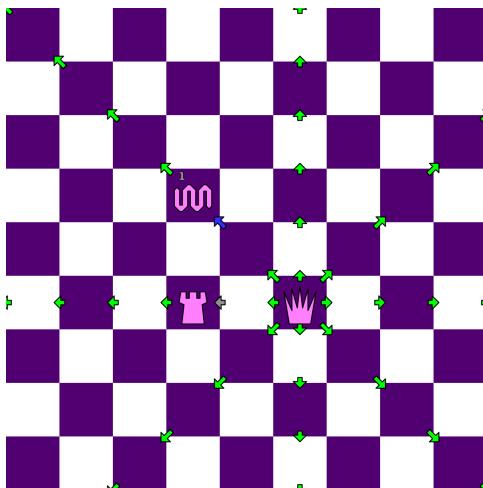


Figure 57: Queen cascading



Activated Wave 2 received rules of movement from Queen, and 0 momentum. Note, since Wave 2 has no momentum it can't activate Rook, only Wave 1.

Figure 58: Wave 2, 2nd cascading

Activated Wave 1 inherits rules of movement from activating piece (Wave 2), meaning Wave 1 too now moves as Queen would. Due to no momentum, Wave 1 can't activate neither Queen nor Rook.

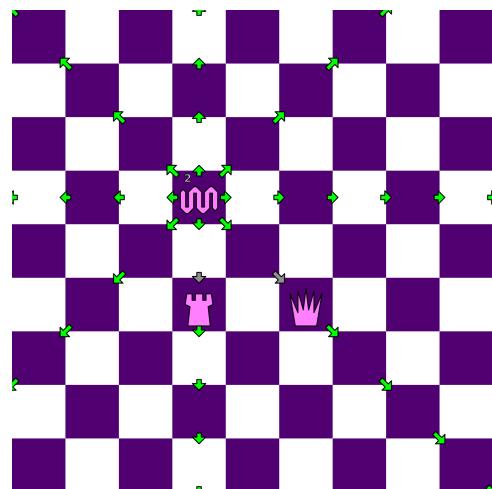
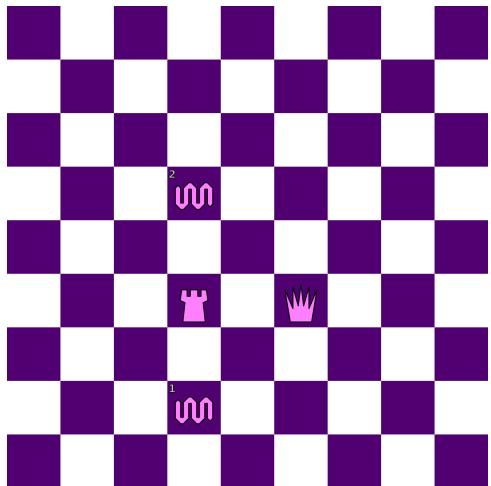


Figure 59: Wave 1, 3rd cascading



Wave 1 ends this rather long cascade by settling past Rook.

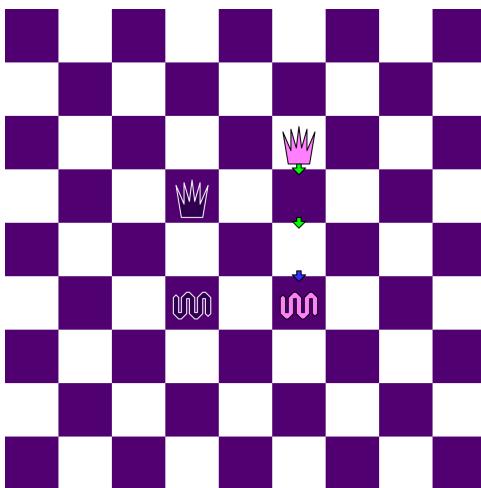
Figure 60: Wave 1, end cascading

In a cascade, Wave is not limited by received momentum, nor it's obstructed by other pieces on board. Wave inherits rules of movement from activating piece, and can make multiple steps, even if activating piece can make only one. For details see [Movement of Wave](#) in Definitions. All other pieces moves according to their own rules, and are restricted by momentum received.

During cascade, after each ply activation takes place according to current positions of pieces on the board, just as it would at the beginning of the move. For each activation in a cascade, all pieces can choose any legal direction independently of previous choices.

This makes it possible, in the same cascade, to activate piece which started it, Rook in this example. Such cascade is said to feature push-pull activation. It's also possible to reactivate other (non-initiating) pieces in the same cascade, e.g. here Wave 1 was reactivated 3 times.

## Cascading opponent



Cascading opponent refers to a move in which opponent's Wave has been displaced, potentially other opponent's pieces.

On the left, light Queen is about to activate light Wave, giving it momentum of 3.

Figure 61: Light Queen starting cascade

Activated light Wave can activate dark Wave, but can't interact with dark Queen in any way.

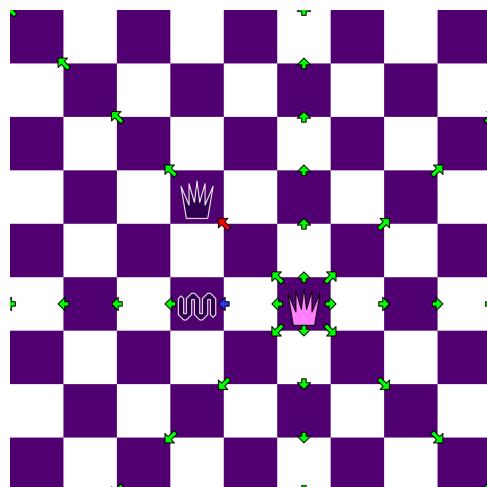
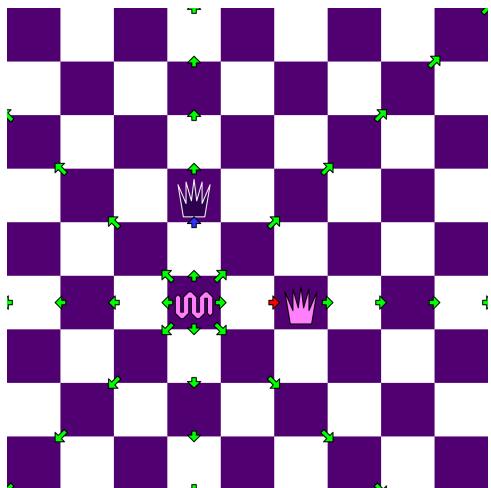


Figure 62: Light Wave



Activated dark Wave now can activate dark Queen, but cannot interact with light Queen in any way.

Figure 63: Dark Wave

Activated dark Queen is limited to momentum transferred to it, i.e. 3. Dark Queen cannot activate light Wave. Just as it could in ordinary, non-cascading move dark Queen can capture either light Wave or light Queen. Also, dark Queen is obstructed by pieces present on board.

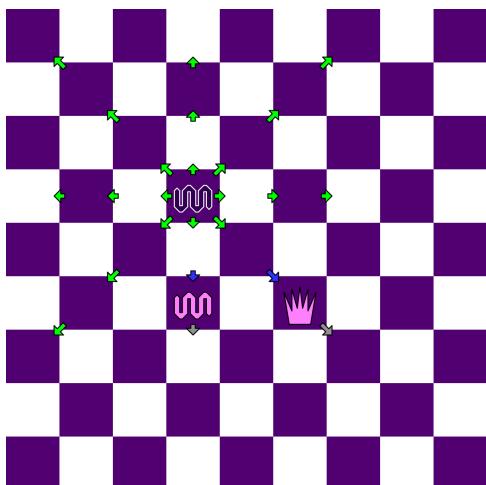
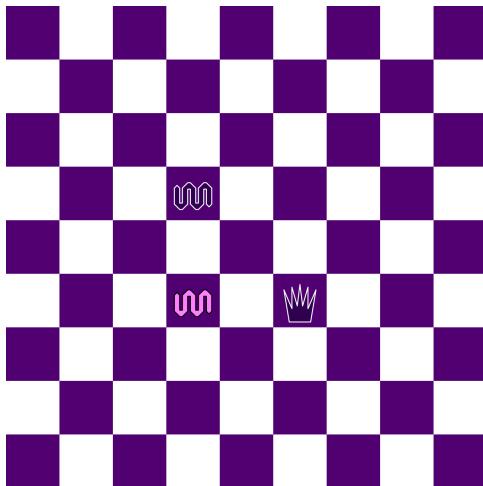


Figure 64: Dark Queen



This example of cascading opponent ends with dark Queen capturing light Queen.

Figure 65: Cascading opponent end

In summary, during cascade opponent's pieces retain all of their normal behavior, most notably capturing their opponent's (in cascade, that means your own!) pieces.

This behavior retention include checking and checkmating their opponent's (again, your own) King, en passant, promotion of their own pieces (if their Pyramid has been activated), etc. This list includes all other movements, features described later in this book.

Plies which cannot be performed by opponent's pieces during cascade are those involving opponent's King, including castling, as that would require activation of opponent's King, which is not allowed.

## Activating Pawn

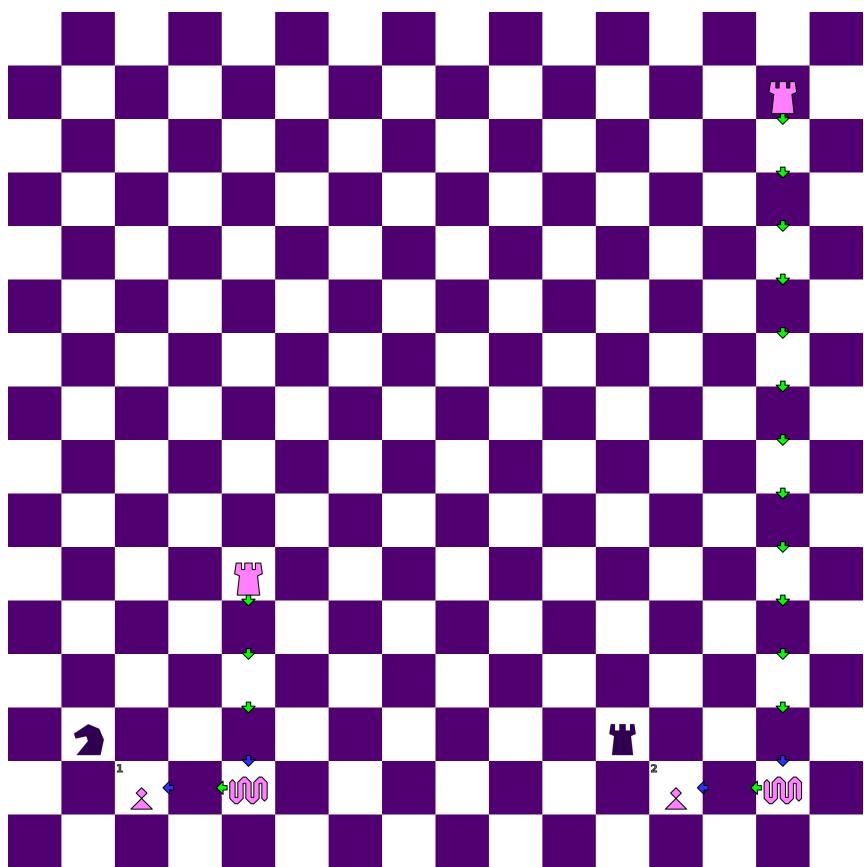


Figure 66: Activating Pawns

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.

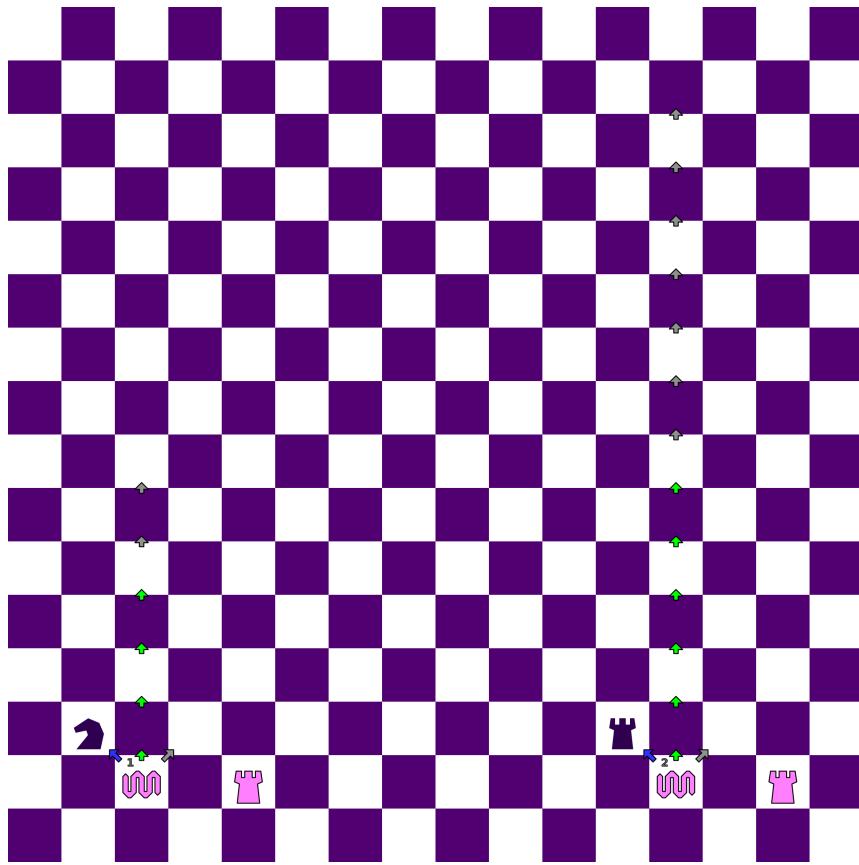


Figure 67: Pawns activated

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.

## Activation by Pawn

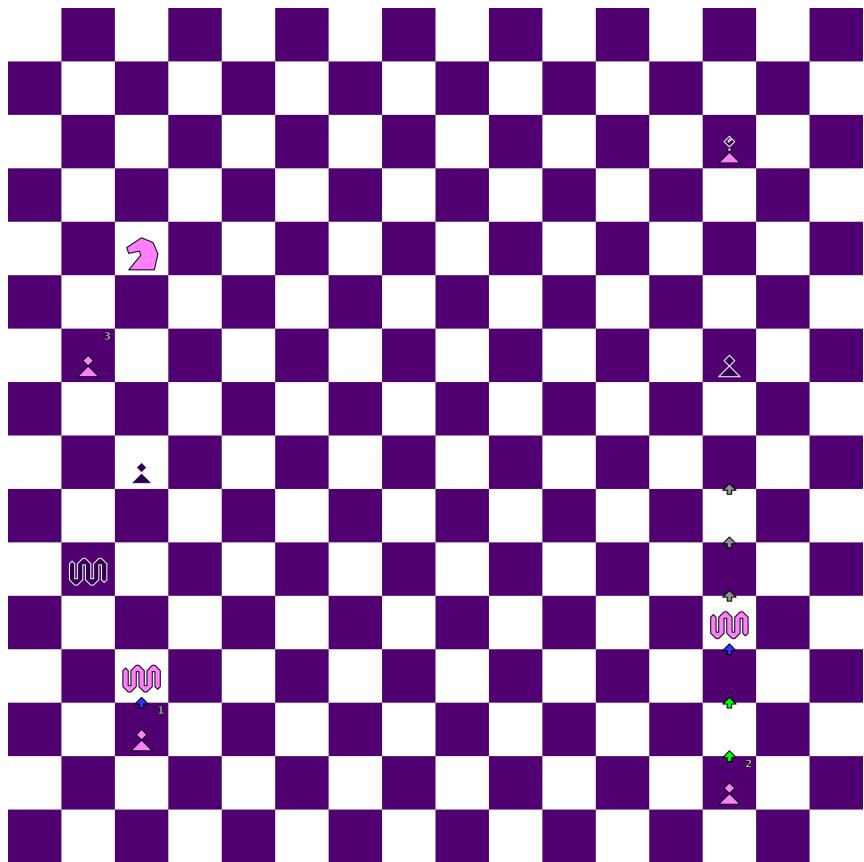


Figure 68: Pawn activates Wave on step-field

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 travelled-over step-fields as momentum, in this case 3 (Pawn 2). Note, rushed Pawn has to capture field at which Wave is located, and is blocked from rushing any further.

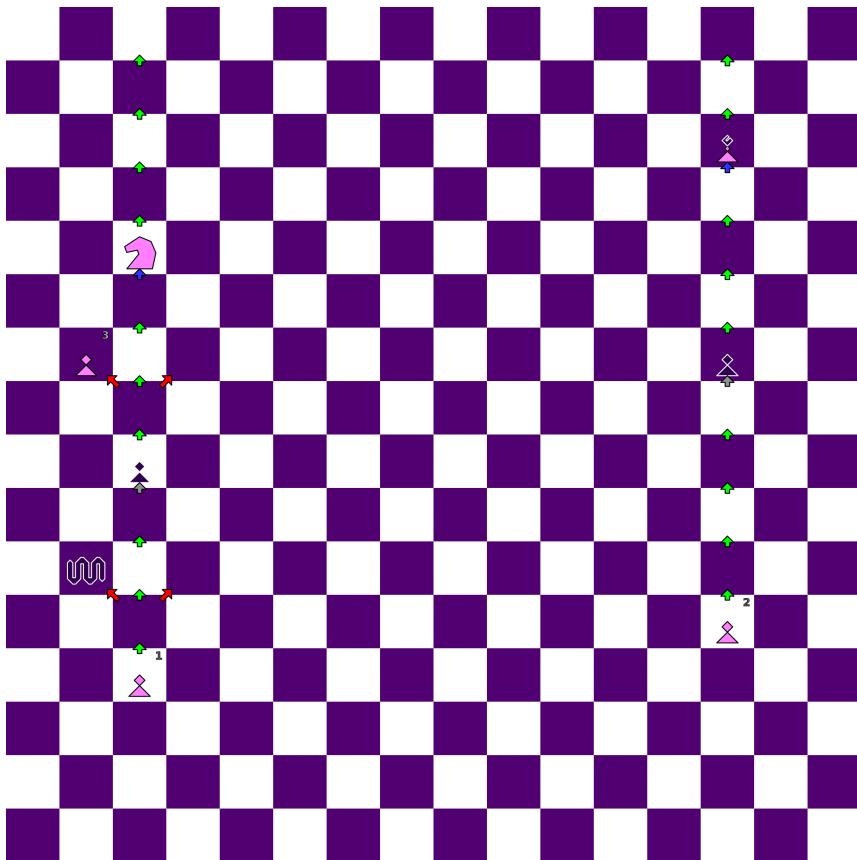


Figure 69: Wave activated on Pawn's step-field

In all cases, Wave activated on Pawn's step-fields can move only forward, until the end of the board. Either Wave could also activate light Knight or light Bishop, transferring to them received momentum (1 and 3, respectively). 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).

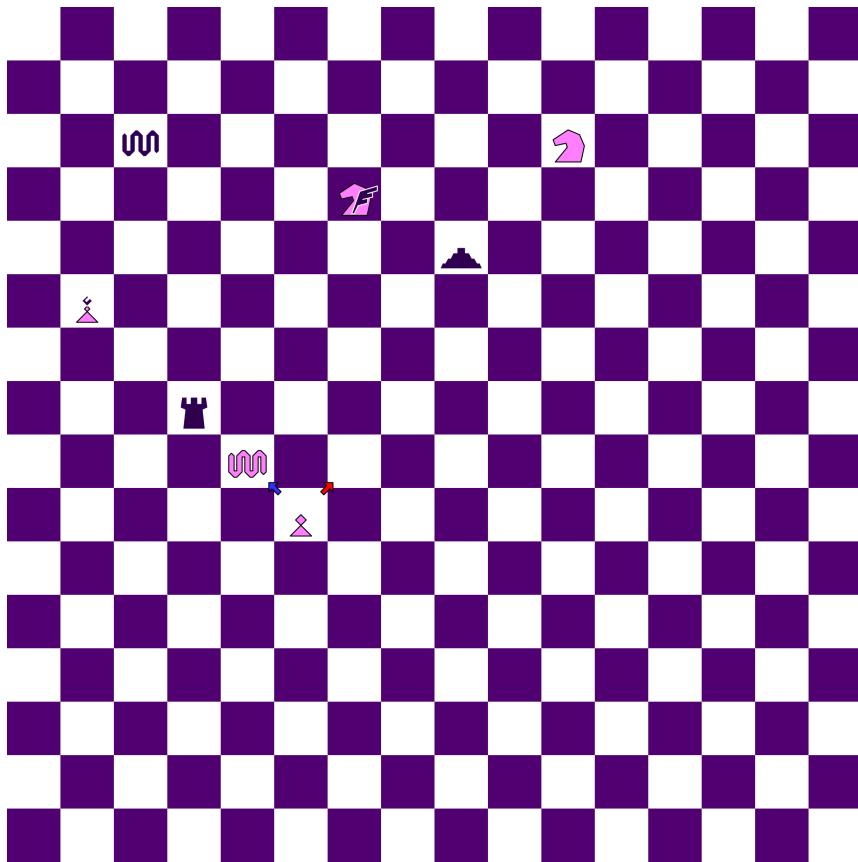


Figure 70: Pawn activates Wave on capture-field

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.

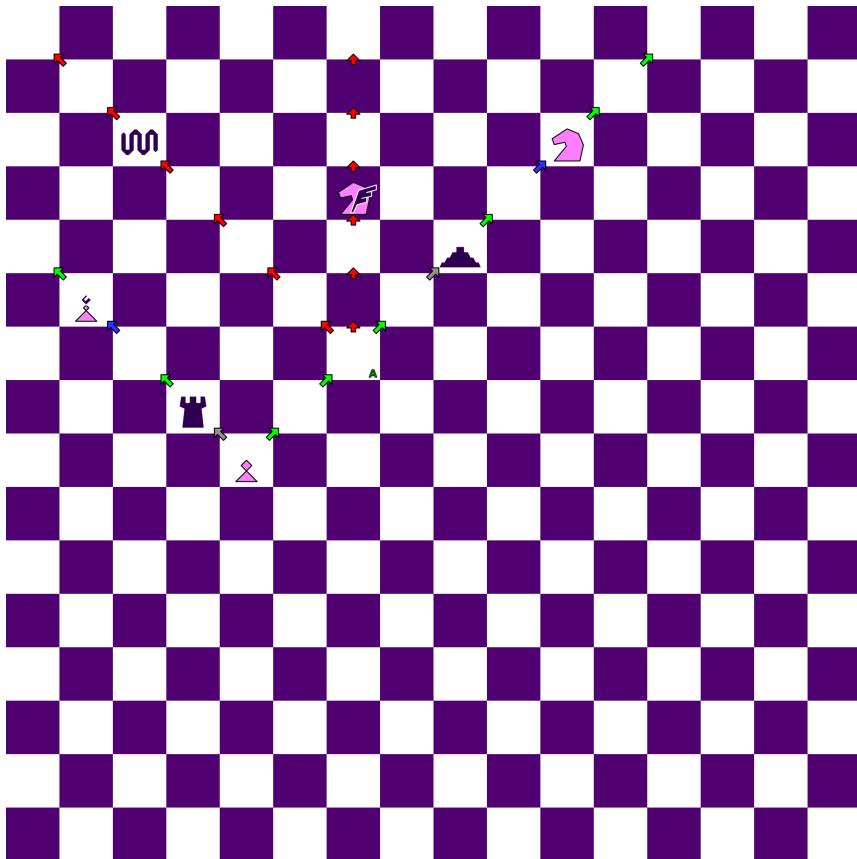


Figure 71: Wave activated on Pawn’s capture-field

Wave could also activate either light Bishop or light Knight, giving it received 1 momentum. 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.

## Activation by Unicorn

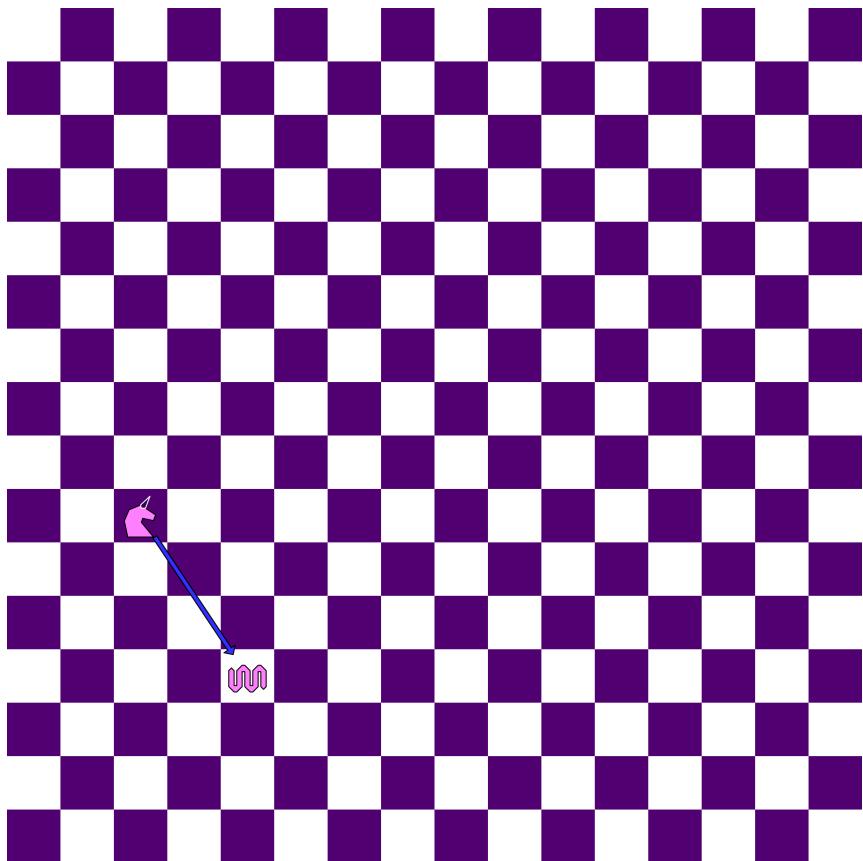


Figure 72: Unicorn activates Wave

While Unicorn moves 1 step at a time, its movement **depends on a color of a starting field**. For Wave to make multiple steps as Unicorn would, that means it too has to have different steps for differently colored fields. So, Wave has to choose 2 different steps at the beginning of its movement.

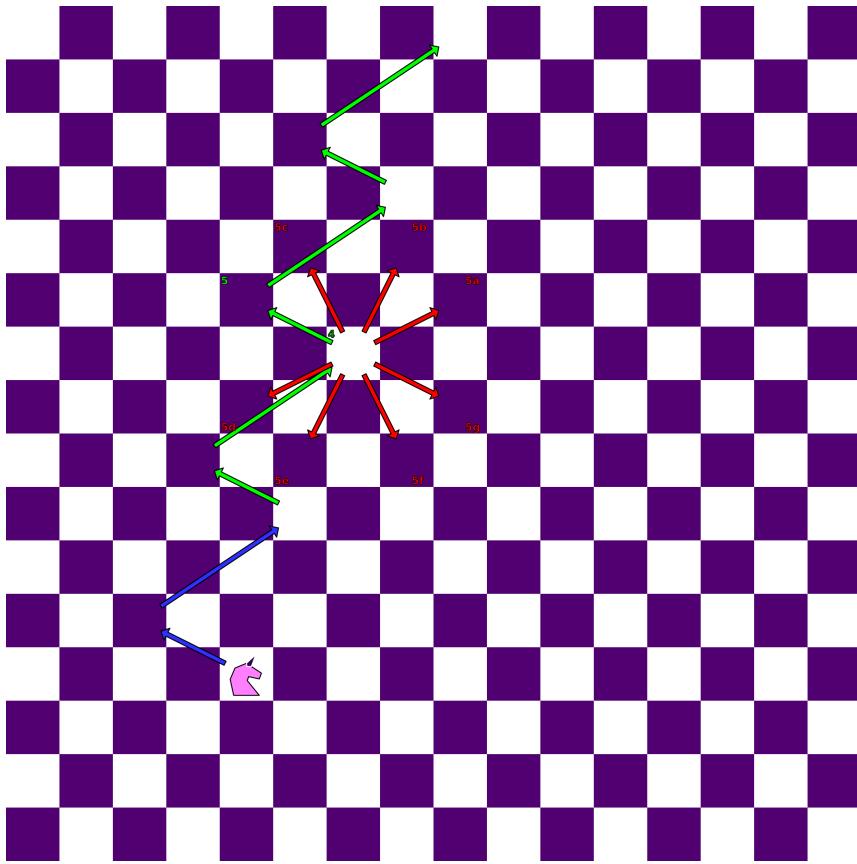


Figure 73: Wave activated by Unicorn

Once initial 2 steps are chosen (blue), Wave has to follow them for the remainder of a ply (green). So, Wave cannot change its direction in the middle of a movement; e.g. upon reaching field 4 it can't change its direction to 5b, or any other red step, it has to follow initially chosen step (here, 5).

## Out of board steps

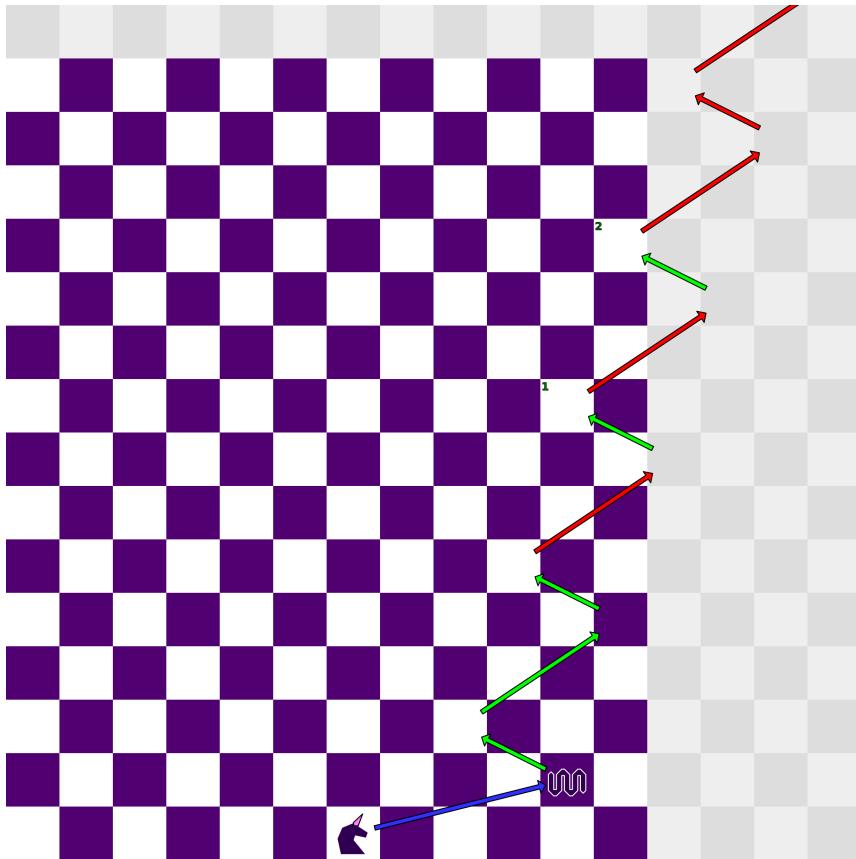


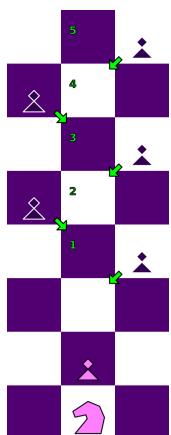
Figure 74: Wave off-board steps

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.

## Promotion

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

# 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 75: En passant

# 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 76: Castling

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



Figure 77: 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 Age of Aquarius, Wave is inserted between Knight and Unicorn symmetrically, on both sides of chessboard. This can be seen in the image below:

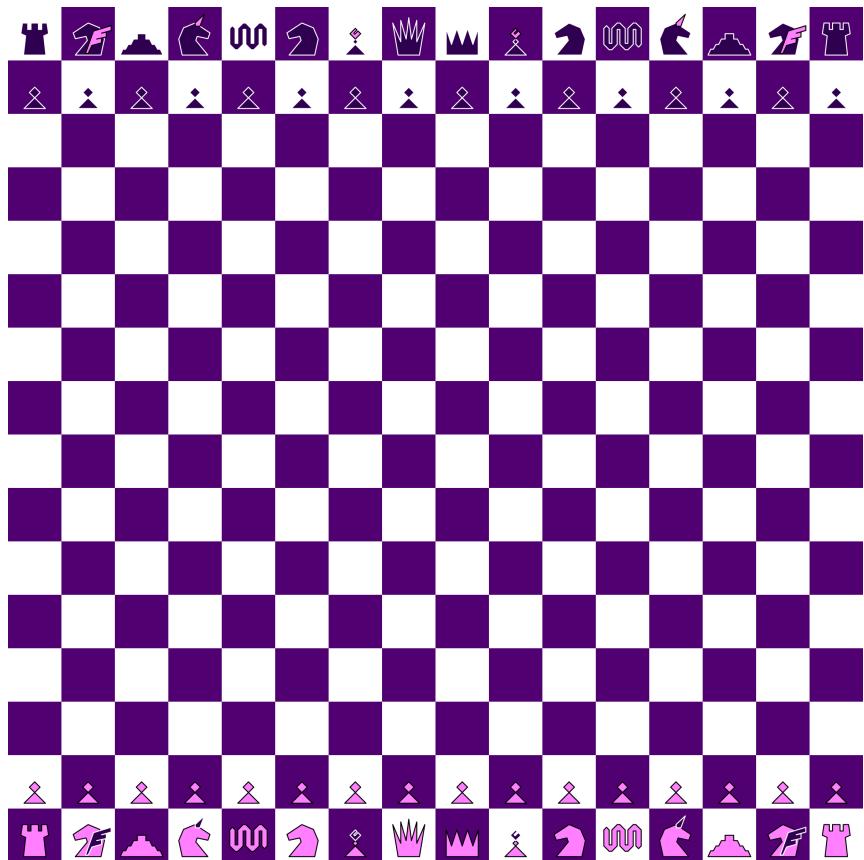


Figure 78: Miranda's veil board

# 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. In algebraic notation, columns are enumerated from 'a' to 'r', and rows are enumerated from '1' to '18'. A new piece is introduced, Star.

## Star

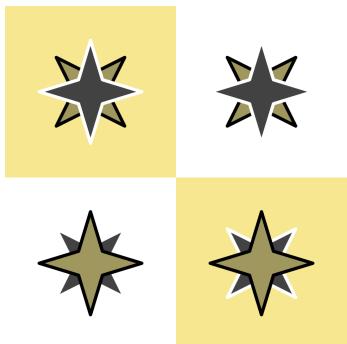


Figure 79: Star

Star does not belong to any player, and can't be moved, activated, captured or converted by either. 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 field (or a Star) 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. 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. In algebraic notation symbol for Star is 'T'.

## Portal-fields

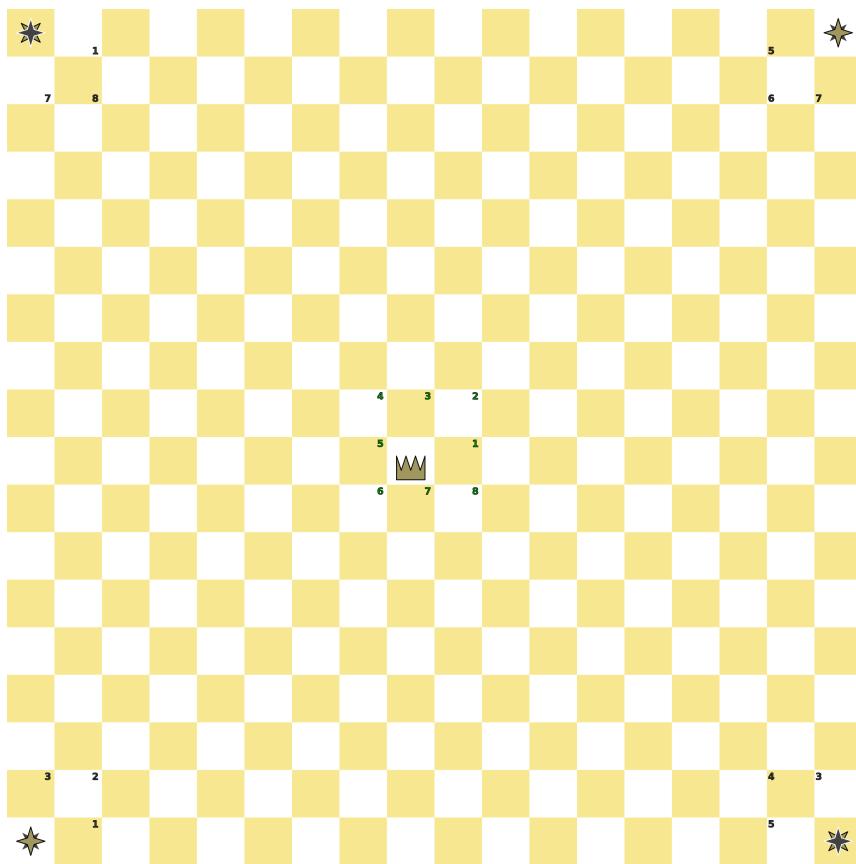


Figure 80: Portal-fields

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

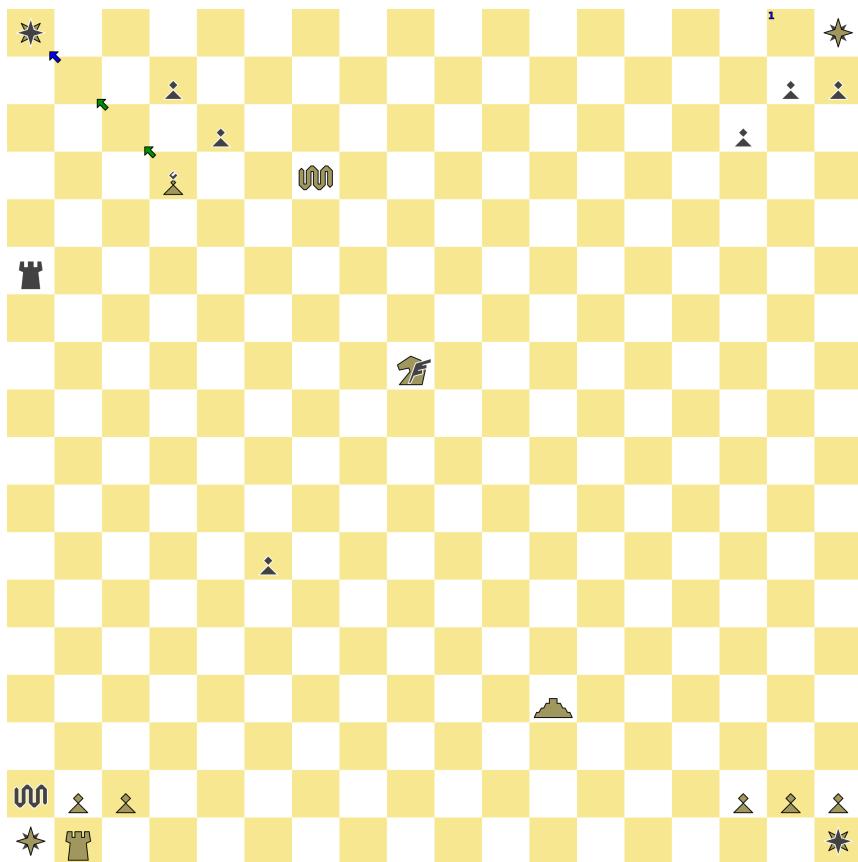


Figure 81: Teleportation start

Light Bishop is about to teleport by diving into dark Star. Normally, teleport destination could be chosen among empty portal-fields of both light Stars. Here, portal-field are all blocked, except field 1.

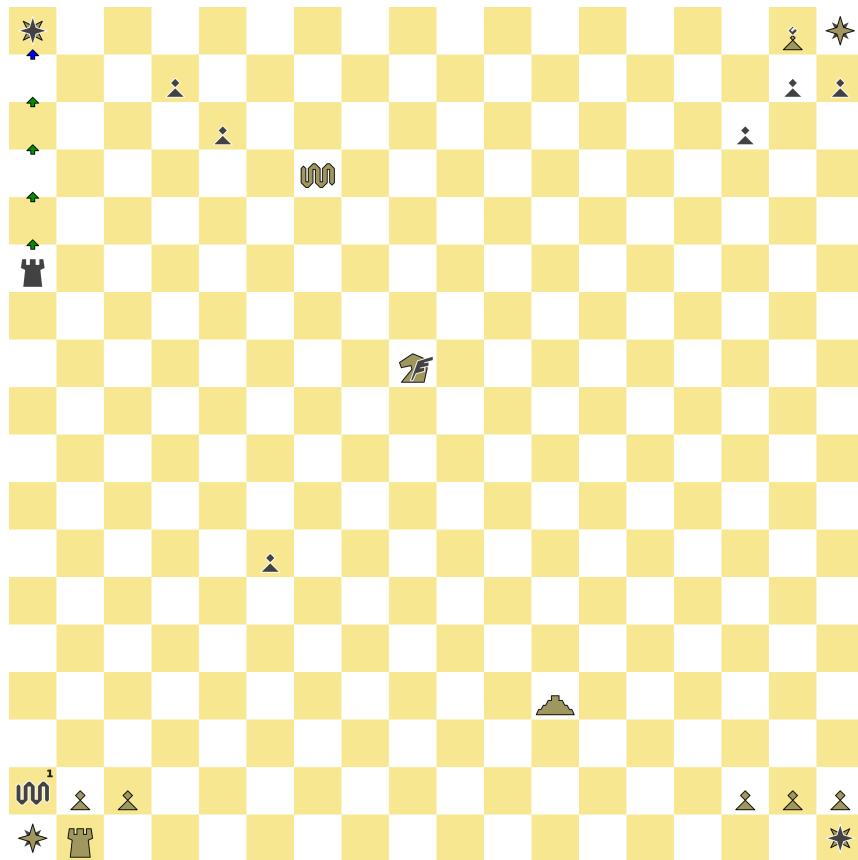


Figure 82: Teleporting dark Rook

Dark Rook after teleportation is about to be removed from chessboard, since there is no empty portal-fields around both opposite-color Stars. Note that own, dark Wave (on field 1) is also blocking emergence of teleported dark Rook, even though it could be activated by it in a normal, non-teleporting ply.

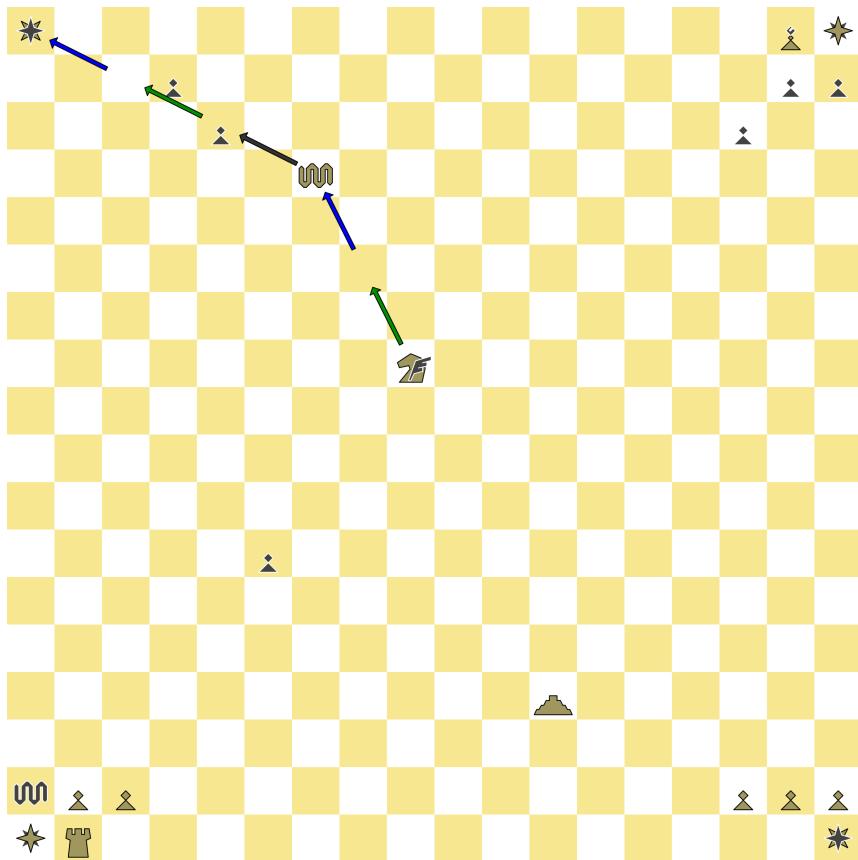


Figure 83: Teleporting light

Wave can reach a Star and start teleporting even if activating piece (here, Pegasus) would be blocked.

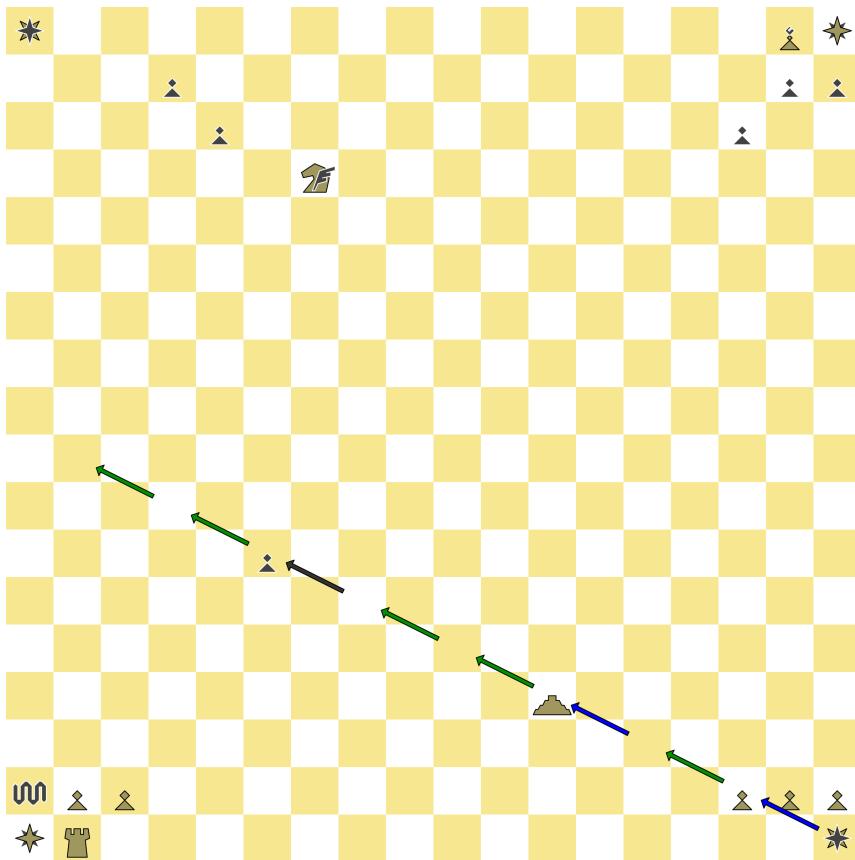


Figure 84: Teleportation end

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**.

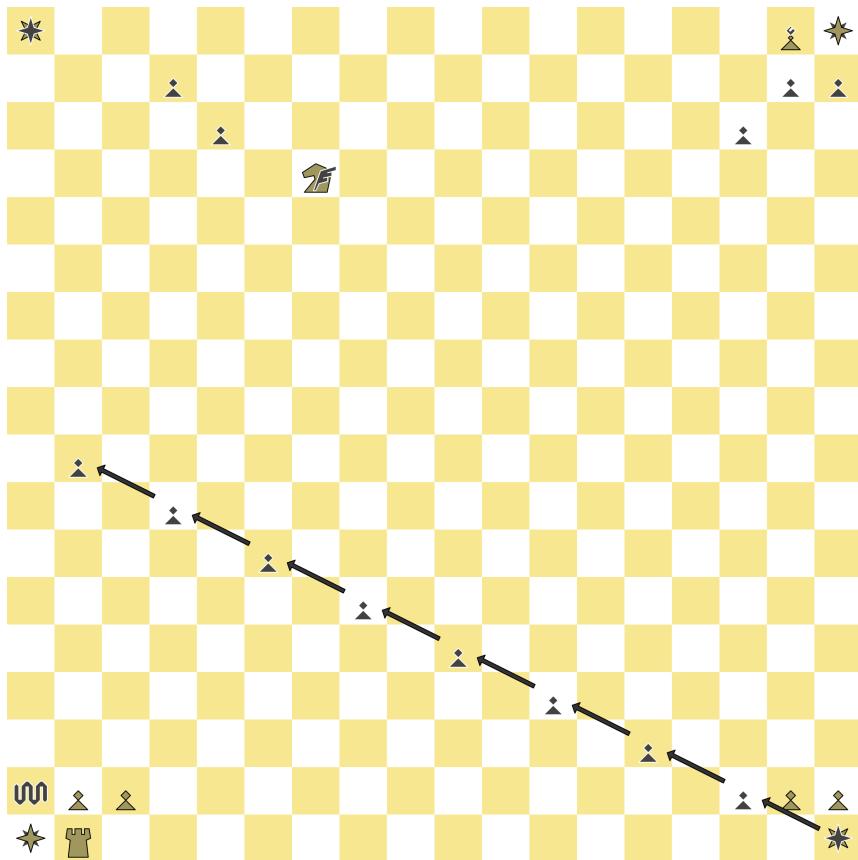


Figure 85: Teleported Wave blocked

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 Wave

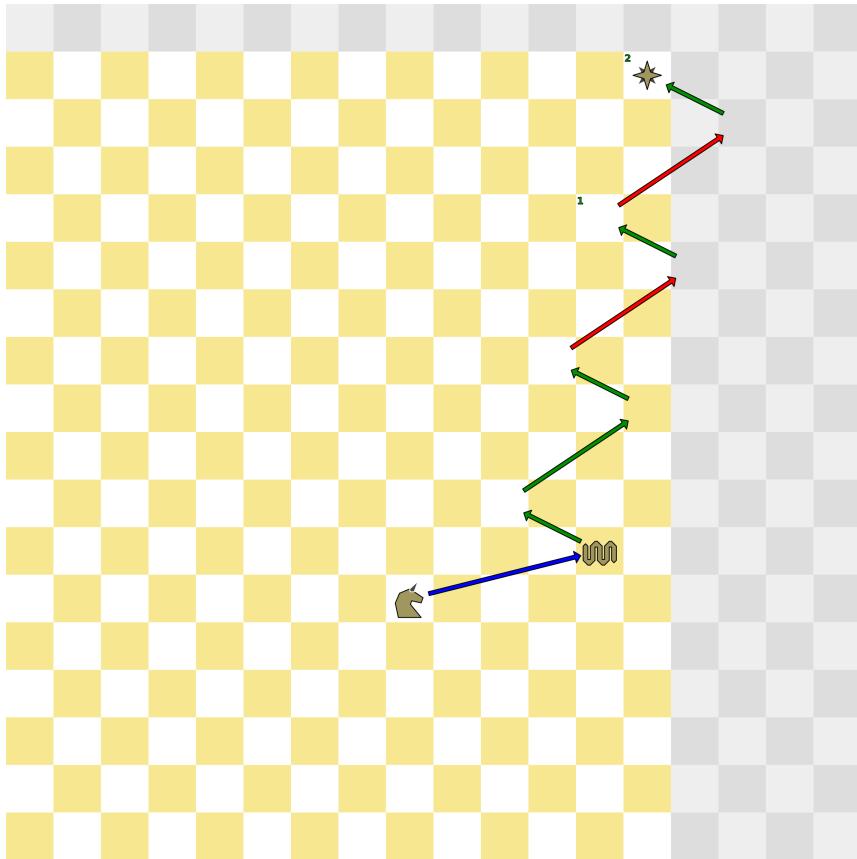


Figure 86: Wave out-of-board before teleportation

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.

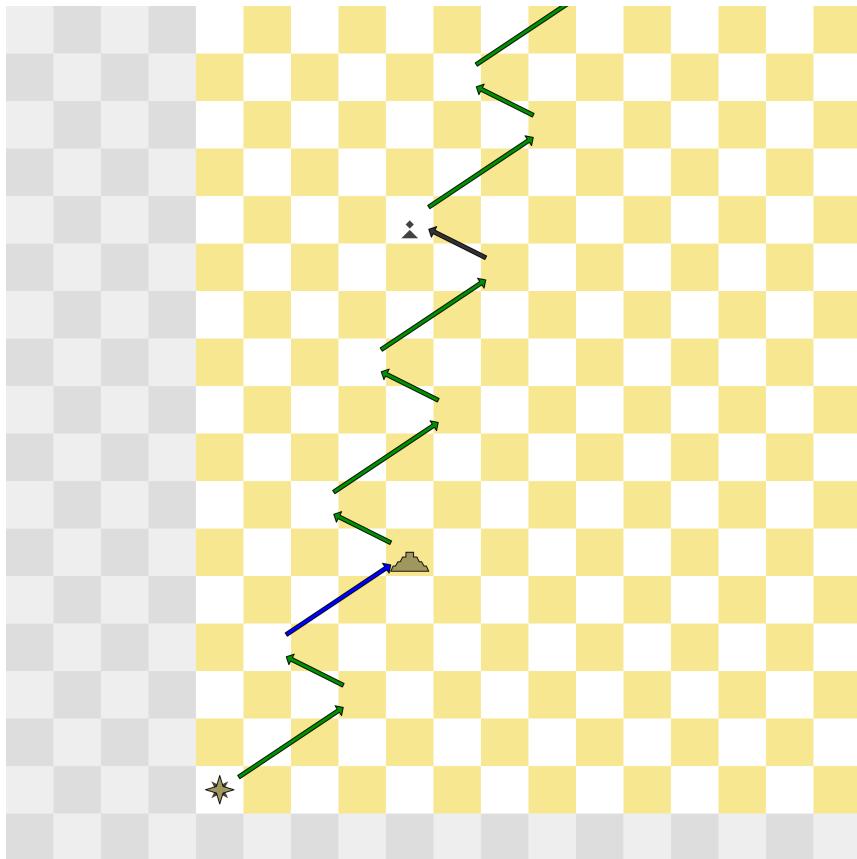


Figure 87: Wave teleported

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).

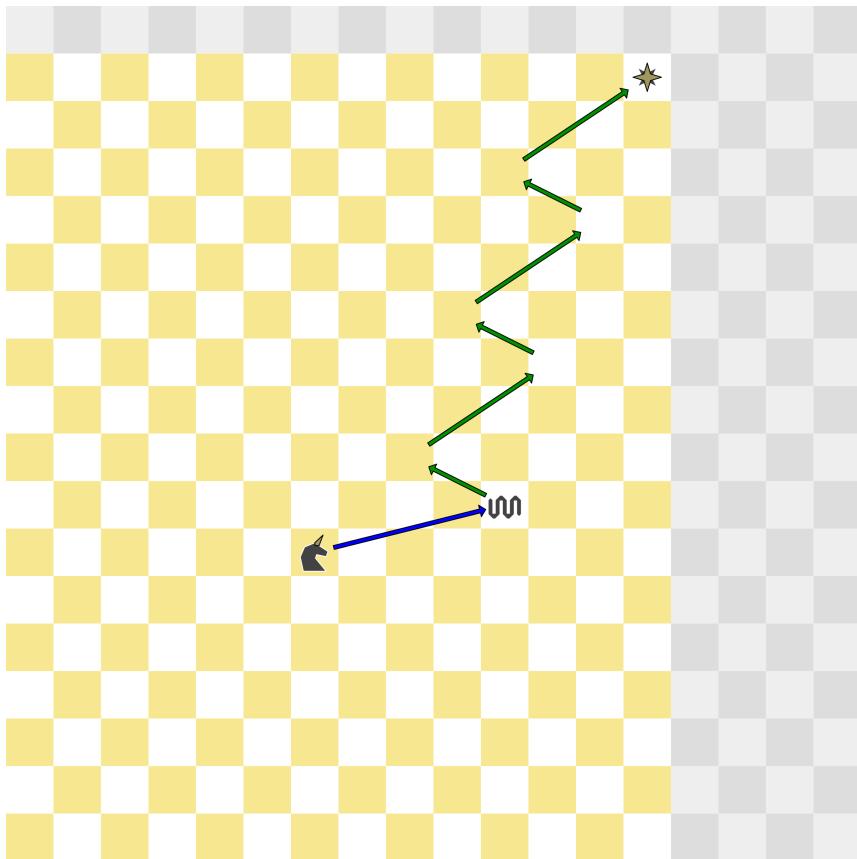


Figure 88: Wave before teleportation

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).

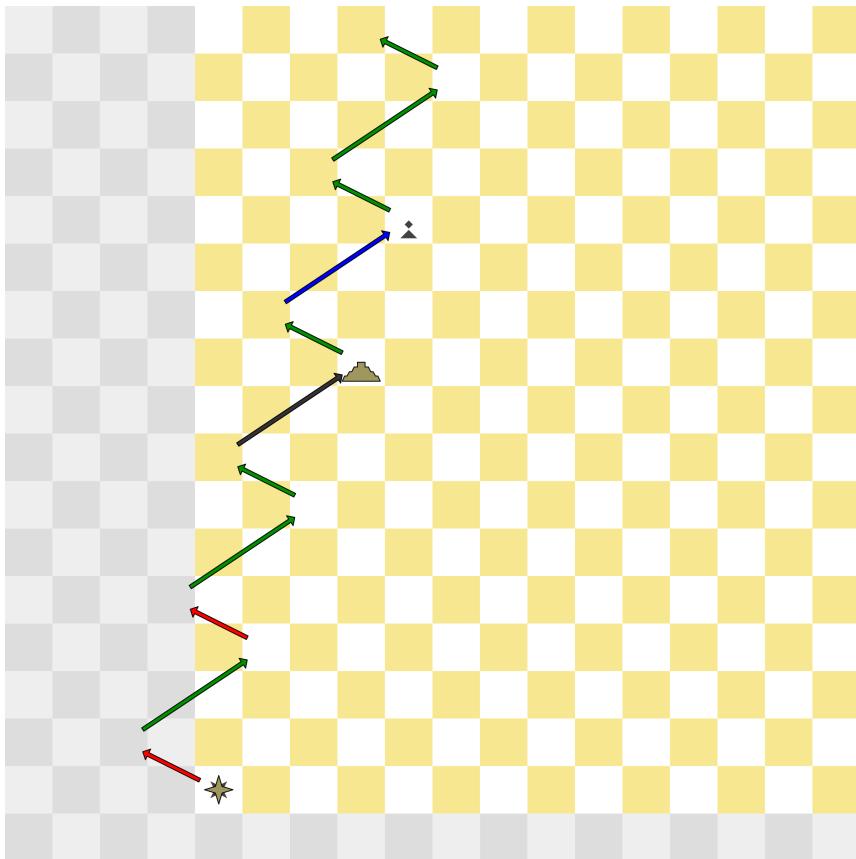


Figure 89: Wave out-of-board after teleportation

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

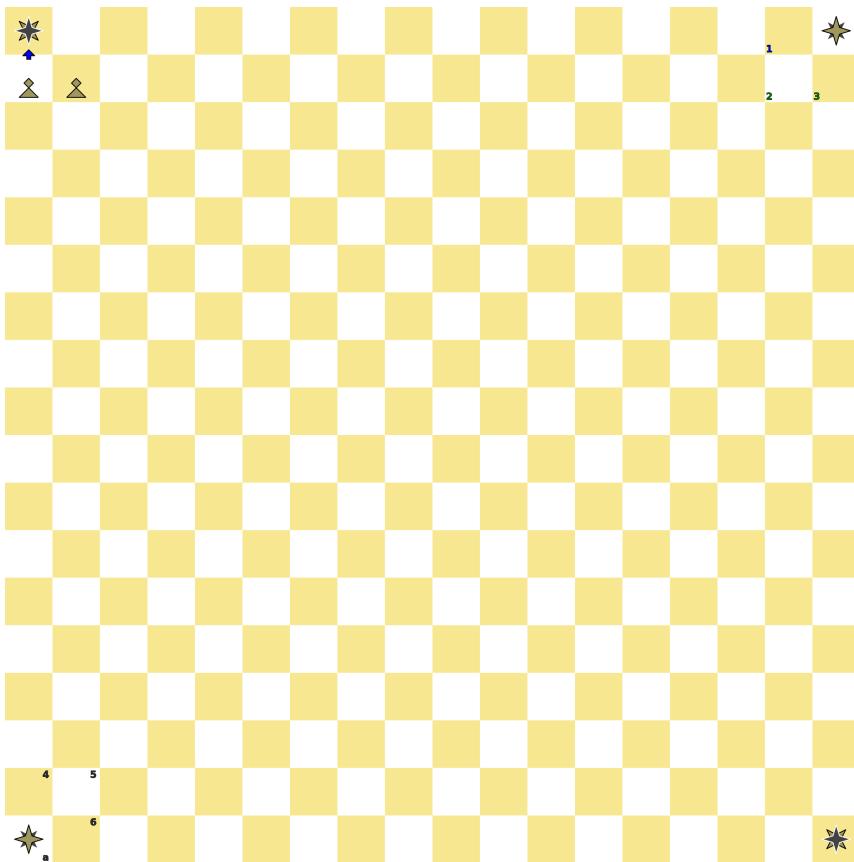


Figure 90: Pawn teleporting on step-field

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 (green, blue fields). If destination portal-field is on opponent's **figure row** (blue), player can choose between promoting Pawn outright, or keeping it tagged for promotion.

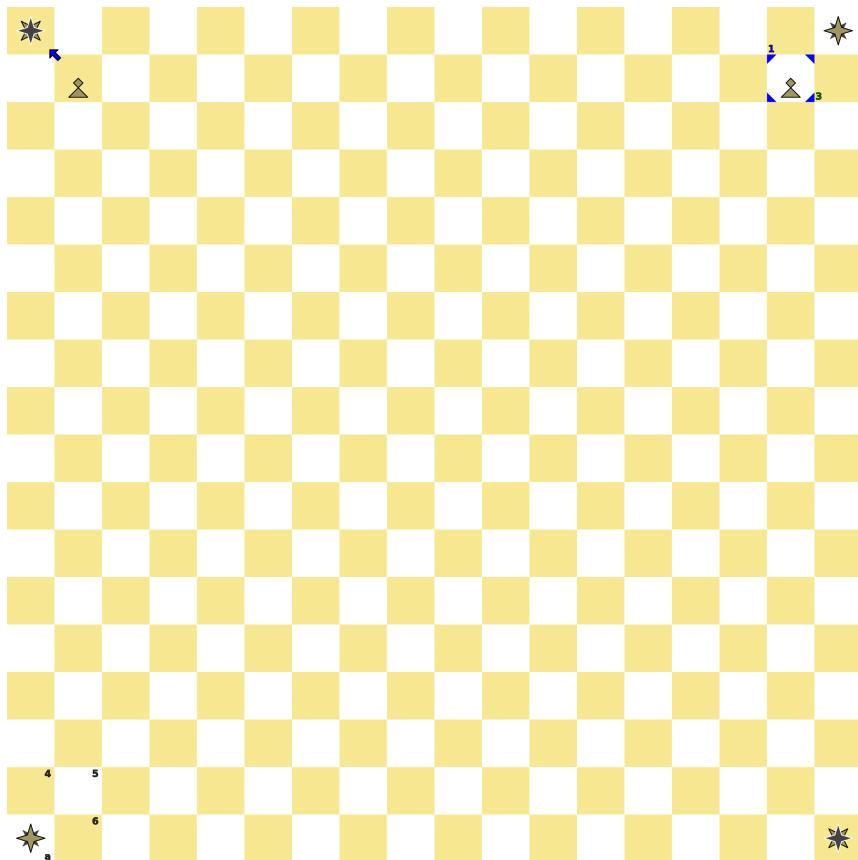


Figure 91: Pawn teleporting on capture-field

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.

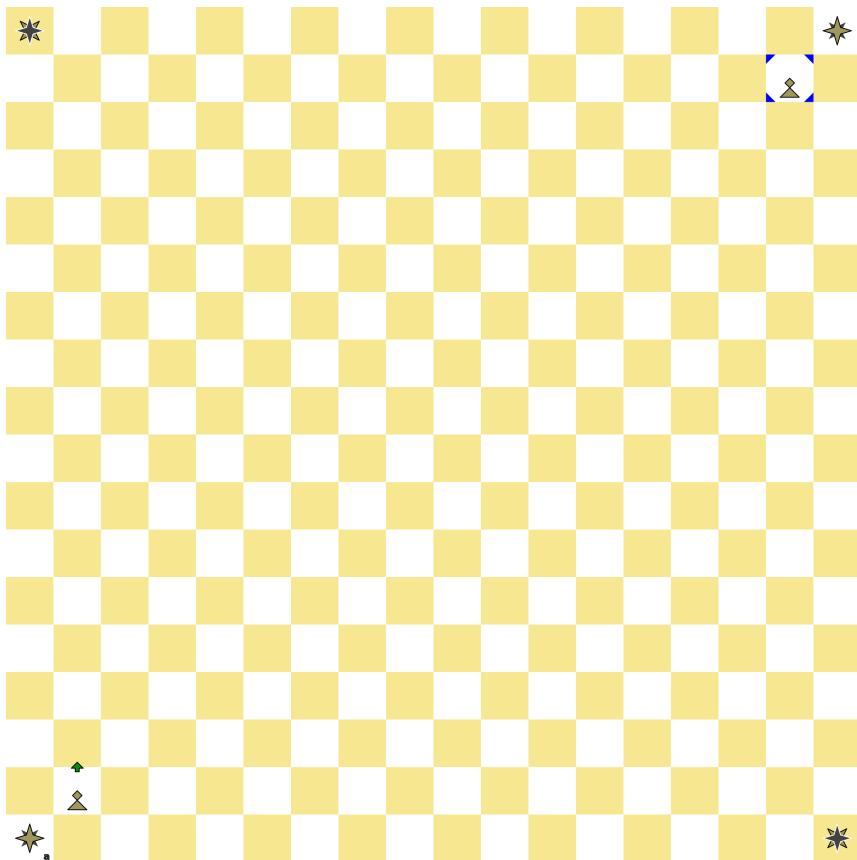


Figure 92: Pawn teleporting end

Light Pawn teleported onto own side of chessboard cannot rush, even though destination field is on own **Pawn row**.

## Teleporting Bishop

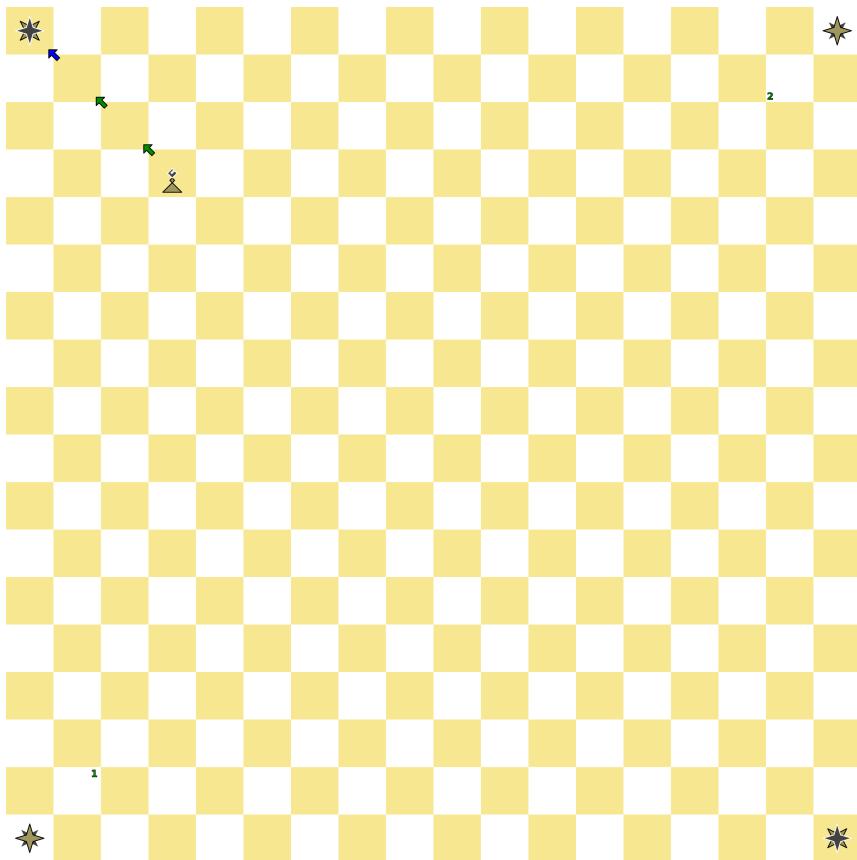


Figure 93: Bishop teleportation

Teleporting Bishop, like any other piece, can choose any empty portal-field around opposite-color Star as a destination, regardless of a field's color. 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.

## 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.

Additionaly, promotion in this variant is monogamous. Only one Queen in the same color can be present on chess-board at any given time.

## Pawn ranks, rows

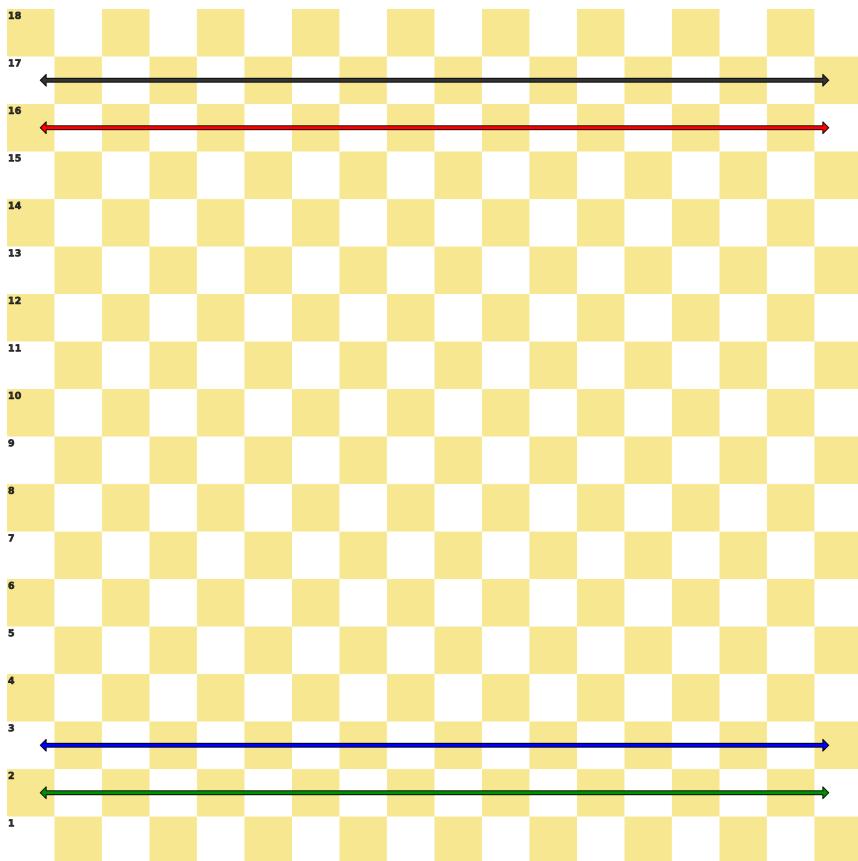


Figure 94: Pawn rows

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

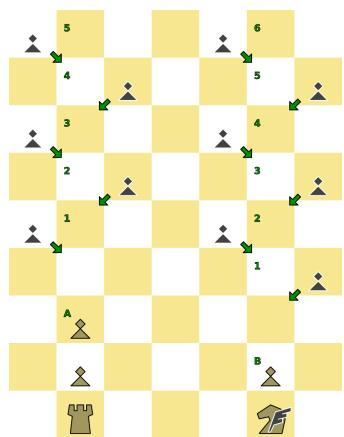


Figure 95: En passant

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 (Pawn A) can be rushed for up to 6 fields, while those in second row (B) can go up to 7 fields forward.

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

# 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 96: Castling

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



Figure 97: 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.

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

## 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.

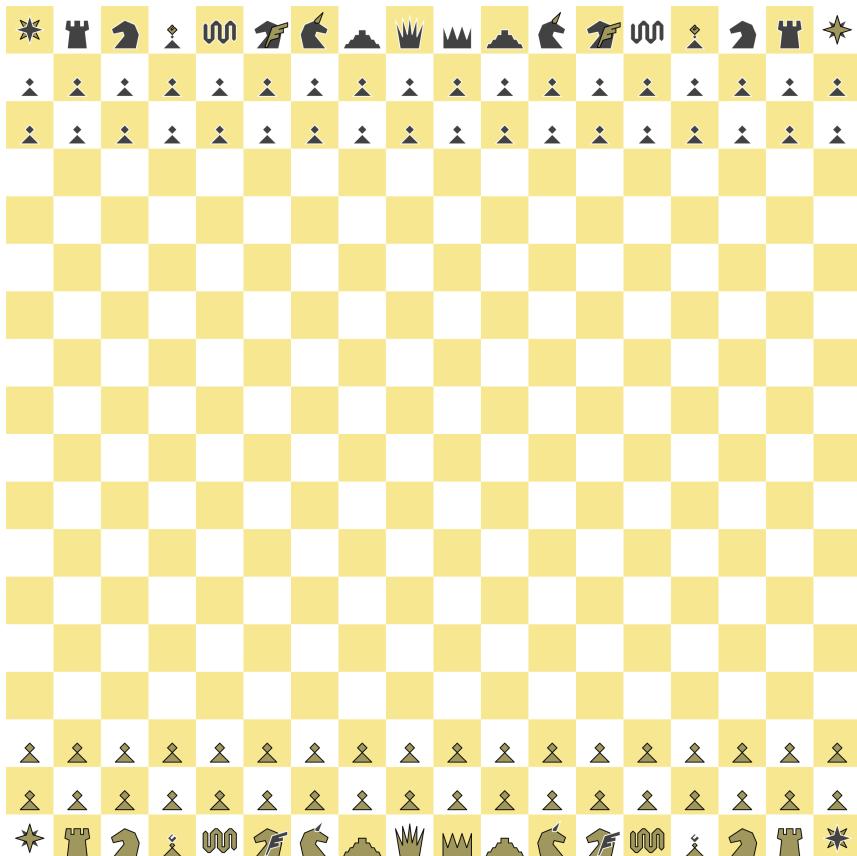


Figure 98: Nineteen board



# 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. In algebraic notation, columns are enumerated from 'a' to 't', and rows are enumerated from '1' to '20'. A new piece is introduced, Centaur.

# Centaur

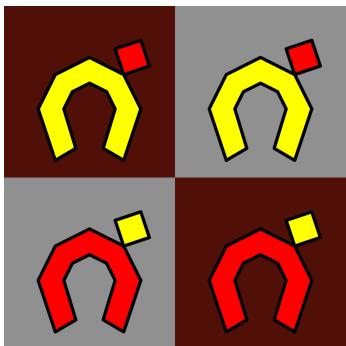


Figure 99: Centaur  
that ply.

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.

In algebraic notation symbol for Centaur is 'C'.

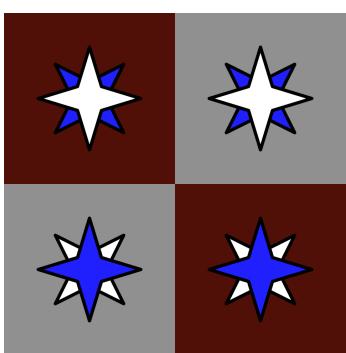


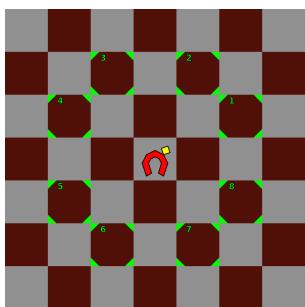
Figure 100: Star

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.

The two directions are chosen freely on first and second jump. Once both long and short jump directions are determined, Centaur has to follow them in all subsequent steps, for the remainder of

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

## Movement



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

Figure 101: Centaur  
short jump

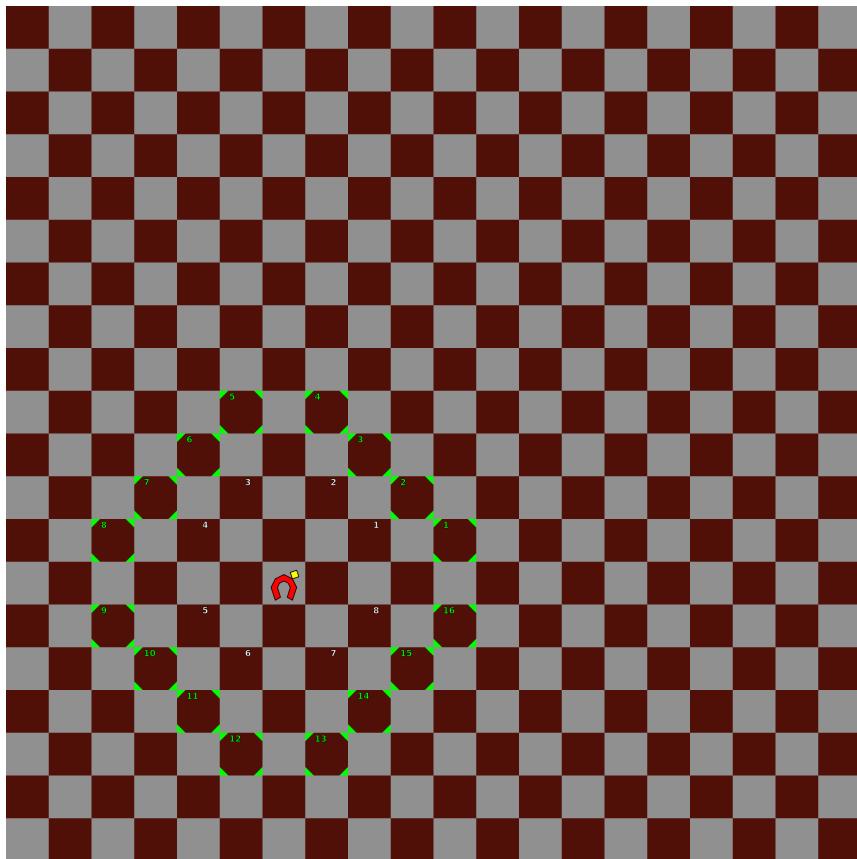


Figure 102: Centaur long jump

On fields in opposite color, Centaur can jump much longer, exactly the same way Unicorn does. Again, just as Knight (and Unicorn), Centaur is not hampered by surrounding pieces. Only own pieces on marked (i.e. step) fields can prevent Centaur to move, opponent's pieces could be captured.

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

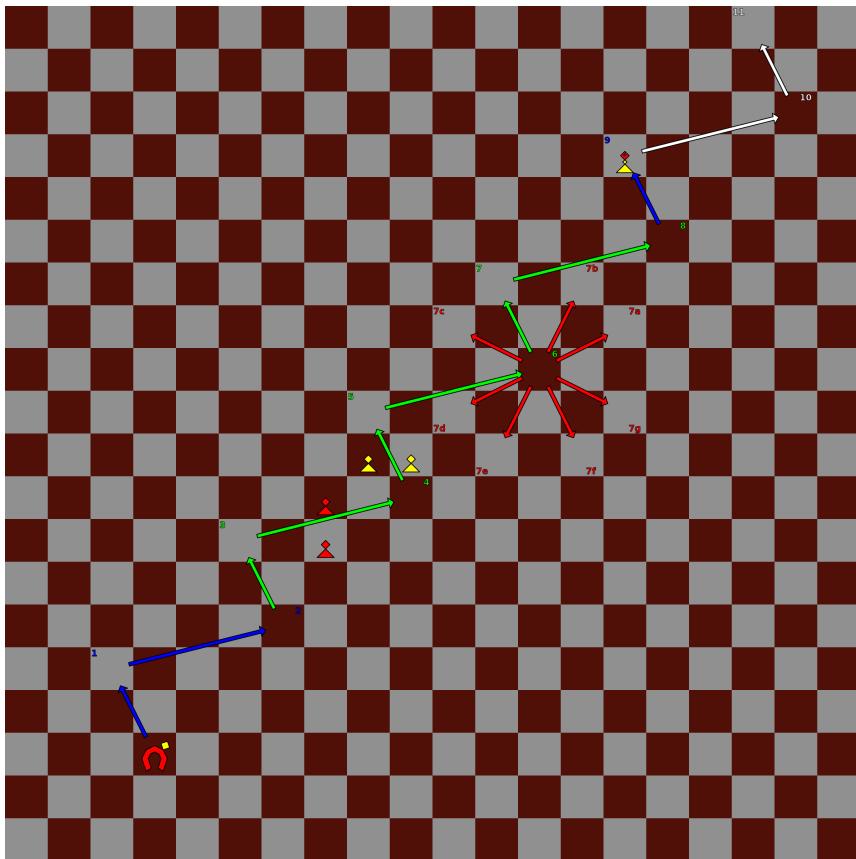


Figure 103: Centaur multi-step move

On first two jumps, Centaur can choose freely any direction (blue). After two directions are chosen, Centaur for the rest of a ply has to follow them (green), e.g. after reaching field 6, it cannot move to any 7a to 7g fields (red).

Here, step-fields are numbered 1 to 11, they are also capture-fields. Light Centaur could capture dark Bishop, but is prevented from moving any further (grey). Pieces on all other fields are ignored (Pawns).

## Out of board steps

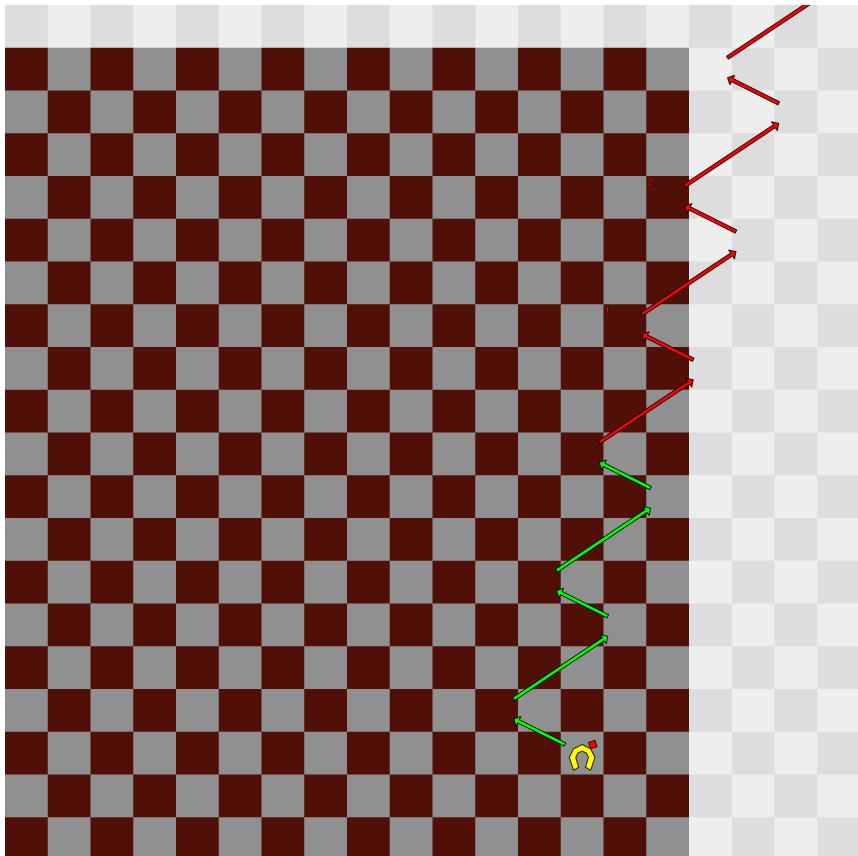


Figure 104: Centaur off-board steps

Here, light grey fields are virtual fields extending existing chessboard. It's illegal to step outside chessboard, and all subsequent steps are also illegal. That means, Centaur cannot reach fields 1 and 2 from starting position with selected directions, even though it would end movement on the chessboard.

## Activating Wave

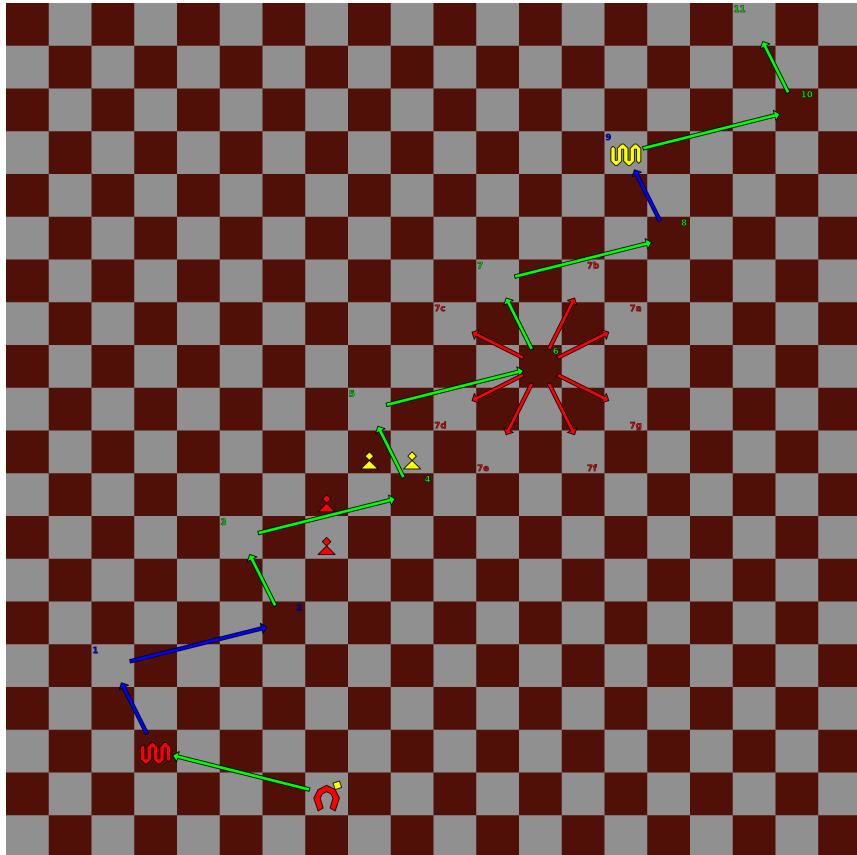


Figure 105: Wave activation by Centaur

Wave activated by Centaur moves **the same way**, i.e. on first two jumps, Wave has to choose long and short step (blue). After two directions are chosen, Wave for the rest of a ply has to follow them (green), and cannot change mid-ply (red).

Light Wave could also activate dark Wave on a step-field, pieces on all other fields are ignored (Pawns).

## Out of board steps

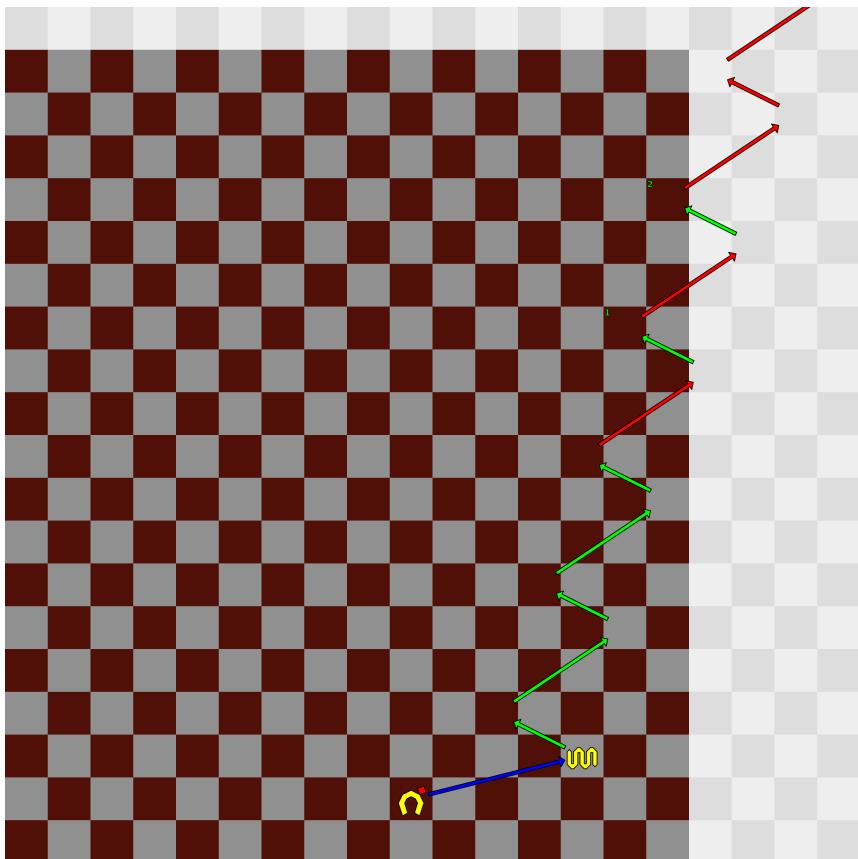


Figure 106: Wave off-board steps

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

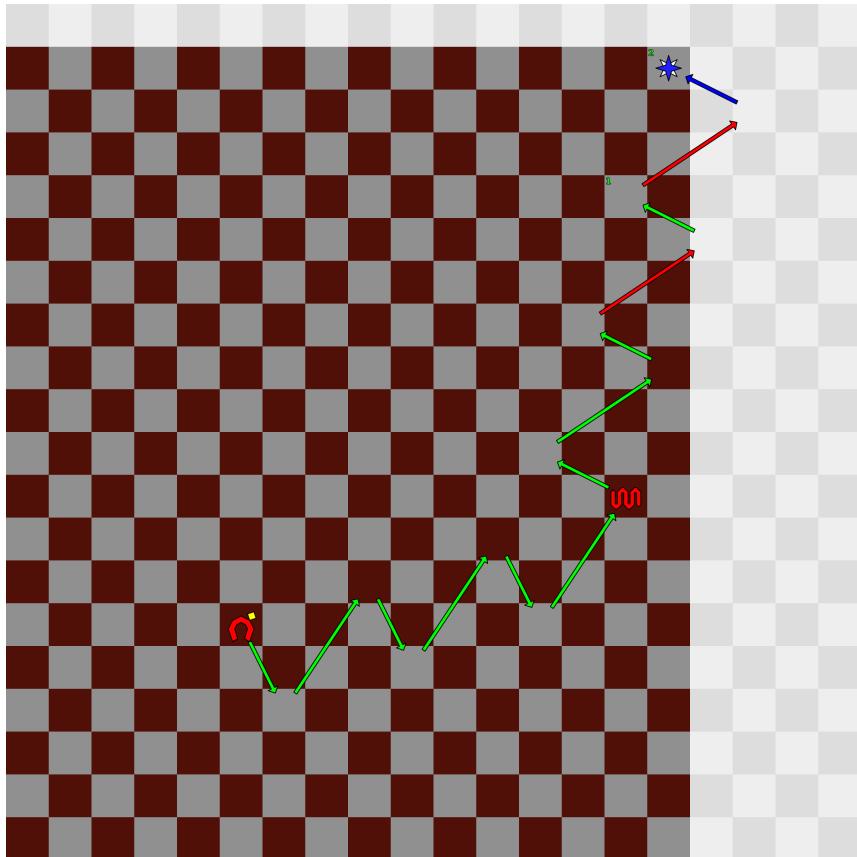


Figure 107: Wave off-board teleporting

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.

## 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.

## Scout Pawns

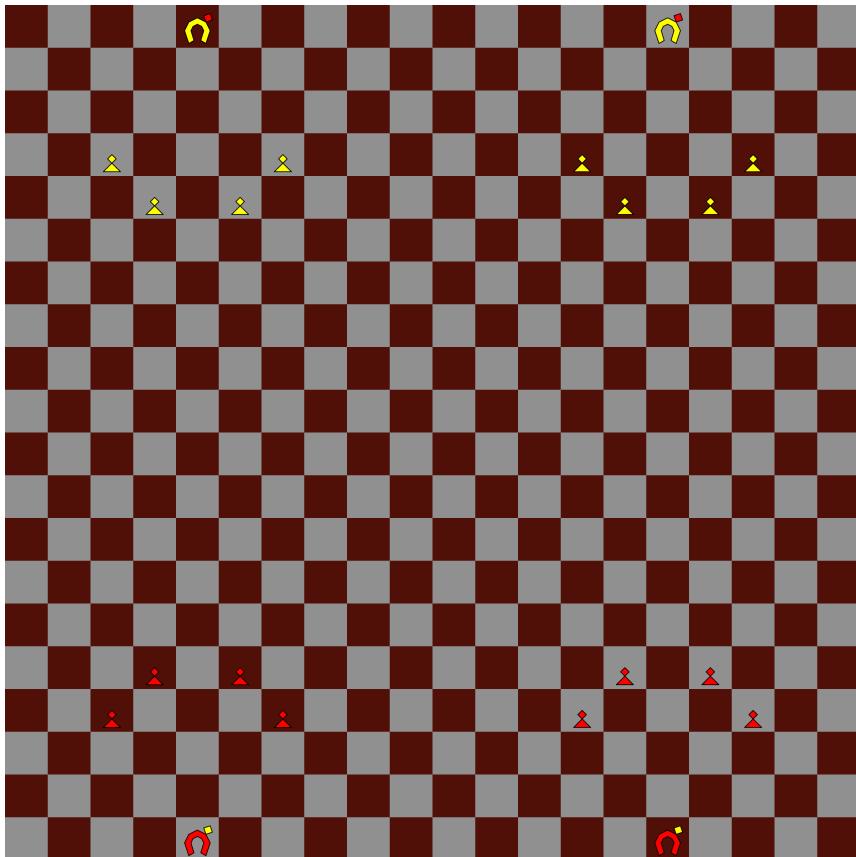


Figure 108: Scout Pawns

In this variant an additional set of Pawns are added to [the initial setup](#), called Scout Pawns. Scout Pawns do not make full-size Pawns ranks, and so their rows are not Pawns rows.

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

# Rush, en passant

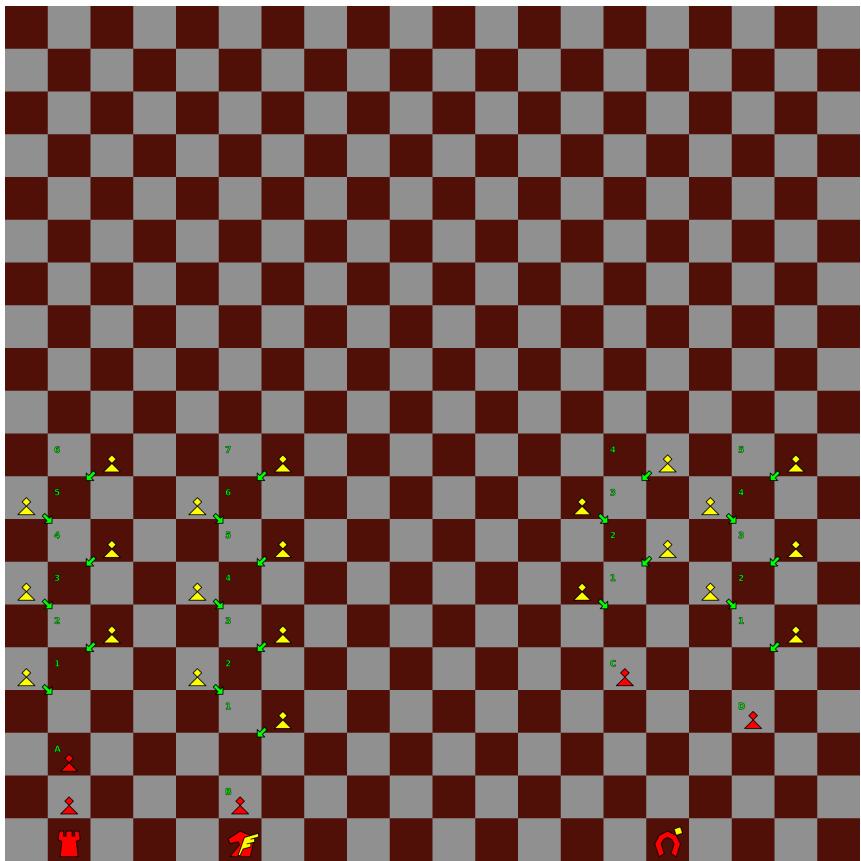


Figure 109: En passant

Rush and en passant are very similar to those in [Nineteen variant](#). All Pawns, including scout Pawns can be rushed up to, and including, the last row on own side of chessboard.

In this variant, Pawns can be rushed 7 (Pawn A) or 8 (B) fields, depending if they were in first or second Pawn row.

Scout Pawns can be rushed 5 (Pawn C) or 6 (D) fields, depending how close their starting position is to opponent.

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

# Castling

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



Figure 110: Castling

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



Figure 111: 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.

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

## Initial setup

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

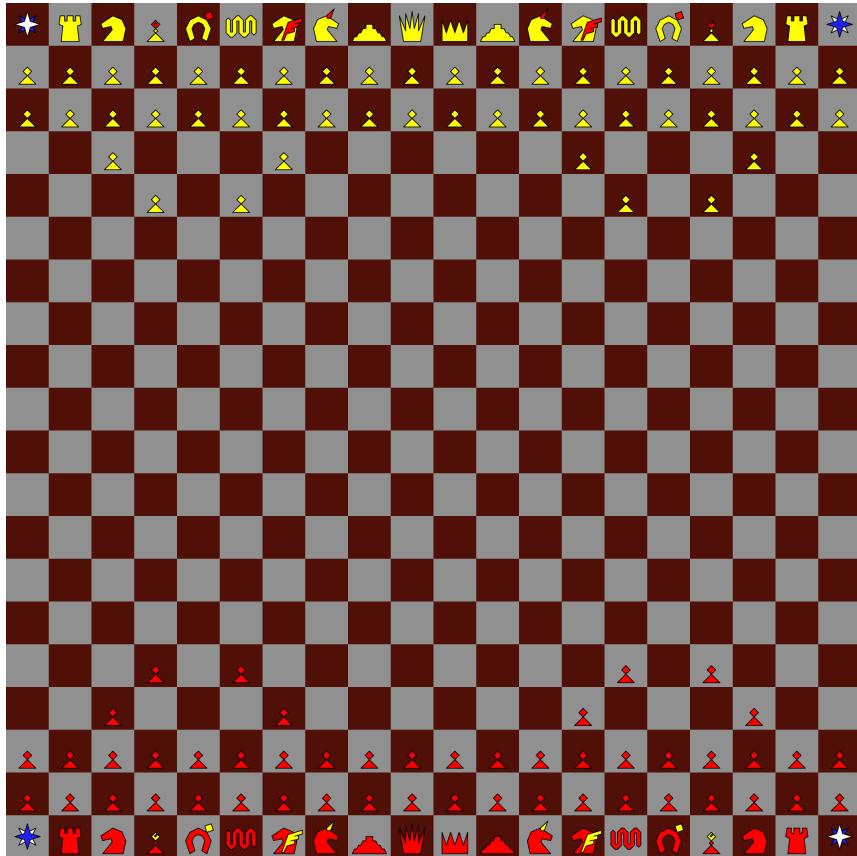


Figure 112: Hemera's Dawn board



# 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. In algebraic notation, columns are enumerated from 'a' to 'v', and rows are enumerated from '1' to '22'. A new piece is introduced, Serpent.

## Serpent

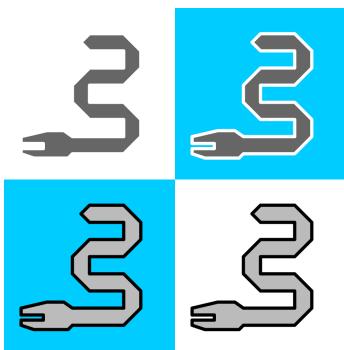


Figure 113: Serpent

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 can move no longer than for one third of board size, rounded up to first whole number.

In this variant that means Serpent can move for up to 8 fields, inclusively.

Serpent can move one field vertically or horizontally if it's unoccupied. This color-changing move is a complete move of a player, and cannot contain anything else.

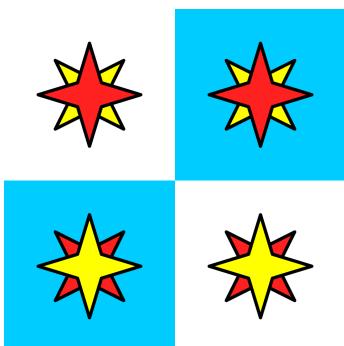


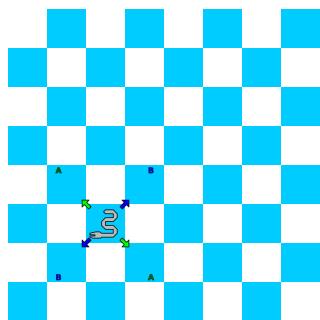
Figure 114: Star

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

In algebraic notation symbol for Serpent is 'S'.

Star colors in this variant are presented on the left.

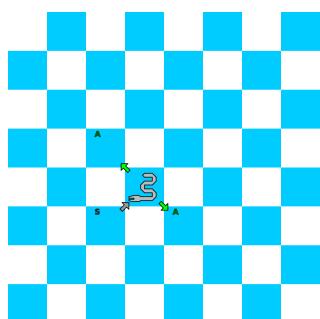
## Movement



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.

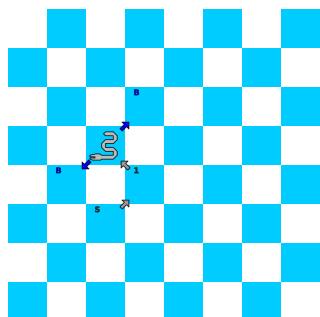
Figure 115: Diagonals



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.

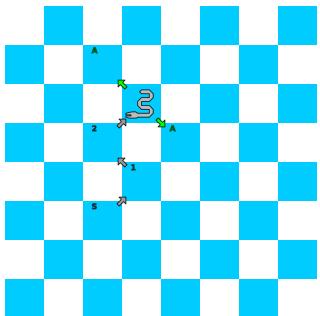
Figure 116: Step 1



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.

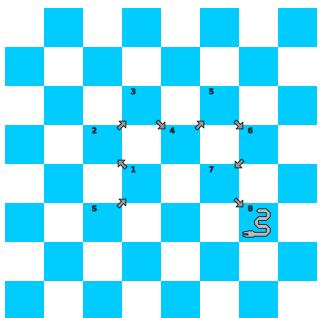
Figure 117: Step 2



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 118: Step 3



Finished move with completely exhausted movement limit.

Figure 119: End step

## Revisiting fields, loops

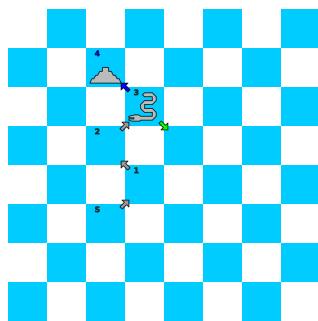


Figure 120: Activating Pyramid

Starting with the same scene, only with added Pyramid, Serpent can activate said Pyramid with momentum of 4.

There is nothing preventing Serpent to revisit already traversed fields, and build up more momentum.

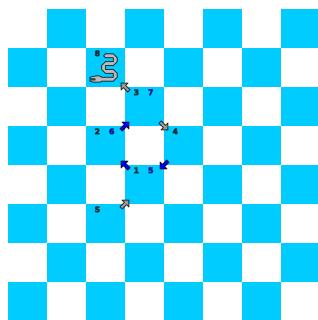


Figure 121: Building momentum

All revisited fields counts towards momentum each time they are traveled over.

Here, fields are enumerated in visiting order, revisited fields are marked blue. So, Serpent can now activate Pyramid with momentum of 8.

## Color-changing move

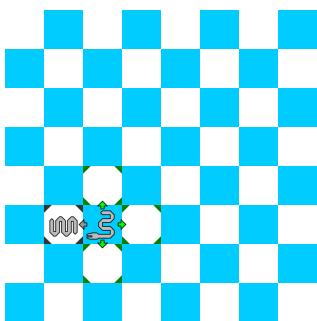


Figure 122: Color-changing move

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

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

## Out-of-board steps

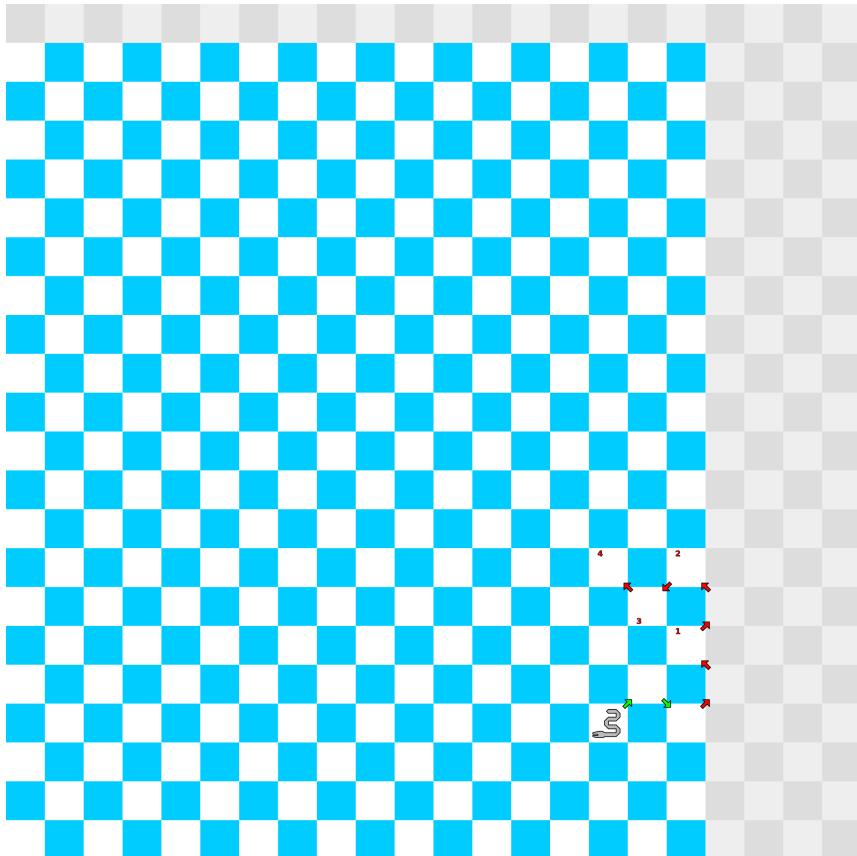


Figure 123: Serpent out-of-board steps

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

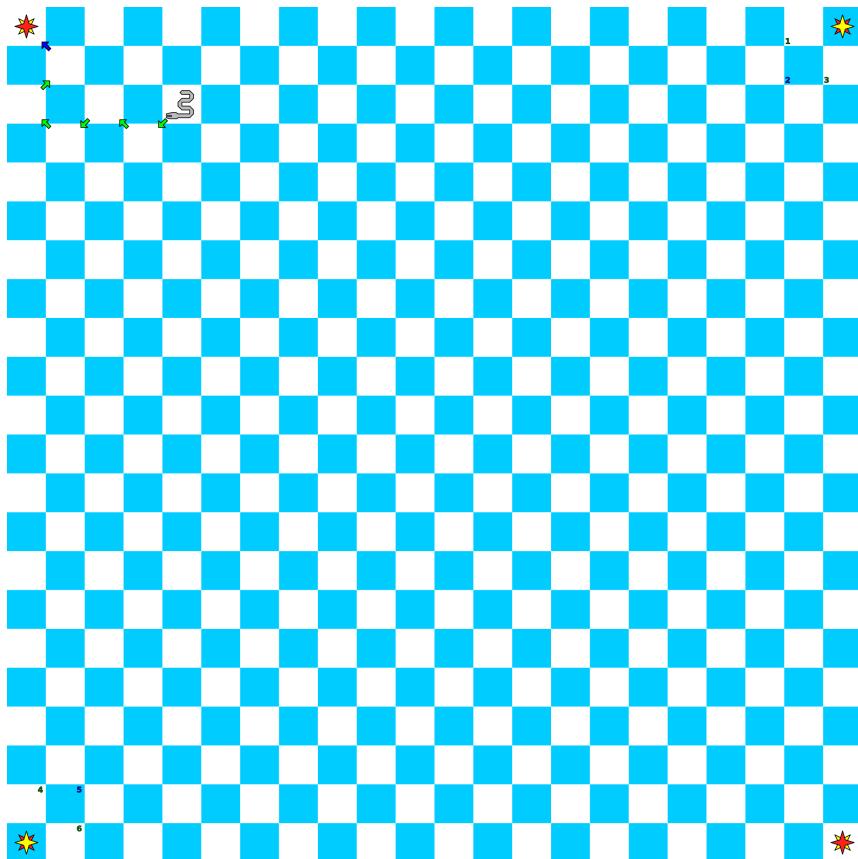


Figure 124: Teleporting Serpent

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**.

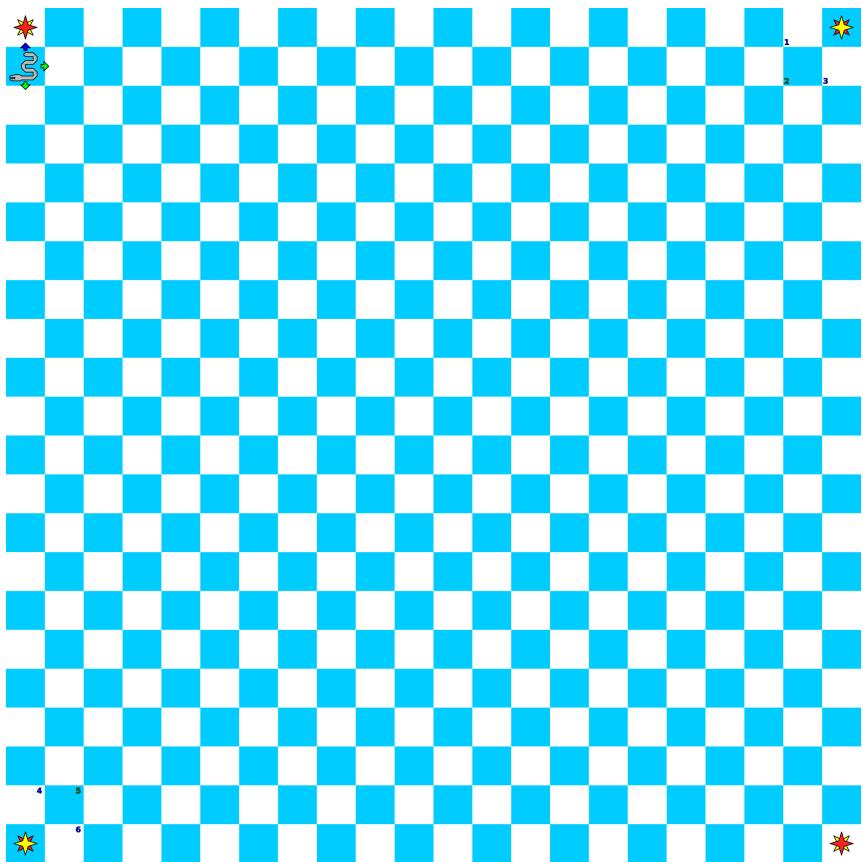


Figure 125: Color-changing step

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

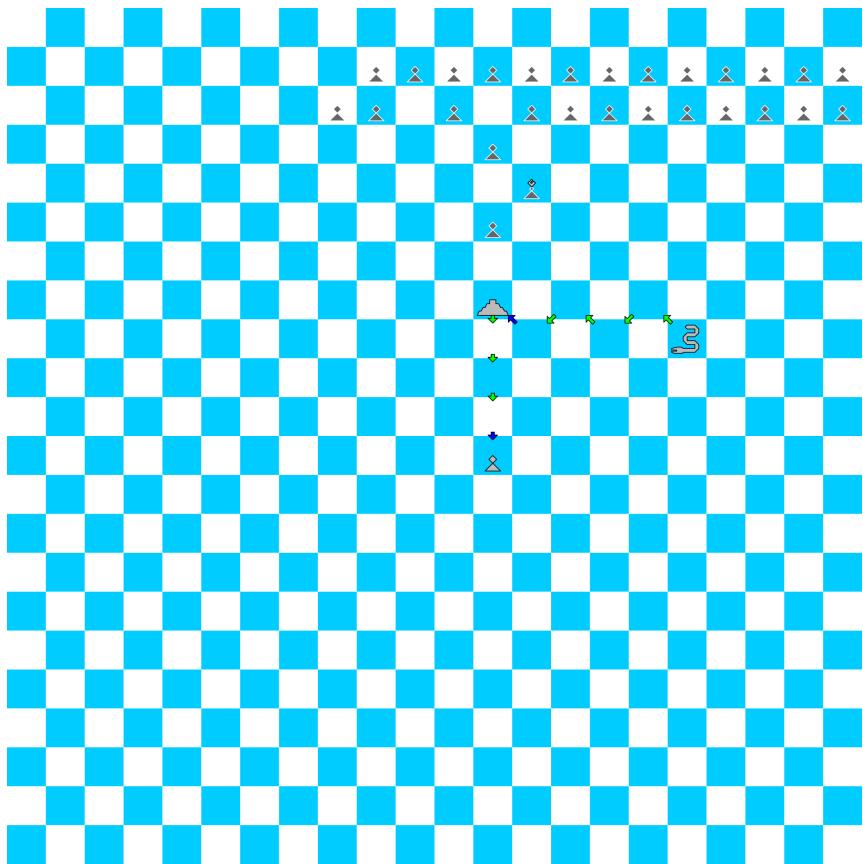


Figure 126: Pawn-sacrifice start

Pawn-sacrifice move is 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 and, in the same move, starts a new ply as if starting a new move. Any received momentum (if Serpent was activated) is lost. Any of pieces involved can be on any side of chessboard, own or opponent's.

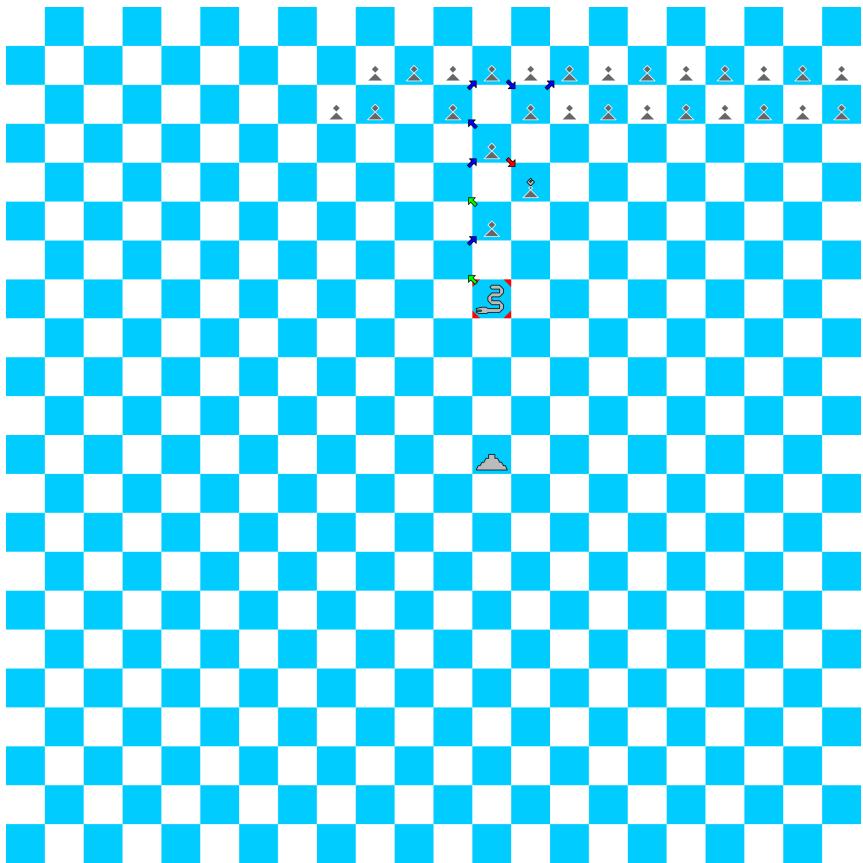
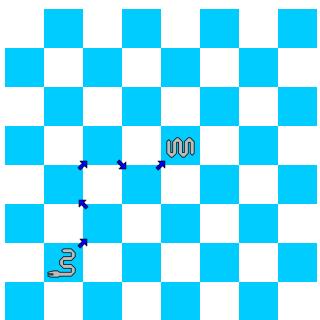


Figure 127: Pawn-sacrifice end

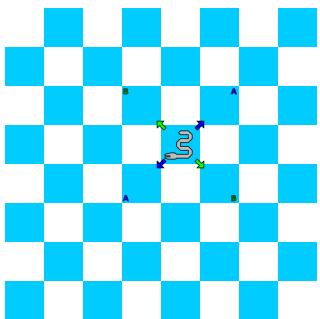
In a new ply, Serpent can capture all opponent's Pawns in its path, or move over empty fields. Serpent can't capture any other opponent's piece (here, dark Bishop). Pawn-sacrifice tag lasts until normal limit of Serpent's ply is reached (in this variant, 8 fields inclusively), or by any action other then capturing Pawns and traversing empty fields, e.g. teleporting, activating Wave, ... Momentum Serpent accumulates is counted from field at which it got Pawn-sacrifice tag.

## Activating Wave



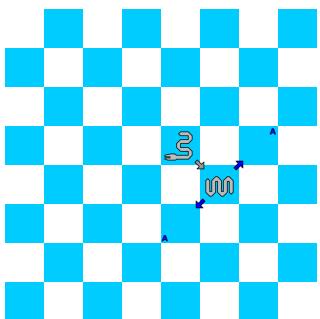
Serpent can activate Wave on its step-fields only, it cannot activate Wave on color-changing fields.

Figure 128: Activating



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

Figure 129: Activated



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

Figure 130: First step

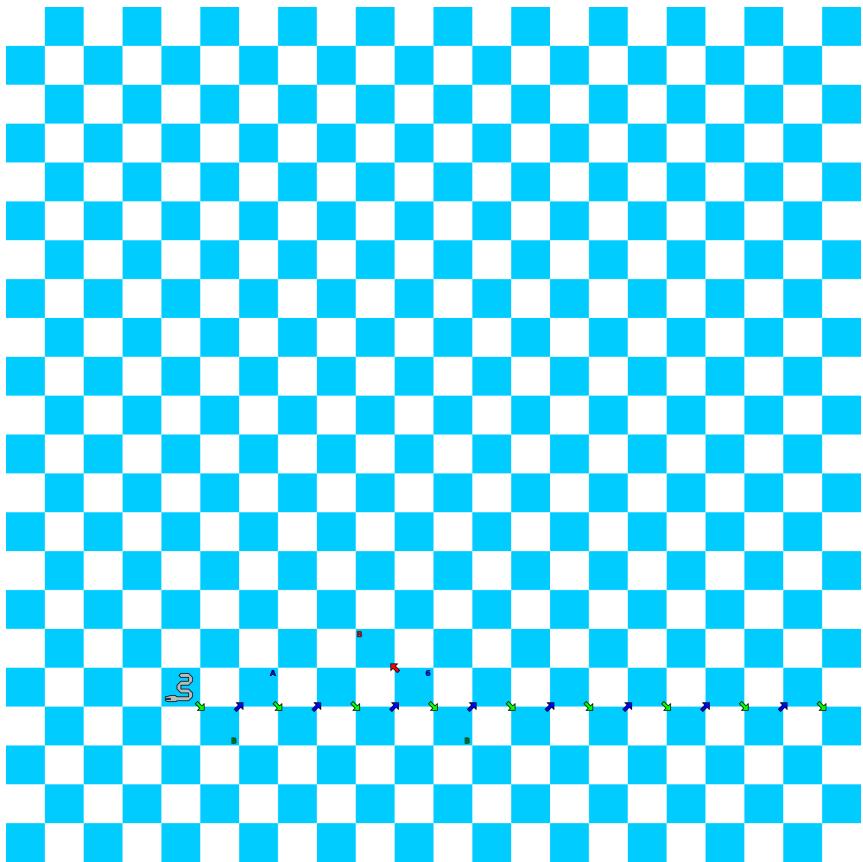


Figure 131: Activated Wave ply

Once the two directions are chosen, Wave has to alternate between them. So, Wave cannot change given directions, even if it's on a proper diagonal. E.g. upon reaching field 6, it's illegal for Wave to choose different 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

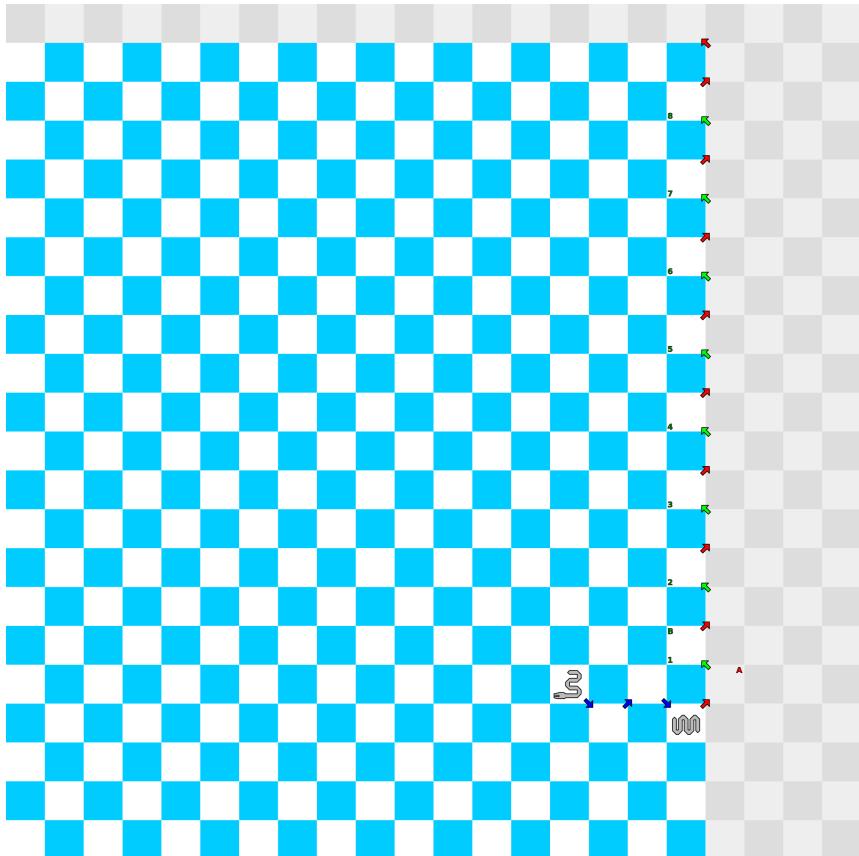


Figure 132: Wave out-of-board steps

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

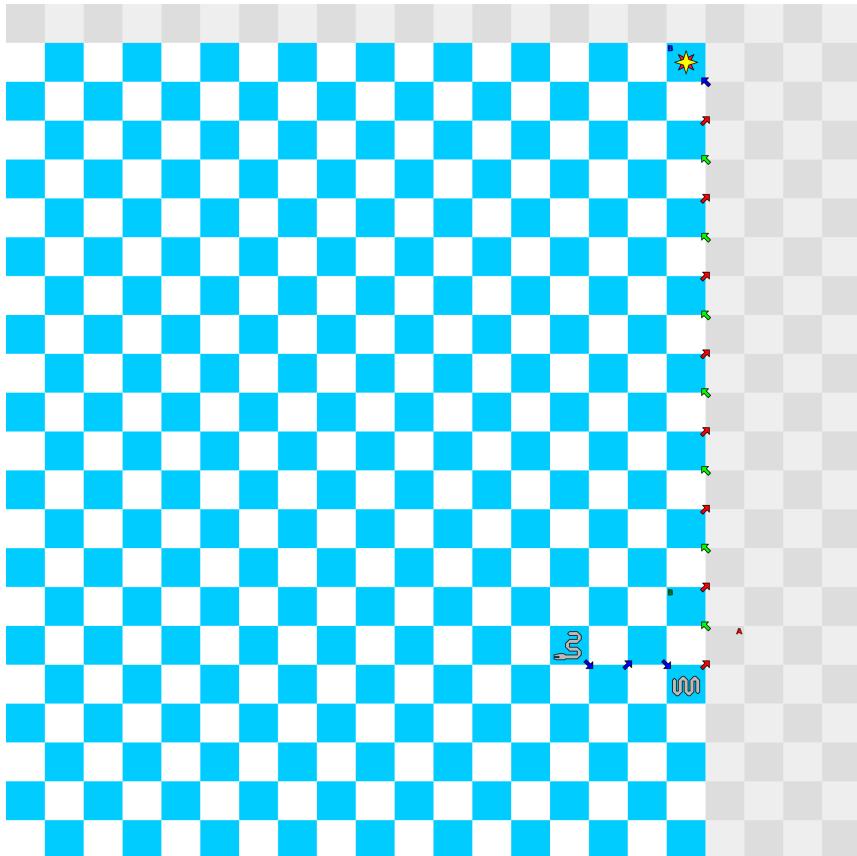


Figure 133: Teleporting off-board Wave

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.

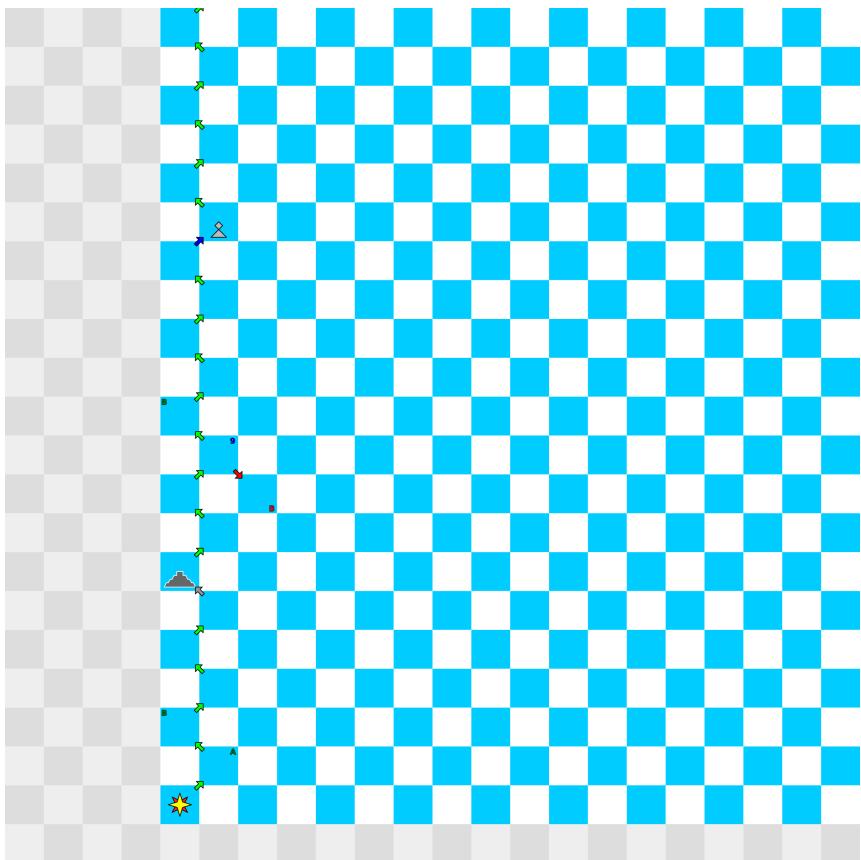


Figure 134: Teleported Wave

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.

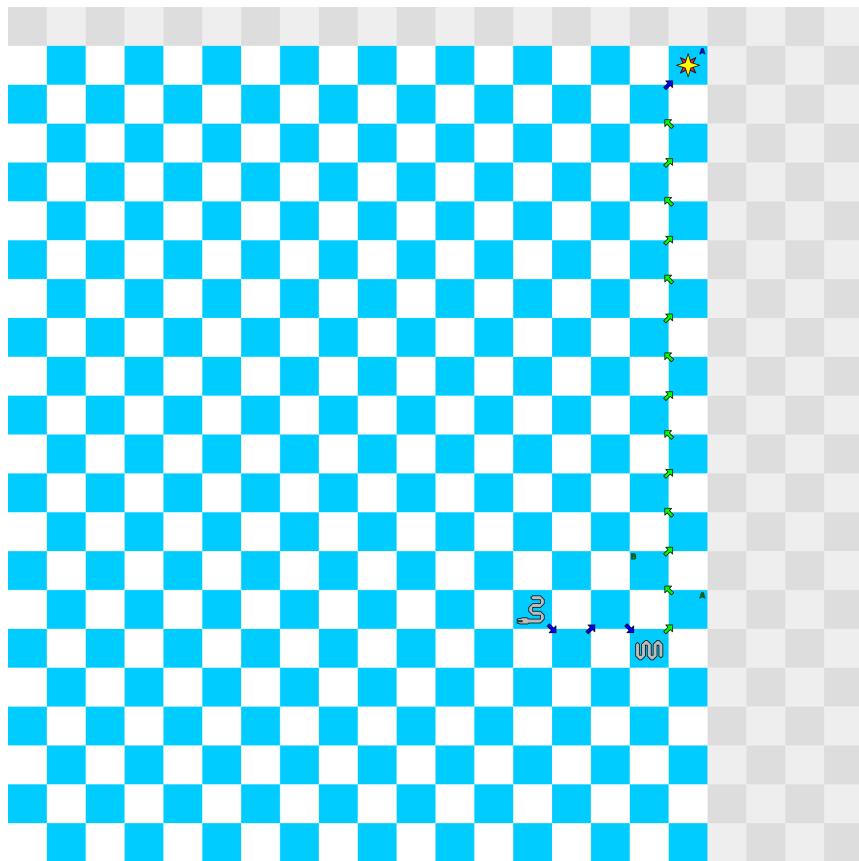


Figure 135: Teleporting Wave

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 136: 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.

## 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.

# Rush, en passant

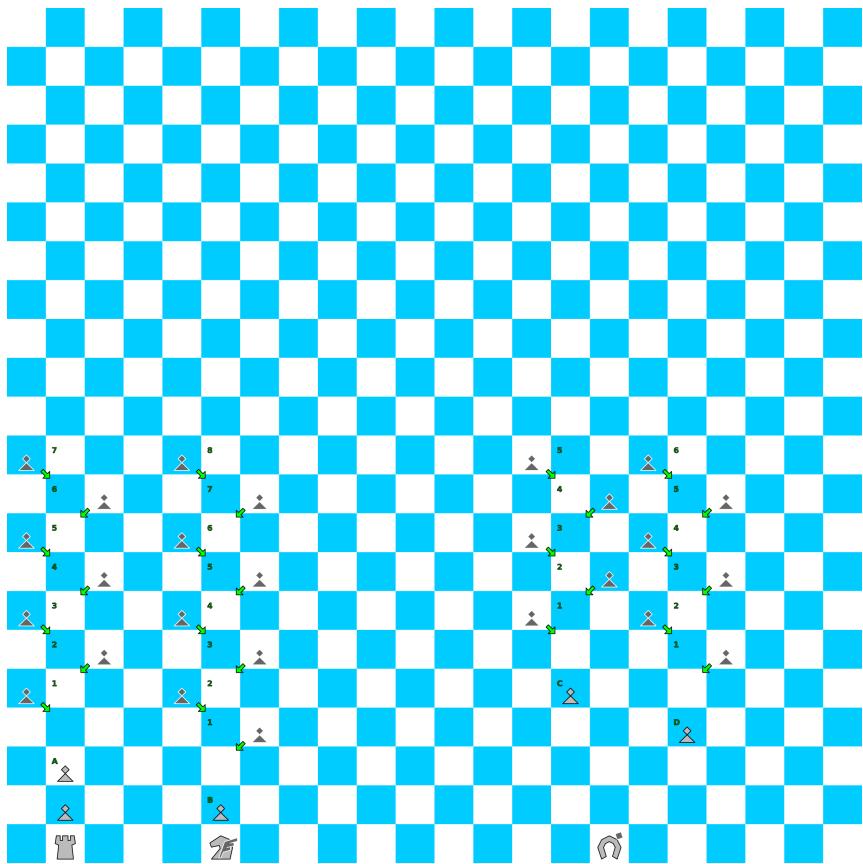


Figure 137: En passant

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

# Castling

Castling is the same as in Classical Chess, only difference is that King can move between 2 and 8 fields across. All other constraints from Classical Chess still applies.



Figure 138: Castling

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



Figure 139: 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 inserted between Knight and Centaur symmetrically, on both sides of chessboard. This can be seen in the image below:

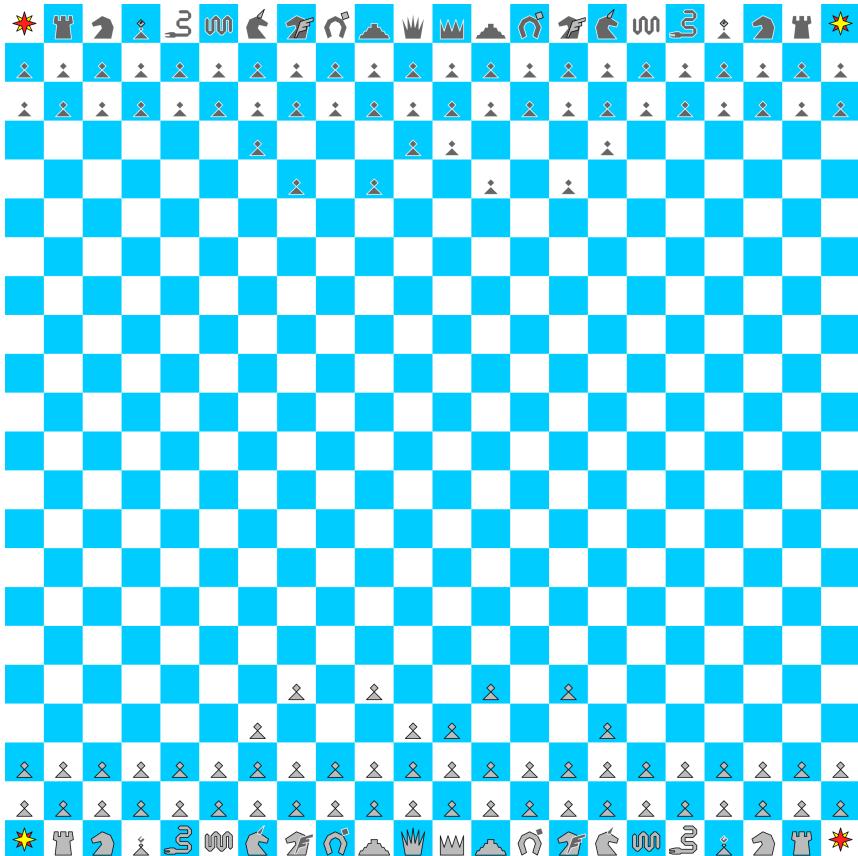


Figure 140: Tamochan Revisited board

# Conquest of Tlalocan

*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

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. In algebraic notation, columns are enumerated from 'a' to 'x', and rows are enumerated from '1' to '24'. A new piece is introduced, Shaman.

# Shaman

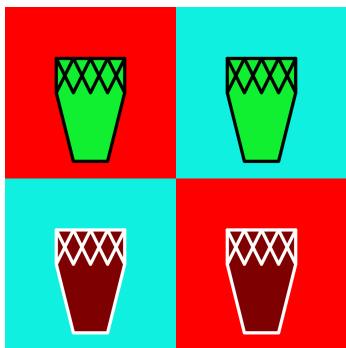


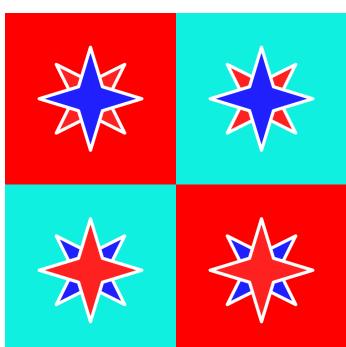
Figure 141: Shaman

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.

Shaman can activate both Wave and Pyramid on its capture-fields, while only Wave can be activated on step-fields. In all cases, activation ends Shaman's ply.



Alternative move for Shaman is a trance-journey.

Shaman symbol in algebraic notation is 'H', to avoid confusion with Serpent.

Star colors in this variant are presented on the left.

Figure 142: Star

## Movement

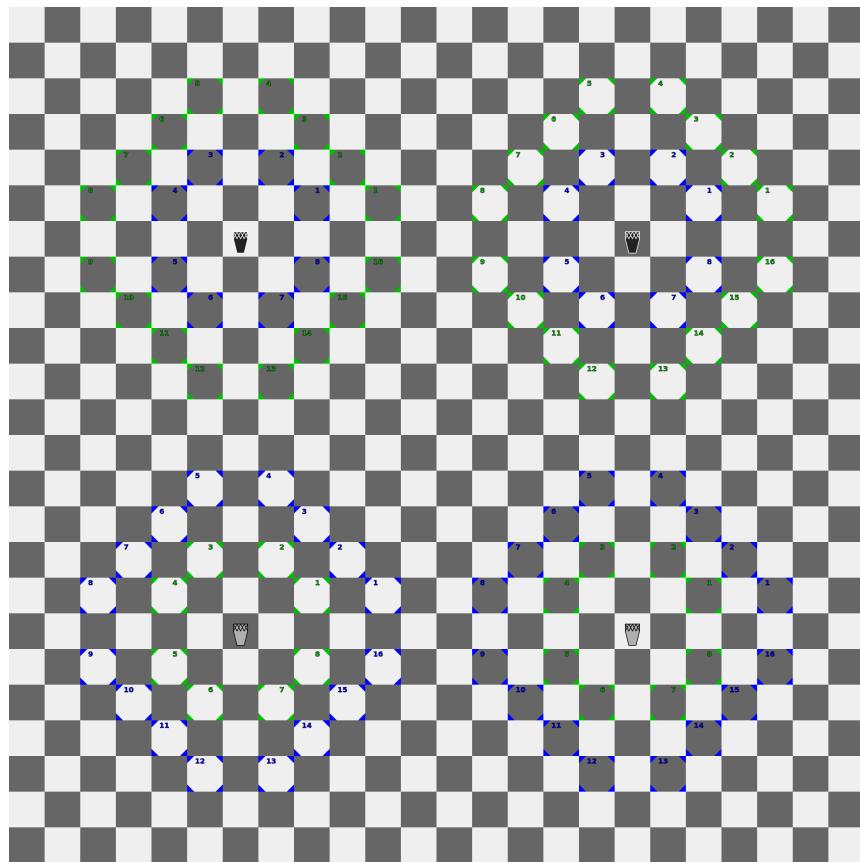


Figure 143: Shaman's movement

For this variant examples are rendered in B&W to improve legibility. Here, step-fields are marked green, while capture-fields are marked blue. Note, movement of Shaman does not depend on color of field on which it stands, only on color of the piece itself.

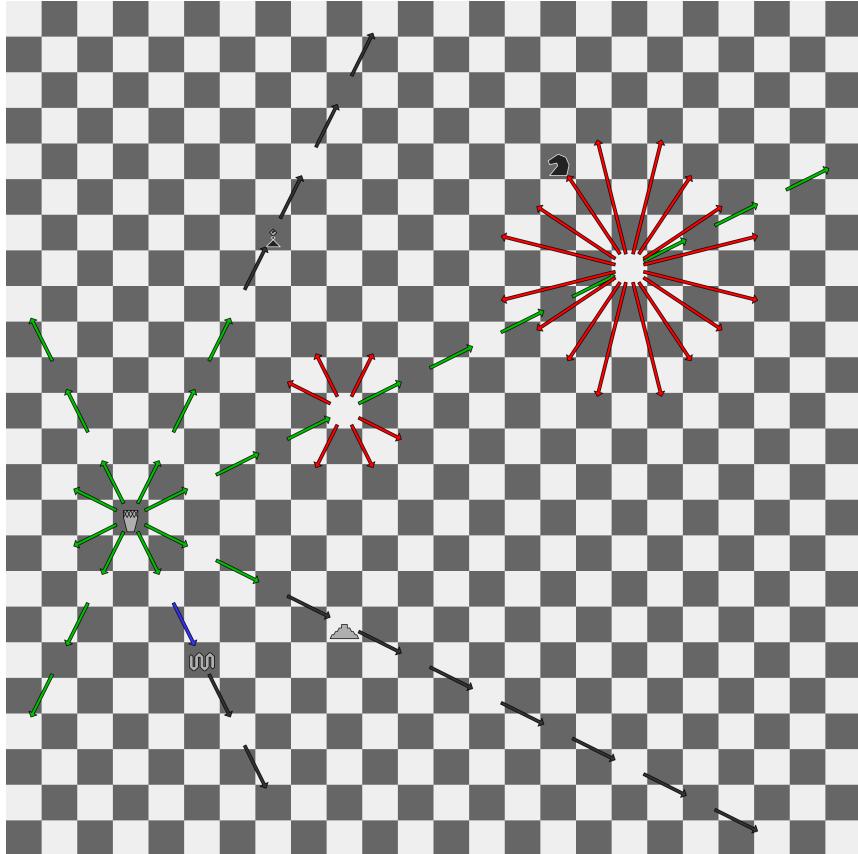


Figure 144: Light Shaman's step-ply

Once initial step-direction is chosen, light Shaman has to follow it, and so moves similar to Pegasus. Unlike Pegasus, Shaman can't capture opponent's pieces on step-fields, nor activate Pyramid. Wave on step-field can be activated, and would continue to move as Shaman (and Pegasus) would. Again, once direction is chosen, it cannot be changed, neither in other step- nor capture-direction, even if opponent's piece is present on a capture-field.

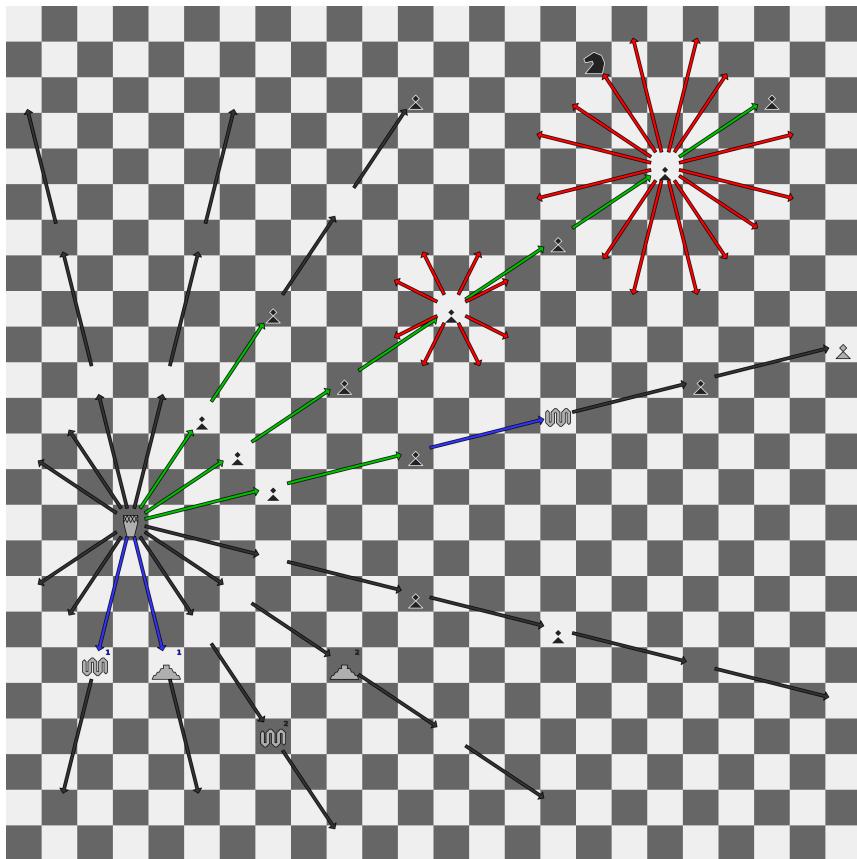


Figure 145: Light Shaman's capture-ply

Capture-ply can only be started with immediate capture, after which Shaman can continue its movement as long as it's keep capturing opponent's pieces in the same direction. Empty capture-fields cannot be overstepped, any piece at a distance is out of reach. Again, once started capturing, Shaman cannot change it's heading, neither in other step- nor capture-direction. Shaman can also activate Pyramid or Wave on a capture-field, even on a first step, thus ending it's ply.

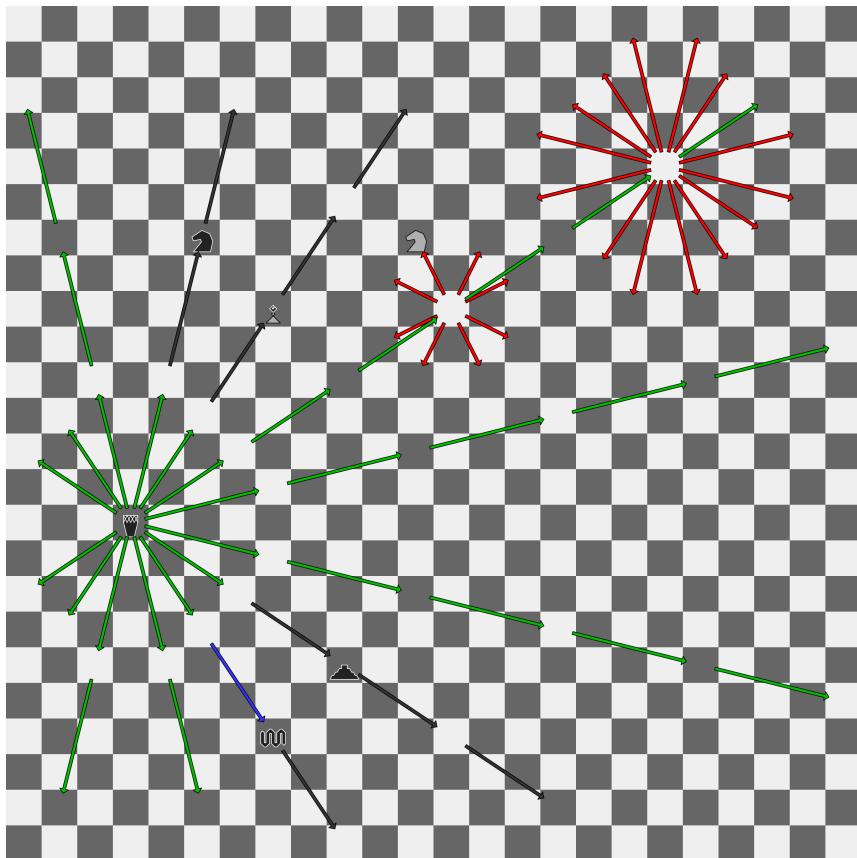


Figure 146: Dark Shaman's step-ply

Dark Shaman's step-ply is the same as light Shaman's, except it steps like a long-jump Unicorn, in chosen direction. Shaman can't capture opponent's pieces on step-fields, nor activate Pyramid. Wave on a step-field can be activated, and would continue to move as dark Shaman would. Again, once direction is chosen, it cannot be changed, neither in other step- nor capture-direction, even if opponent's piece is present on a capture-field.

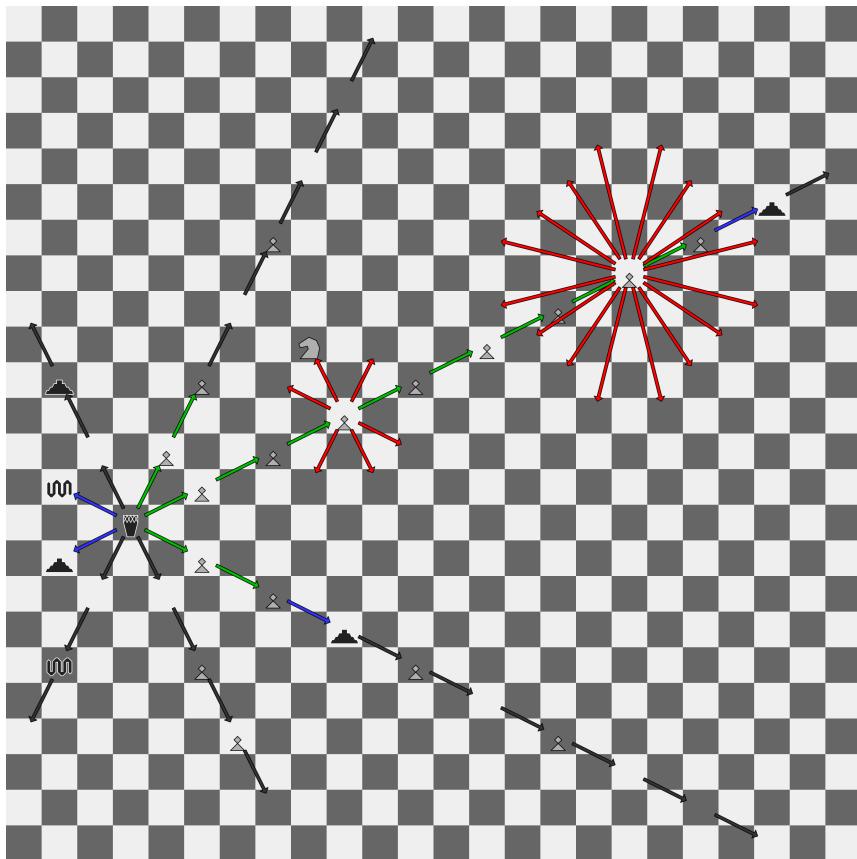


Figure 147: Dark Shaman's capture-ply

Dark Shaman's capture-ply is the same as light Shaman's, except it captures like Pegasus, in chosen direction. Capture-ply can be initiated with immediate capture, after which Shaman can continue capturing opponent's pieces, in the same direction, if there is no empty capture-field in-between. While capturing, Shaman cannot change it's heading to any other direction. Shaman can also activate Pyramid or Wave on a capture-field, even on it's first step, thus ending it's ply.

## Activating Wave

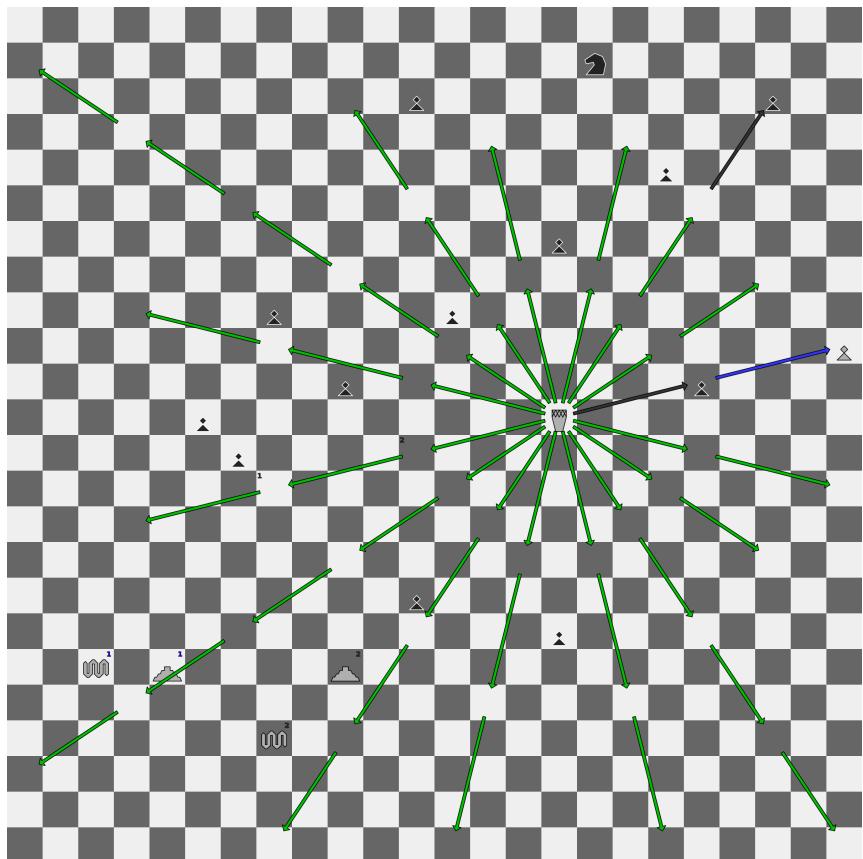


Figure 148: Shaman activated Wave

Activated Wave moves the same as activating piece in the moment of activation. So, if activated on, say, **light Shaman's capture-field**, Wave would move too as long-range Unicorn, in this case with momentum of 3.

## Teleporting Shaman

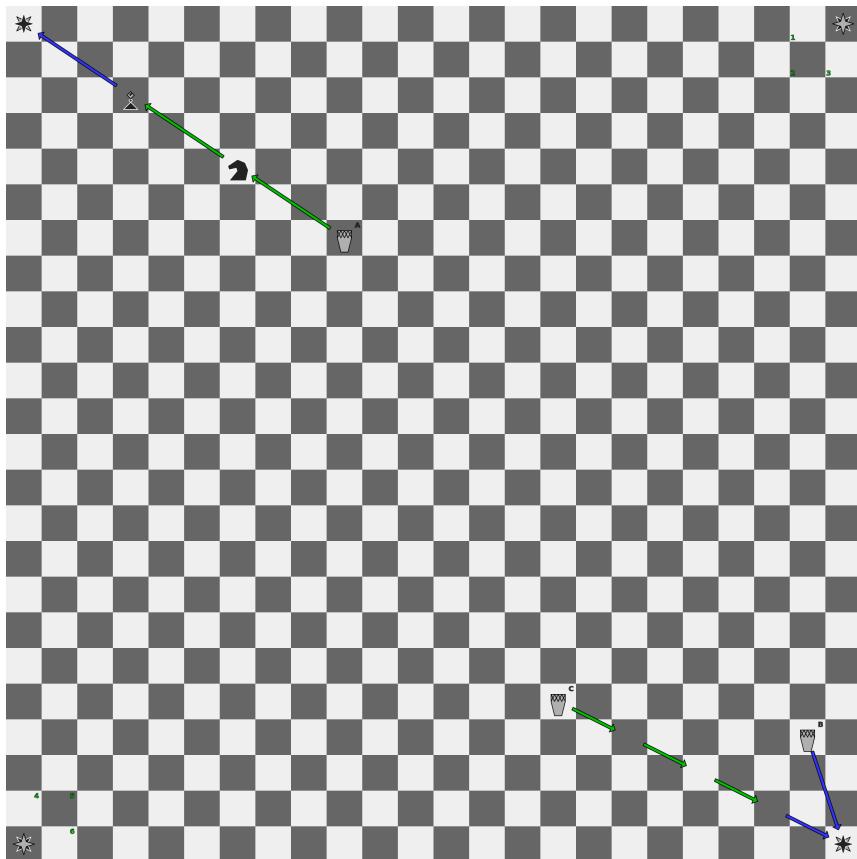


Figure 149: Teleporting Shaman

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

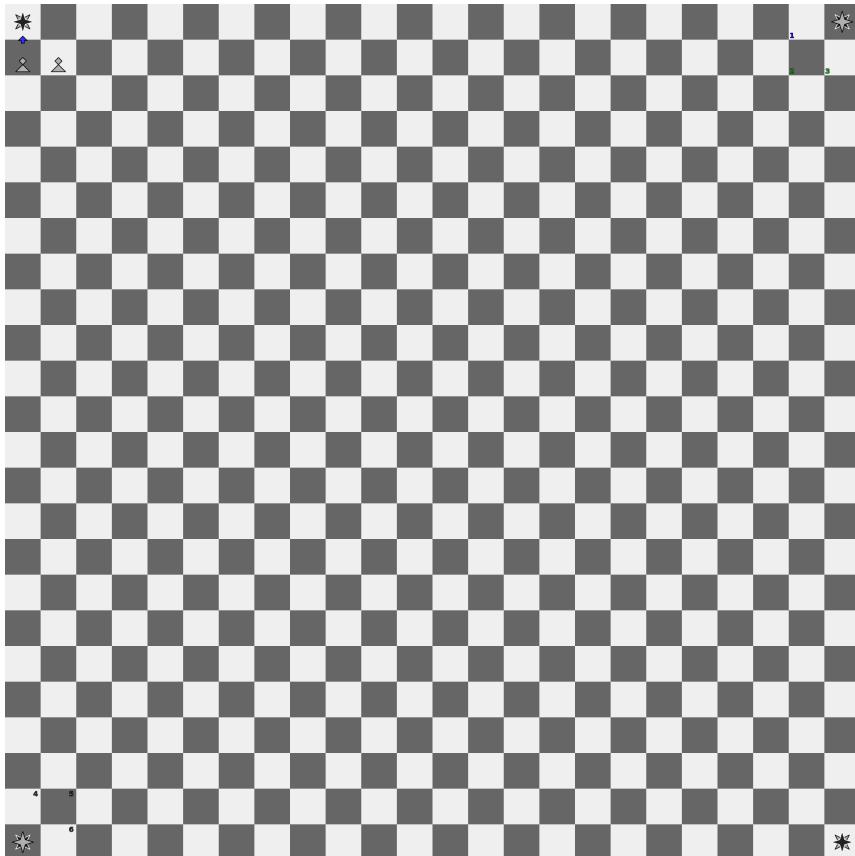


Figure 150: Teleporting Pawn

Promotion in this variant is immediate. So, Pawn teleported to opponent's Pawn row (fields 2, 3) won't be tagged for promotion. If teleported to opponent's figure row (field 1), Pawn has to be promoted immediately. Pawn teleported onto own side of a board (portal-fields 4, 5, 6) loses option to promote, and does not gain opportunity to rush on an initial move, the same as in previous variant, Nineteen.

## Trance-journey

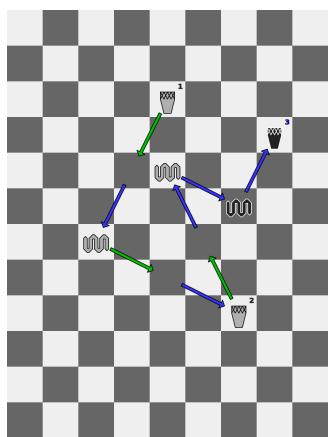


Figure 151: Start

Trance-journey can be started by activating a Shaman, if at least one other Shaman precedes it in a cascade. Colors of Shamans do not need to match.

Shaman taking on trance-journey is called entranced Shaman (in this example, dark Shaman 3), while the one immediately preceding it is called entrancing Shaman (here, the light Shaman 2).

Whether entrancing Shaman started a cascade or was activated is not relevant, mere existance of two Shamans in a cascade is enough to grant trance-journey option.

Trance-journey can be undertaken even if entranced Shaman received no momentum. Length of trance-journey is not limited by received momentum.

Trance-journey is optional, second Shaman in a cascade could also perform normal step- or capture-ply. In such a case, second Shaman would be limited by received momentum, and trance-journey option would no longer be valid.

Here, light Shaman 2 could also undertake trance-journey, in which case entrancing Shaman would be light Shaman 1. Had it received any momentum, dark Shaman 3 could also move just as **a long-jump Unicorn**.

## Movement

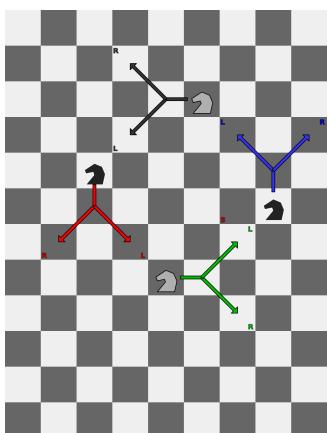


Figure 152: Knight directions

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.

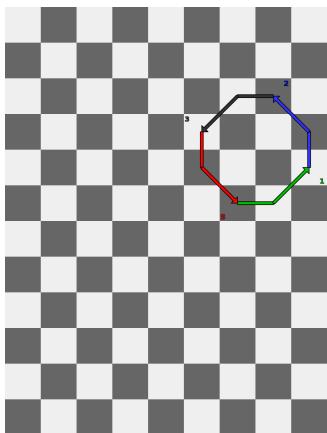


Figure 153: Stop sign pattern

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.

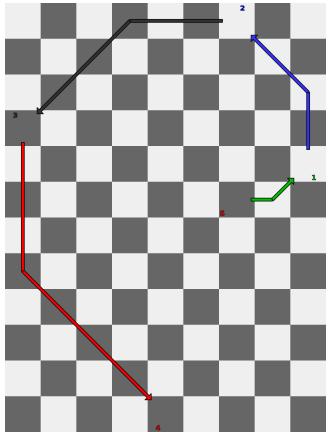


Figure 154: Stop sign pattern unwinded

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  $180^\circ$ .

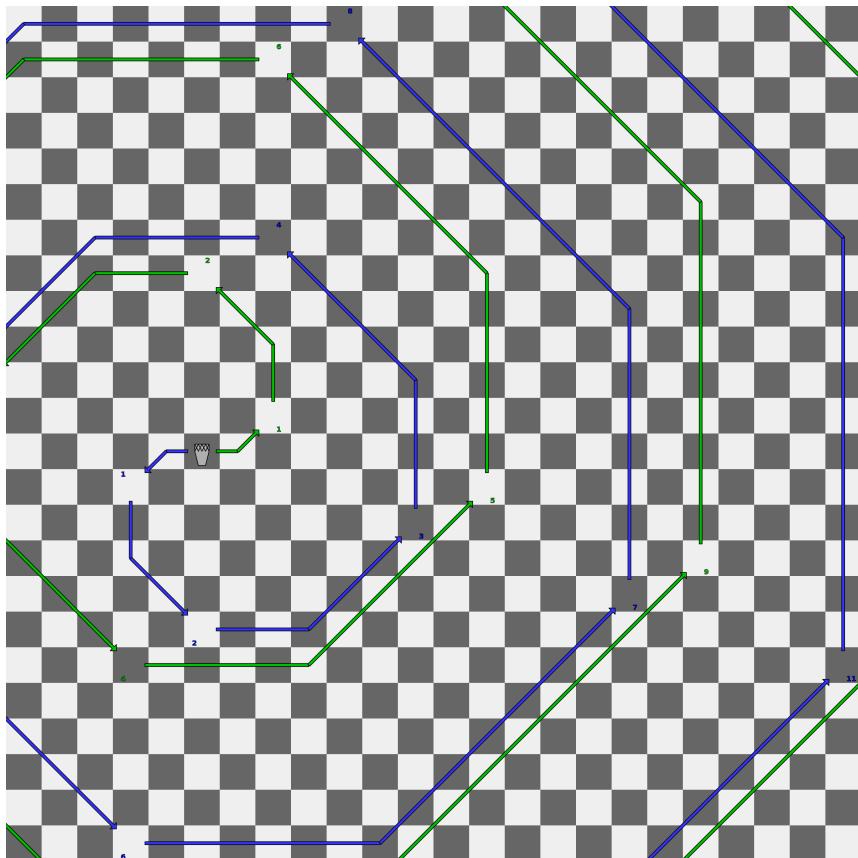


Figure 155: Light Shaman trance-journey

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. If Shaman stops on a step-field outside of a chessboard, it is obliterated.

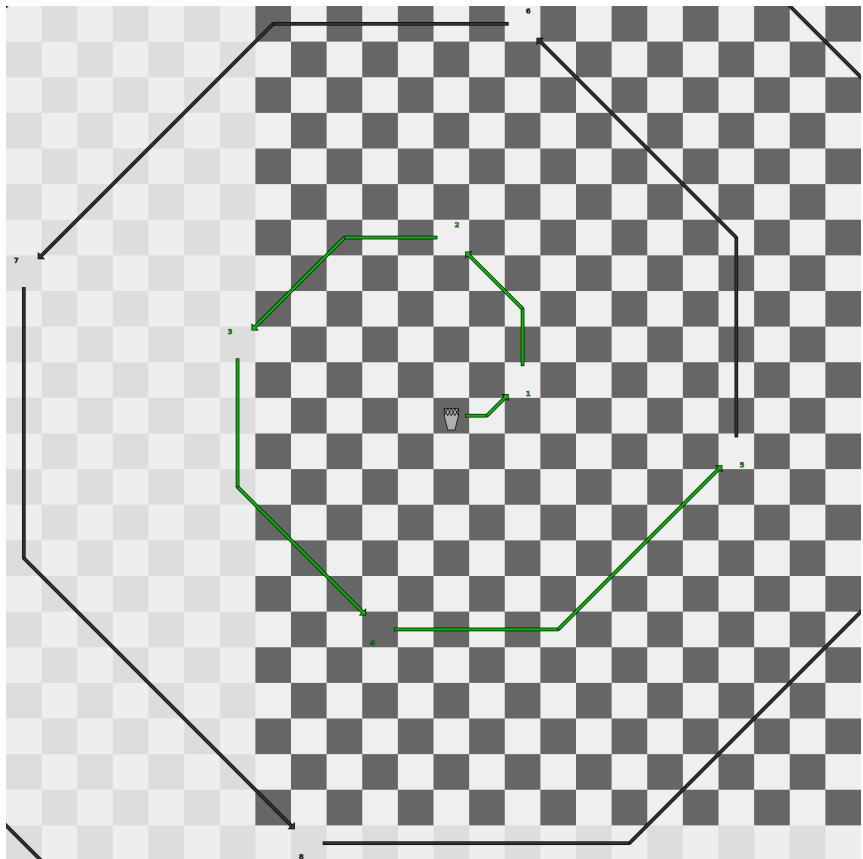


Figure 156: Light Shaman trance-journey with offset

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.

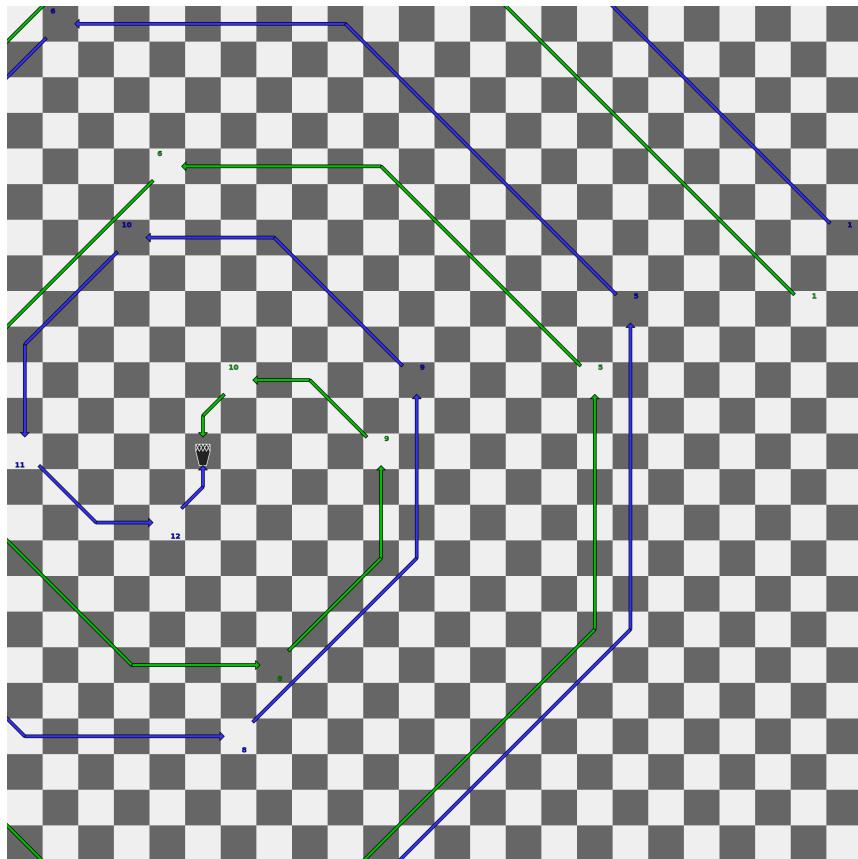


Figure 157: Dark Shaman trance-journey

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

- complete pattern consists of up (green) and down (blue) hand pattern
- dark Shaman starts moving from outermost step-field towards starting position.

As a consequence, every step now starts with diagonal leg and ends with either vertical or horizontal leg.

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

## Interaction

Again, entranced Shaman is the one undertaking trance-journey, entrancing Shaman is the one preceding entranced Shaman in a cascade. Interaction with other pieces found on a step-fields depends on a color of entrancing Shaman.

If entrancing Shaman is light, pieces found on affected step-fields can be moved (but don't have to) 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 are 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 Kings and Stars.

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

As a special case, if both Shamans are dark, entranced Shaman can undertake double trance-journey, traveling full lengths on both up- and down-hand patterns, capturing all pieces on all step-fields (except Kings and Stars), after which entranced Shaman is oblationed (i.e. removed from chess-board as if captured by the opponent).

## Displacement-fields

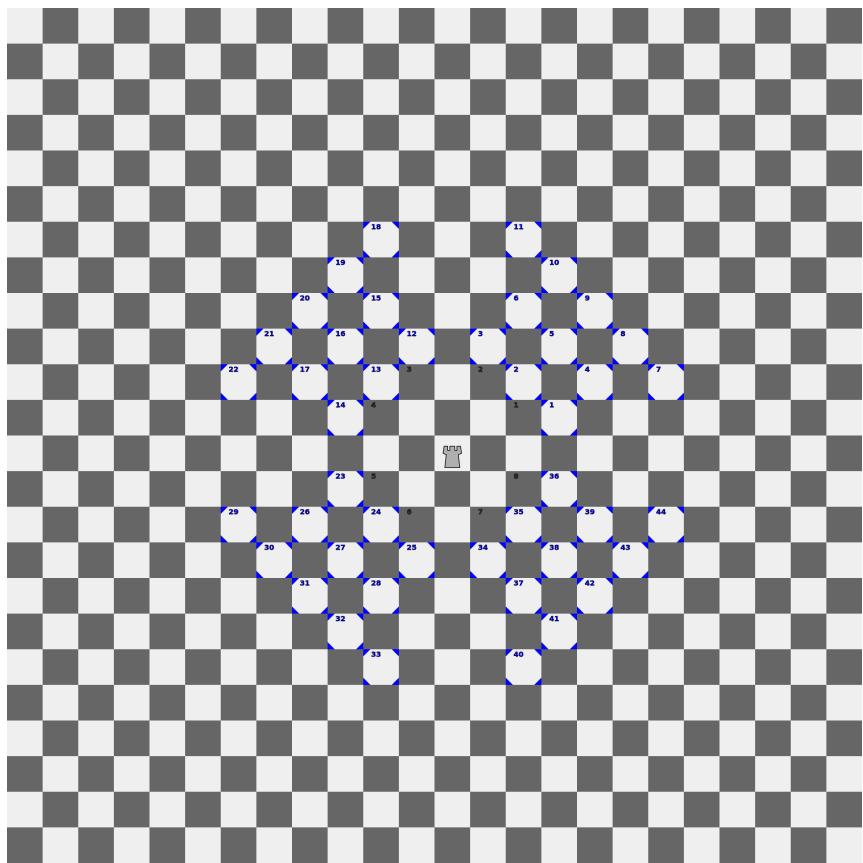


Figure 158: Displacement-fields

Displacement-fields are all marked fields (blue). For comparison, 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 can block one later on from being displaced onto the very same field.

## Interaction (cont.)

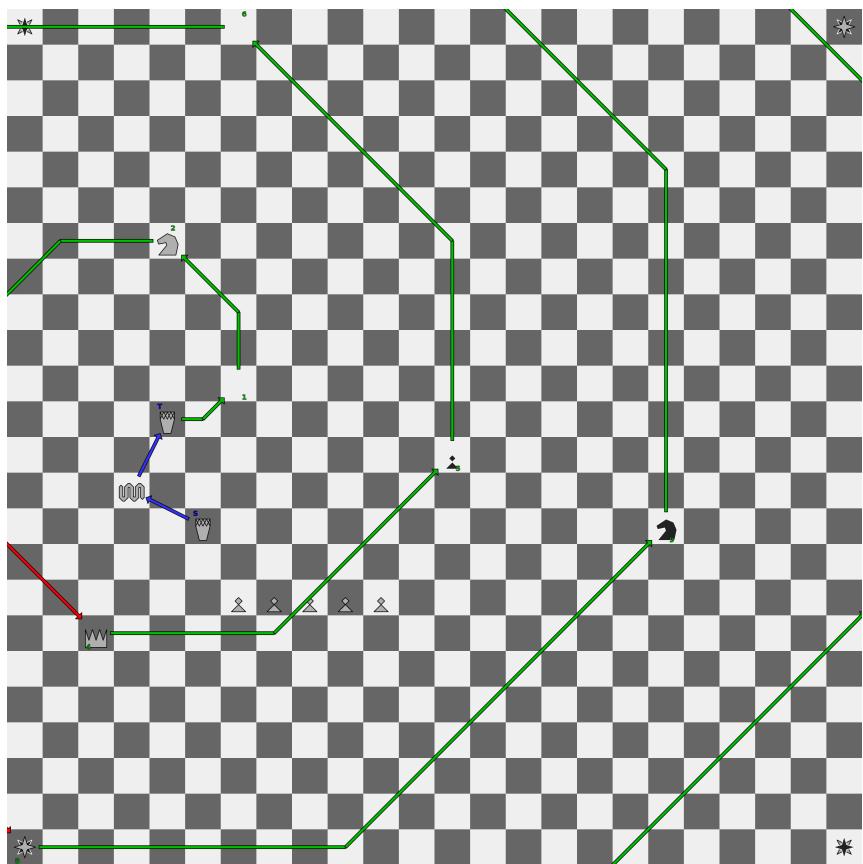


Figure 159: Light → light Shaman interaction start

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.

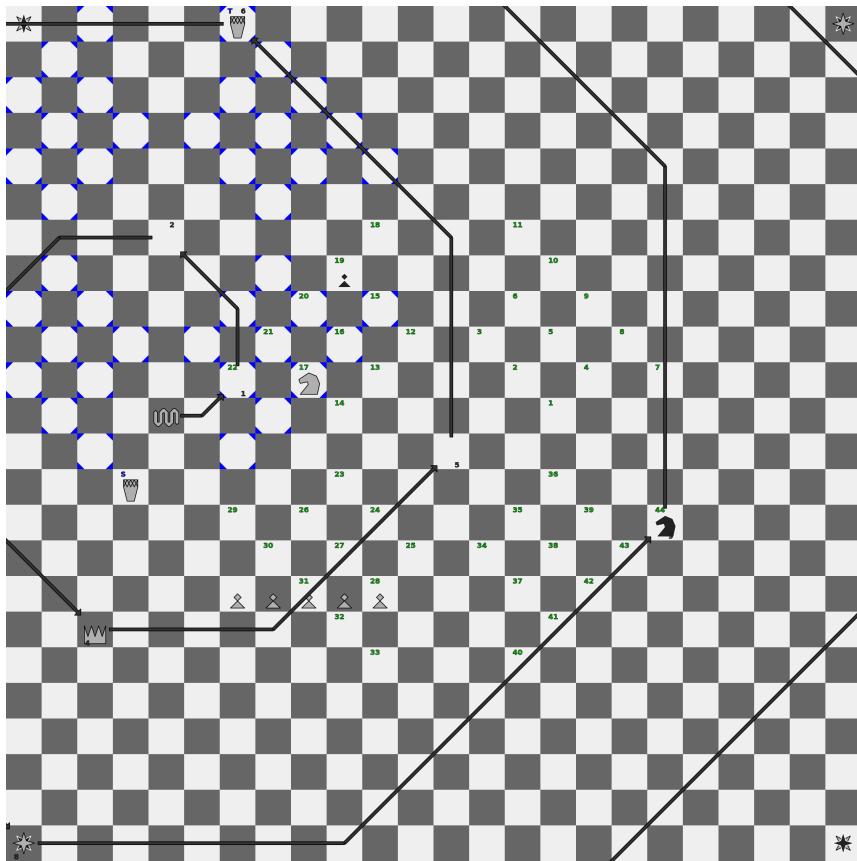


Figure 160: Light → light Shaman interaction end

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 15. This prevents dark Pawn to be displaced from field 5 onto the same field.

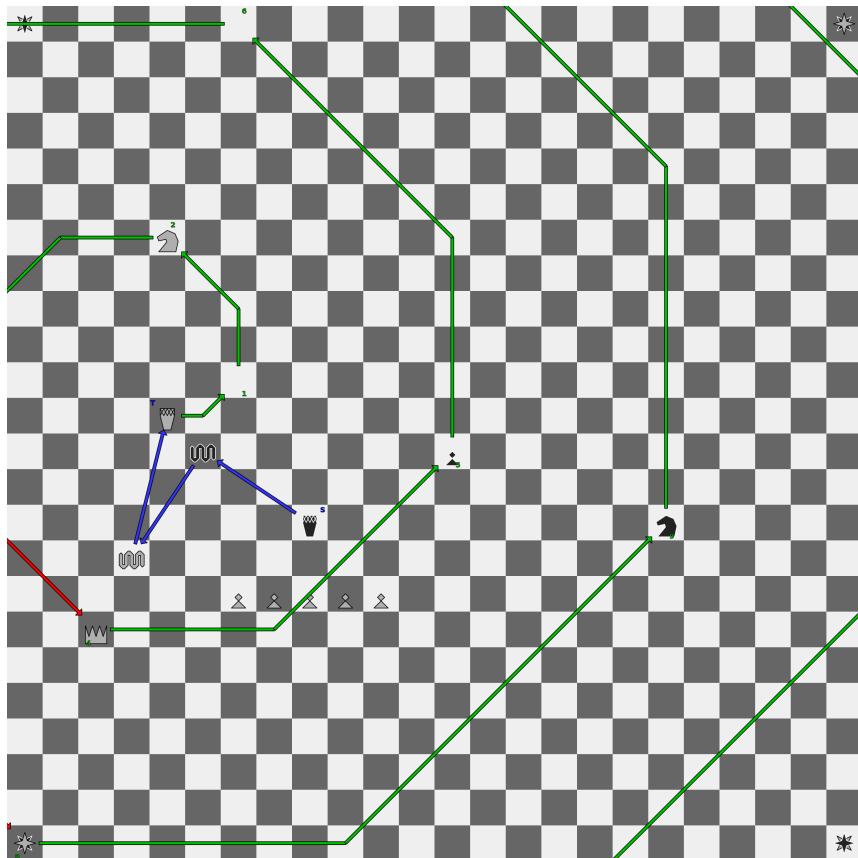


Figure 161: Dark → light Shaman interaction start

Light Shaman is about to be dark-entranced (i.e. entranced by dark Shaman) and so will capture pieces on a trance-journey along 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.

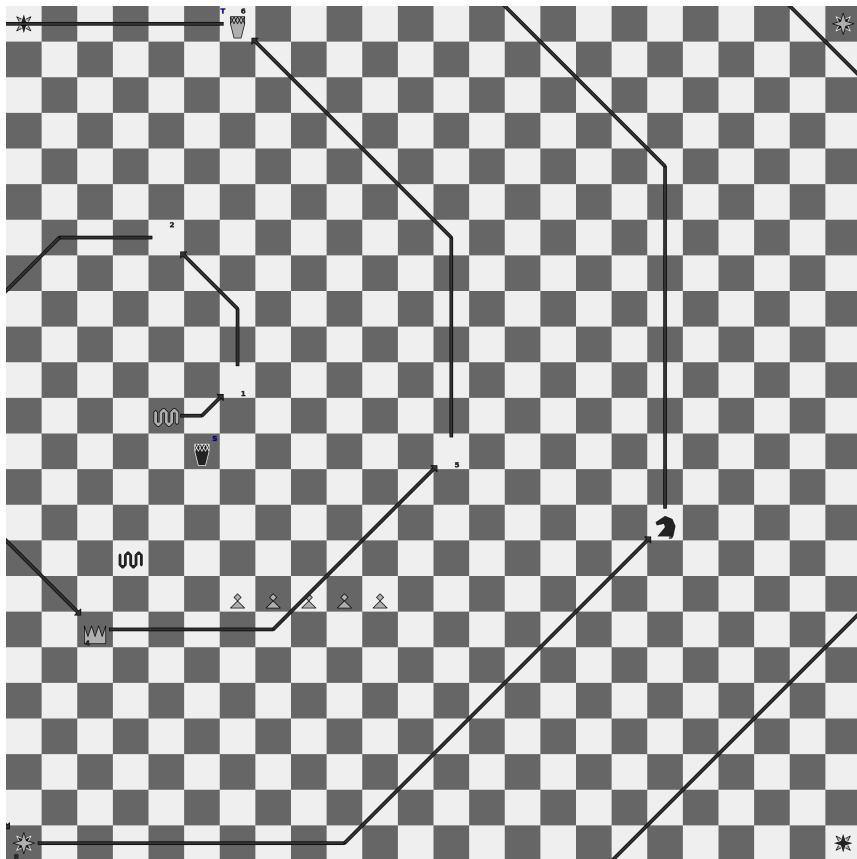


Figure 162: Dark → light Shaman interaction end

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.

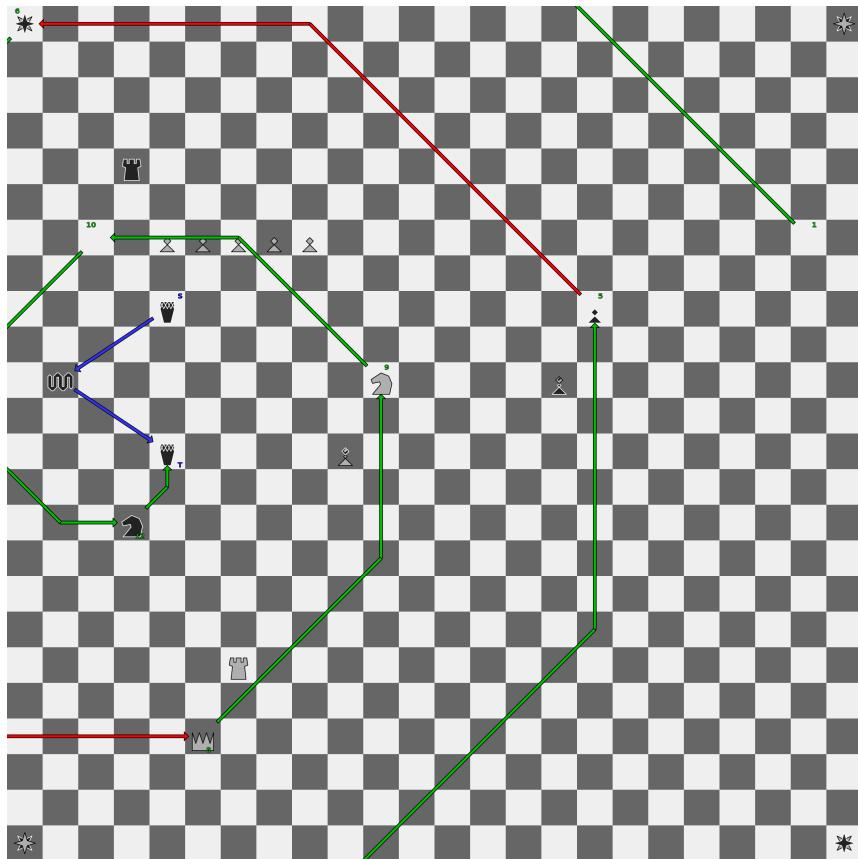


Figure 163: Dark → dark Shaman interaction start

Dark-entranced 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).

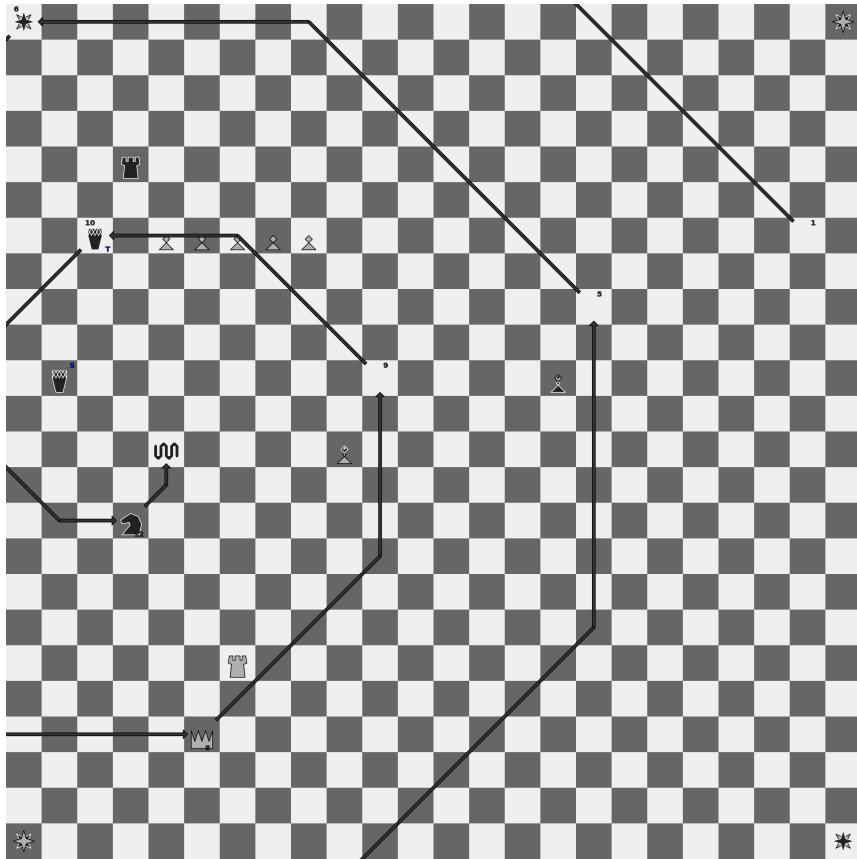


Figure 164: Dark → dark Shaman interaction end

All pieces on capture-fields up-to and including destination field of dark-entranced Shaman must be captured. This is in contrast to light-entranced Shaman, player can choose which pieces on step-fields are displaced, and which are not.

Dark-entranced Shaman settled on a field 10, and so piece closer to starting position (here, dark Knight on field 12) is not captured.

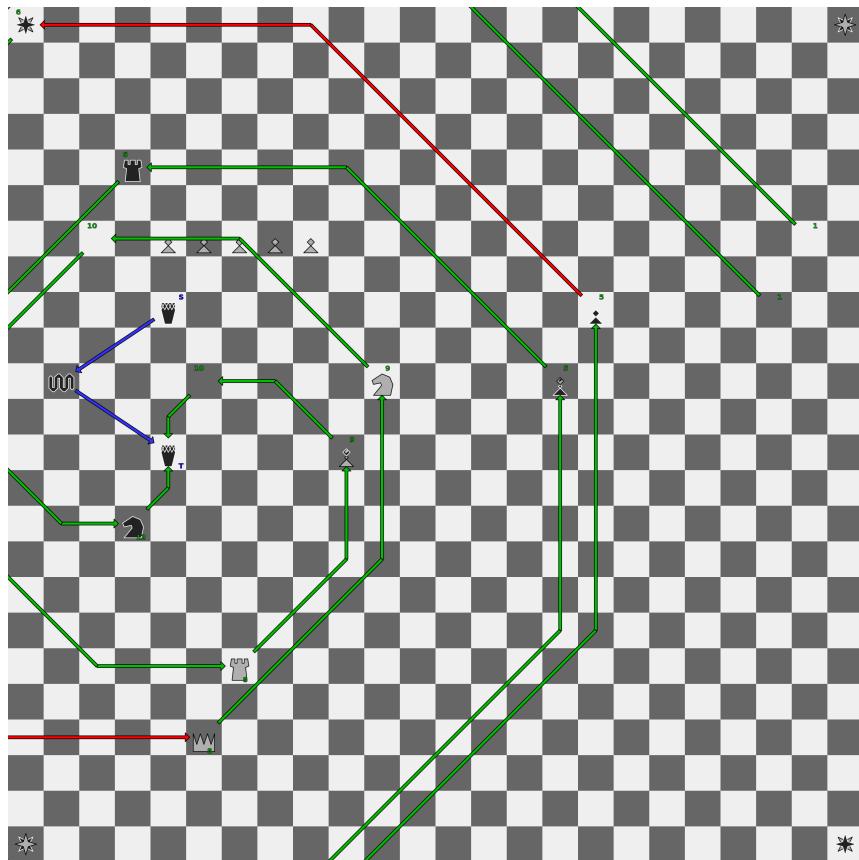


Figure 165: Dark → dark Shaman double start

Dark-entranced Shaman is about to undertake double trance-journey, when it must capture all pieces on both up- and down-hand patterns.

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

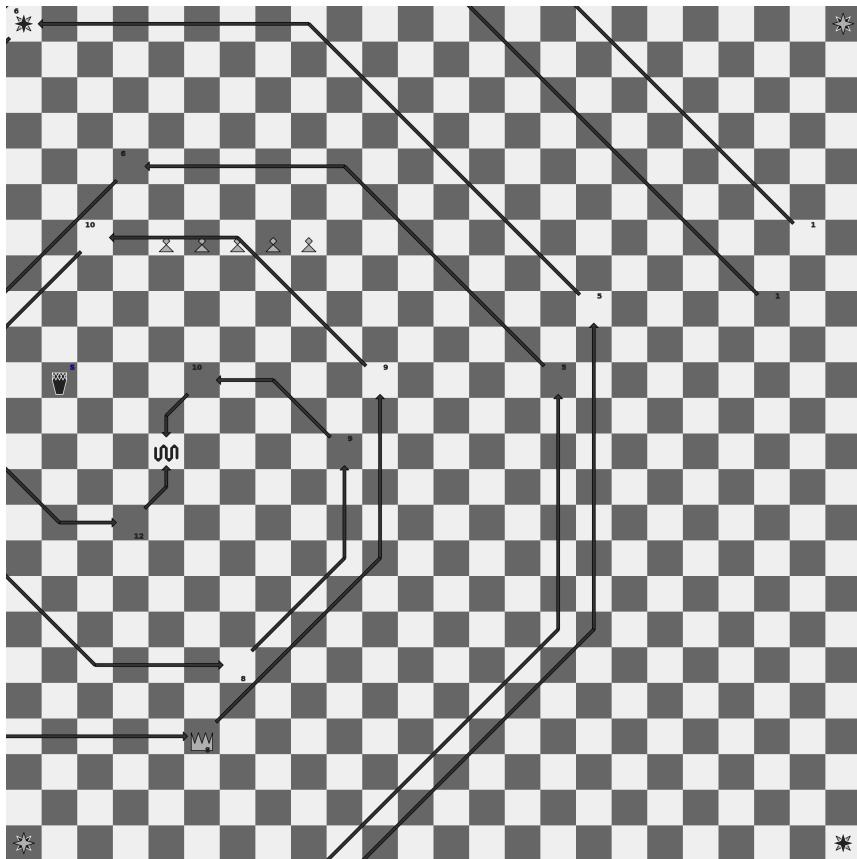


Figure 166: Dark → dark Shaman double end

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.

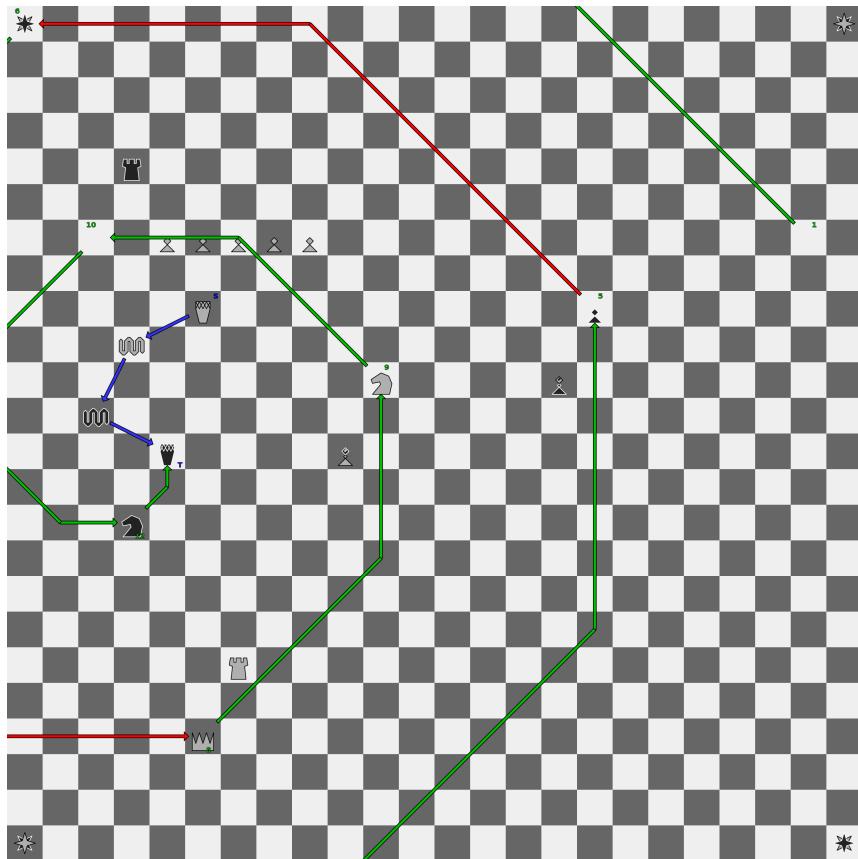


Figure 167: Light → dark Shaman interaction start

Light-entranced 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.

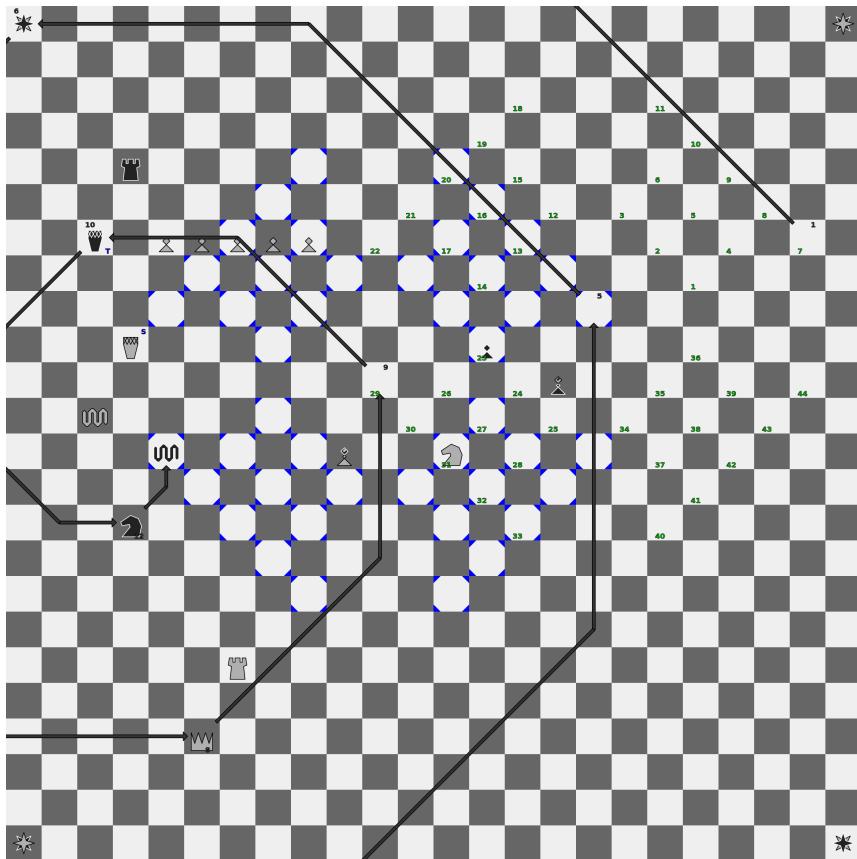


Figure 168: Light → dark Shaman interaction end

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.

## Multiple displacements

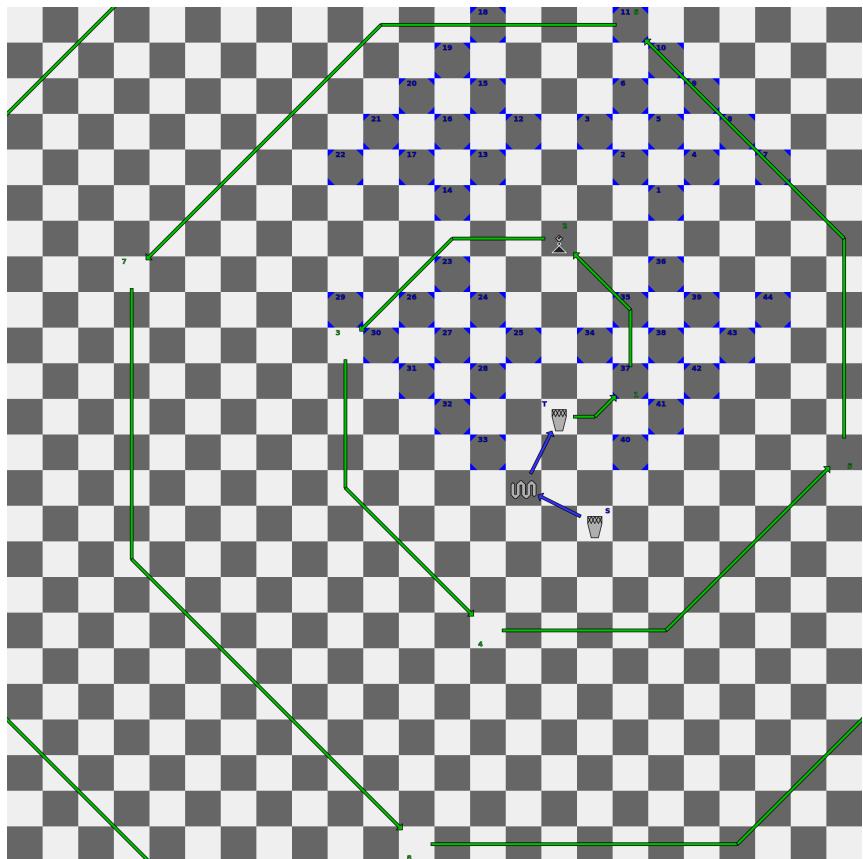


Figure 169: Backward displacement start

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 travelled over by the Shaman.

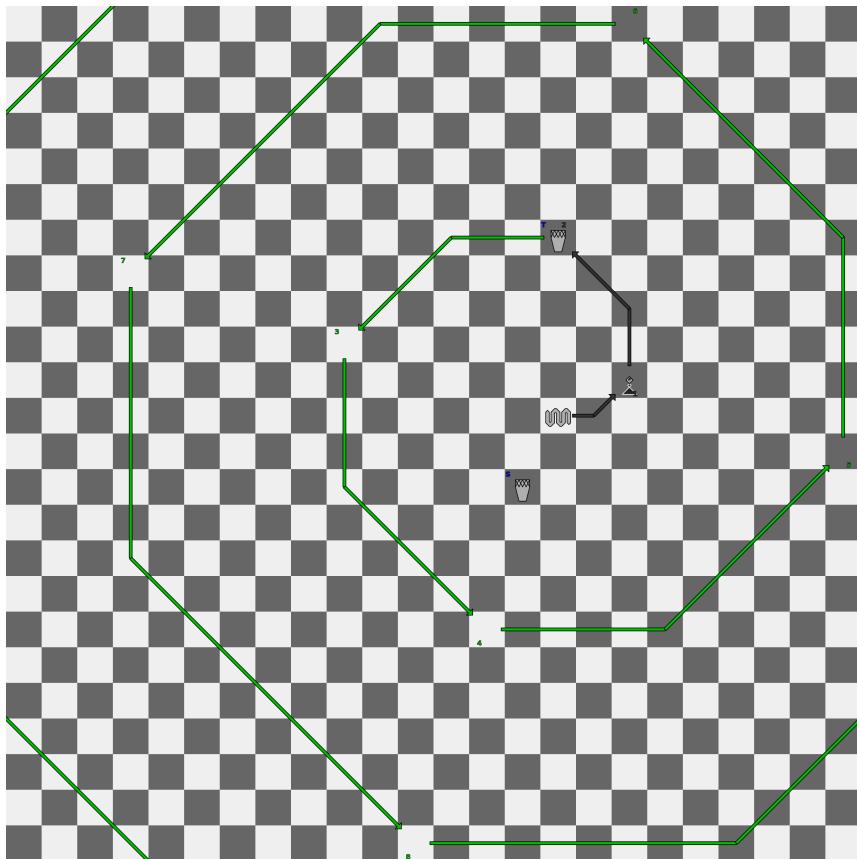


Figure 170: Backward displacement end

Such a displacement (when piece is displaced onto field already travelled 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 travelled-over path (grey), and thus out of reach for the remainder of the trance-journey.

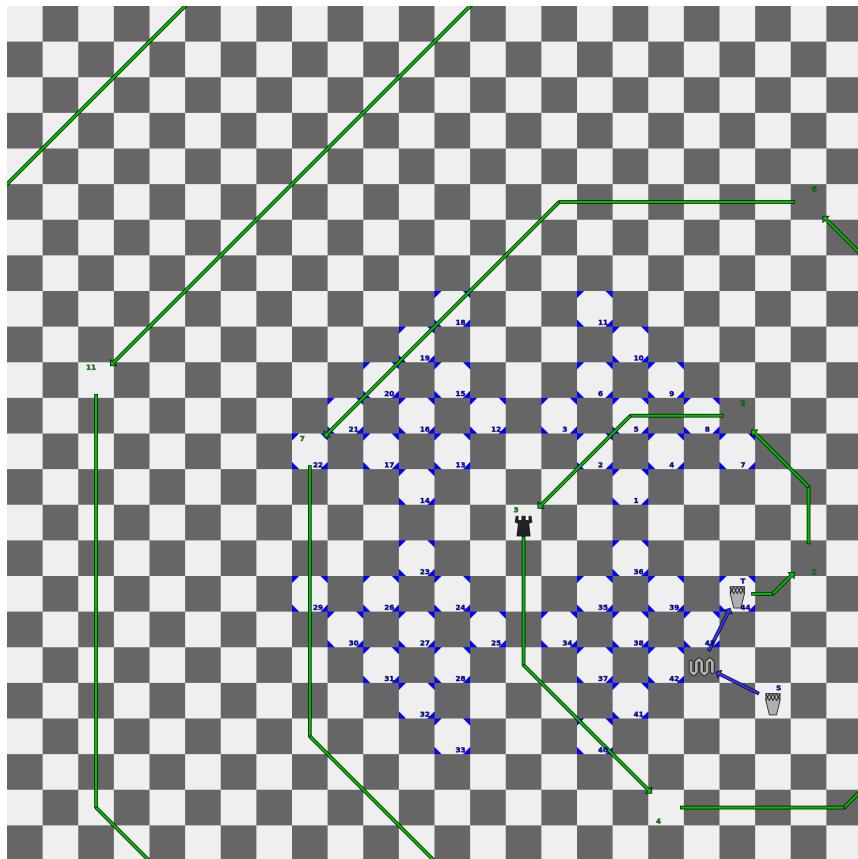


Figure 171: Forward displacement start

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

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

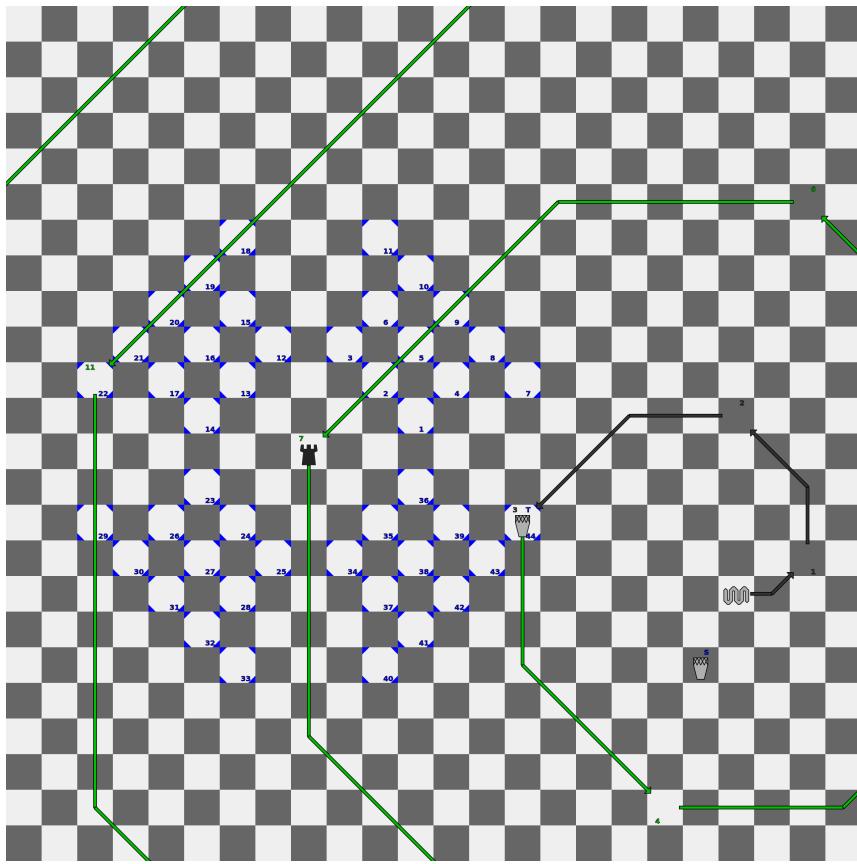


Figure 172: Forward displacement, step 2

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.

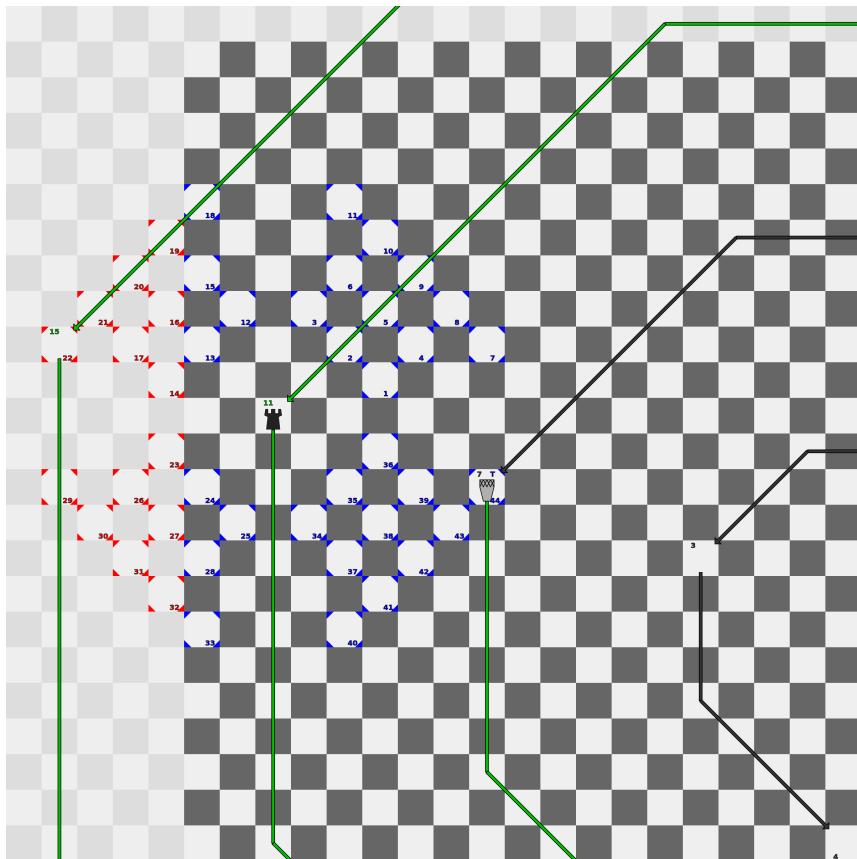


Figure 173: Forward displacement end

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.

## Push-pull entrancement

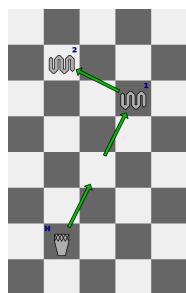


Figure 174: Push-pull entrancement start

Shaman starting a cascade can also be activated later during the very same cascade, which gives it an option to go onto trance-journey.

If ends in a trance-journey, such a cascade is said to feature push-pull entrancement. This is basically **push-pull activation** of a Shaman, ending in a trance-journey.

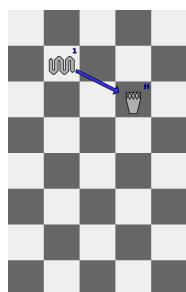


Figure 175: Push-pull entrancement step

If not starting a cascade, Shaman can be activated twice in the same cascade, and entrance itself into a trance-journey.

In all cases, to qualify as a self-entrancement, there should be no other Shamans in a cascade between starting a cascade/first activation and final activation of a Shaman undertaking trance-journey.

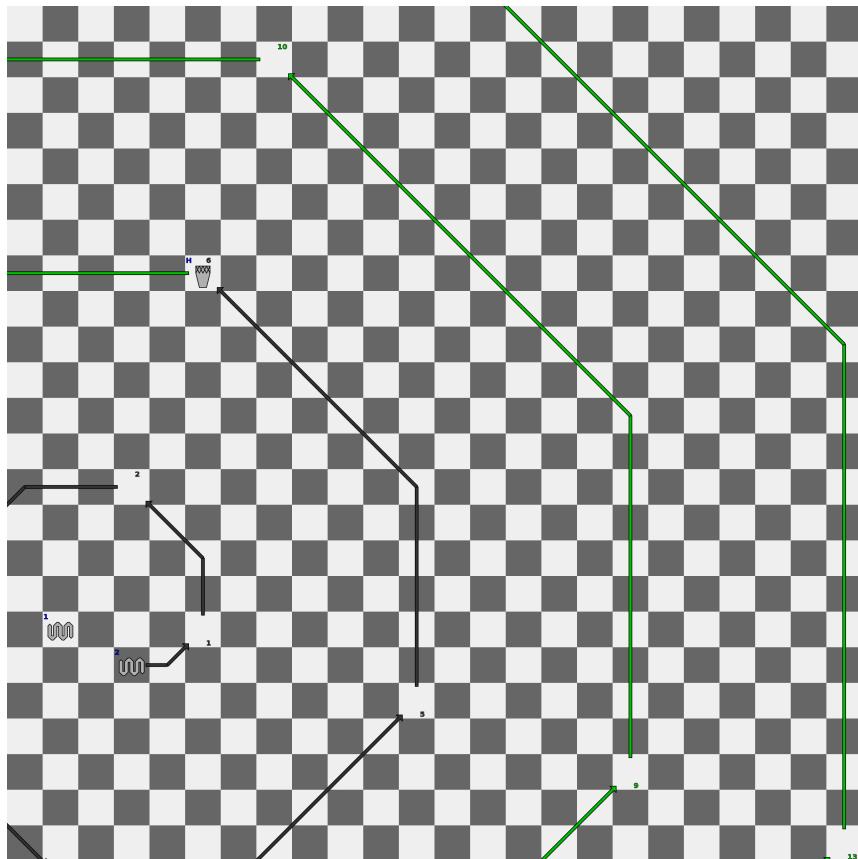


Figure 176: Push-pull entrance end

When entrancing and entranced Shamans are the same, their colors are the same, and so only:  
**light → light Shaman,**  
**dark → dark Shaman, and**  
**dark → dark Shaman double** interactions are possible.

## 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.

## Scout Pawns

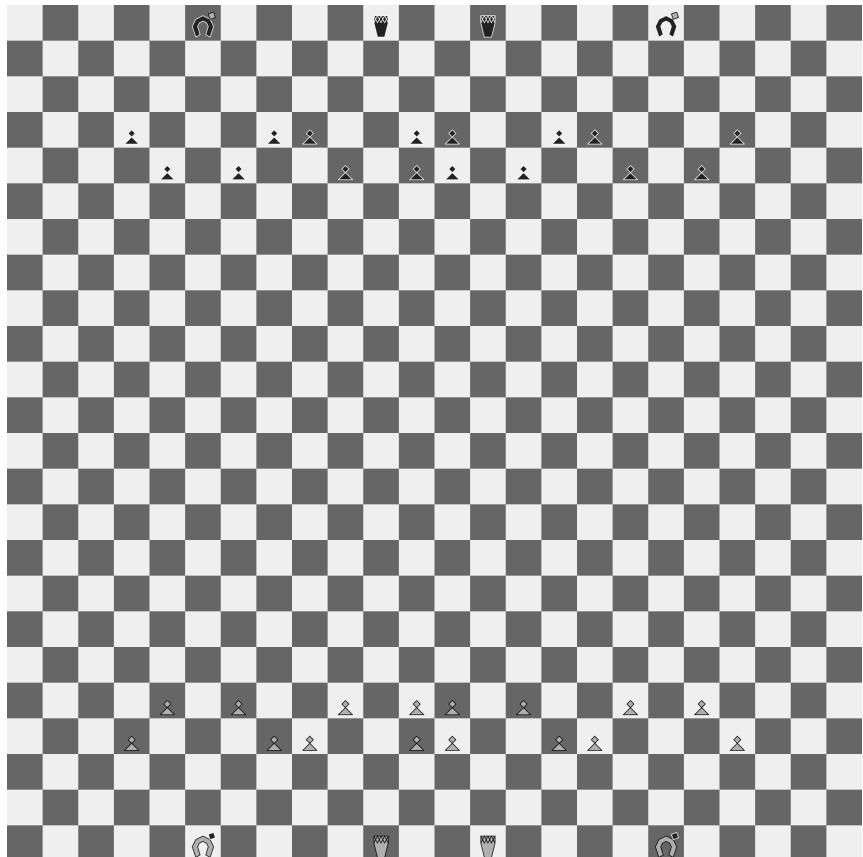


Figure 177: Scout Pawns

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

## Rush, en passant

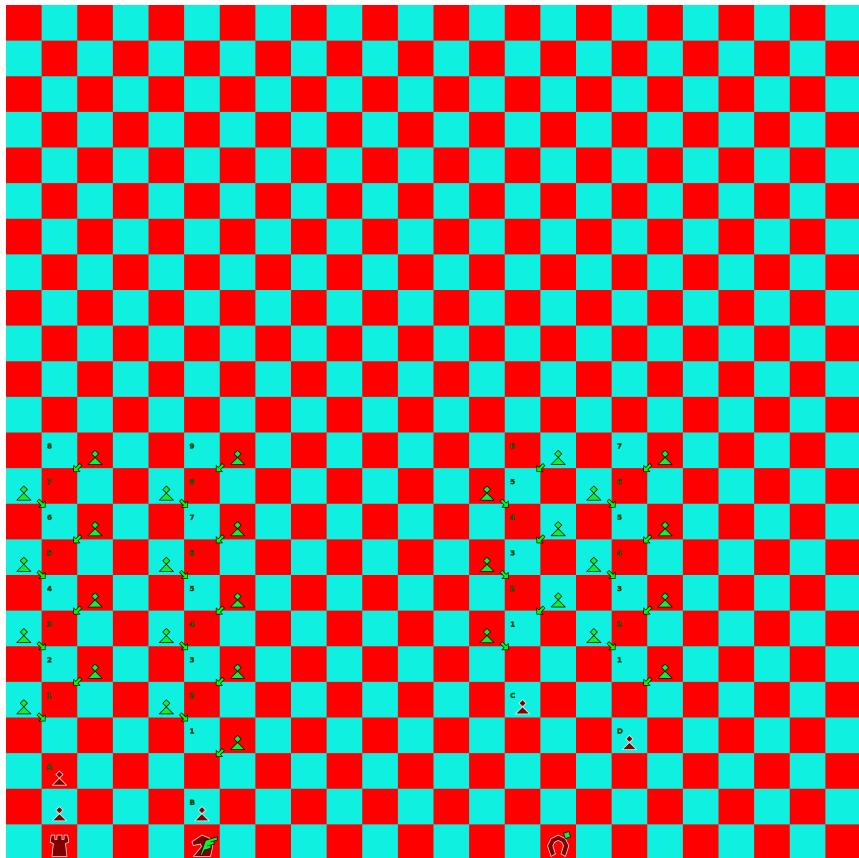


Figure 178: En passant

Rush and en passant are identical to those in Hemera's Dawn variant. Own Pawns can be rushed for up to 10 fields in this variant.

# Castling

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



Figure 179: Castling

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



Figure 180: 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 Unicorn and Pyramid symmetrically, on both sides of chessboard. This can be seen in the image below:

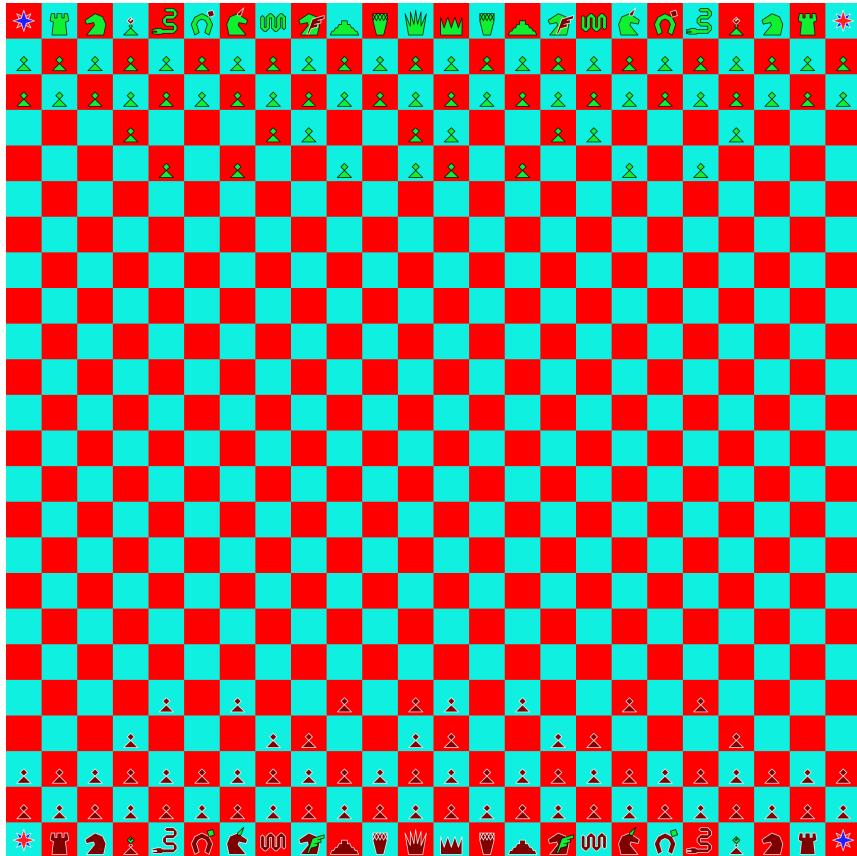


Figure 181: Conquest of Tlalocan board



# 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. In algebraic notation, columns are enumerated from 'a' to 'x', and rows are enumerated from '1' to '24'. A new piece is introduced, Monolith.

# Monolith

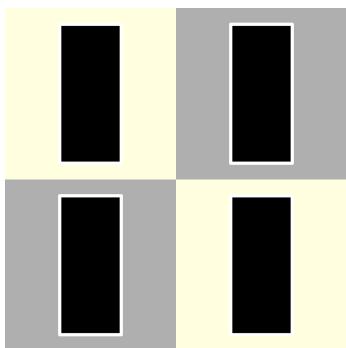


Figure 182: Monolith

Monolith does not belong to any player, but can be moved by both of them. Monolith cannot be captured, converted, nor activated. 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.

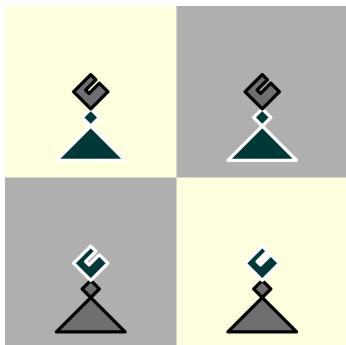
Piece, if not Wave, then reappears on a chosen empty portal-field around any Star or the other Monolith. Wave teleported from a Monolith can emerge only from the other Monolith. Kings, Monoliths cannot be teleported.

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 step-fields in its ply must be empty. Monolith moves similar to Knight, but can perform 3 steps in a single ply, by alternating between left and right steps.

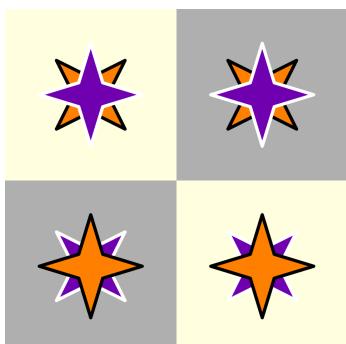
Alternative move for Monolith is syzygy.

In algebraic notation, symbol for Monolith is 'M'.



Piece colors in this variant are presented on the left.

Figure 183: Bishop



Star colors in this variant are presented on the left.

Figure 184: Star

## Movement

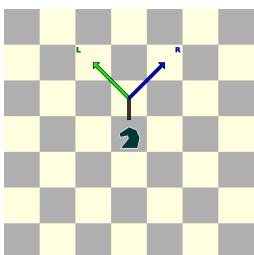


Figure 185: Knight steps

Like in a [Conquest of Tlalocan variant](#), looking from Knight's position forward, one direction would be to the left, and the other to the right.

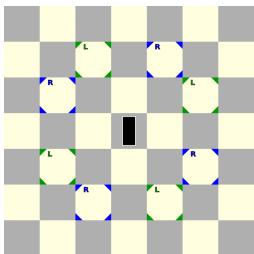


Figure 186: Monolith steps

Here, all left (green) and right (blue) steps of Monolith are marked.

Monolith can freely choose any step-field as its first step destination. On all subsequent steps, Monolith has to alternate between left and right steps. Every step direction can be chosen independently of any previous choice.

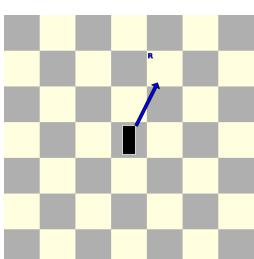


Figure 187: Monolith first step

Like Knight, Monolith is not obstructed by any piece on unmarked (i.e. non-step) field. Monolith cannot interact with any other piece on its own. So, Monolith is blocked by any piece on its step-field. In this variant, Monolith is limited to 3 steps in its ply.

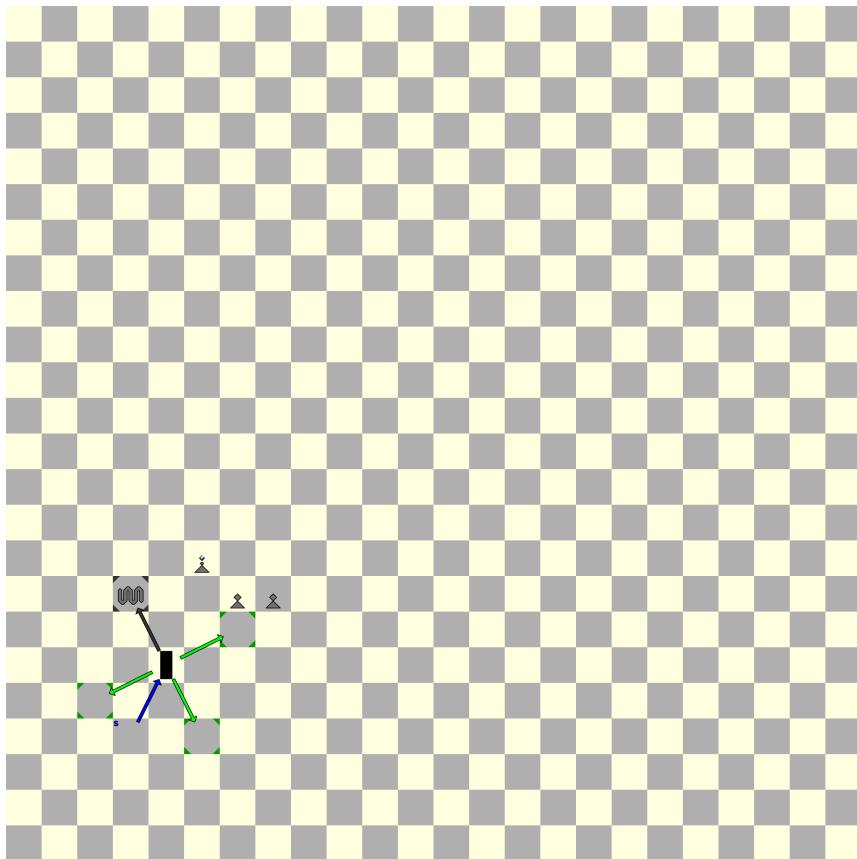


Figure 188: Monolith step 2

Starting field is marked S. Right step was chosen as a first one, so next step has to be to the left. Here, Monolith is obstructed by light Wave on a step-field. This is so regardless if player moving Monolith is light or dark.

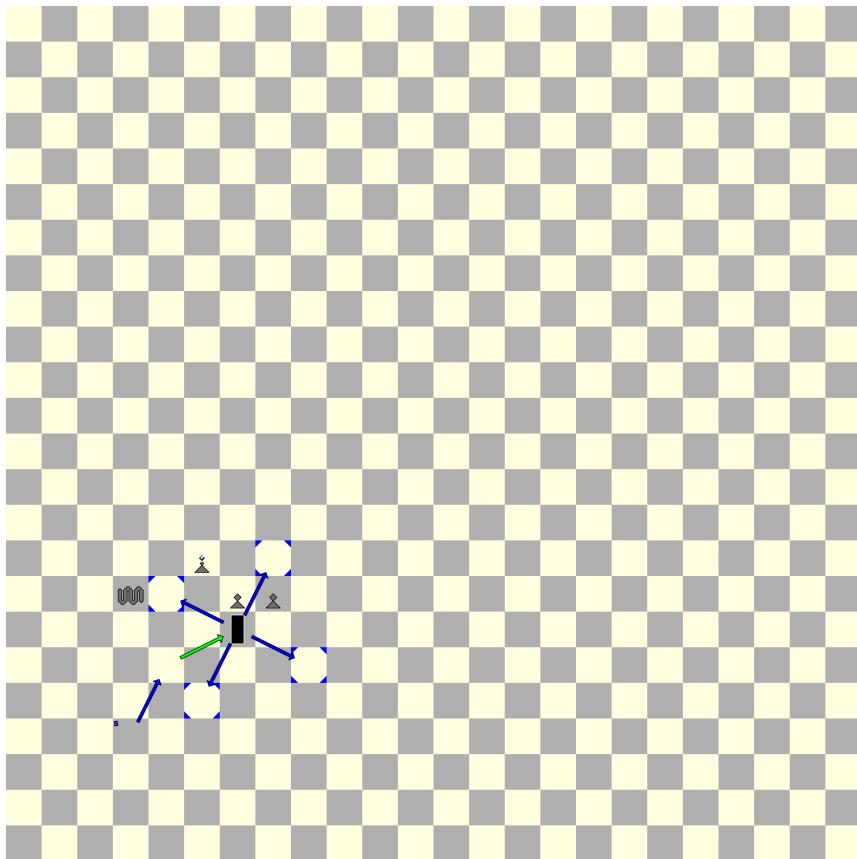


Figure 189: Monolith step 3

Previous step was a left one, so next step needs to be one of 4 marked right steps. This is also last step in a Monolith's ply, since it's third. Monolith is not obstructed by Pawns on a non-step fields; nor by Bishop on a left step-field.

## Teleporting

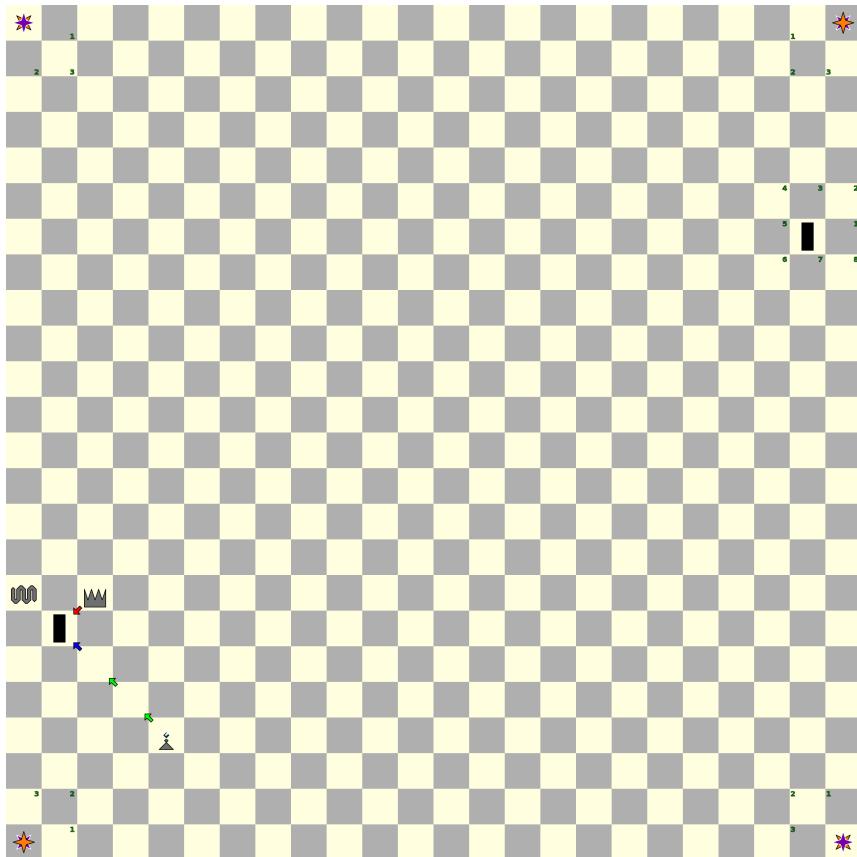


Figure 190: Teleporting piece via Monolith

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.

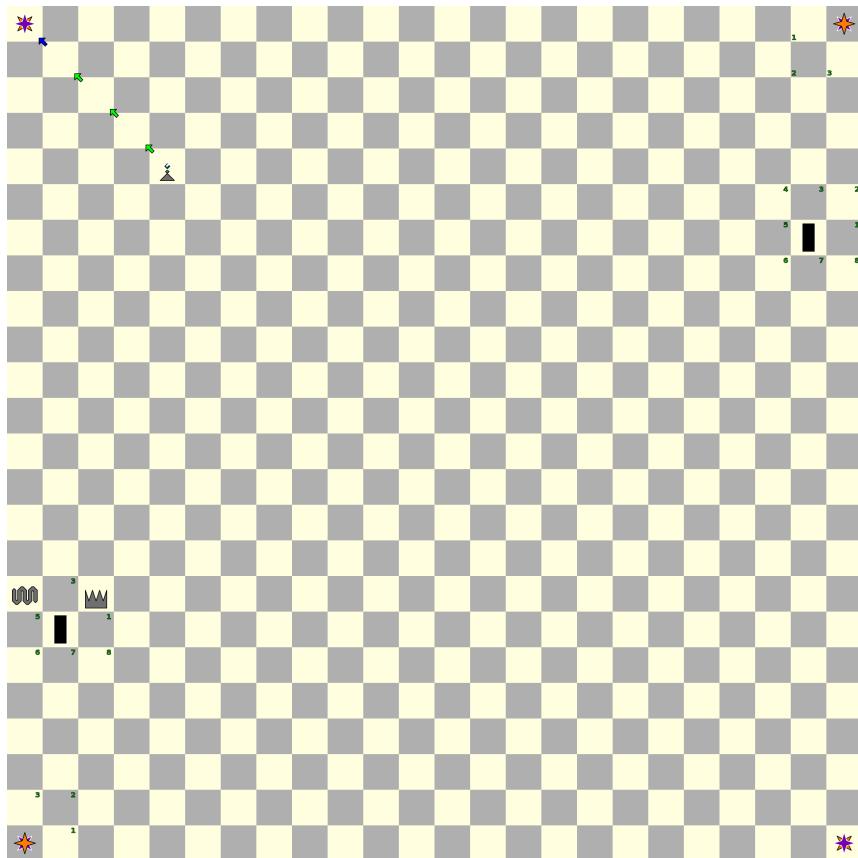


Figure 191: Teleporting piece via Star

All pieces, except Waves, teleporting from a Star can reappear on a 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.

## Wave

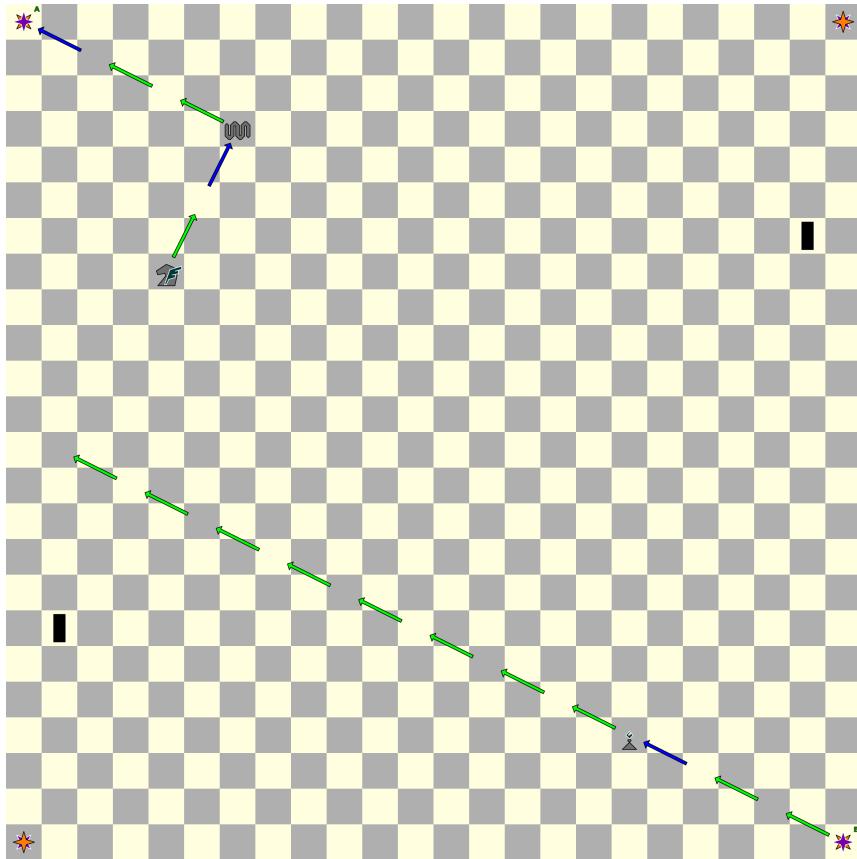


Figure 192: Teleporting Wave via Star

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.

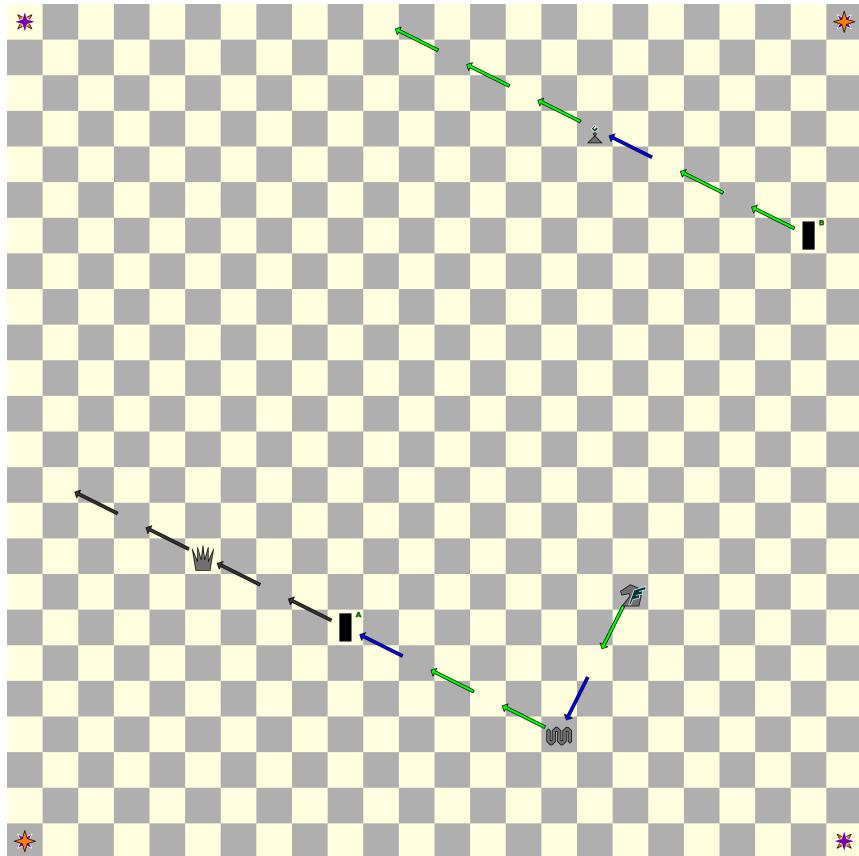


Figure 193: Teleporting Wave via Monolith

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.

Note, teleportation is mandatory for Wave when it reaches Monolith; Wave cannot pass beyond it, as it can do with all the other pieces.

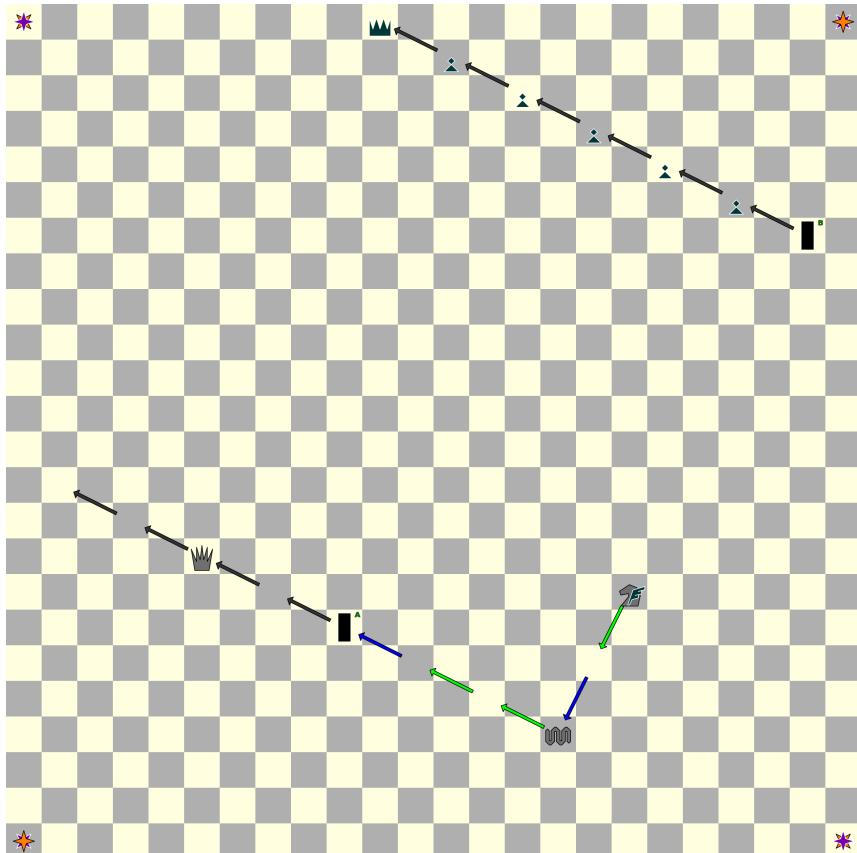


Figure 194: Teleported Wave blocked

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 (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.

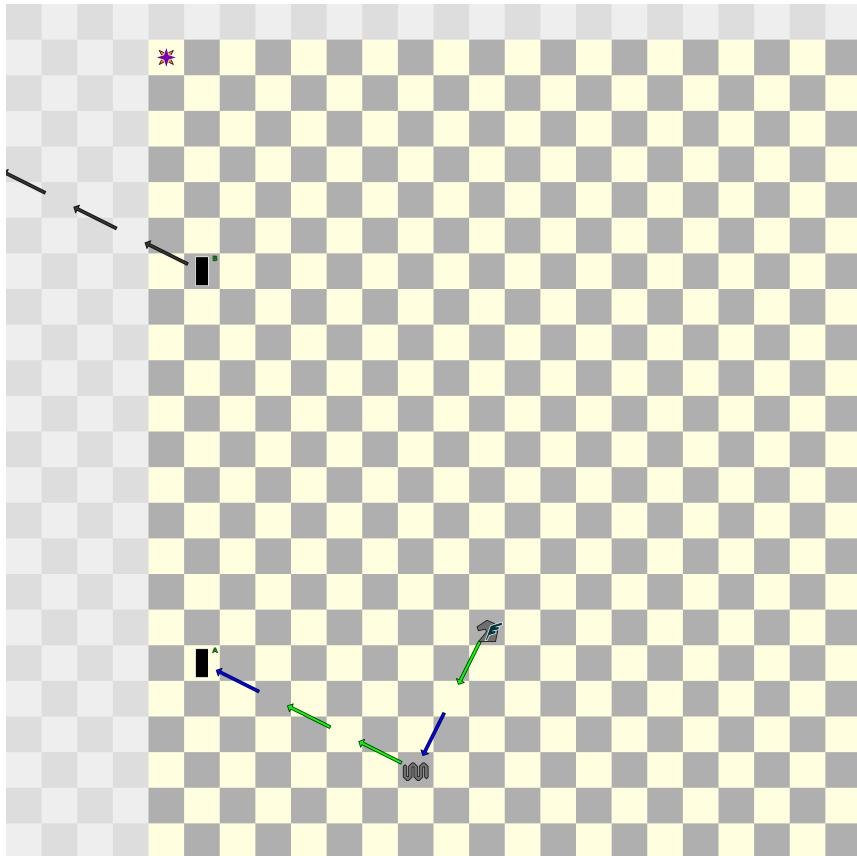


Figure 195: Wave teleported off-board

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

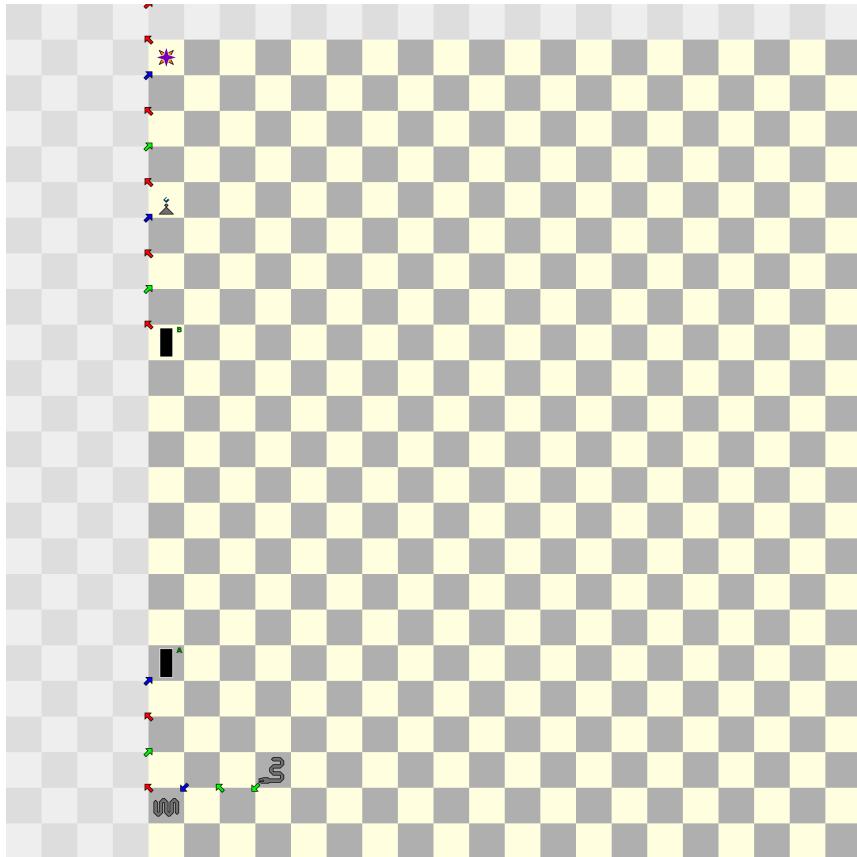


Figure 196: Teleporting Wave on- and off-board

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

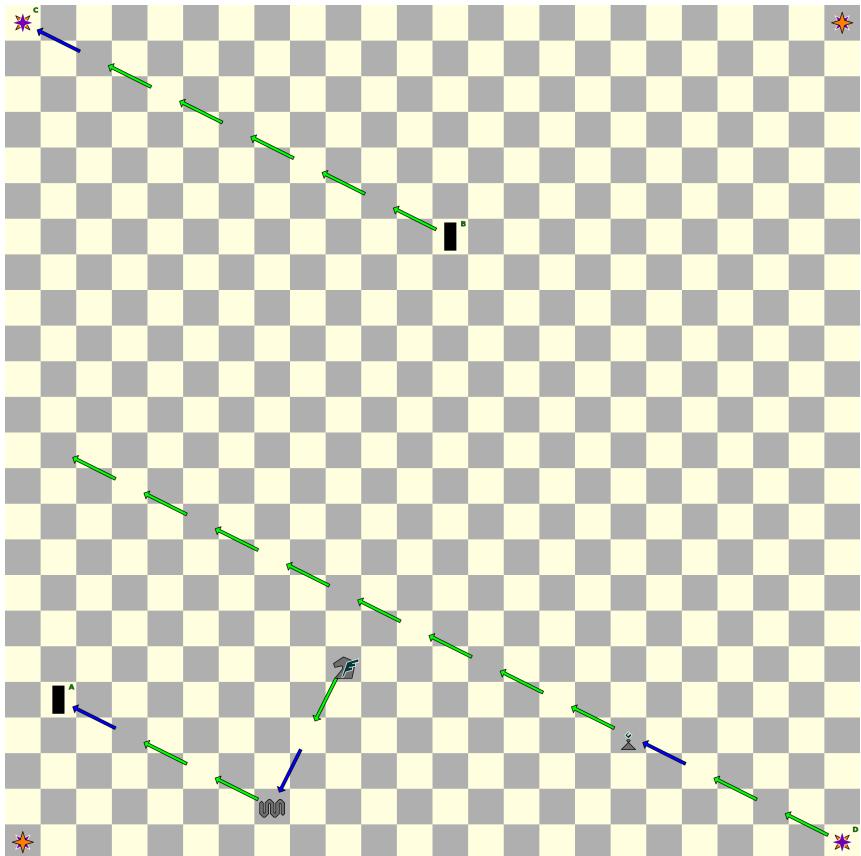


Figure 197: Cascading teleportations

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  $C \rightarrow D$ ).

## Trance-journey interaction

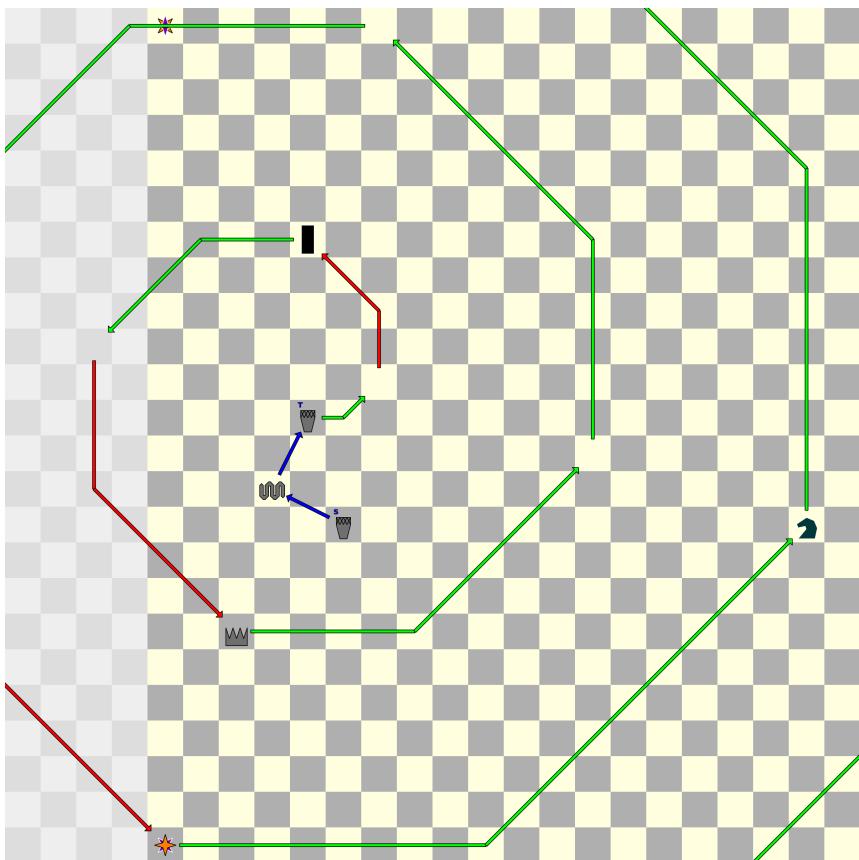


Figure 198: Trance-journey interaction

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.

## Syzygy

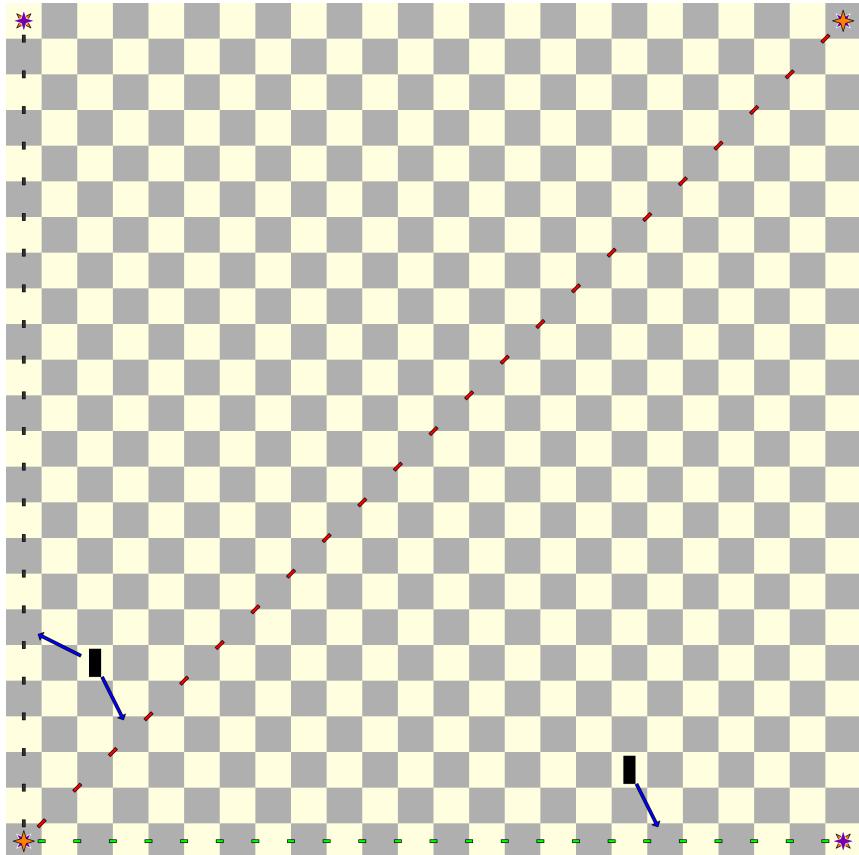


Figure 199: Syzygy with Stars

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.

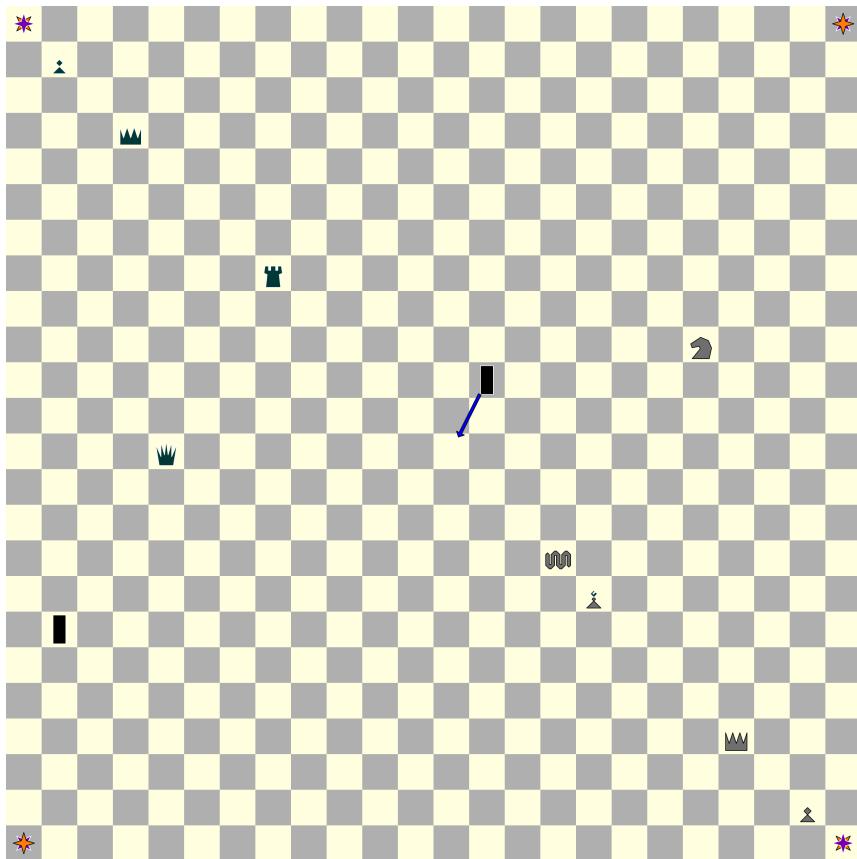


Figure 200: 2-Stars syzygy start

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.

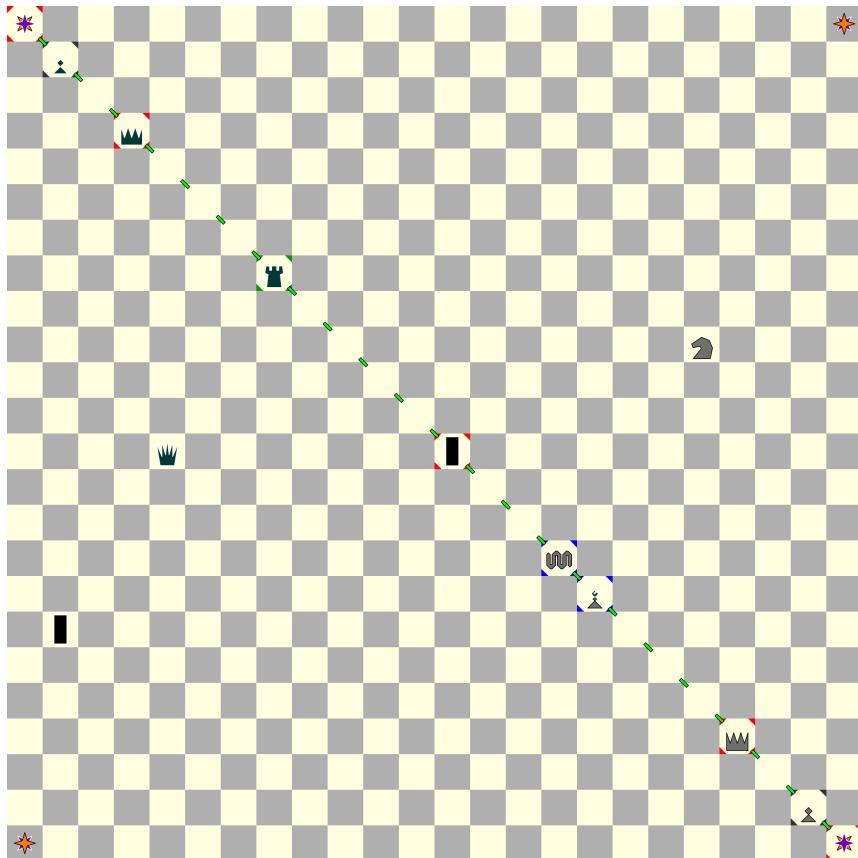


Figure 201: 2-Stars syzygy steps

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).

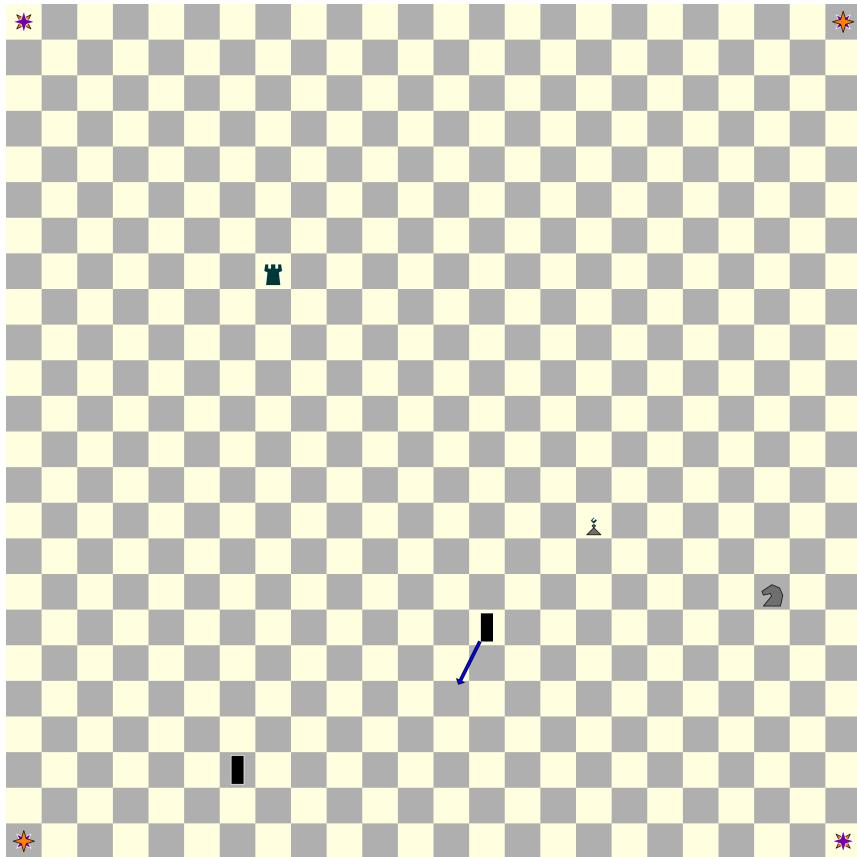


Figure 202: 2-Monoliths syzygy init

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. All own figures (except King) on a syzygy-fields are then eligible to be demoted to Pawn.

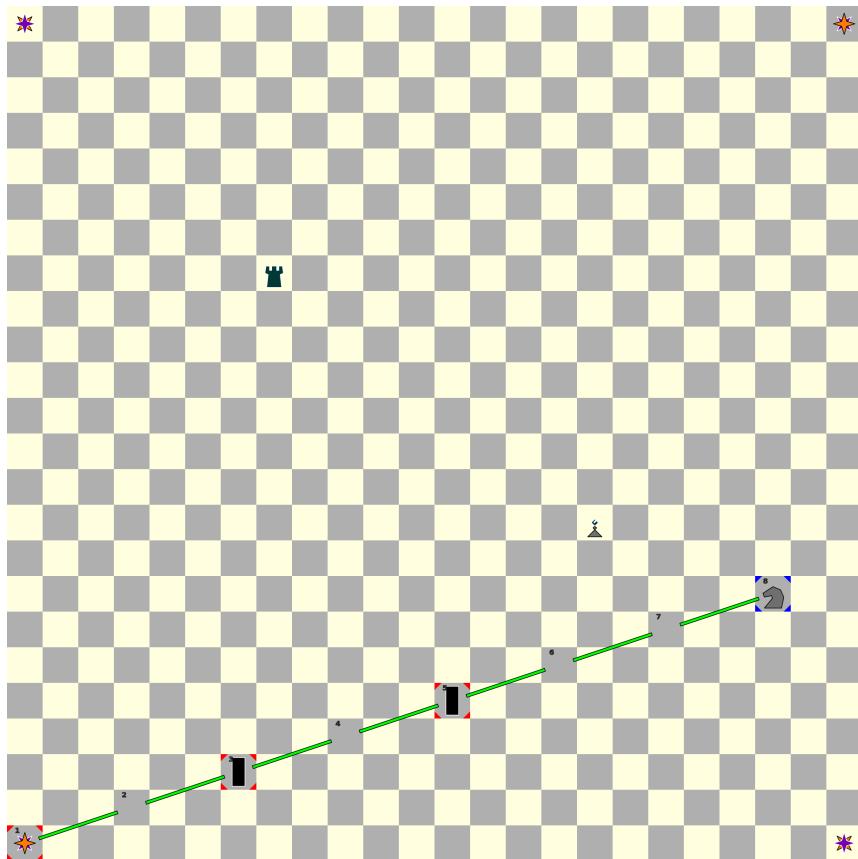


Figure 203: 2-Monoliths syzygy steps

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.

## Reentering syzygy

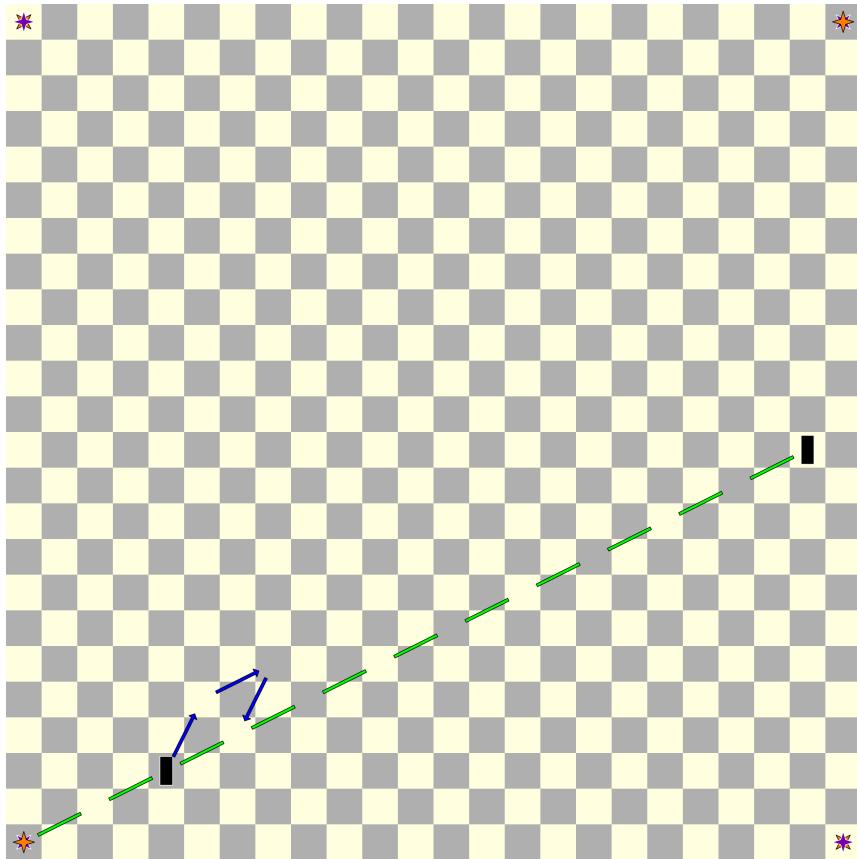


Figure 204: Reentering syzygy in the same move

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.

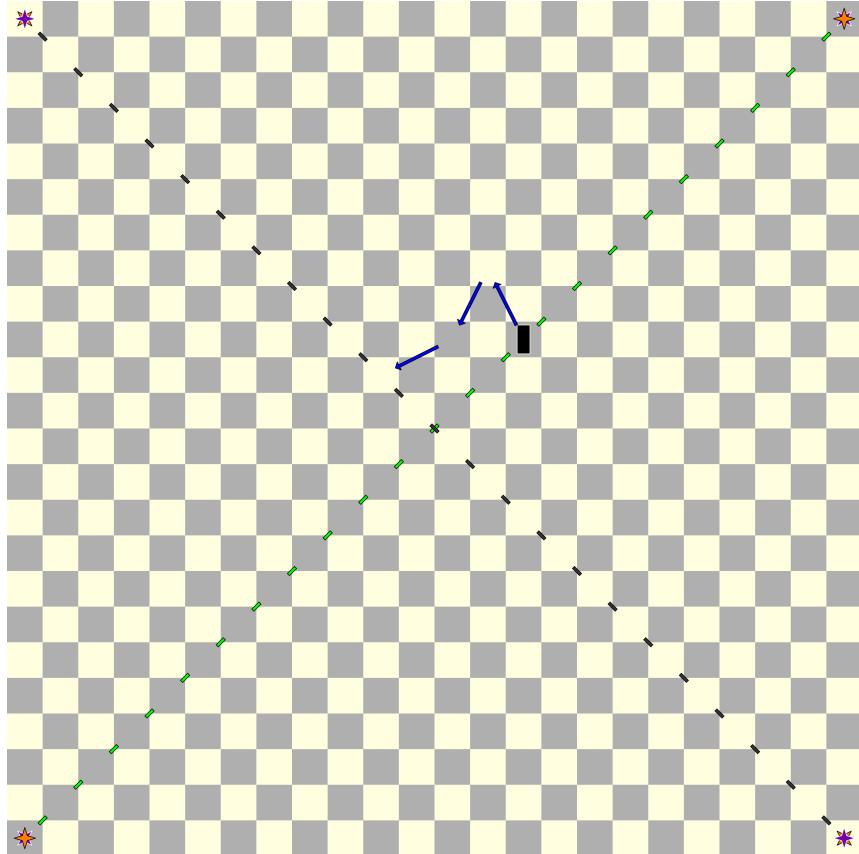


Figure 205: Reentering independent syzygy

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

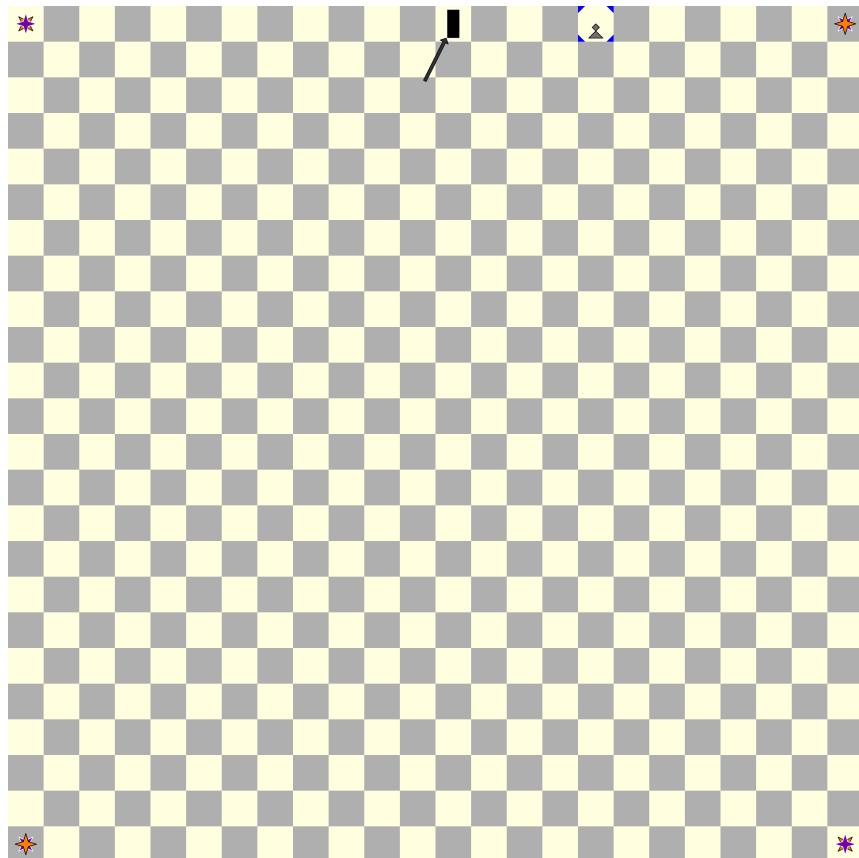


Figure 206: Syzygy ends with Pawn tagged for promotion

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**.

## 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.

## Rush, en passant

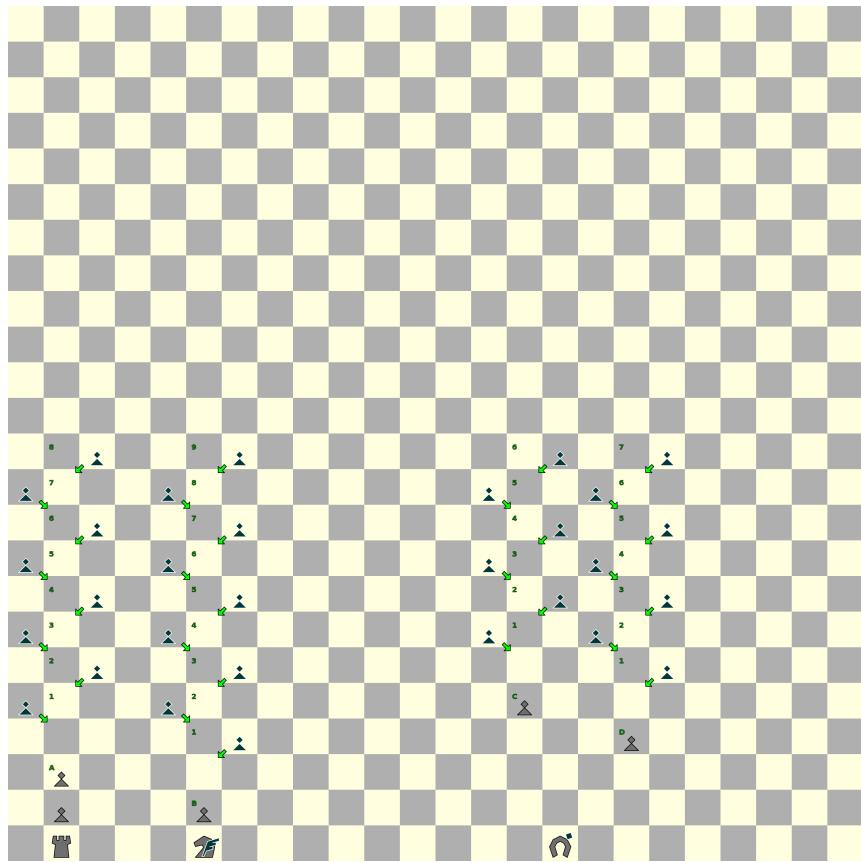


Figure 207: En passant

Rush and en passant are identical to those in Hemera's Dawn variant. Own Pawns can be rushed for up to 10 fields in this variant.

# Castling

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



Figure 208: Castling

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



Figure 209: 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, symetrically, on both sides of chessboard. This can be seen in the image below:

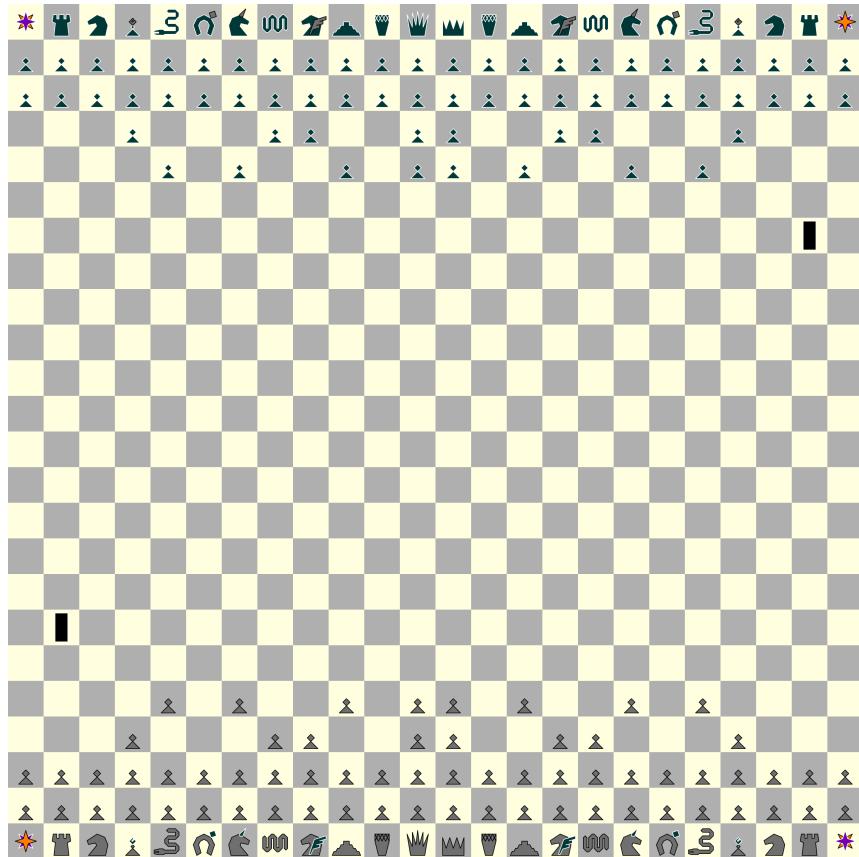


Figure 210: Discovery board



# 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. In algebraic notation, columns are enumerated from 'a' to 'z', and rows are enumerated from '1' to '26'. A new piece is introduced, Starchild.

# Starchild

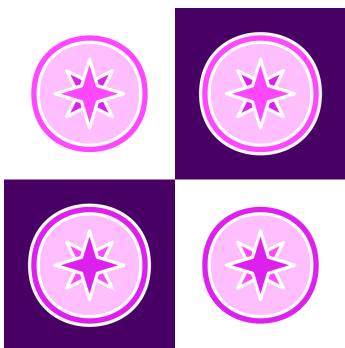


Figure 211: Starchild

Starchild can activate any own piece (except King), opponent's Starchild and any Star on its neighboring-fields.

Starchild cannot capture any piece, cannot check or checkmate opponent's King. Starchild is celestial piece, it can participate in demoting-to-Pawn syzygy. Starchild can be demoted to Pawn.

Starchild cannot be converted, but can be activated. If activated, it does not spend momentum while moving. Starchild can activate own Wave and Starchild on step-fields.

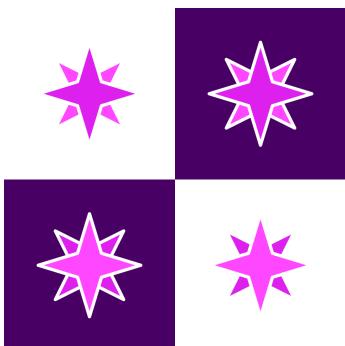


Figure 212: Star

Starchild can't teleport. Starchild moves from starting to destination field in opposite color in one step, without interacting with any piece on chessboard.

Starchild can resurrect any captured piece, except Kings, Stars, Monoliths. Waves and Starchilds can be resurrected without resurrecting Starchild being oblationed. Starchild can take any piece, except Kings, Waves, Stars and Monoliths, for a non-interactive, viewing-only trance-journey.

In algebraic notation, symbol for Starchild is 'I'.

## Movement

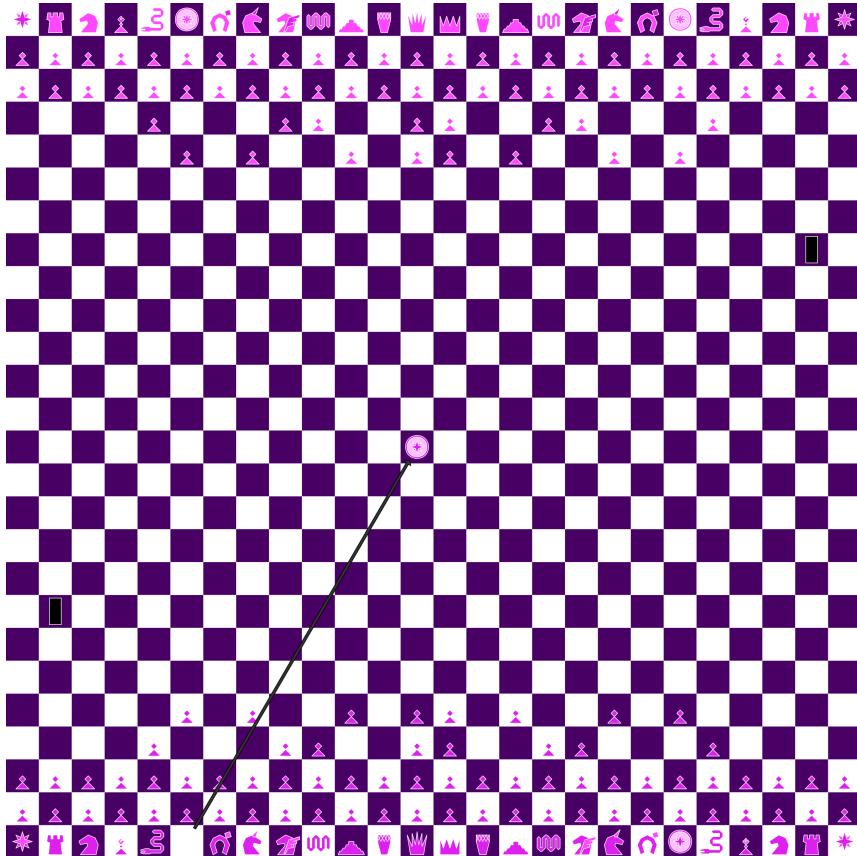


Figure 213: Starchild movement

Starchild can move to any empty field in opposite color to the one it's located on. Starchild is not hampered by any piece between starting and destination field.

Here, light Starchild in the middle moved from its starting position in one step. It is now positioned at dark field, and so can access any empty light field in a single step.

## Activating on step-fields

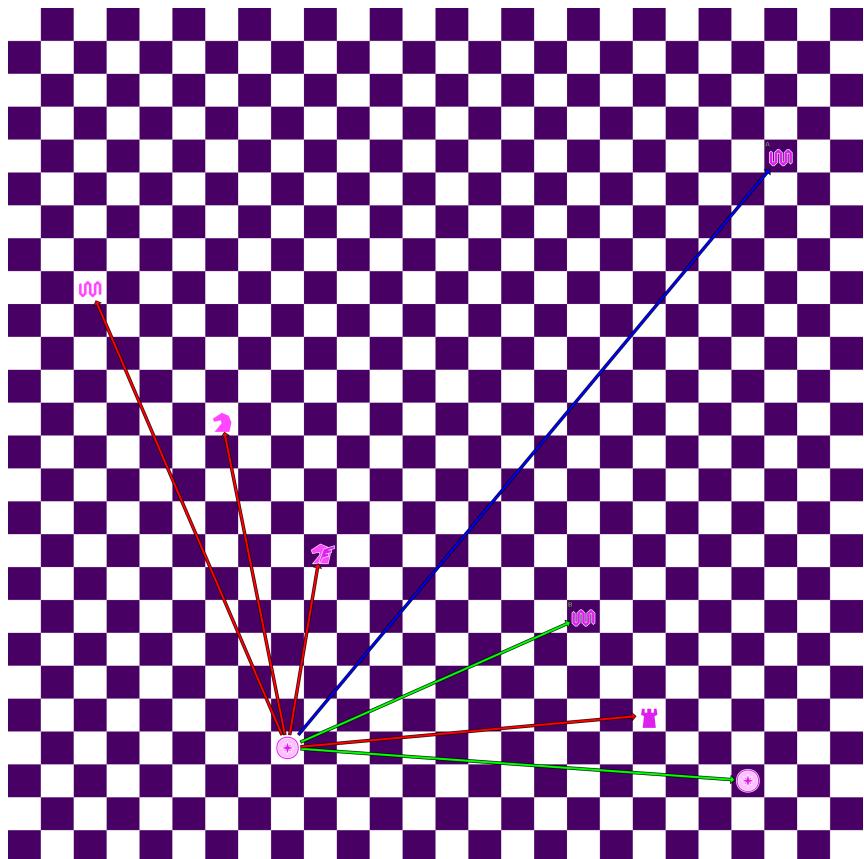


Figure 214: Activating Wave

Starchild can activate own Waves and Starchilds on its step-fields, with 1 momentum. Here, both light Waves and own Starchild can be activated. Neither light Rook nor any of other opponent's pieces can be activated; some of them are also on the same color field as activating Starchild.

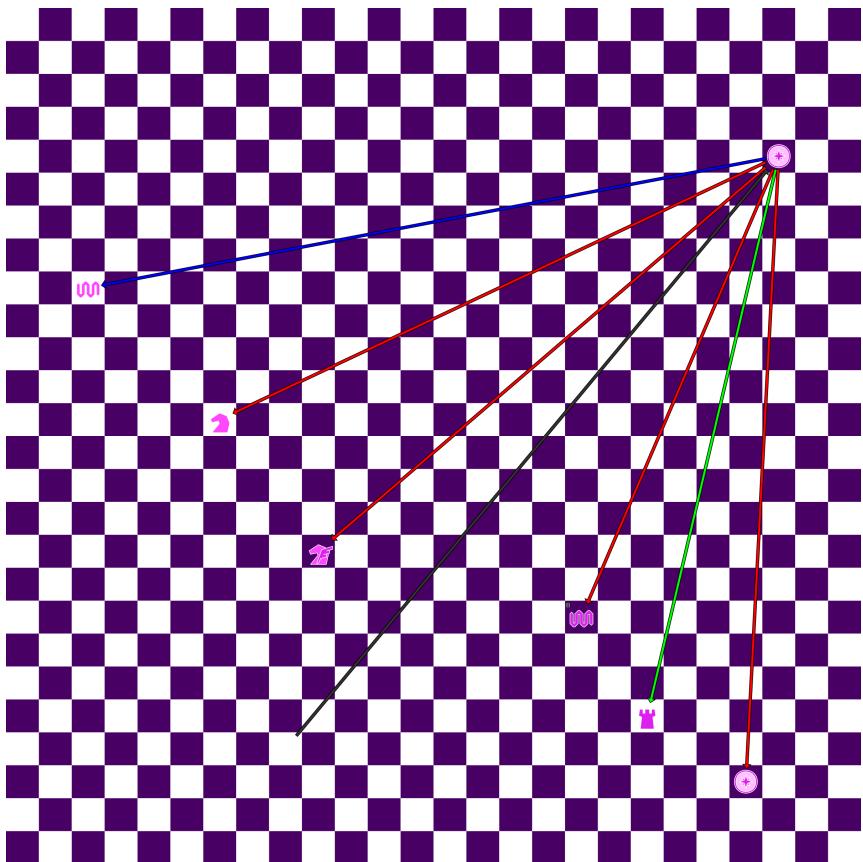


Figure 215: Wave activated

Activated Wave moves the same as Starchild, i.e. to any field in opposite color to its starting position. There it can activate any own piece (except King), and opponent's Wave, with 1 received momentum. Here, light Wave A is now activated, and it can activate dark Wave or light Rook. It cannot activate other opponent's pieces (here, dark Knight, Pegasus). Light Starchild and Wave B can't be activated because they're on the same dark field as activating Wave.

## Activating Starchild

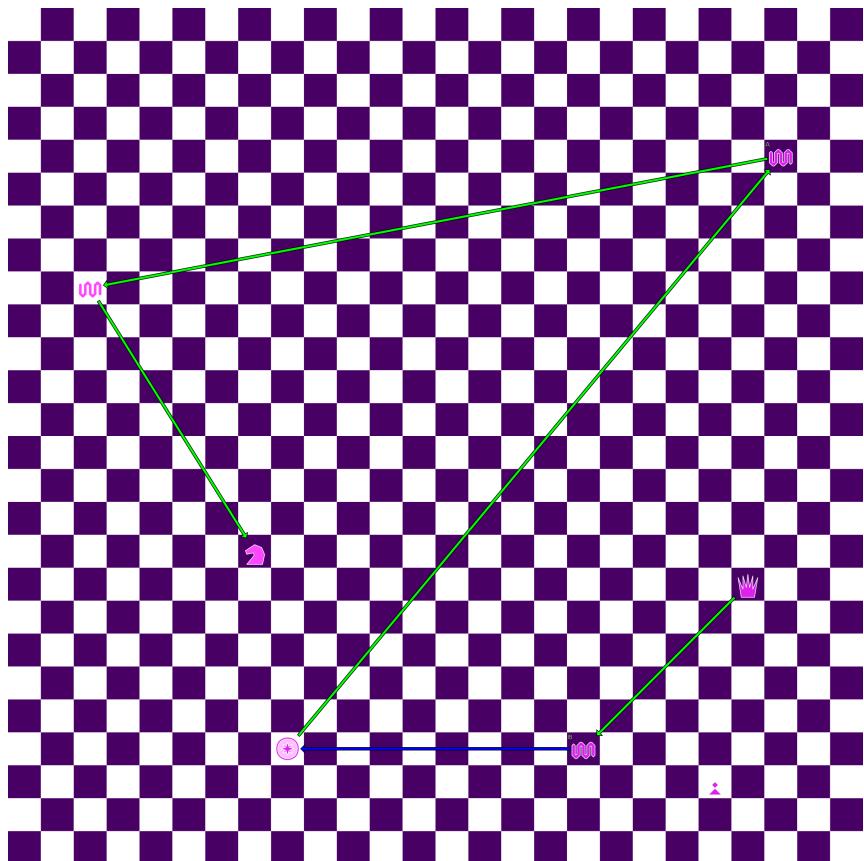
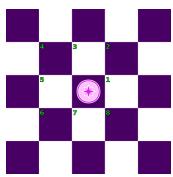


Figure 216: Activating Starchild

Like Wave, activated Starchild does not spend received momentum for moving; if Starchild activates a piece, it transfers all of received momentum to it. In example similar to previous, light Starchild is receiving 5 momentum after being activated by light Queen, received momentum is then transferred from light Wave to dark Wave to dark Knight in its entirety.

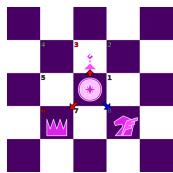
## Neighboring-fields



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

Figure 217:  
Neighboring-fields

## Activating on neighboring-fields



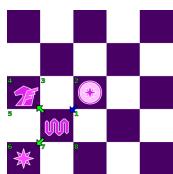
Fields at which Starchild can activate a piece are neighboring-fields; pieces that can be activated are own pieces (except King), and opponent's Starchild.

Figure 218: Activating piece

Note, Starchild cannot move to empty neighboring-fields, it can only activate a piece on its neighboring-field.

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

## Activating Wave



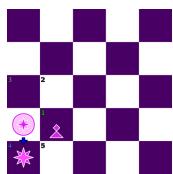
Wave activated by Starchild on its neighboring-fields can activate a piece, with 1 momentum; any own piece (except King), and opponent's Waves can be activated.

Figure 219: Activating Wave

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

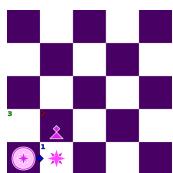
**Activated Wave cannot teleport.** Instead of teleporting, Wave would reappear on any empty portal-field around Star (or Monolith). If there are no empty portal-fields, Wave would be oblationed.

## Moving a Star



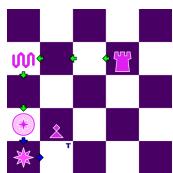
Starchild can activate a Star the same way as any other piece, i.e. by capturing neighboring-field at which Star is located. Activated Star receives 1 momentum.

Figure 220: Moving into a Star



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

Figure 221: Star moving

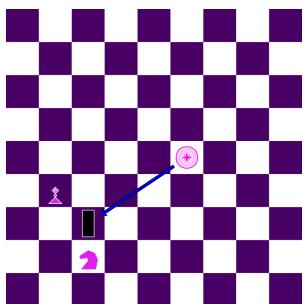


Note, even if activated Starchild received more than 1 momentum, Star can move for only one step.

Figure 222: Activating Starchild

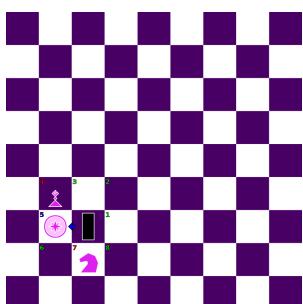
Here, Star received all of initial 3 momentum gathered by the Rook, since neither Wave nor Starchild expend momentum for its movement. Nevertheless, activated Star can move for only one field.

## Not teleporting



Starchild can try to capture either step- or neighboring-field at which Monolith is located, as if trying to teleport.

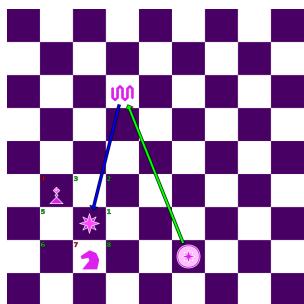
Figure 223: Moving into a Monolith



Instead of teleporting, Starchild then emerges on any empty portal-field around Monolith it tried to move. If there are no empty portal-fields, Starchild is obliterated.

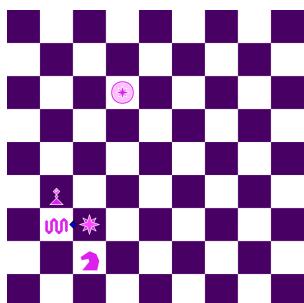
Figure 224: Moving out of a Monolith

## Not teleporting Wave



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

Figure 225: Moving into 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.

Figure 226: Moving out of a Star

## Teleporting Wave

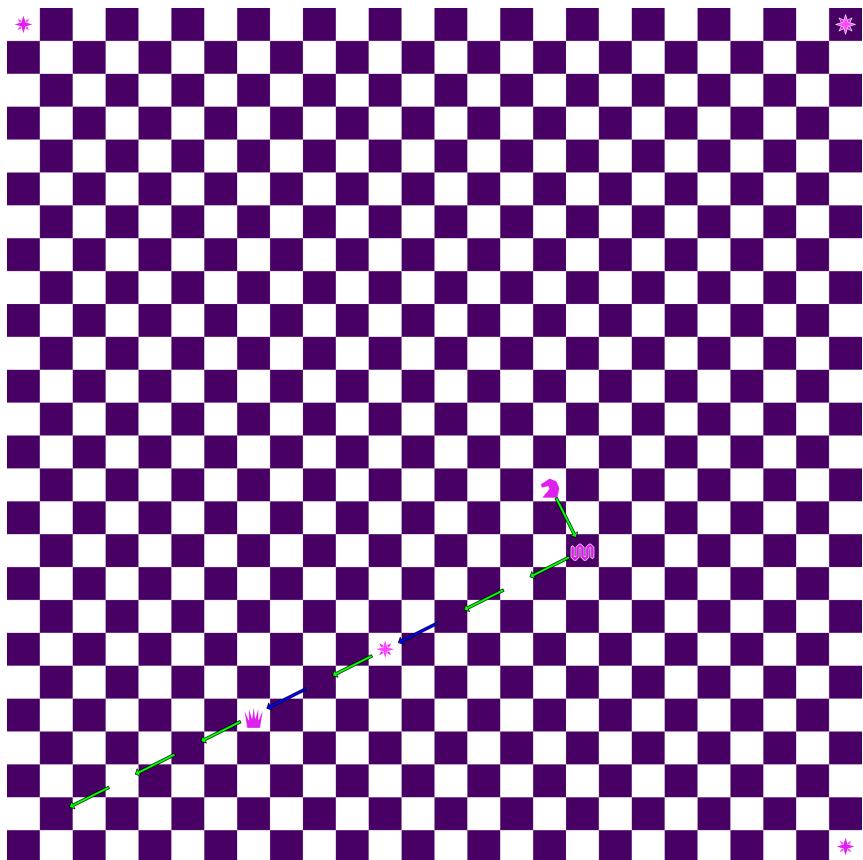


Figure 227: Optional Wave teleportation

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-through"**, i.e. ignore as all the other pieces on chessboard.

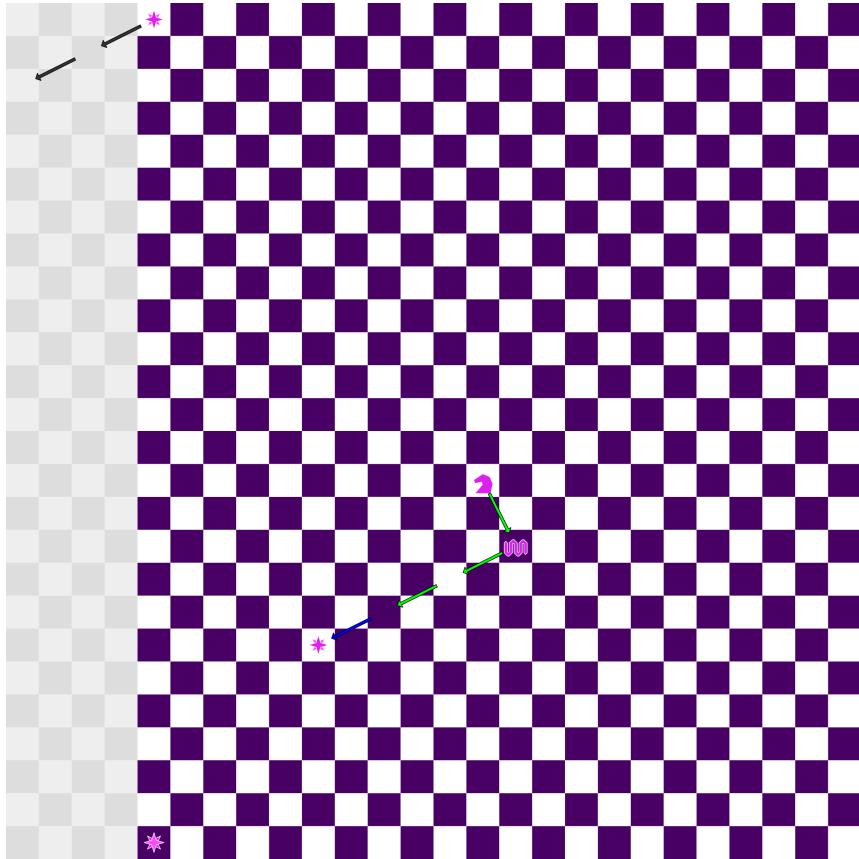


Figure 228: Wave teleported off-board

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](#).

## Conversion immunity

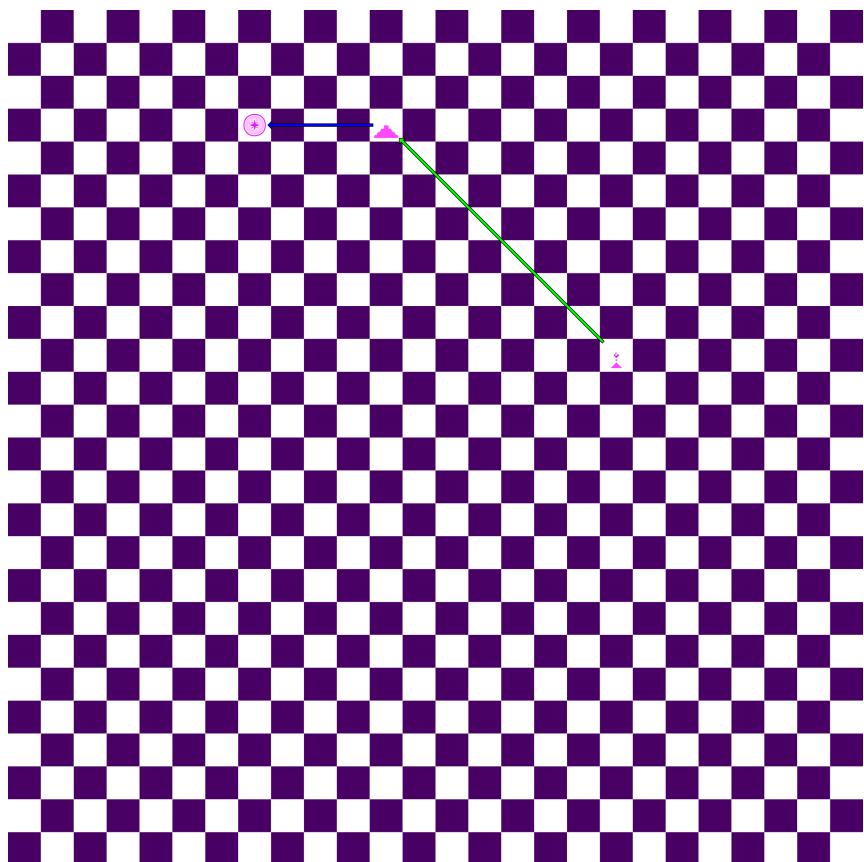


Figure 229: Conversion immunity

**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 opposite color. Starchild cannot be converted, instead, original Starchild remains on chessboard; conversioning Pyramid is still oblationed.

## Trance-journey

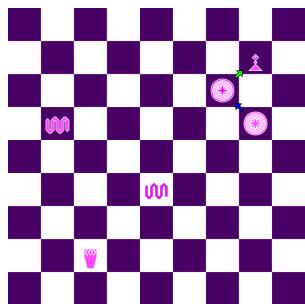


Figure 230: Starchild initiating

are allowed, but no other pieces. Initiating Shaman or Starchild can themselves be activated by some other piece(s), not necessarily in the same color.

Trance-journey is initiated by either Shaman or Starchild, by activating another Starchild. Activated Starchild then activates a piece, entranced piece then leaves onto trance-journey. Any piece, own or opponent's, can be entranced, except Kings, Waves, Stars and Monoliths.

Between initiating piece and entrancing Starchild only Waves

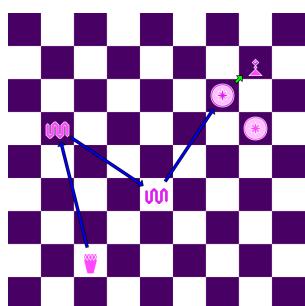


Figure 231: Shaman initiating

Entranced piece must have the same color as initiating Shaman or Starchild, color of entrancing Starchild do not need to match.

Here, entranced piece is dark Bishop, both initiating pieces are also dark, i.e. dark Shaman in this example, and dark Starchild in previous example. Entrancing piece in both examples is light Starchild.

Entranced piece can end its trance-journey on any empty step-field. If all are occupied, then it emerges on any empty entrancing Starchild's neighboring-field. If there's none, then it emerges on empty initiating Shaman or Starchild's neighboring-fields. If all are occupied, entranced piece is oblationed.

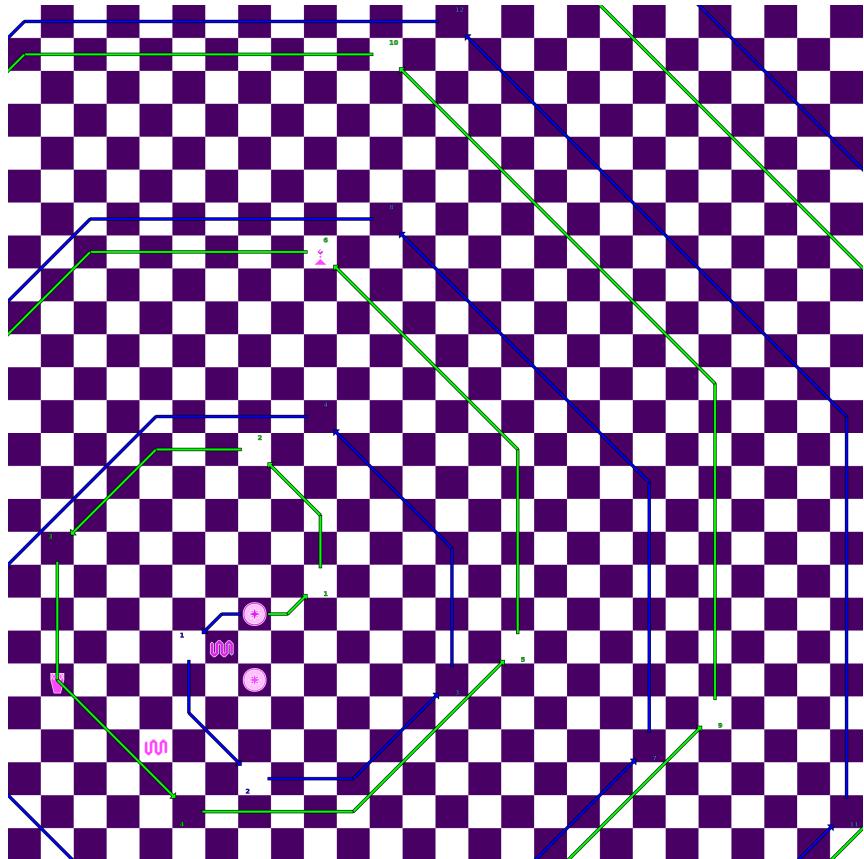


Figure 232: Trance-journey

Trance-journey pattern depends on color of entrancing Starchild. Here, light Starchild features **light Shaman's pattern**. Should entrancing Starchild be dark, it would also produce **dark Shaman's pattern**.

Trance-journey is optional, entranced piece could just move, with received momentum. Here, dark Bishop is receiving 1 momentum, so it could move for 1 step.

## Push-pull entrancement

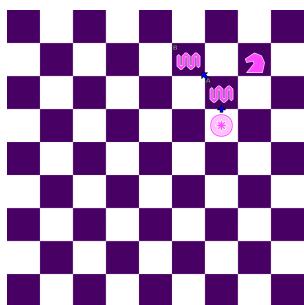


Figure 233: Initiating  
trance-journey

Starchild initiating trance-journey could also be activated later in the same cascade, and act as an entrancing Shaman. This is similar to push-pull entrancement in the [previous variant, Conquest of Tlalocan](#).

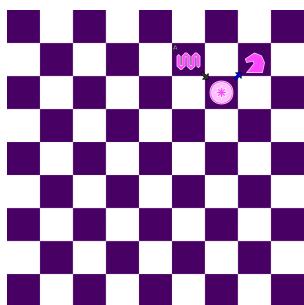


Figure 234: Push-pull  
entrancing

In previous example, dark Starchild activated Wave A, which then activated Wave B. Here, Wave B is "in the air", about to activate dark Starchild, which will then entrance dark Knight.

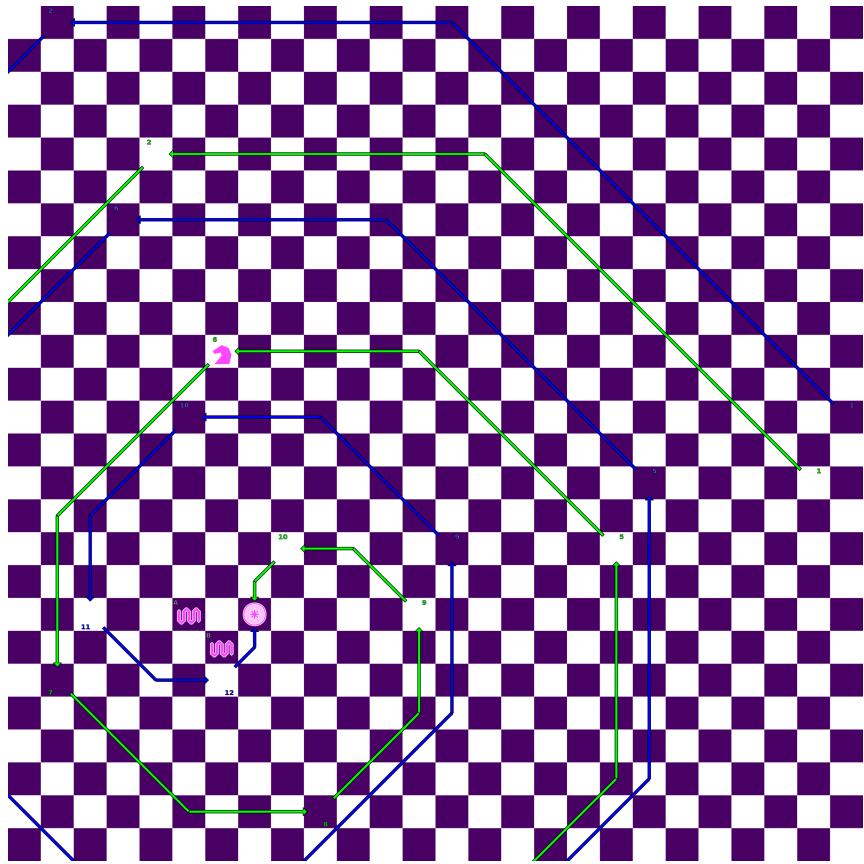


Figure 235: Dark-pattern trance-journey

Starchild can initiate trance-journey by **push-pull activation**, if its color is the same as color of entranced piece; here both Starchild and Knight are dark.

Push-pull activation would work even if initiating Starchild has been activated by some other pieces, which don't have to be in the same color.

## Failed trance-journey

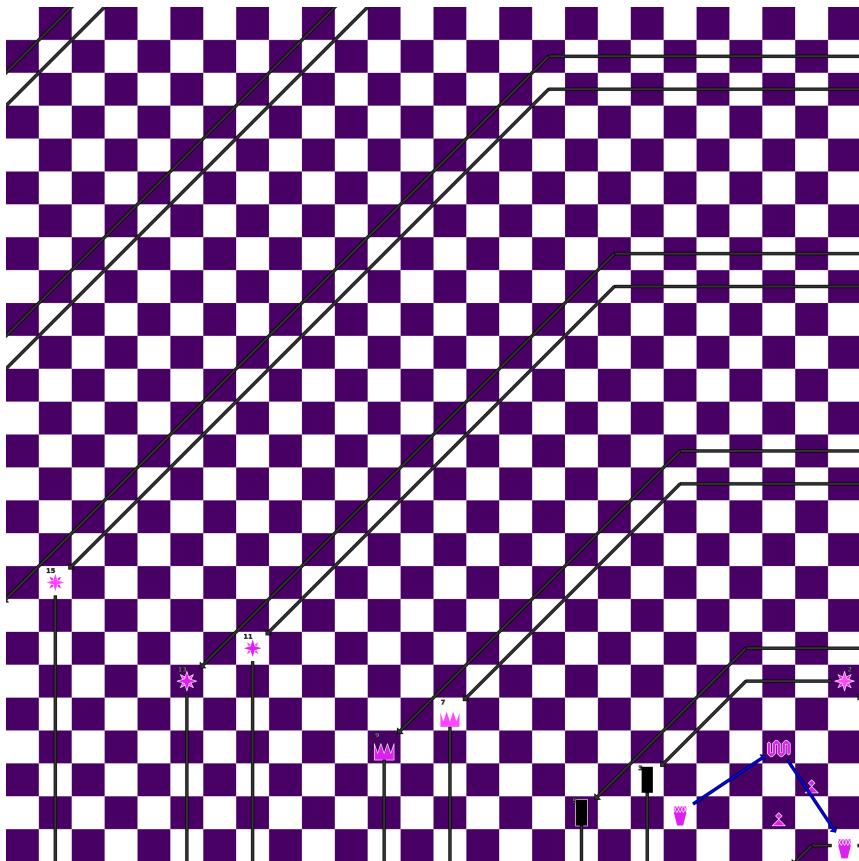


Figure 236: Failed trance-journey

If all step-fields in a trance-journey are blocked by Kings, Stars or Monoliths, entranced Shaman is **oblationed**, i.e. removed from chessboard as if captured by opponent.

For a trance-journey to fail, since it's optional, all capture-fields needs to be either empty or blocked by own pieces, and all step-fields of a normal movement also needs to be blocked.

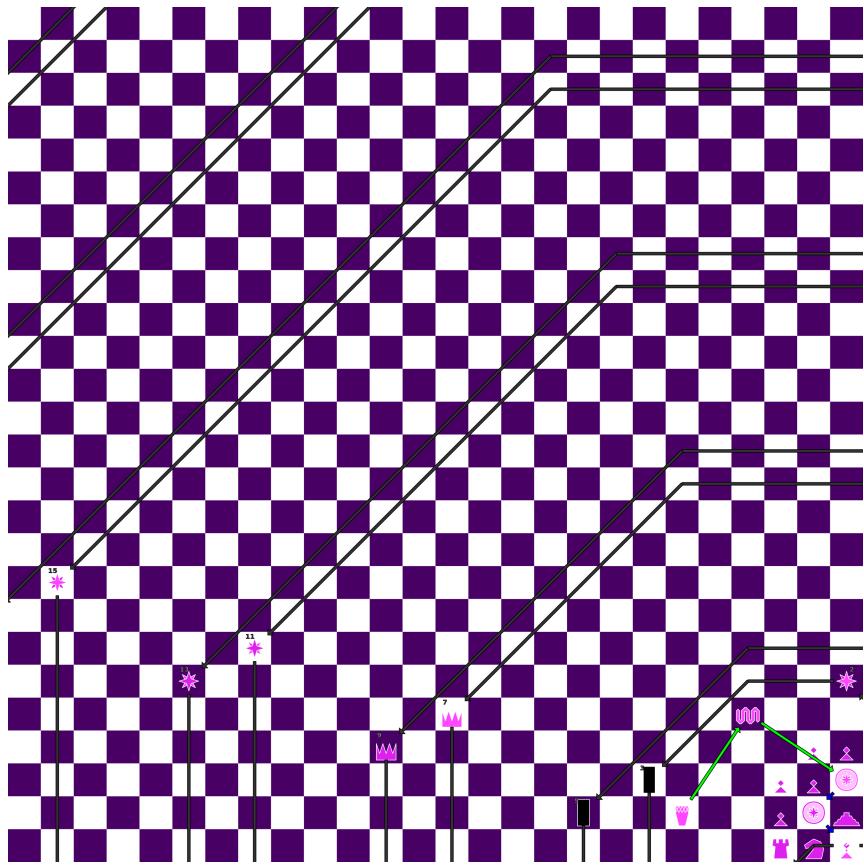


Figure 237: Failed new trance-journey

In addition to all step-fields being blocked, for a Starchild-induced trance-journey to fail, all neighboring-fields of initiating piece and entrancing Starchild needs to be blocked as well.

## Syzygy

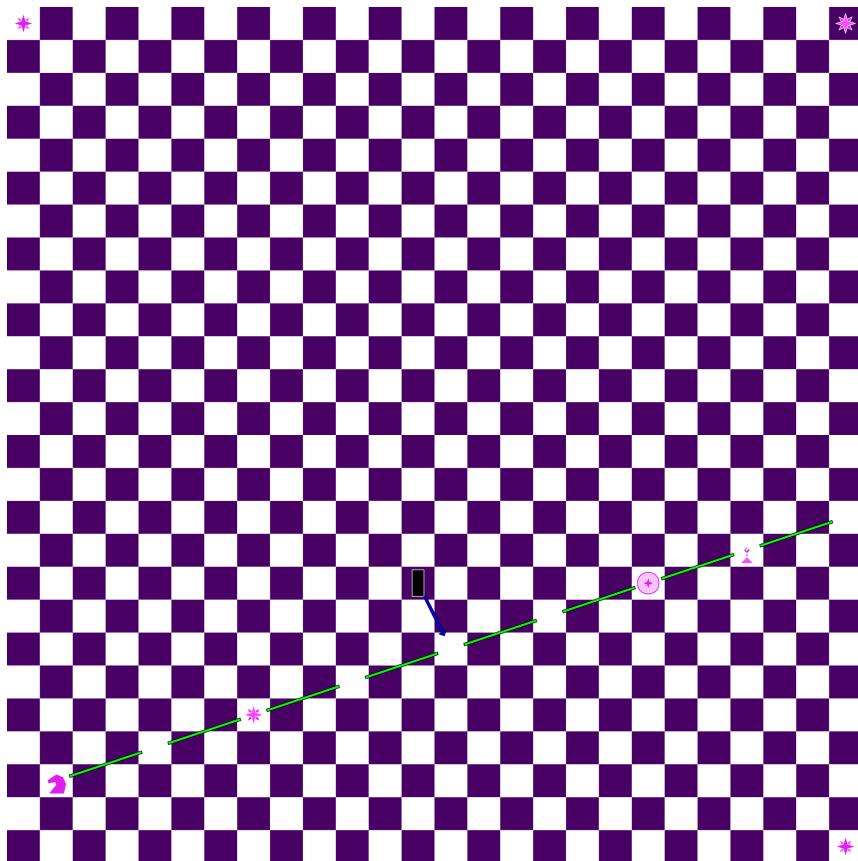


Figure 238: Demoting-to-Pawn syzygy

Starchild is celestial piece, it can participate in **demoting-to-Pawn syzygy** in place of Stars and Monoliths. Again, shortest step connecting Stars, Monoliths, Starchilds is called syzygy-step, fields which are connected by syzygy-steps are called syzygy-fields. For horizontal and vertical syzygy, syzygy-steps are the same as steps of Rook; for diagonal it's Bishop steps. Starchilds are also eligible to demotion.

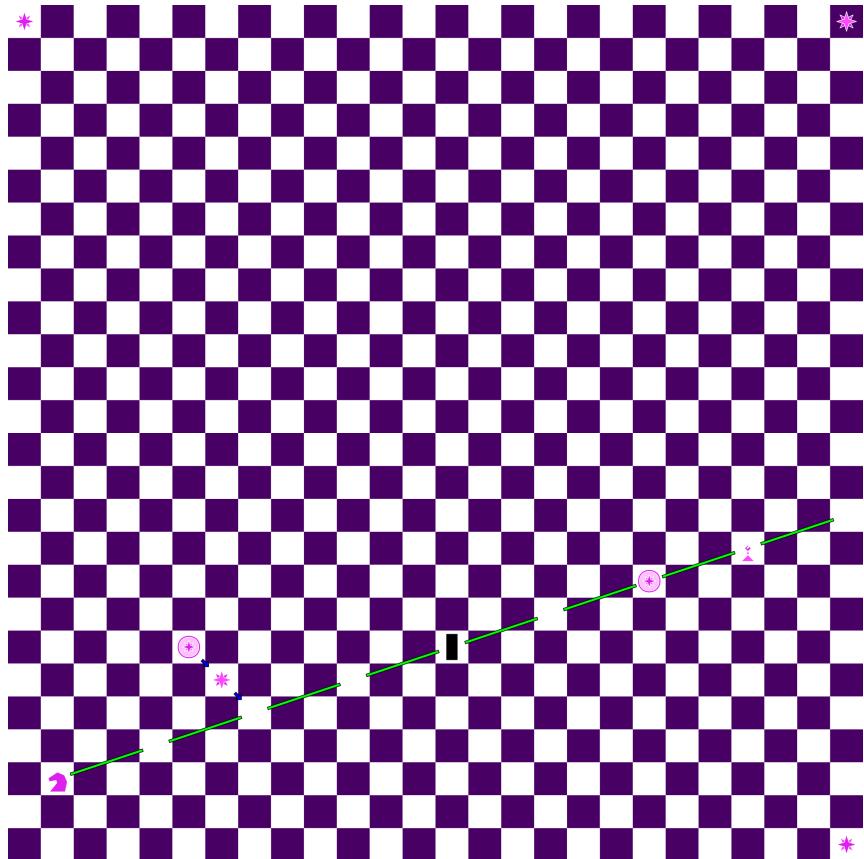


Figure 239: Star-initiated syzygy

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

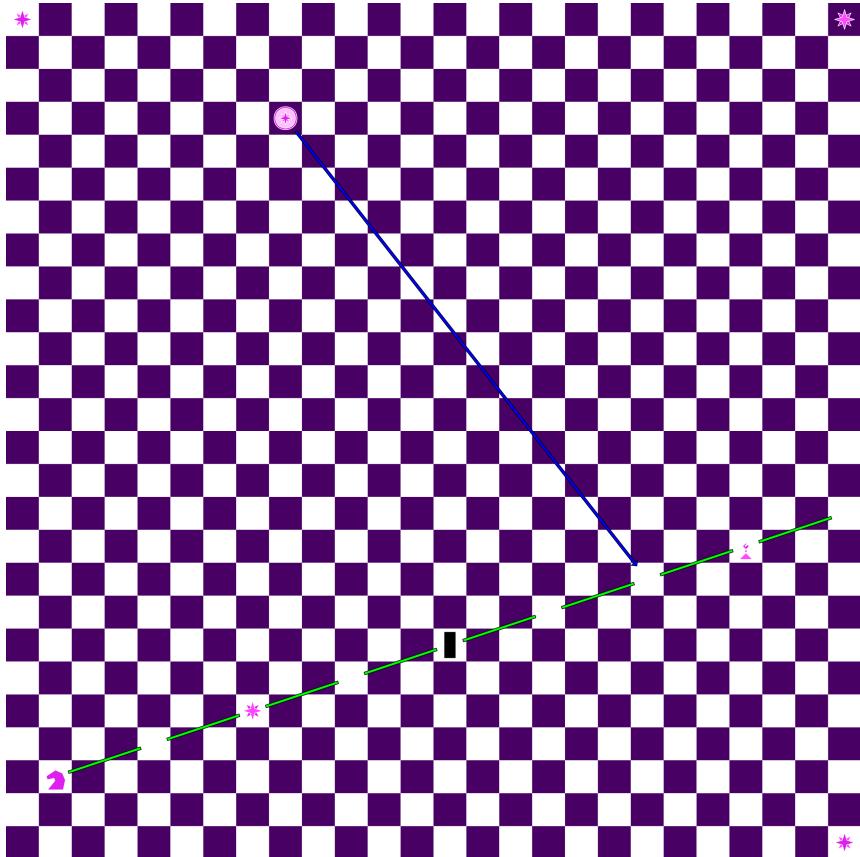


Figure 240: Resurrection syzygy start

Starchild-initiated syzygy is resurrection. One captured piece can optionally be resurrected by replacing initiating Starchild, Starchild itself is then oblationed. Only captured pieces can be resurrected. Kings, Stars and Monoliths cannot be resurrected.

Similar to demoting-to-Pawn, only one resurrection per syzygy is allowed; to resurrect another piece Starchild in syzygy has to move out of alignment, and then back in.

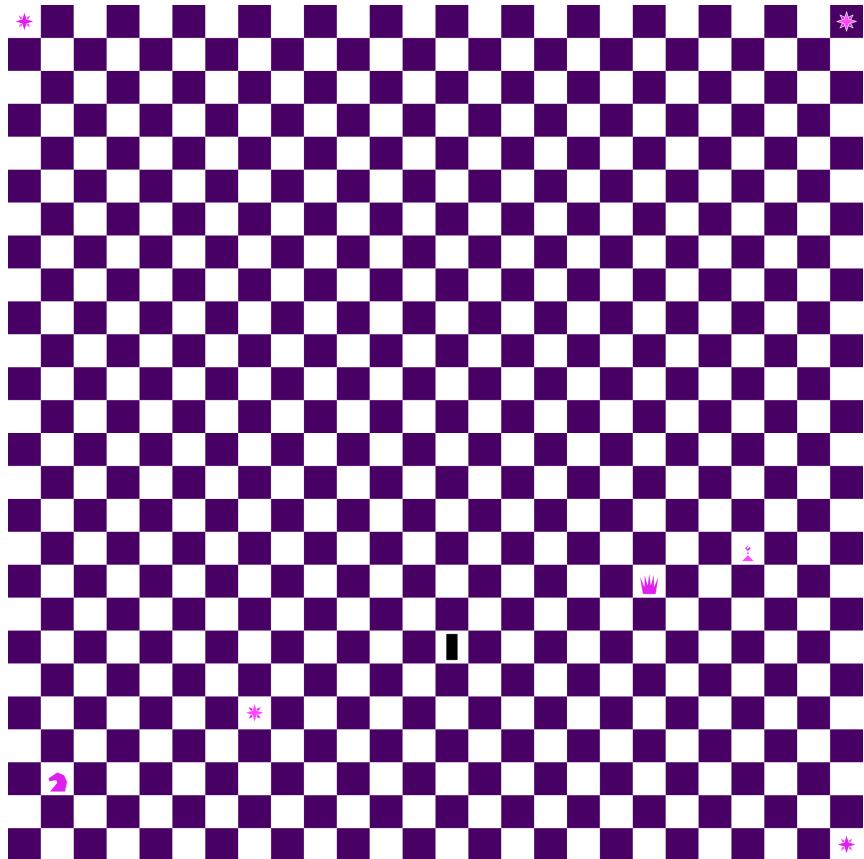


Figure 241: Queen resurrected

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.

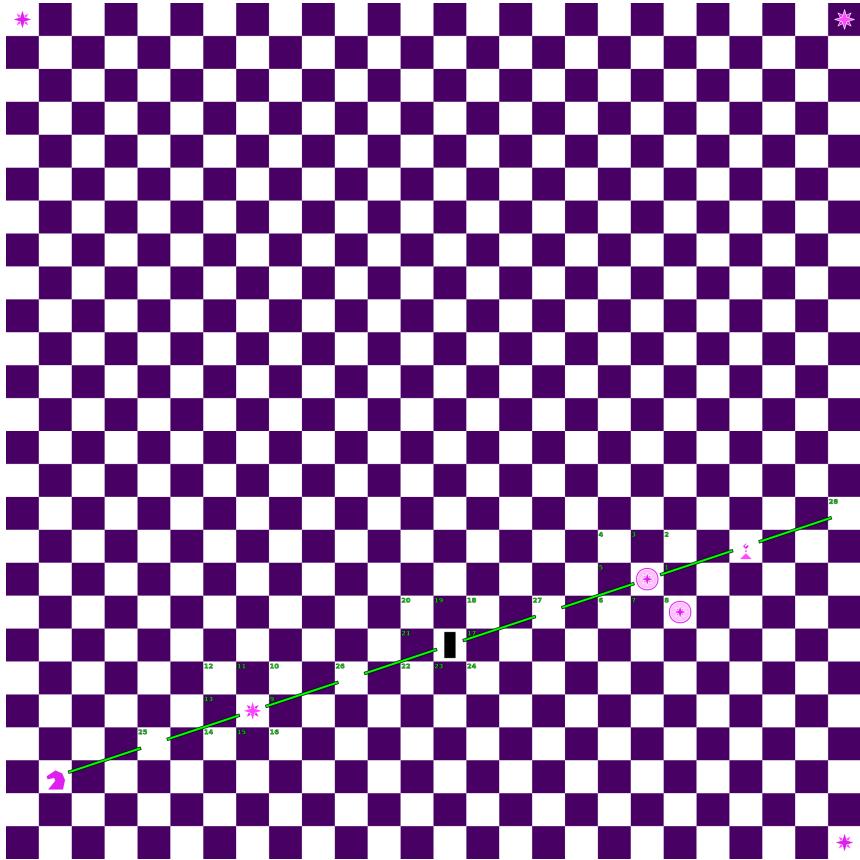


Figure 242: Starchild resurrected

Captured Waves and Starchilds can be resurrected, without initiating Starchild being oblationed. Chosen piece can emerge on any empty neighboring-field around Starchilds in syzygy. If neighboring-fields are all occupied, piece emerges on any empty portal-field around Stars, Monoliths in syzygy. If portal-fields are occupied, piece emerges on any empty syzygy-field. If all are occupied, resurrection is not performed.

## Cascading syzygy

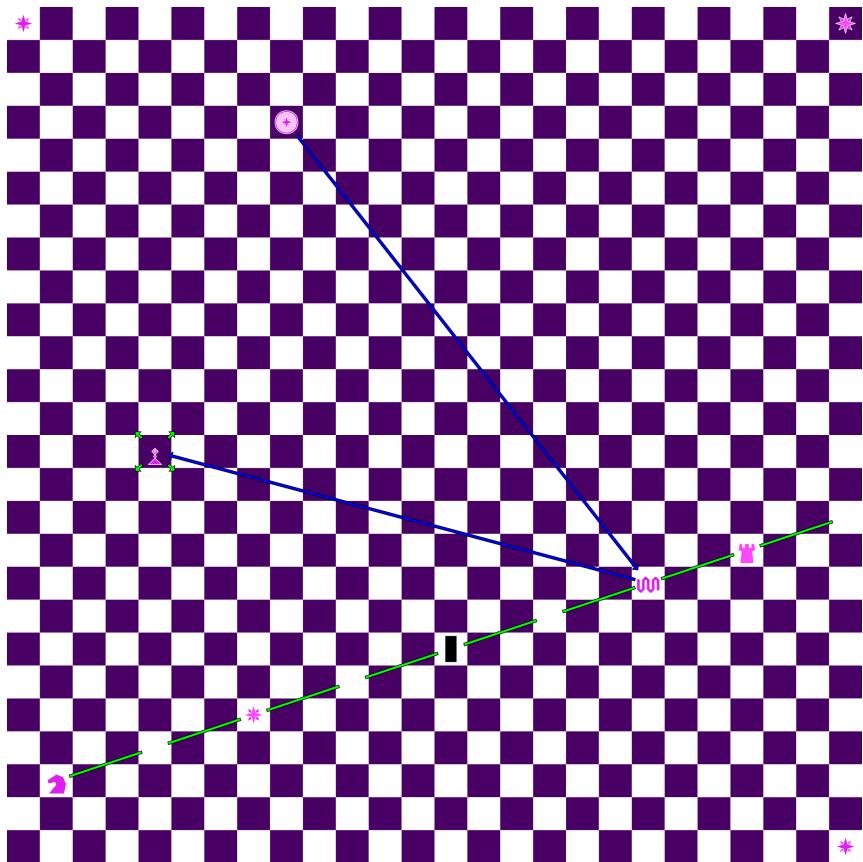


Figure 243: Starchild cascading

Starchild initiating syzygy can activate pieces on a destination syzygy-field, and start a cascade. Here, Bishop can move for 1 step, after Wave transfers 1 momentum from syzygy-initiating Starchild.

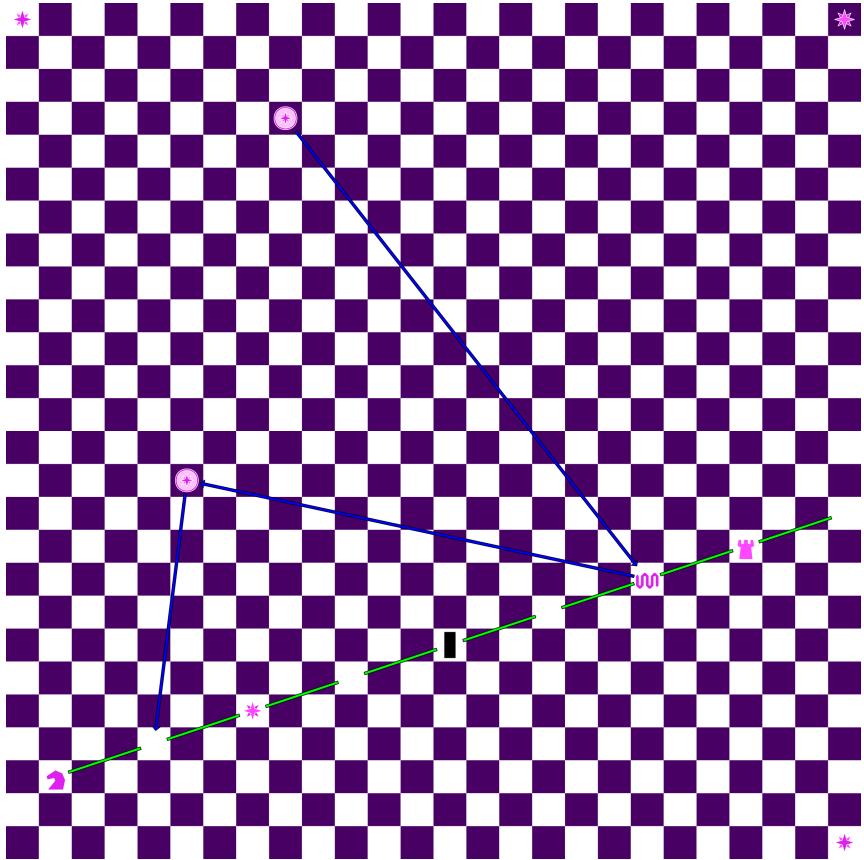


Figure 244: Double Starchild

Starchild initiating syzygy can activate another Starchild(s), creating double (triple, ...) syzygies, which all have the same syzygy-steps, connecting the same celestial pieces. In such a move, only one Starchild can have additional interactions, i.e. only one resurrection can be performed.

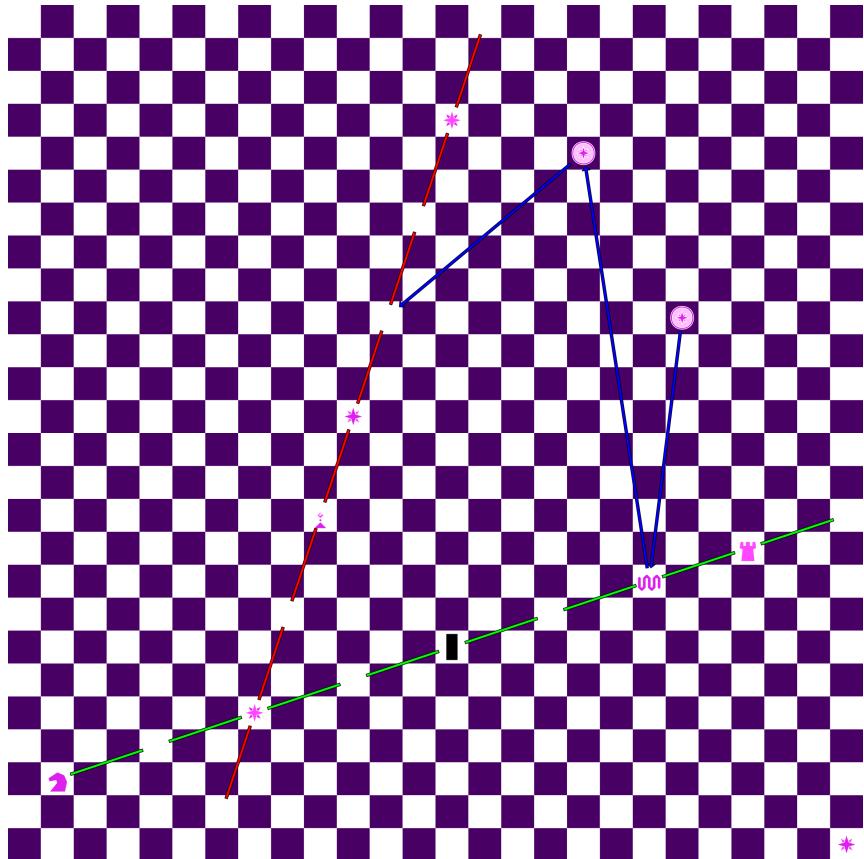


Figure 245: Shared celestial piece

Starchild initiating syzygy can activate another Starchild(s), creating two (or more) syzygies, which share a syzygy-field. If syzygies also share celestial piece on that shared syzygy-field, only one Starchild can have additional interactions, i.e. only one resurrection can be performed. This is so even if any, or all, syzygies could be created without shared celestial piece.

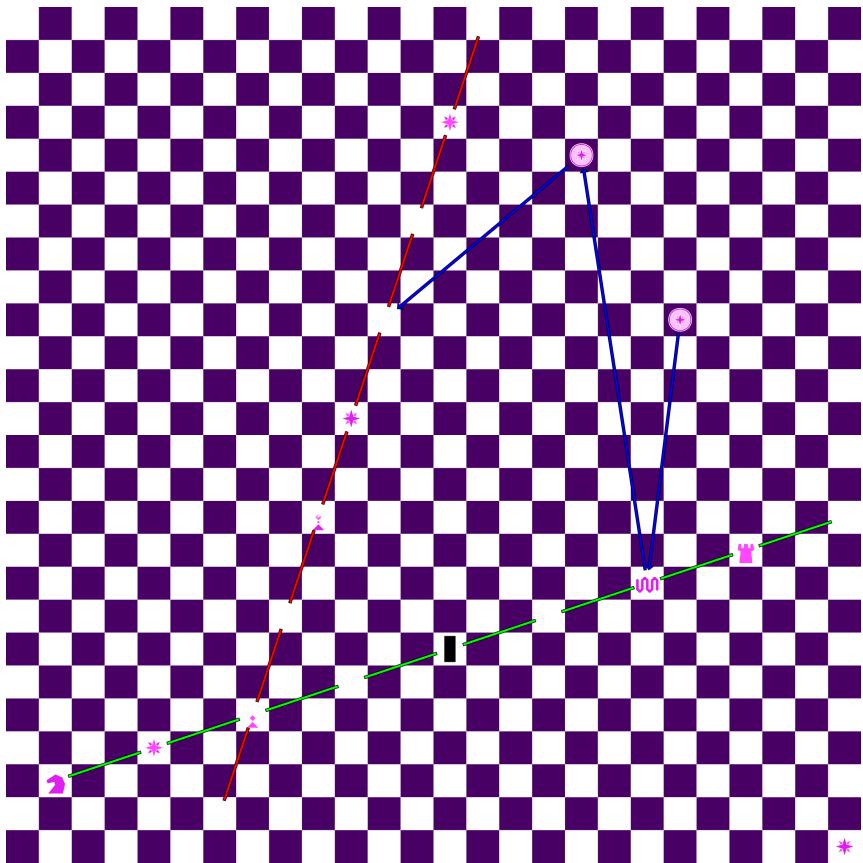


Figure 246: Shared syzygy-field

If two (or more) syzygies are created which share a syzygy-field, but do not share celestial piece, two (or more) Starchilds can have additional interactions, i.e. two (or more) resurrections can be performed, one for each Starchild in a separate syzygy. This is so even if any other, non-celestial piece occupies shared syzygy-field.

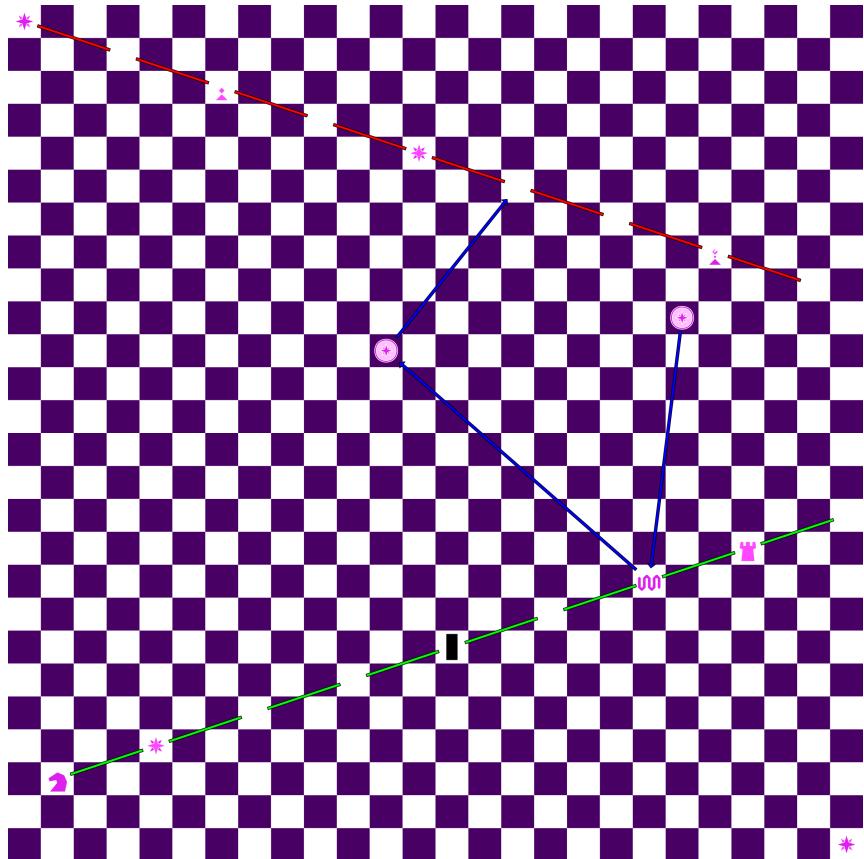


Figure 247: Independent syzygies

If two (or more) syzygies are created which do not share syzygy-field, two (or more) resurrections can be performed, one for each Starchild in a separate syzygy.

## Reentering syzygy

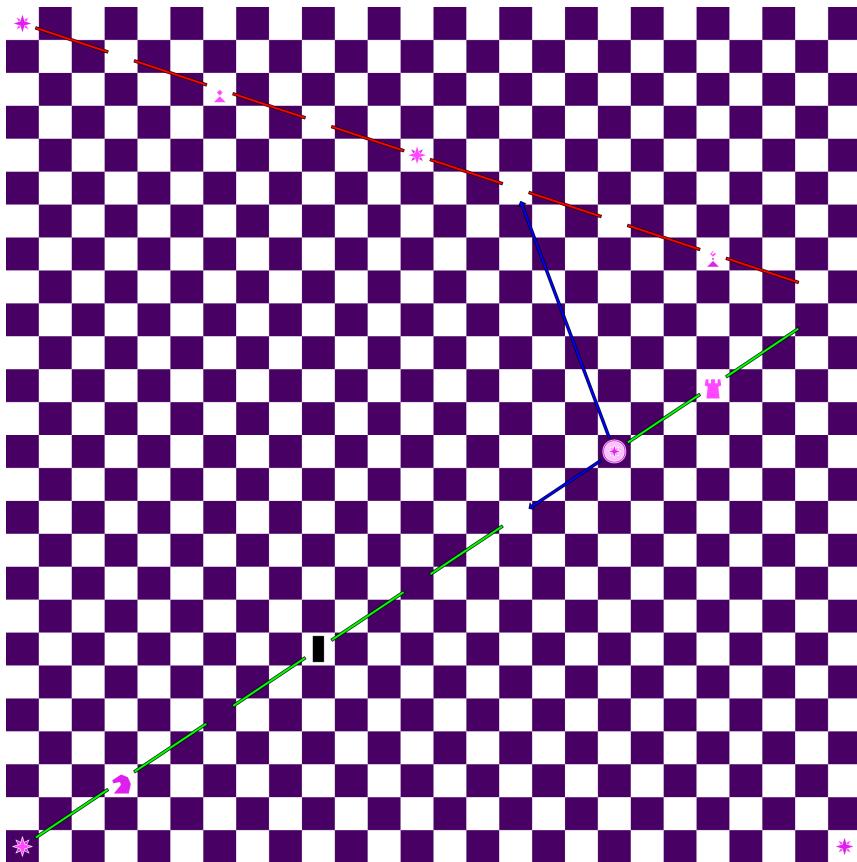


Figure 248: Reentering syzygy

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 syzygy.

## Promotion

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

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

## Rush, en passant

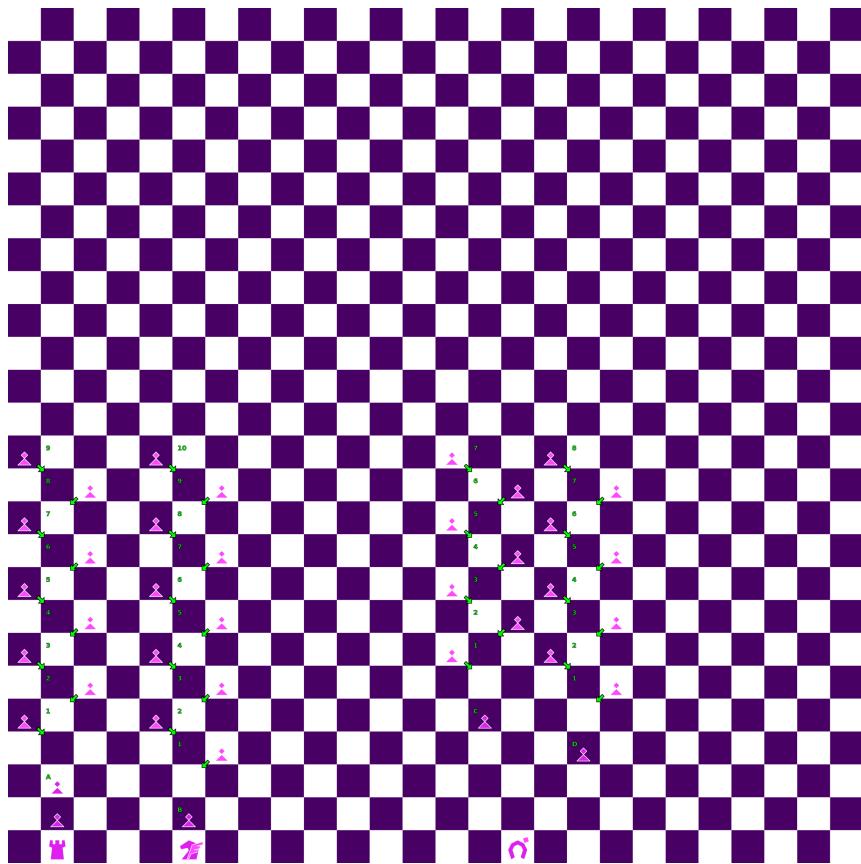


Figure 249: En passant

Rush and en passant are identical to those in Hemera's **Dawn variant**. Own Pawns can be rushed for up to 11 fields in this variant.

# Castling

Castling is the same as in Classical Chess, only difference is that King can move between 2 and 10 fields across. All other constraints from Classical Chess still applies.



Figure 250: Castling

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



Figure 251: 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 Unicorn and Shaman symmetrically, on both sides of chessboard. This can be seen in the image below:

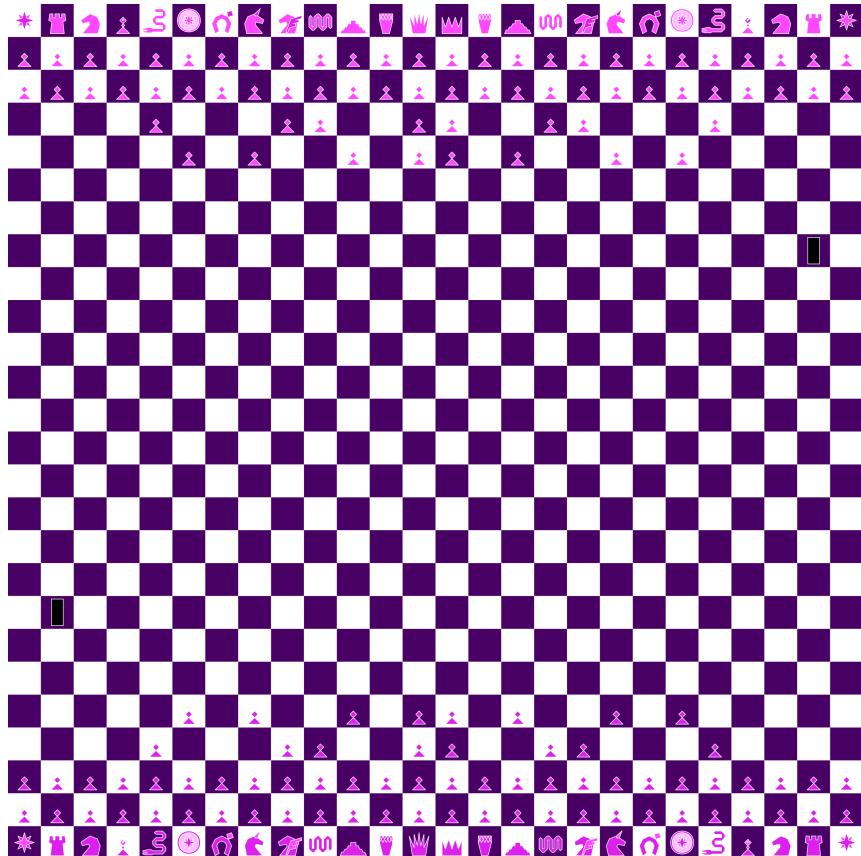


Figure 252: One board



# **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".

## **Move**

Move is completed movement of all pieces, performed sequentially, by one player, in one turn.

## **Cycle**

Cycle consists of light player's move, followed by dark player's move.

## **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.

## **Activation**

Activation is a ply in which a piece captures field previously occupied by another piece, and transfer all of its momentum to activated piece.

## **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.

## **Step**

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

## **Rush**

Rush is Pawn's longer initial movement, i.e. from its starting position, for at least 2 fields forward. Rushing Pawn presents opponent with en passant opportunity.

## **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 Pawns 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.

## **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 and Shaman.

## **Neighboring-fields**

Neighboring-fields are all fields immediately surrounding a particular field horizontally, vertically and diagonally.

## **Portal-fields**

Portal-fields are all fields immediately surrounding a particular field horizontally, vertically and diagonally.

These are used in teleportation context, i.e. in a cascade involving a Star or Monolith.

## **Displacement-fields**

Displacement-fields are all fields where a piece can be moved to directly. Displacement is not affected by how piece normally moves.

These are used in trance-journey context, i.e. in a cascade involving entranced light Shaman.

## **Oblation**

Oblation is removal of a piece from chessboard by rules or circumstances, without being captured by opponent.

## **Chip**

Chip is a device not playable by either 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 to be promoted, or which player's turn is ongoing.

## **Piece**

Piece is an item on chessboard playable by players or a Star, i.e. piece is any item except chips.

## **Passive piece**

Passive piece is any which needs to be activated, before it can move. These are Pyramid and Wave.

## **Figure**

Figure is any piece, except Pawn.

## **Pawn row**

Pawn row is any row which contains Pawns in its full length 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 and later variants 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.

Note that scout Pawns do not fill up row completely, and so these Pawns are not located at Pawns 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 Pawn row or figure row.



# Definitions

## Sides of a chessboard

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 position. Similarly, King's side is right half of chessboard.

## Movement limits

Maximum number of steps either Serpent or Monolith can make is determined by the size of a chessboard.

$$sml = \lceil \frac{n}{3} \rceil \quad (1)$$

$$mml = \lceil \frac{n}{11} \rceil \quad (2)$$

where:

$n$  is size of chessboard for a given variant

$\lceil \rceil$  is ceil function, giving smallest integer greater than or equal to its argument

$sml$  - Serpent's movement limit, i.e. maximum number of steps Serpent can make

$mml$  - Monolith's movement limit, i.e. maximum number of steps Monolith can make

# Monolith initial positions

Monolith initial positions are calculated from the size of a chessboard.

$$dx = \lfloor \frac{n}{11} \rfloor \quad (3)$$

$$dy = \lfloor \frac{7 \times n}{22} \rfloor \quad (4)$$

Monolith on light side of chessboard has coordinates:

$$mls = (dx - 1, dy - 1) \quad (5)$$

Monolith on dark side of chessboard has coordinates:

$$mds = (n - dx, n - dy) \quad (6)$$

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

<b>Id</b>	<b>Symbol</b>	<b>Description</b>
1	AN	algebraic notation, in general
2	CAN	classic AN, as described by FIDE handbook and Wikipedia, can be long, short or minimal
3	LAN	classic AN, long form
4	SAN	classic AN, short form
5	MAN	classic AN, minimal form
6	NAN	new, extended AN, can be long or short
7	EAN	new, extended AN, short form
8	XAN	new, extended AN, long form
9	FIDE	FIDE handbook
10	FIDE point	point in FIDE handbook

Table 1: Abbreviations

For official reference FIDE handbook is used, current date of publication is 2018-01-01:  
<https://handbook.fide.com/chapter/E012018>.

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.

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

## Variants

<b>Id</b>	<b>Variant</b>	<b>Contains</b>
1	Classical chess	Pawn Knight Bishop Rook Queen King
2	Croatian Ties	Pegasus
3	Mayan Ascendancy	Pyramid
4	Age of Aquarius	Unicorn
5	Miranda's Veil	Wave
6	Nineteen	Star
7	Hemera's Dawn	Centaur
8	Tamoanchan Revisited	Serpent
9	Conquest of Tlalocan	Shaman
10	Discovery	Monolith
11	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

Id	Variant	Files		Ranks	
		min	max	min	max
1	Classical chess	a	h	1	8
2	Croatian Ties	a	j	1	10
3	Mayan Ascendancy	a	l	1	12
4	Age of Aquarius	a	n	1	14
5	Miranda's Veil	a	p	1	16
6	Nineteen	a	r	1	18
7	Hemera's Dawn	a	t	1	20
8	Tamoanchan Revisited	a	v	1	22
9	Conquest of Tlalocan	a	x	1	24
10	Discovery	a	x	1	24
11	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 boards 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 x 20.

## Pieces

<b>Id</b>	<b>Piece</b>	<b>Symbol</b>	<b>Introduced in</b>
1	Pawn	P	
2	Knight	N	
3	Bishop	B	
4	Rook	R	Classical chess
5	Queen	Q	
6	King	K	
7	Pegasus	G	Croatian Ties
8	Pyramid	A	Mayan Ascendancy
9	Unicorn	U	Age of Aquarius
10	Wave	W	Miranda's Veil
11	Star	T	Nineteen
12	Centaur	C	Hemera's Dawn
13	Serpent	S	Tamoanchan Revisited
14	Shaman	H	Conquest of Tlalocan
15	Monolith	M	Discovery
16	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 **Gf8**. The same movement in XAN, would be written as **Gc2-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. Only difference is that disambiguation really affects plies (movement of a single piece), and not move as a whole, as multiple pieces might get moved in a single, cascading move.

For instance, should **Pegasus simple move example** had another light Pegasus at **i2** field, move to destination field 3 would be written as **Gcf8**.

## 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 **Gg4\*xP**, or just **Gg4\***, if captured piece is not needed.

In CAN, the same move would be written as **Gxg4**. 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**.

## 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.

## 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&**. Rank 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.

## 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 tagged for promotion** moves before actual promotion, it losses its tag, which is denoted with == (double equal sign) before destination field, like so: **==e12**.

If the same example contained e.g. dark Bishop at **f12**, Pawn tagged for promotion could capture it, which would be written as **==f12\*B**.

## 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, like so:  
**[Qk2-f7] ~ [Af7-i7] ~ [Ai7-i9]**.

## 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 **oblationed**. 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, **Centaurs has to choose 2 different steps**, which it will then follow for the rest of ply. Lets say that destination field is 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 **Cp15** 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.

## 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] ~ [Wn8].

## 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 interactions with pieces on entranced Shaman's step-fields, would be written as Hd11~We13@Hg24. In XAN, it would be [Hf10-d11] ~ [Wd11-e13]@ [He13-g24].

Displacements are noted by writing < (less-than) immediately after step in which a piece is 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

Hd11~We13@H..e18< i14..m12< j17..g24. In XAN, with gathered plies and displaced pieces it would be  
[Hf10-d11] ~ [Wd11-e13]@  
[He13..e18<Ni14..m12<Pj17..g24].

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

Hf12~Wd9~We13@H..e18\*..m12\*..g24. In XAN, with gathered plies and captured pieces it would be  
[Hi10-f12] ~ [Wf12-d9] ~ [Wd9-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 initial position of entranced Shaman. 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 **Hb14~We12@H..q16\*..k14\*..c18**. There is no step between Shaman's initial position and trance-journey starting field, , (comma) is used to separate them. Now, in XAN with gathered plies and noted captured pieces it would look like so  
[**He16-b14**] ~ [**Wb14-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 **Hb14~We12@@** or, with captured pieces, as **Hb14~We12@@P,B,R,R,N,B,N**. In XAN, with gathered plies and capturing locations noted, it would be written as  
[**He16-b14**] ~ [**Wb14-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 dark Bishop is oblationed, which is written as **Hw5~Wz3~Iy2~Iz1@@@**, and in XAN, with plies gathering and oblationed piece, as **[Hu2-w5] ~ [Ww5-z3] ~ [Iz3-y2] ~ [Iy2-z1] @@@B**.

## Syzygy, demoting to Pawn

Demoting to Pawn is noted by writing > (greater-than), followed by disambiguating position, i.e. one of rank, file or rank + file, in that order. Optionally, disambiguation can be preceded by piece which was demoted, and demotion-field can be written instead of just a disambiguation.

In this [syzygy example](#), if Monolith was moved by light player, then either light Wave or light Bishop could be demoted to Pawn. If Bishop was chosen, that would be written as **Mm12>p**. 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 there was no suitable empty field at which Wave or Starchild could be resurrected, resurrection is not performed, which could be written by appending \$\$ (double dollar) after the ply. Since there are no actual side-effects to failed resurrection, \$\$ is optional.

In case [resurrection example](#) ended by [resurrecting Queen](#), this 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\$Ju8.**

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 teleported. If Wave teleported, vertical bar is followed by Wave and its destination field, optionally followed by activated pieces' plies, if there were any.

If piece teleported, but there is no empty portal-field, teleportation failed, and is noted with || (double vertical bar). 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|q18**.

This **blocked teleportation example** would be written as **Ra18||**, or in XAN it would be **Ra13-a18||**.

In this **Wave teleporting example**, followed by **Wave teleported example**, if activated Pyramid would move 2 fields upward, complete move would be written as **Gg15~Wa18|W14~A16**. In XAN, with plies gathering, it would be

**[Gi11-g15]~[Wg15-a18]| [Wr1-14]~[A14-16].**

If previous example ended with **teleported Wave blocked**

example, it would be written as **Gg15~Wa18||**, and in XAN it would be **[Gi11-g15]~[Wg15-a18]||**.

This cascading teleportation example would be written by sequencing teleportations like so **Gh2~Wb4|Wa24|Wr4~Bt6**, if activated Bishop would take upper-right diagonal. In XAN, with plies gathering, it would be

**[Gj6-h2]~[Wh2-b4]| [Wm18-a24]| [Wx1-r4]~  
[Br4-t6].**

Starchild and Wave activated by it cannot teleport, which is written as failed teleportation, i.e. 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 nothing is written after ||. So, previous example with Starchild oblationed would be written as **Ic3||**, or, in XAN as **[If5-c3]||**.

## Pawn-sacrifice

Pawn-sacrifice is written by separating plies with :: (double colon) instead of usual ~ (tilde), followed by capturing steps. All Pawn-capturing steps made by Serpent must be written, captured pieces are not needed, as they can only be opponent's Pawns.

This **Pawn-sacrifice** followed by **capturing opponent's Pawns** is written as

**Sm15~Am11::S..m17\*..m19\*.120\*.m21\*.n20\*.o21\*.**

In XAN, with plies gathering, it would be

**[Sr14-m15] ~ [Am15-m11] ::**

**[Sm15..m17\*..m19\*.120\*.m21\*.n20\*.o21\*].**

If there aren't enough Pawns captured to isolate only one path an additional, non-capturing steps needs to be written as well. In previous example, if Serpent stopped at **m17**, at least 2 different paths are possible. Previous example started with **Sm15~Am11::S.116.m17\*** path, other possible path is **Sm15~Am11::S.n16.m17\***. 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 2 steps, where one step immediately follows the other. Multi-step separator .. is for separating 2 steps which have at least one unwritten step in-between. For instance, first, short path in previous paragraph (i.e. **Sm15~Am11::S.116.m17\***) might also be confused with **Sm15~Am11::S..116..m17\***, which is a short-hand for **Sm15~Am11::S.114.k15.116.k17.118.m17\***, a very different path.

## 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 neccessary 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.

## Move symbols, annotations

Draw offer is noted with (=) (equal sign in brackets), see FIDE C.12. Checks are noted with + (plus sign), checkmates are noted with # (hashtag), these are mandatory in NAN, but optional in CAN, see FIDE C.13. Placeholder for a move is ... (ellipsis), usually used to resume game score after commentary, see

[https://en.wikipedia.org/wiki/Algebraic\\_notation\\_\(chess\)  
#Notation\\_for\\_a\\_series\\_of\\_moves.](https://en.wikipedia.org/wiki/Algebraic_notation_(chess)#Notation_for_a_series_of_moves)

Annotations are written at the end of a complete move, e.g. **ef8\*!**. It is recommended to use \_ (underscore) to separate AN and annotations, like so **ef8\*\_!**. Usage of \_ 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

<b>Id</b>	<b>Symbol</b>	<b>Side-effect</b>
1	*	capturing
2	<	trance-journey displacement
3	==	failed promotion
4	:	en passant
5	&	castling
6	=	promotion, tag
7	%	conversion
8	%%	failed conversion, oblation
9	>	syzygy, demoting to Pawn
10	\$	syzygy, resurrection
11	\$\$	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 failed promotion are both step and ply side-effects, others are purely ply side-effects. Failed promotion can be followed by other side-effects in the same step, e.g. en passant; this is why it's written before destination field.

Sometimes it's possible to choose which side-effect will take place. For instance, **upon reaching dark Rook with its**

**Pyramid**, light player is to decide whether opponent's Rook will be captured or converted. This decision cannot be reconstructed based on movement alone. Notation for captured pieces have traditionally been optional, and so is for all other interactions. This means, at least some side-effects are now mandatory. To avoid any possible confusion which are, in NAN all side-effects are mandatory.

## Path separators

<b>Id</b>	<b>Symbol</b>	<b>Separates</b>
1	.	single steps
2	..	multiple steps
3	-	starting and destination field
4	~	plies
5		teleportation
6		failed teleportation, oblation
7	@	trance-journey
8	@@	dual trance-journey, oblation
9	@@@	failed trance-journey, oblation
10	::	Pawn-sacrifice
11	,	items in a list
12	[]	ply gathering

Table 6: Path separators

First 3 symbols (., .. and -) separates steps within a single ply. Other symbols (~, |, @ and ::) are separators between plies, or ply 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 symbol ([ ]) is just to visually enhance plies, making them easier to tell apart, but otherwise does not contribute any new information.

## Move status

<b>Id</b>	<b>Symbol</b>	<b>Status</b>
1	+	check
2	#	checkmate
3	-	annotations separator
4	...	placeholder for a move
5	(=)	draw offer

Table 7: Move status

While check and checkmate status are not mandatory because of lack of information, they do convey information, and intent to a player. Later variants are somewhat more complex than traditional chess, so it's easier to overlook some consequences of a single, cascading move (which may also move opponent's pieces), combined with e.g. wild movement of Centaur, weird movement of Serpent and Shaman.

It's possible during a cascade to have checked (or even checkmated!) opponent's King, status applies only if check (or checkmate) holds after move of a player has been finished. To avoid any possible confusion, check and checkmate status are mandatory in NAN.

## Initial setups

Id	Variant	No. of Pawn rows
		Figure row
1	Classical chess	1 <b>RNBQKBNR</b>
2	Croatian Ties	1 <b>RGNBQKBNGR</b>
3	Mayan Ascendancy	1 <b>RGANBOKBNAGR</b>
4	Age of Aquarius	1 <b>RGAUNBOKBNUAGR</b>
5	Miranda's Veil	1 <b>RGAUWNBOKBNWUAGR</b>
6	Nineteen	2 <b>TRNBWGUAQKAUGWBNRt</b>
7	Hemera's Dawn	2 <b>TRNBCWGUAQKAUGWCBNRt</b>
8	Tamoanchan Revisited	2 <b>TRNBSWUGCAQKACGUWSBNRt</b>
9	Conquest of Tlalocan	2 <b>TRNBSCUWGAHQKHAGWUCSBNRt</b>
10	Discovery	2 <b>TRNBSCUWGAHQKHAGWUCSBNRt</b>
11	One	2 <b>TRNBSICUGWAHQKHAWGUCISBNRt</b>

Table 8: Initial setups of light figures

Initial setups table contains complete row of pieces 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 pieces switched to opposite of light player's setup. So, for Nineteen variant **TRNBWGUQAQKAUGWBNRT** 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).

## Scout Pawn

Id	Variant	Light scout Pawn files	
		row 4	row 5
1	Hemera's Dawn	<b>cgnr</b>	<b>dfoq</b>
2	Tamoanchan Revisited	<b>gklp</b>	<b>hjmo</b>
3	Conquest of Tlalocan	<b>dhilmprqu</b>	<b>egjlmort</b>
4	Discovery	<b>dhilmprqu</b>	<b>egjlmort</b>
5	One	<b>eijmnqrsv</b>	<b>fhkkmnpsu</b>

Table 9: Light scout Pawn files

In addition to 2 rows of Pawns, most of later variants also have scout Pawns, table above contains initial positions of those for light player. For light player, scout Pawns occupy rows 4 and 5 on chessboard. For desired variant, one would fill row on indicated files with Pawns.

For instance, **cgnr** for *row 4* in Hemera's Dawn variant means that light scout Pawns are located at **c4**, **g4**, **n4** and **r4**.

For dark player, positions are mirrored, *row 4* is the one closest to the dark figure row, *row 5* contains outermost scout Pawns. For Hemera's Dawn variant, *row 4* translate to *row 17*, and *row 5* becomes *row 16*. So, the same **cgnr** for *row 4* now means dark Pawns are located at **c17**, **g17**, **n17** and **r17**.

### Monolith initial positions

Id	Variant	Side	
		<i>light</i>	<i>dark</i>
1	Discovery	<b>b7</b>	<b>w18</b>
2	One	<b>b8</b>	<b>y19</b>

Table 10: 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

<b>Id</b>	<b>Variant</b>	<b>Serpent</b>	<b>Monolith</b>
1	Tamoanchan Revisited	8	—
2	Conquest of Tlalocan	8	—
3	Discovery	8	3
4	One	9	3

Table 11: Movement limits

Movement limits table contains maximum number of steps Serpent or Monolith can make, depending on which variant is being played. Monolith is not listed for the first 2 variants, since it has only been introduced in Discovery variant.

## Movement of Wave

<b>Id</b>	<b>Activated by</b>	<b>Moves like</b>
1	Pawn	Pawn, single direction, multiple steps
2	Knight	Pegasus
3	Bishop	Bishop
4	Rook	Rook
5	Queen	Queen
6	King	Queen
7	Pegasus	Pegasus
8	Pyramid	Rook
9	Unicorn	Centaur
10	Wave	activating Wave
11	Star	—
12	Centaur	Centaur
13	Serpent	Serpent, 2 alternating directions, multiple steps
14	Shaman	Shaman
15	Monolith	—
16	Starchild	Starchild

Table 12: Movement of Wave

Wave generally moves the same way as activating piece in the moment of activation, with ability to make multiple steps in one direction even if activated by single step piece, e.g. Wave activated by Knight moves like a Pegasus. Another example, Wave activated by Shaman on capturing-fields moves over that Shaman's capturing-fields.

Wave activated by Serpent is exception, it moves by alternating between 2 diagonal steps, which, once chosen, can't be changed for the remainder of Wave's ply.

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 move a Star. Wave cannot activate Kings, Stars and Monoliths.

Wave activated by Pawn always moves toward opponent's figure row, either in a straight line (if activated on a Pawn's step-field), or diagonally (if activated on a Pawn's capture-field); once left or right diagonal is chosen, it can't be changed for the remainder of Wave's ply.

All other properties of Wave movement remains the same, regardless which piece activated it: ability to "pass-through" pieces (except Monoliths) on a chessboard as if they're not there, inability to capture any piece, ability to activate any own piece (except King), ability to activate opponent's Wave and ability to transfer all of received momentum to activated piece.

# Grammar

Id	Entity	Meaning
1	< >	named entity, to be substituted
2		choice between 2 values, can be chained
3	[ ]	optional item(s), zero or one time
4	( )	optional item(s), zero or more times
5	{ }	optional item(s), one or more times
6	..	choice from range of values
7	#number	numbered reference
8	?	empty value
9	-	space
10	<b>value</b>	verbatim value
11	<b>value</b>	compatibility value, for CAN

Table 13: Grammar

Here, notational grammar is described in more formal, concise way. Annotations are not covered, as they are short-hand 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 used to denote Pawn (when its piece symbol is omitted from notation), when there is no special side-effect to a ply, and when there is no special move status.

Value separator | is used to present choice between 2 values, e.g. ? | **P**. Choices can be chained, as in ? | + | #. If there are too many sequential values to list, range of choices .. is used instead, e.g. **a** .. **z**.

Grouping options contain items to be repeated, [ ] for items to appear or not, ( ) to repeat items 0 or more times, and { } to repeat items 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 are also valid regardless of formatting, spacing, e.g.

```
<abc> = def
        ghi
        | jk1
```

means  $\langle abc \rangle$  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  $\langle abc \rangle$ . 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>**.

Grammar is written without context, to determine which pieces, files and ranks are available for a particular variant see [Variants](#), [Chessboards](#) and [Pieces](#) tables.

```
<pawn> = ? | P

<classic-piece> =
    <pawn> | N | B | R | Q | K

<passive-figure> = A | W

<capturing-active-piece> =
    <classic-piece> | G | U | C | S | H

<active-piece> =
    <capturing-active-piece> | I

<capturing-piece> =
    <capturing-active-piece> | A

<promote-to-figure> =
    <passive-figure>
    | N | B | R | Q | G | U | C | S | H | I

<disposable-figure> = <promote-to-figure>

<disposable-piece> = <pawn>
    | <disposable-figure>

<figure> = <disposable-figure> | K | T | M

<piece> = <pawn> | <figure>
```

```
<file> = a .. z  
  
<rank> = 1 .. 26  
  
<field> = <file><rank>  
  
<disambiguation> = <file>  
| <rank>  
| <field>  
  
<step> = .[.]<field>  
  
<stepping> =  
[<disambiguation>]<field>  
| [<disambiguation>]{<step>}  
| <field>-<field>  
  
<pawn-stepping> =  
[<disambiguation>][==]<field>  
| <field>-<field>  
| <field>[-]==<field>  
  
<capturing-step> =  
<step><capturing-side-effects>
```

```
<capturing-side-effects> =
  * [<disposable-figure>]
  | * [P ==]

<en-passant-side-effects> =
  : [<rank>]

<demoting-side-effects> =
  > [<disposable-piece>] <disambiguation>

<resurrecting-side-effects> =
  $<disposable-piece>
  | $W<field>
  | $I<field>
  | $$

<castling-side-effects> = & [<file>]

<promoting-side-effects> =
  [=] <promote-to-figure>

<tagging-delayed-promotion-side-effects> =
  =

<converting-side-effects> =
  % [<disposable-figure>]
  | % [P ==]
  | %%
```

```
<shaman-capturing-cascading-ply> =
H[<disambiguation>] (<capturing-step>)
    <step>

<shaman-capturing-terminal-ply> =
H[<disambiguation>]{<capturing-step>}

<starchild-resurrecting-ply> =
I<stepping><resurrecting-side-effects>

<king-castling-move> =
K<stepping><castling-side-effects>

<pawn-promoting-ply> =
<pawn><stepping><promoting-side-effects>

<pawn-promoting-move> =
<pawn><field><promoting-side-effects>

<pyramid-promotion-ply> =
A<stepping><promoting-side-effects>
| A<stepping>
    <tagging-delayed-promotion-side-effects>

<pyramid-converting-ply> =
A<stepping><converting-side-effects>
```

```

<terminal-ply> =
  <capturing-active-piece><stepping>
    <capturing-side-effects>
  | <pawn><pawn-stepping>
    <en-passant-side-effects>
  | <shaman-capturing-terminal-ply>

<starchild-cascading-plies> =
  I<stepping>{~I<stepping>}

<starting-ply> =
  <pawn><pawn-stepping>
  | <active-piece><stepping>
  | <shaman-capturing-cascading-ply>
  | <starchild-resurrecting-ply>
  | <pawn-promoting-ply>
  | <starchild-cascading-plies>

<cascading-ply> =
  <passive-piece><stepping>
  | <starting-ply>

<cascading-plies> =
  {~W<stepping>}~<cascading-ply>
  | (~W<stepping>){~A<stepping>}

<terminating-ply> =
  <capturing-piece><stepping>
    <capturing-side-effects>
  | (A<stepping>~)<pyramid-promotion-ply>
  | (A<stepping>~)<pyramid-converting-ply>
  | <terminal-ply>

```

```

<cascade-start> =
  <starting-ply>(<cascading-plies>)

<cascade> =
  <terminal-ply>
| <cascade-start>[^<terminating-ply>]

<cascading-start> = {<cascading-plies>}

<cascading> =
  {<cascading-plies>}
| (<cascading-plies>) ^<terminating-ply>

<wave-cascading-plies> =
  (^W<stepping>) ^<cascading-ply>
| (^W<stepping>){^A<stepping>}

<wave-cascading-start> =
  <wave-cascading-plies>(<cascading-plies>)
| {<cascading-plies>}

<wave-cascade> =
  ^<cascade>
| <wave-cascading-start>[^<terminating-ply>]

<teleportation> =
  |<field>
  | {|^W<stepping>}[<move-wave-cascading>]
  | ||[<disposable-piece>]<field>
  | ||

```

```

<shaman-trance-journey-cascade> =
  H<stepping>{~W<stepping>}

<starchild-trance-journey-cascade> =
  H<stepping>{~W<stepping>}~I<stepping>
  | I<stepping>{~I<stepping>}

<trance-journey-start> =
  ?
  | <disambiguation>
  | <disambiguation>,
  | <disambiguation>, <field>

<trance-journey> =
  <shaman-trance-journey-cascade>
    @H<trance-journey-start>
    {<step>[<[<disposable-piece>]<field>]}}
  | <shaman-trance-journey-cascade>
    @H<trance-journey-start>
    {<step>[*[<disposable-piece>]]}
  | <shaman-trance-journey-cascade>
    @H[<disambiguation>]<field>
  | <starchild-trance-journey-cascade>
    @<disposable-piece>[<disambiguation>]
    <field>
  | <shaman-trance-journey-cascade>
    @@ [<disposable-piece>[<field>]
      (, <disposable-piece>[<field>]) ]
  | <shaman-trance-journey-cascade>
    @@@ [<disposable-piece>]

```

```

<pawn-sacrifice> =
  S<stepping>~A<stepping>*[P[==]]::

<pawn-sacrifice-end> =
  |<field>
  |<move-cascading>

<pawn-sacrifice-capture> =
  S[<disambiguation>]{.[.]<field>[*[P[==]]]}
    [<pawn-sacrifice-end>]
  | S<stepping>[<pawn-sacrifice-end>]

<move-star> =
  I<stepping>[<resurrecting-side-effects>]
  ~T<stepping>

<move-cascading> =
  <cascading>
  | [<cascading-start>]<teleportation>
  | [<cascading-start>]<trance-journey>
  | [<cascading-start>]<pawn-sacrifice>
    [<pawn-sacrifice-capture>]
  | [<cascading-start>]<move-star>

<move-wave-cascading> =
  <wave-cascade>
  | [<wave-cascading-start>]<teleportation>
  | [<wave-cascading-start>]<trance-journey>
  | [<wave-cascading-start>]<pawn-sacrifice>
    [<pawn-sacrifice-capture>]
  | [<wave-cascading-start>]<move-star>

```

```

<move-new> =
  <cascade>
| [<cascade-start>~]<teleportation>
| [<cascade-start>~]<trance-journey>
| [<cascade-start>~]<pawn-sacrifice>
  [<pawn-sacrifice-capture>]
| [<cascade-start>~]<move-star>

<status> = ?
  |
  | +
  | #

<compatibility-capture> =
  <classic-piece>[<disambiguation>] [x]
    <field>[<status>]
| <file>[x]<field>[<status>] [-e.p.]

<compatibility-castling> =
  O-O-O
| O-O-O
| O-O
| O-O

<move-monolith> =
  M<stepping>[<demoting-side-effects>]

<move> =
  <move-new><status>
| <move-monolith><status>
| <king-castling-move><status>
| <pawn-promoting-move><status>
| <compatibility-capture>
| <compatibility-castling>

```

Notational grammar isn't exact, some things are difficult to formalize, some are too cumbersome. For instance, any ply in trance-journey, teleportation and elsewhere can be gathered in [ ] (square brackets), just like ordinary ply. Another example, the two notations for capturing after Pawn-sacrifice somewhat overlaps, if there was no Pawn captured. Also, compatibility notation for capture and castling is valid only for Classical Chess, and nowhere else. Additionally, algebraic notation does not distinguish between light and dark pieces, so some of the rules are not possible to formalize at all.

Ply side-effects and move status are mandatory in NAN, not optional as in CAN. These can be empty if there is no side-effect to a ply, or if there is no check, checkmate made in a move.



# Remarks

This chapter contains some suggestions to improve chess design.

## 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 was 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 or captured.

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.

## Own chessboard

In casual games, coins could be used instead of chips.

If making own chessboard, small markings can be placed onto initial positions of scout Pawns, 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.

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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 ...*

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