

# 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*  
2023-01-24  
Zagreb, Croatia

# **Croatian chess**

## and other variants

3rd, revised edition

**Mario Mlačak**

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My most sincere gratitude to:

Valentina Štefanić  
Kristina Mlačak  
Ana Mlačak

and many, many others.

Thank you all.



# Introduction

*Life's too short for chess.*

... Henry James Byron

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

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

"Here, look at what I got."

"What's that?"

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

"Sure."

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

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

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

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

'Hmmmm...'

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

Outside, the setting Sun was shining red.

*late November, 1975  
Bednja, Croatia*

# Prerequisites

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

... Confucius

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

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



# Classical Chess

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

... German proverb

About classical chess is written really everything already, and I have nothing to add. Except for illustration of initial setup, so that you can accustom yourself with rendition of pieces used in this text.

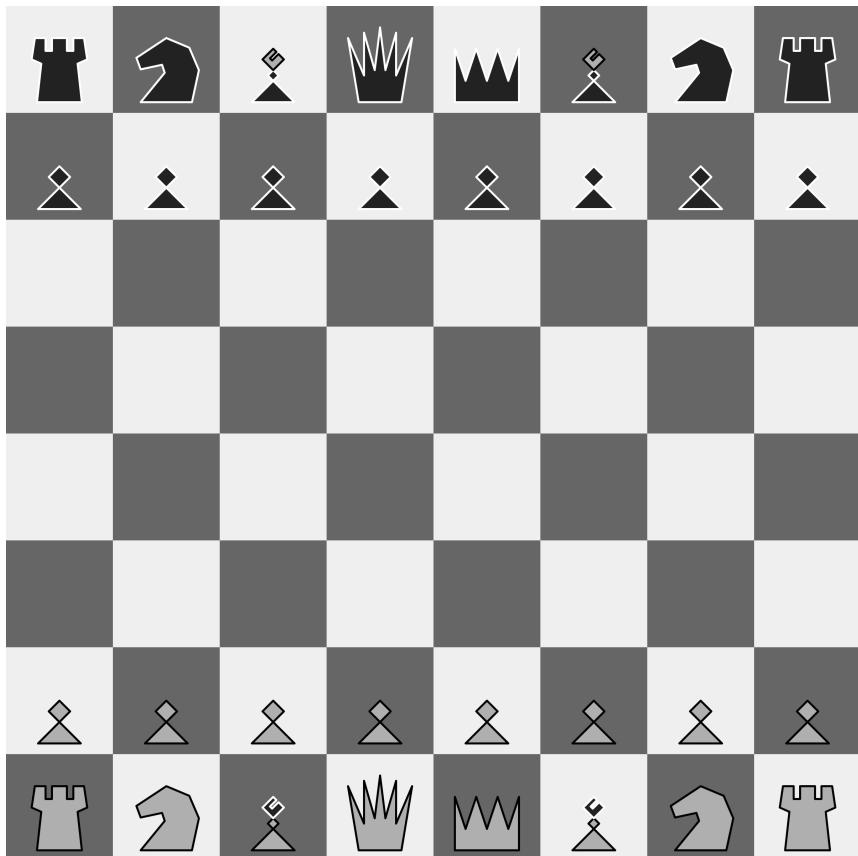


Figure 1: Classical board

# 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

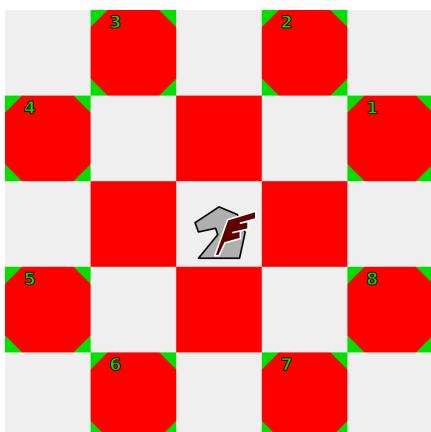


Pegasus moves similarly to Knight, but it can continue its jumpy movement until another piece is encountered, or it runs out of board. Note that once in movement, Pegasus cannot change its heading.

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

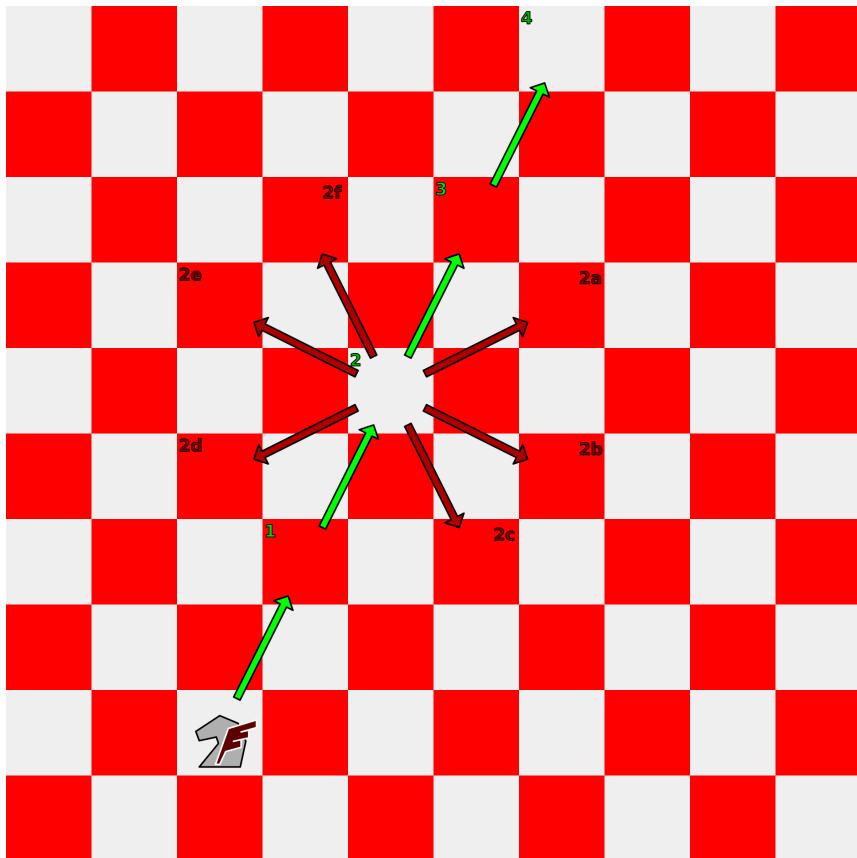


Figure 4: Pegasus move direction

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

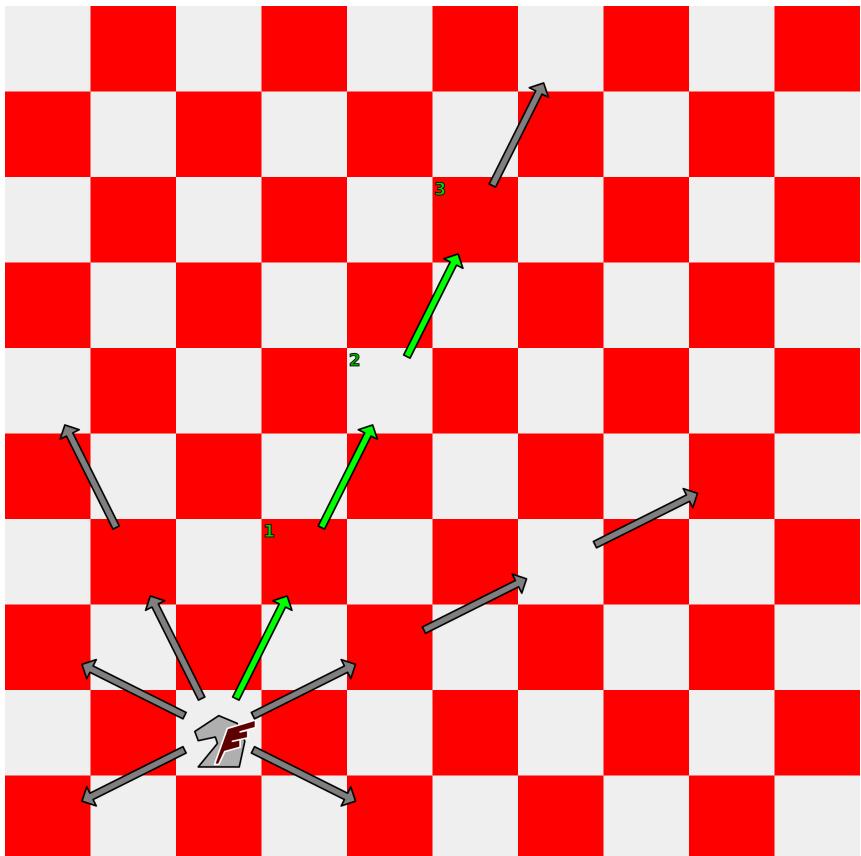


Figure 5: Step-fields, capture-fields, ply

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.)

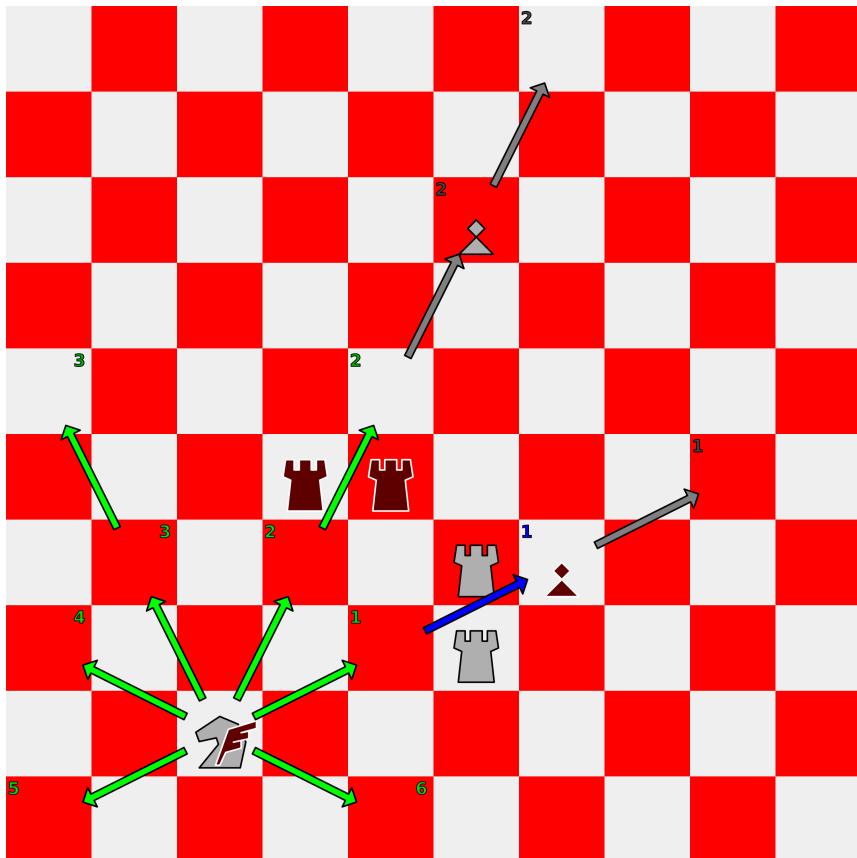


Figure 6: Pegasus moves

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

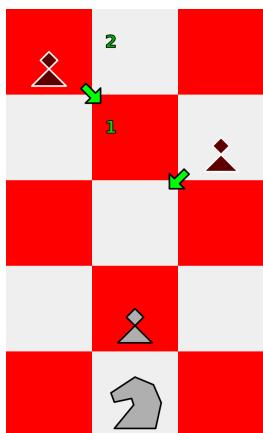


Figure 7: En passant

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:

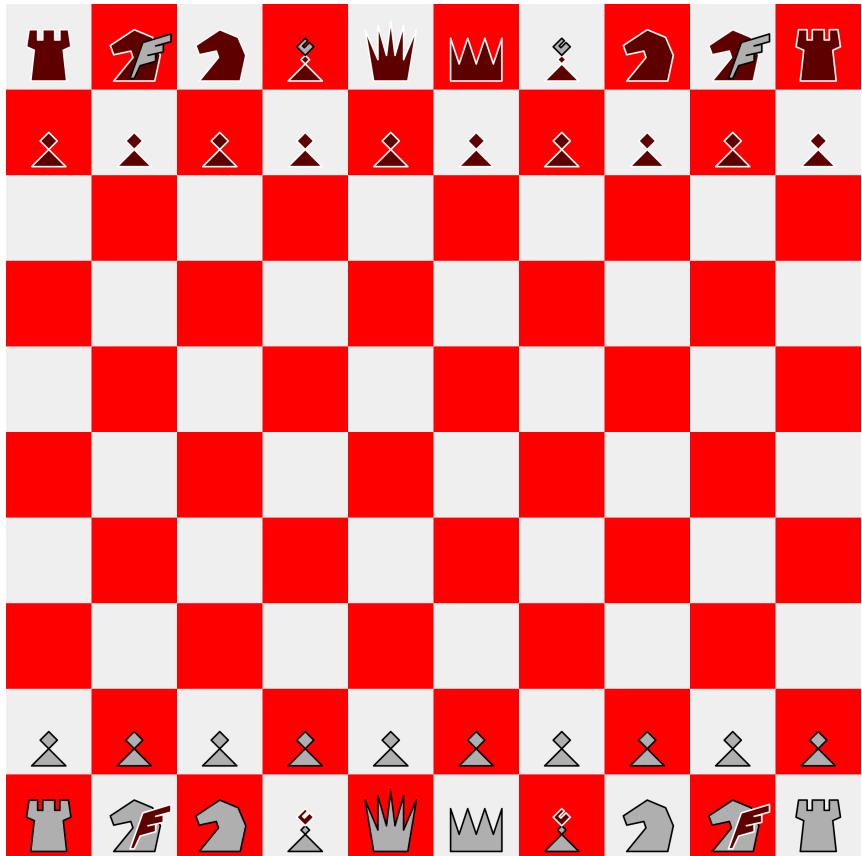


Figure 11: Croatian Ties board

# 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

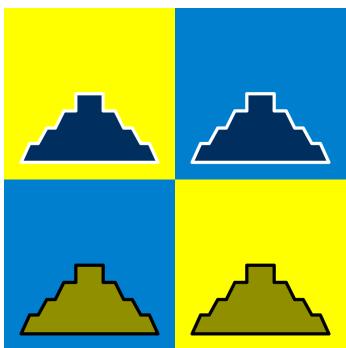


Figure 12: Pyramid

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 fields traveled over by a piece. Pyramid receives momentum from piece which activates it. Momentum is spent by Pyramid when moving, one for each field 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

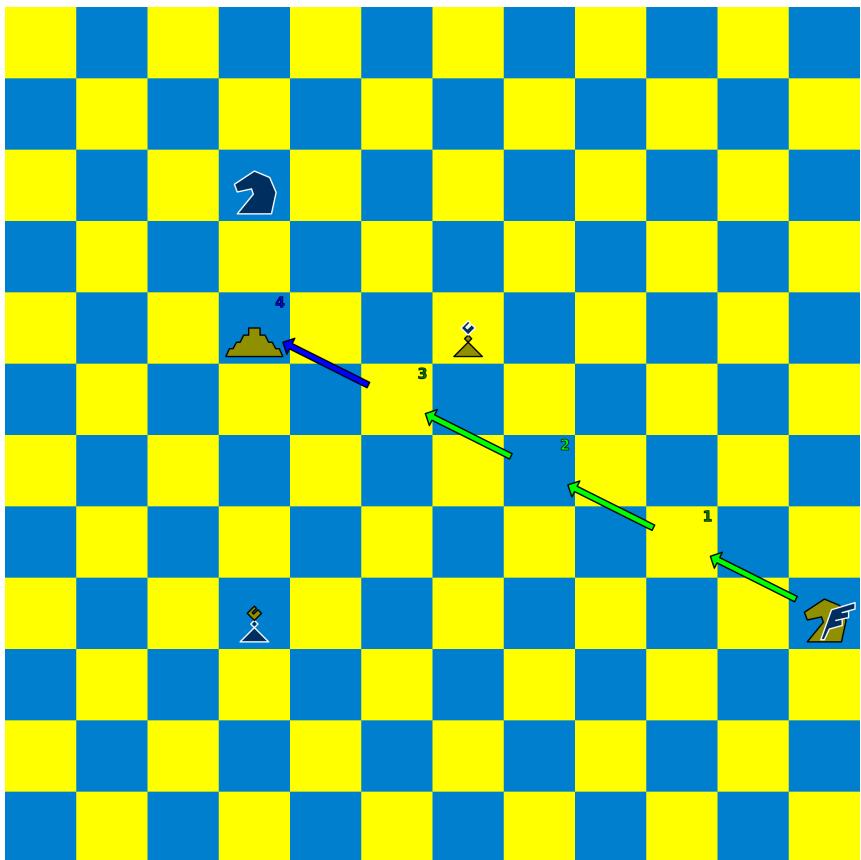


Figure 13: Pyramid activation

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.

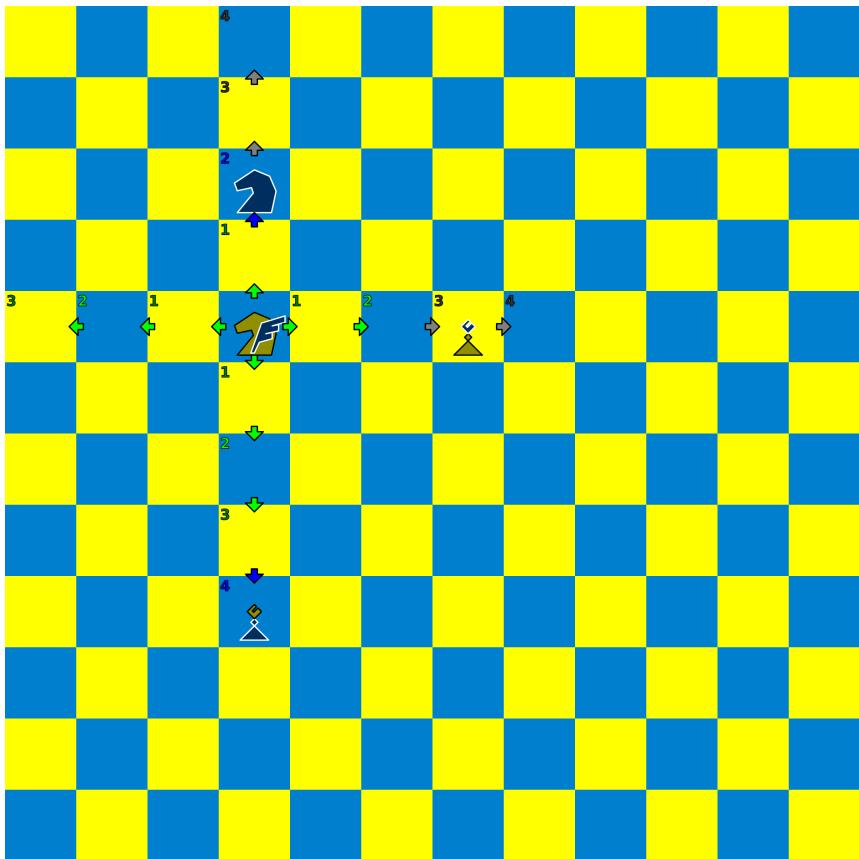


Figure 14: Pyramid activated

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.

## 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.

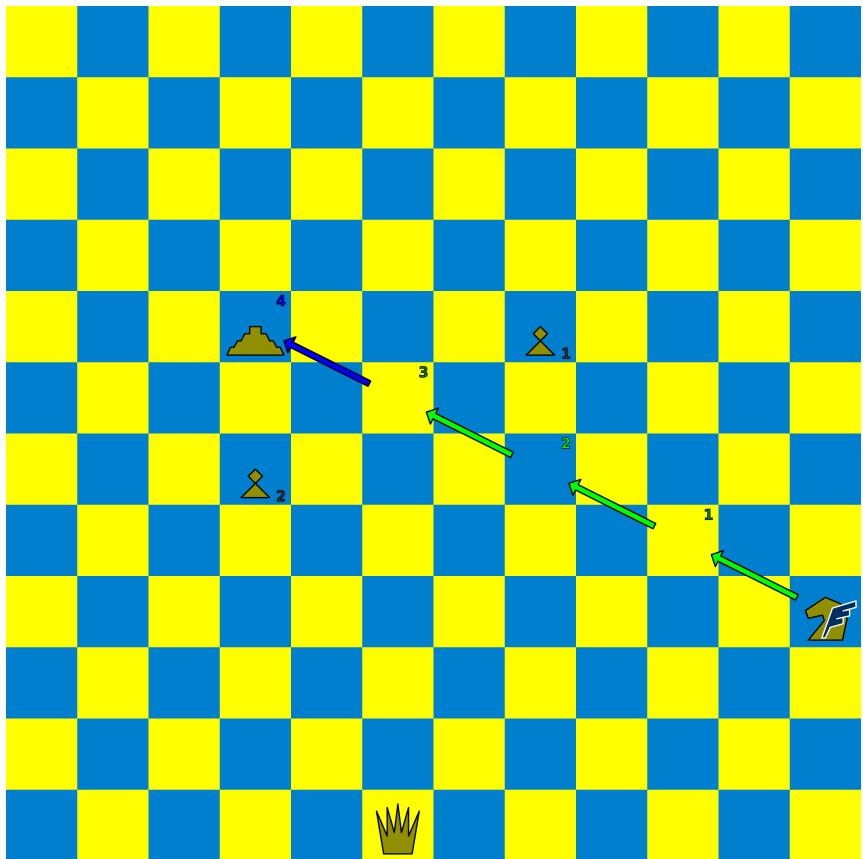


Figure 15: Promotion start

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.

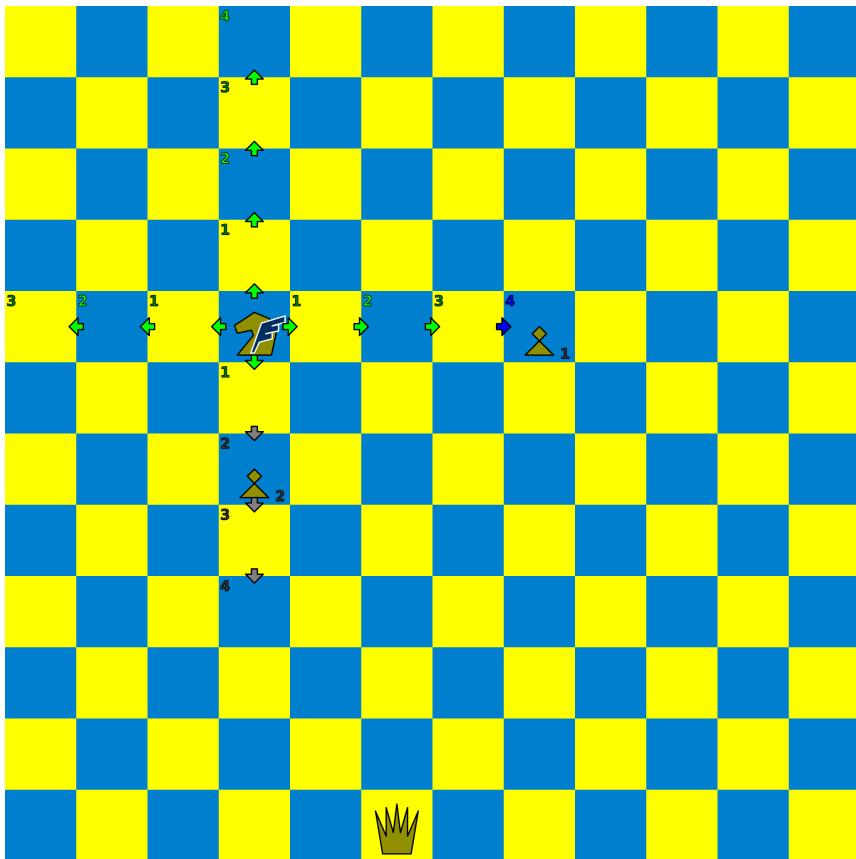


Figure 16: Promotion, Pyramid activated

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.

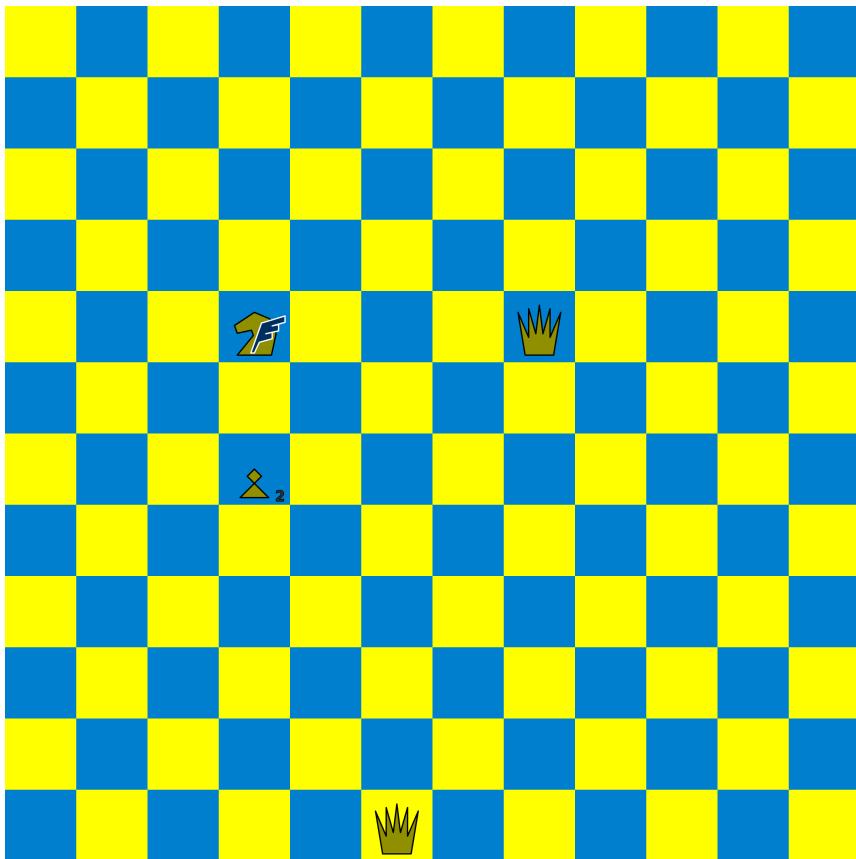


Figure 17: Promotion end

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.

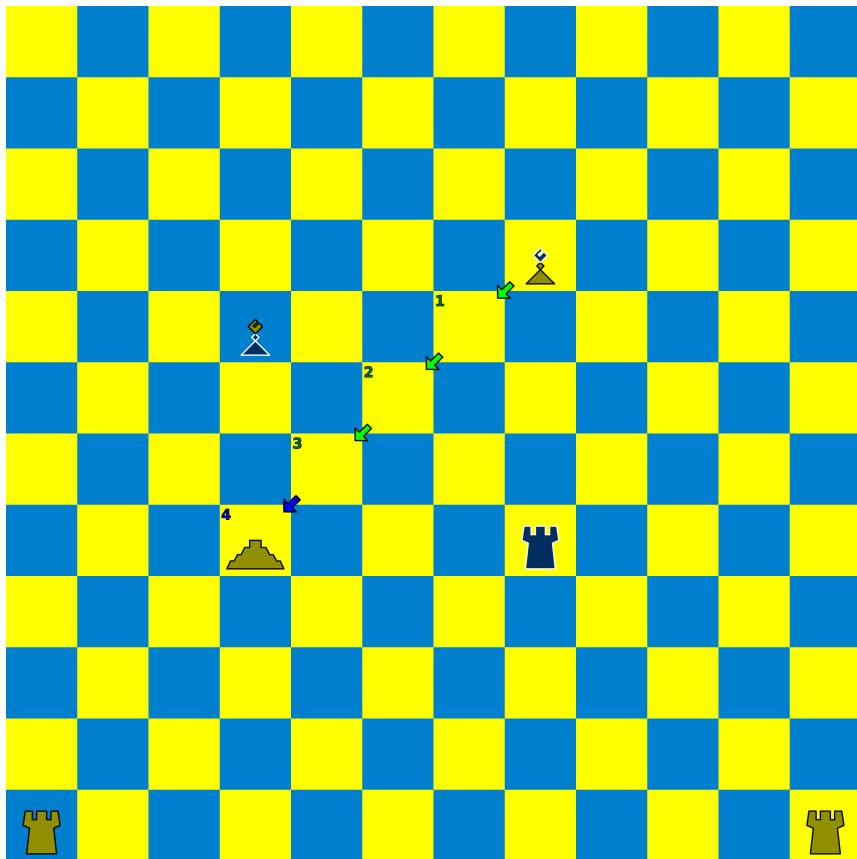


Figure 18: Conversion start

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.

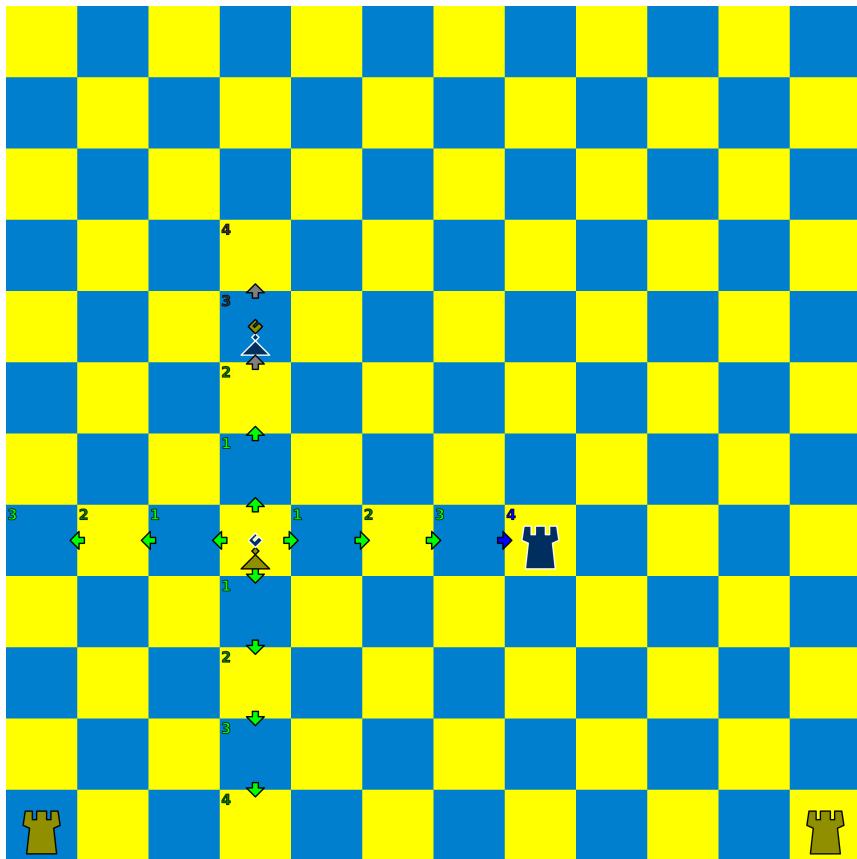


Figure 19: Conversion, Pyramid activated

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.

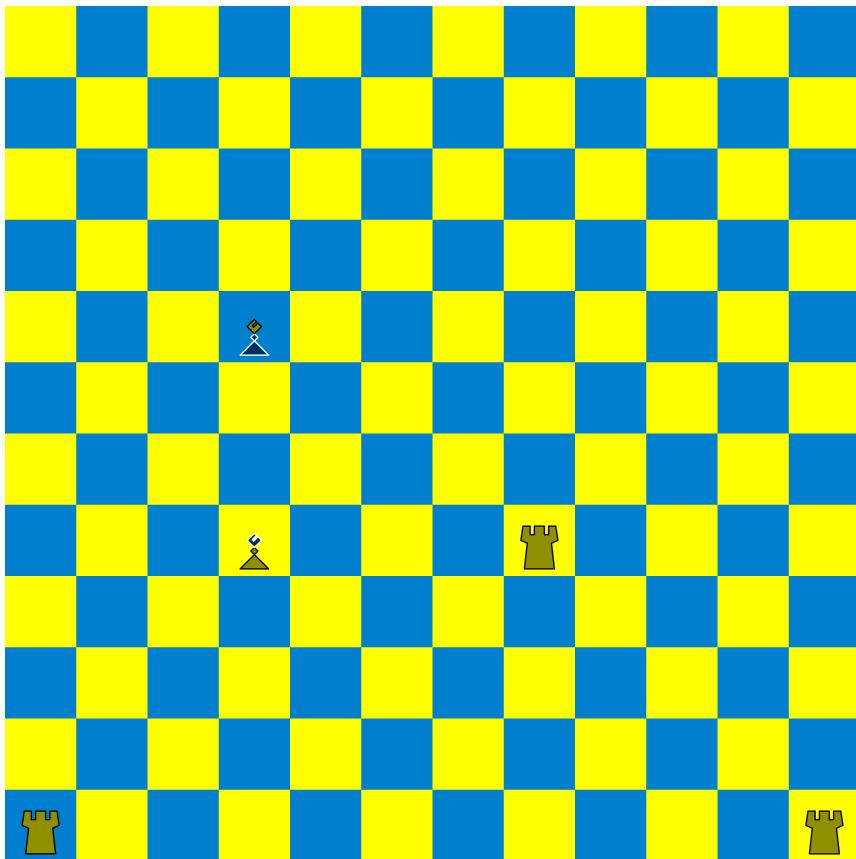


Figure 20: Conversion end

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

## Converting Rooks

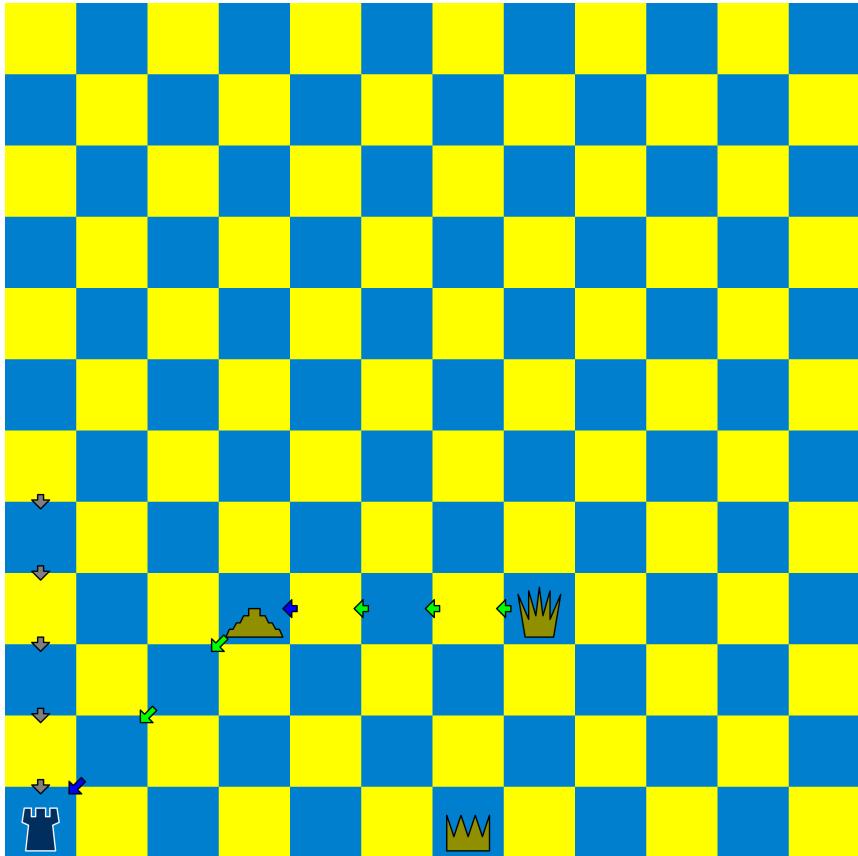


Figure 21: Converting Rook start

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

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

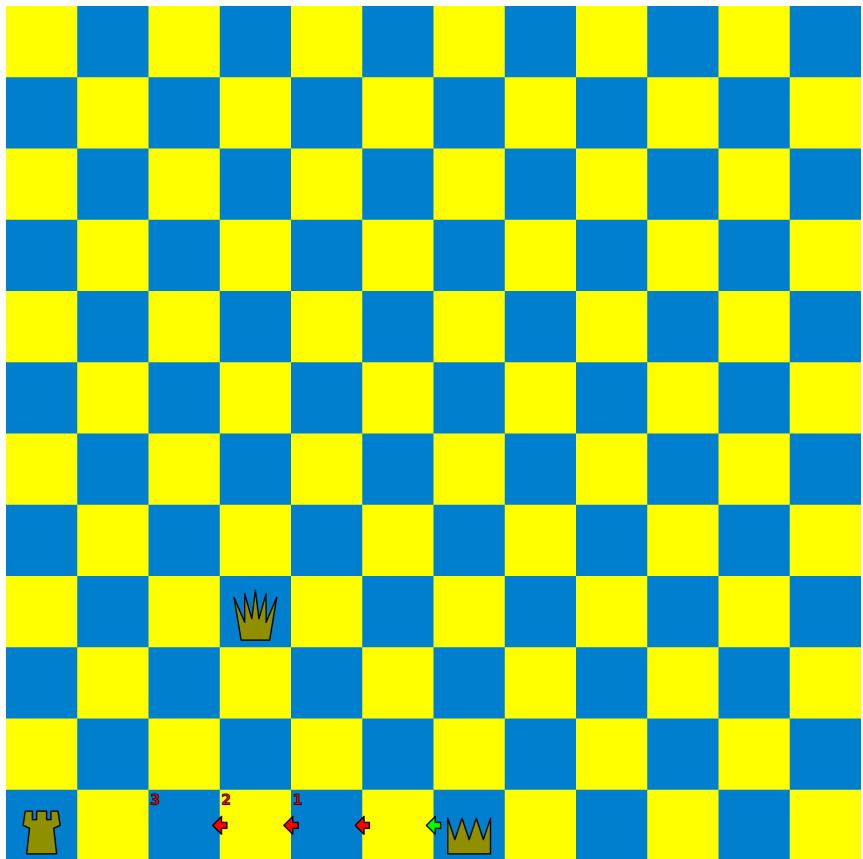


Figure 22: Converting Rook end

Here, dark Rook has been converted at light Rook's initial position, and hasn't been moved; still, light King can't castle with converted Rook.

## Converting Pawns

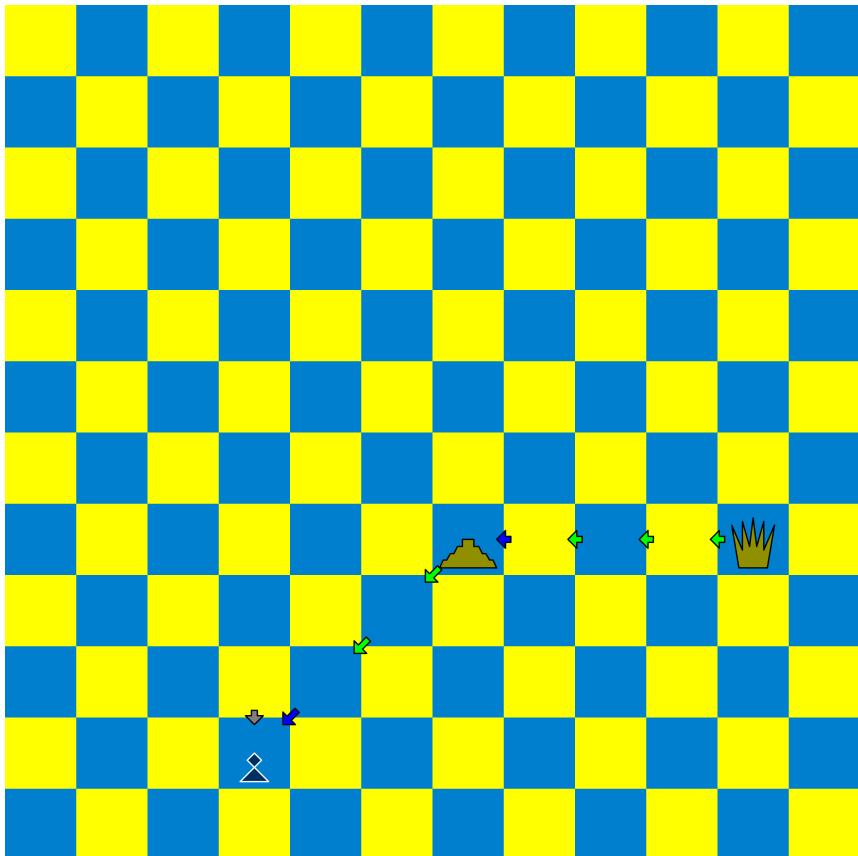


Figure 23: Converting Pawn start

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

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

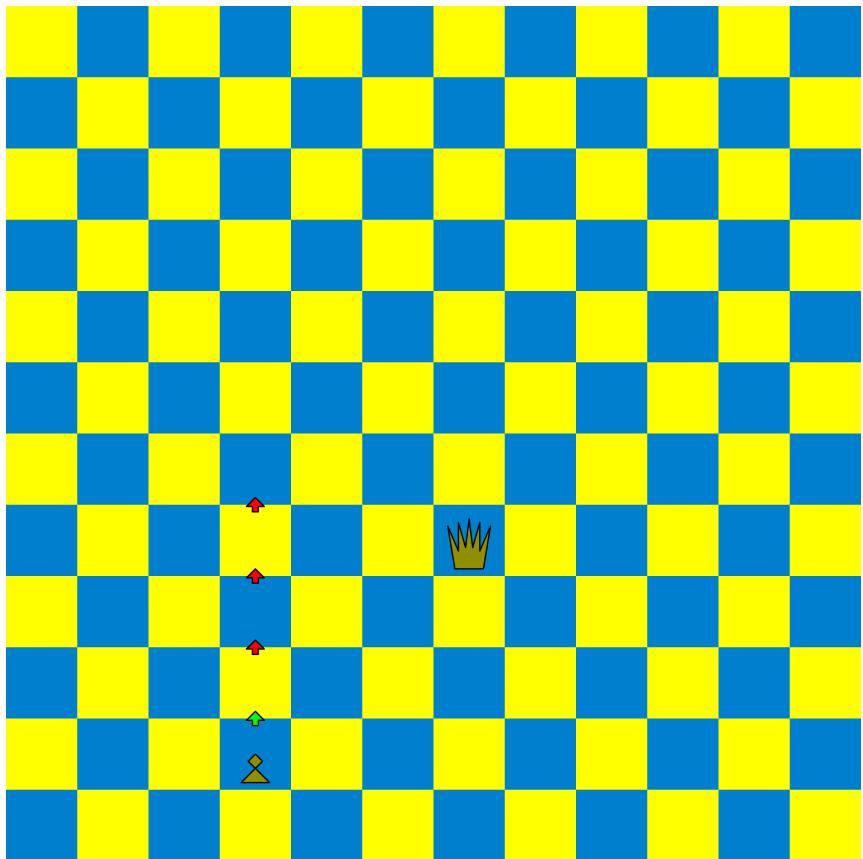


Figure 24: Converting Pawn end

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

## Cascading

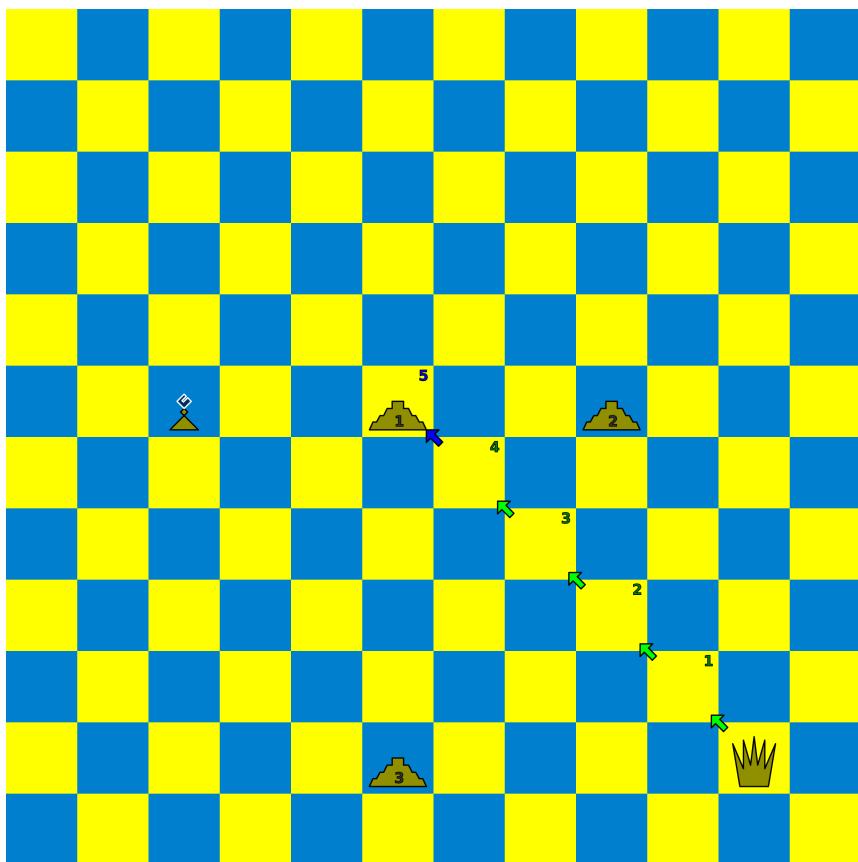


Figure 25: Cascading start

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

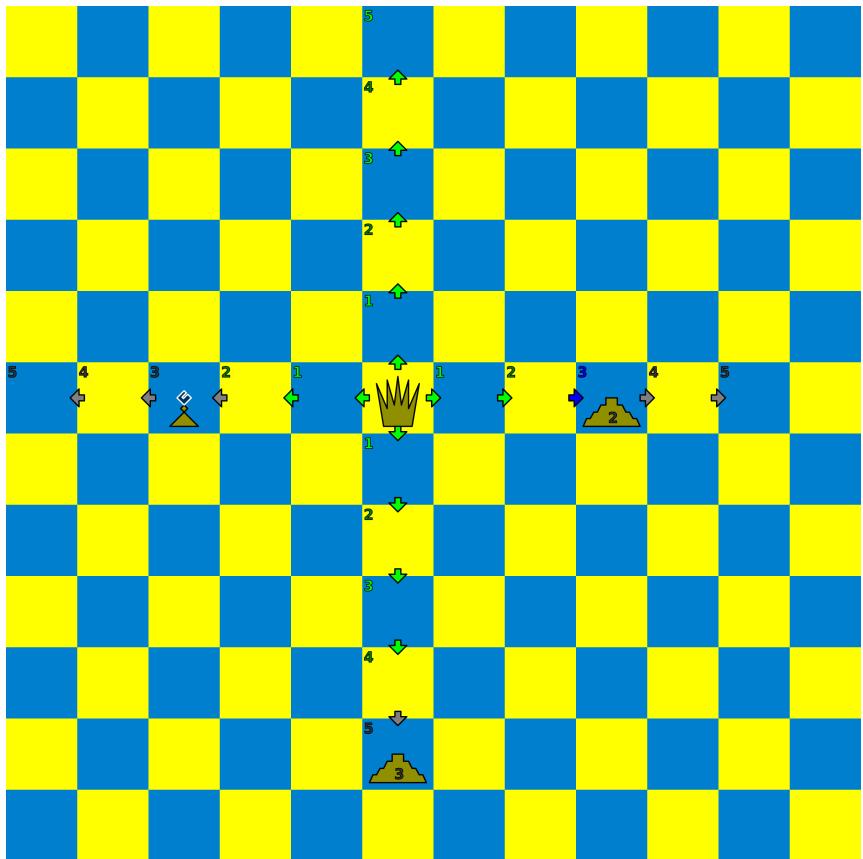


Figure 26: Cascading, 1st Pyramid activated

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.

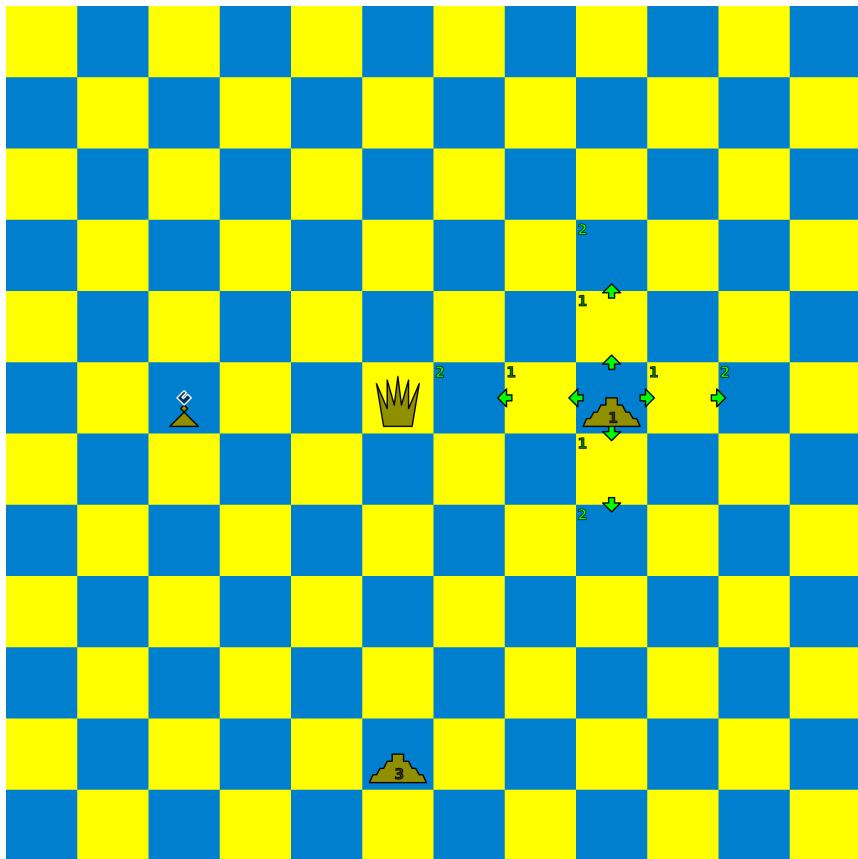


Figure 27: Cascading, 2nd Pyramid activated

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.

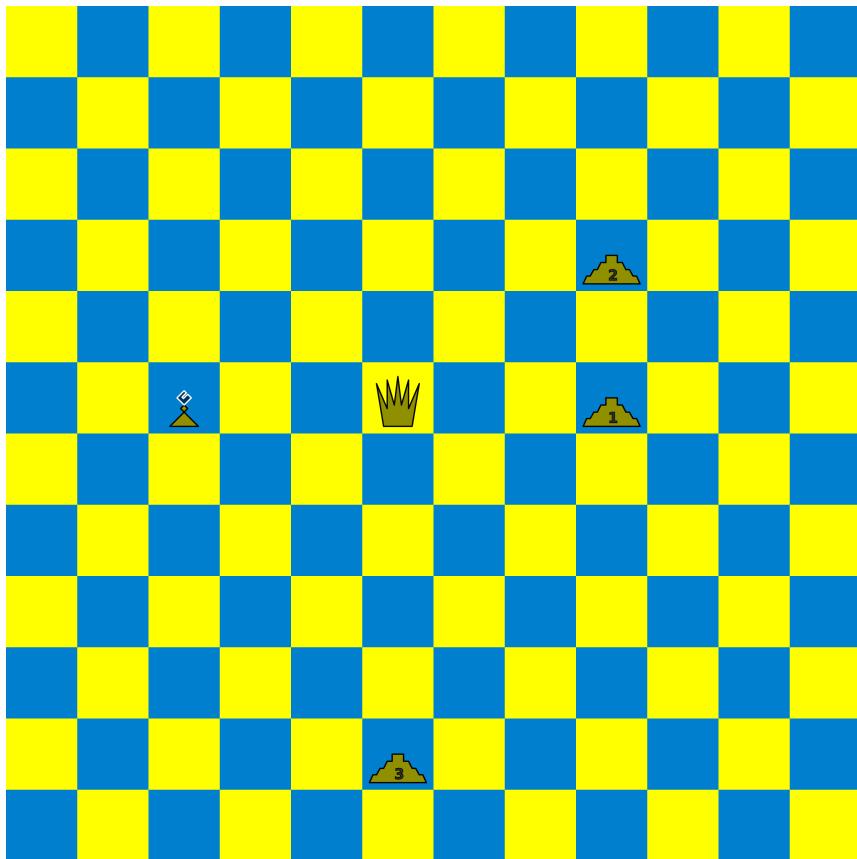


Figure 28: Cascading end

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

## Against King

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

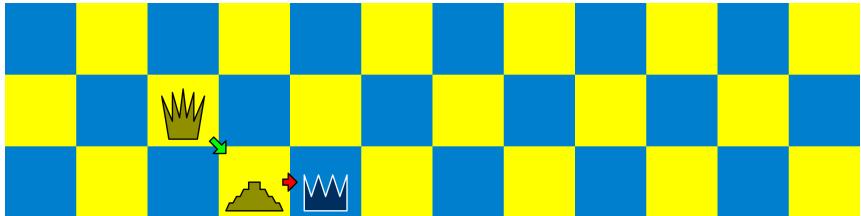


Figure 29: Pyramid vs. King

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

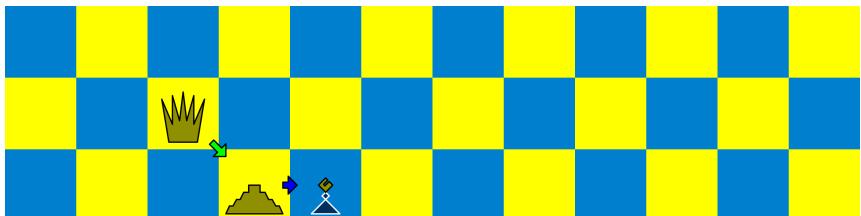


Figure 30: Pyramid vs. Bishop

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

## Activation by Pawn

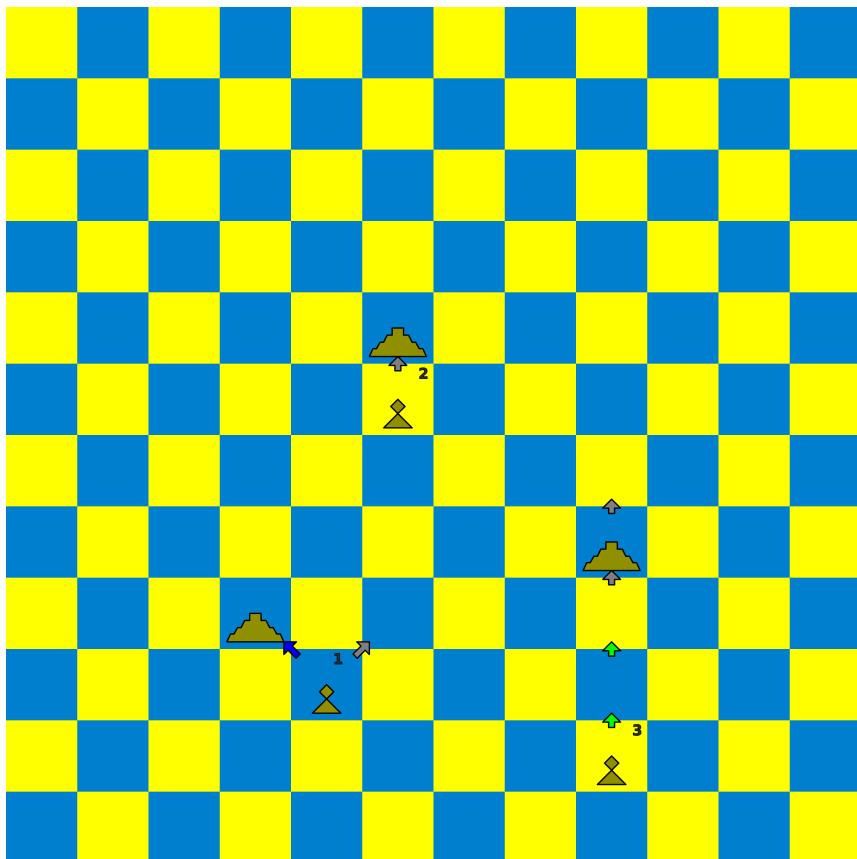


Figure 31: Pyramid activation by Pawns

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

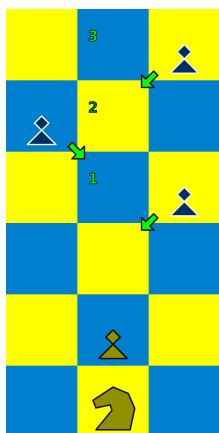


Figure 32: En passant

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

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

# 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 33: 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 34: Castling long right

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

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

## Initial setup

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

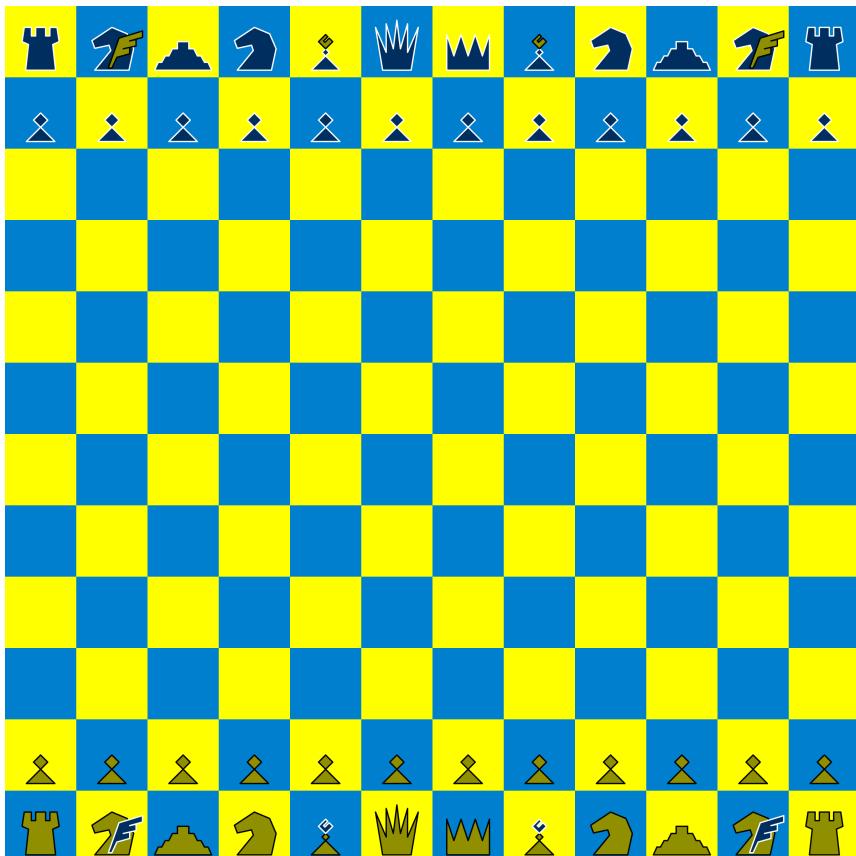


Figure 35: Mayan Ascendancy board

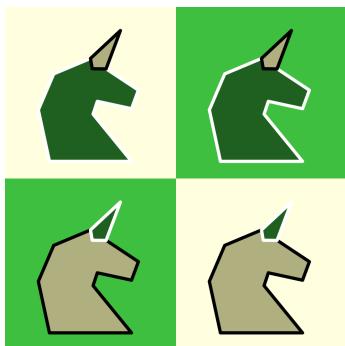
# Age of Aquarius

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

... Evelyn Waugh

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

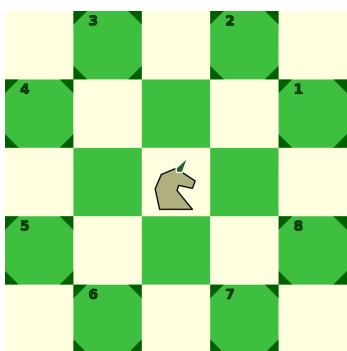


Unicorn is a piece similar to Knight, only it can jump longer on opposite color fields. Just as Knight, Unicorn is not obstructed by any piece in its surroundings.

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

Figure 36: Unicorn

## Movement



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

Figure 37: Unicorn short jump

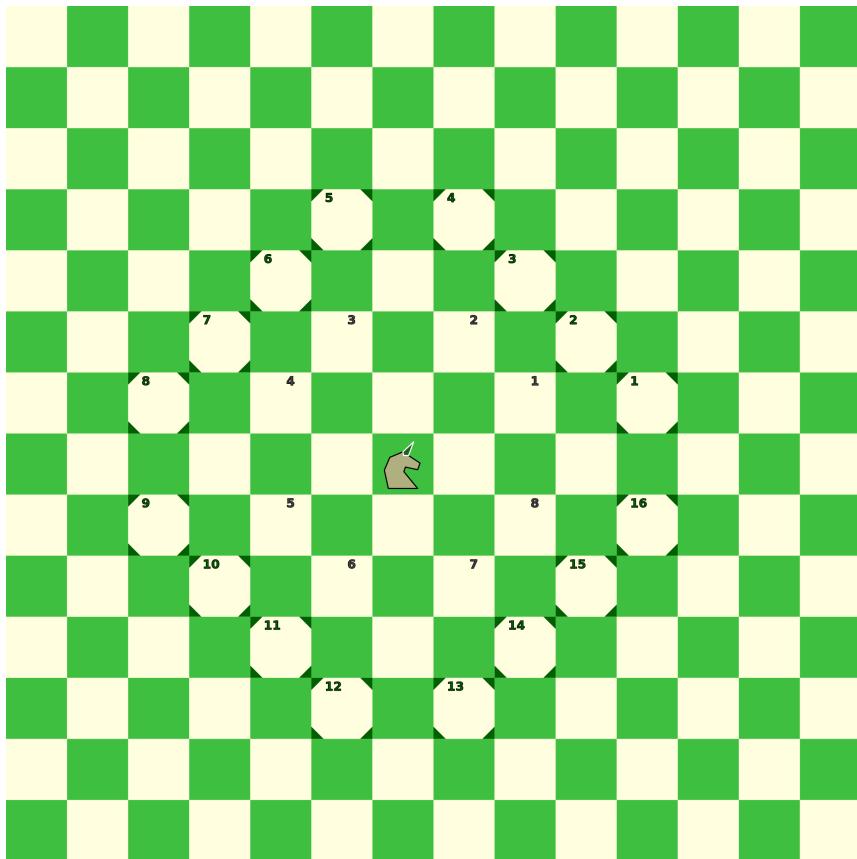


Figure 38: Unicorn long jump

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.

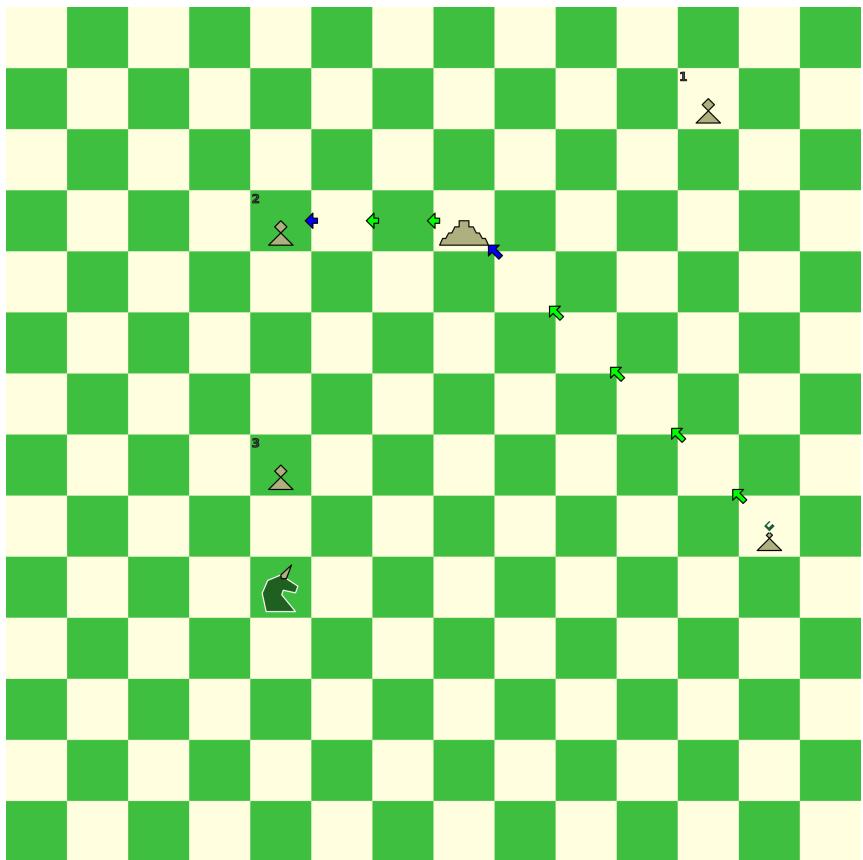


Figure 39: Promotion start

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.

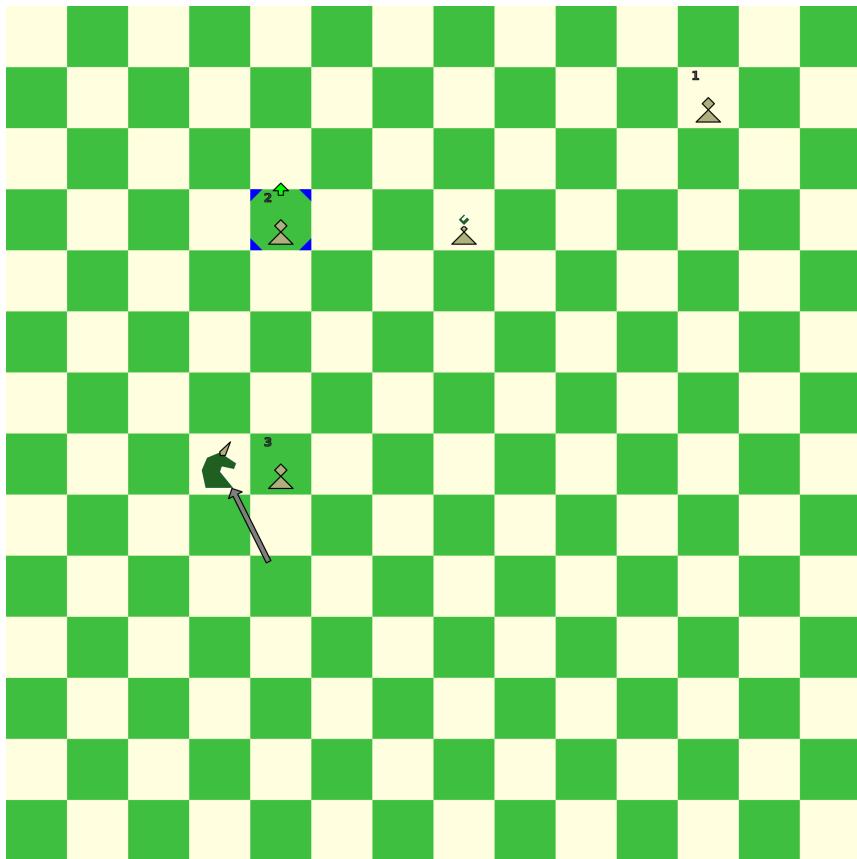


Figure 40: Pawn 2 tagged for promotion

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.

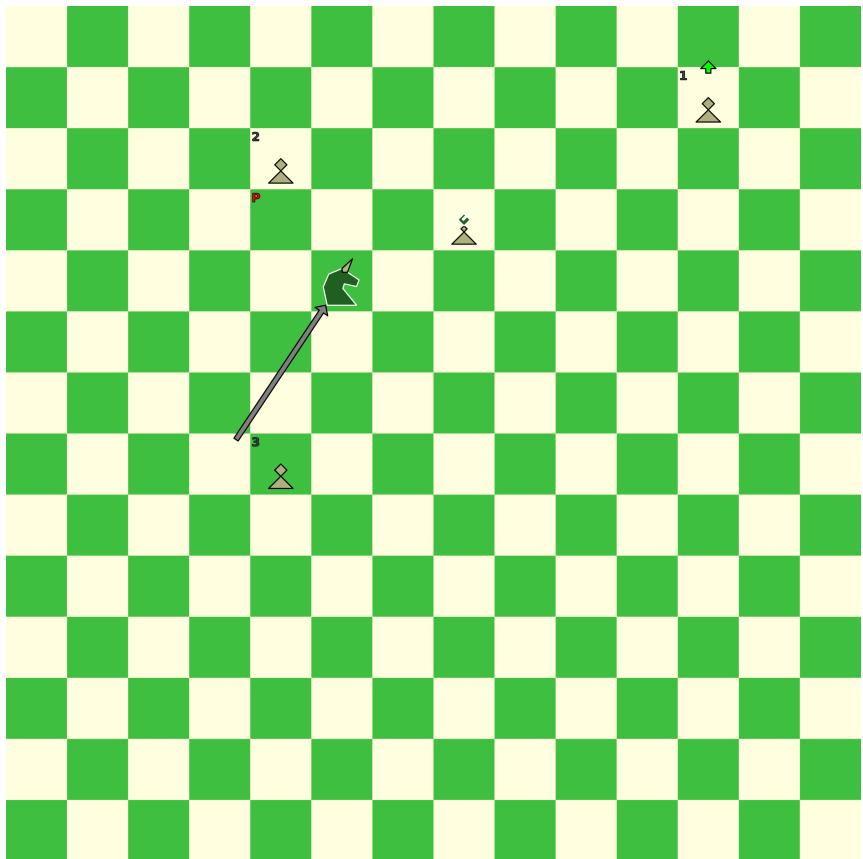


Figure 41: Pawn 1 about to get promotion

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.

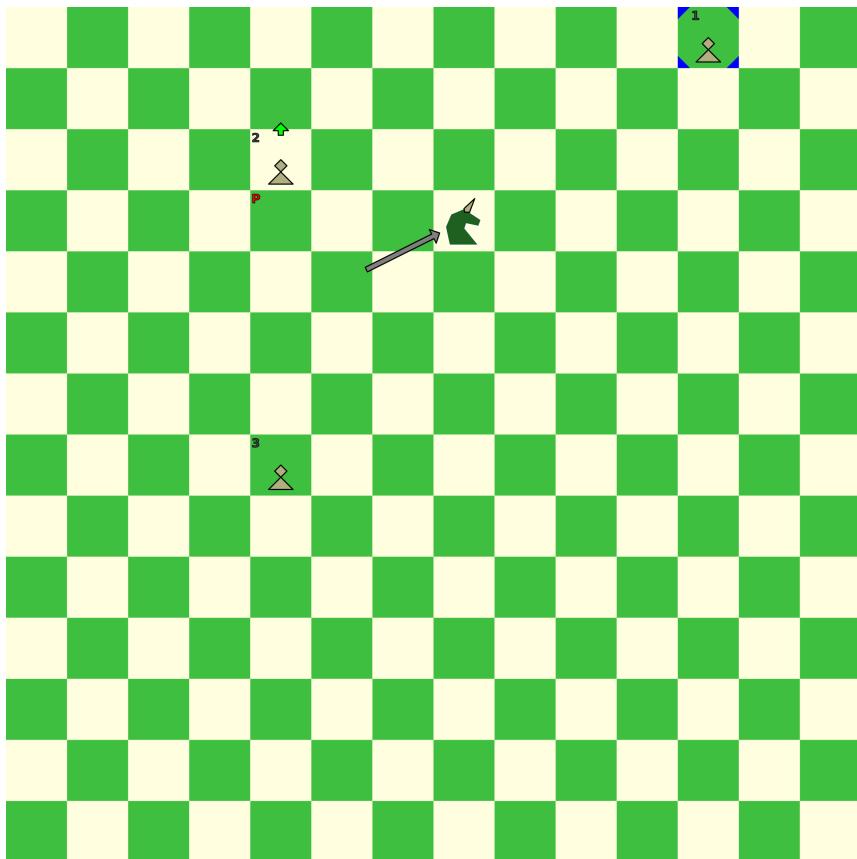


Figure 42: Pawn 1 tagged for promotion

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.

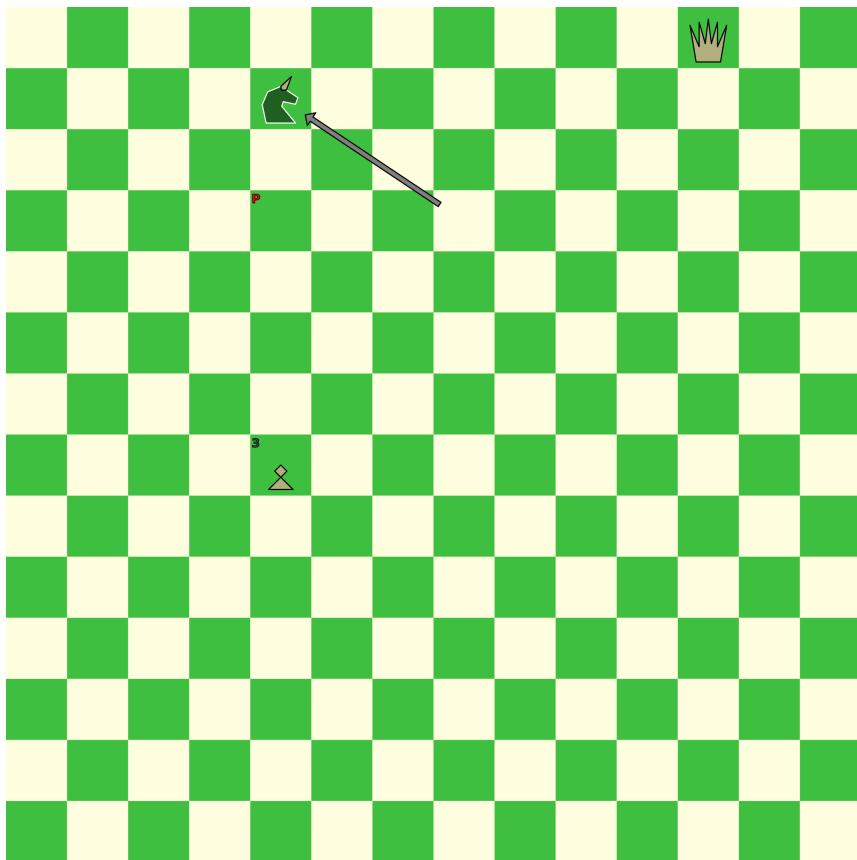


Figure 43: Pawn 1 promoted

Dark Unicorn captures light Pawn 2.

Light Pawn 1 is promoted to Queen.

## Converting tagged Pawn

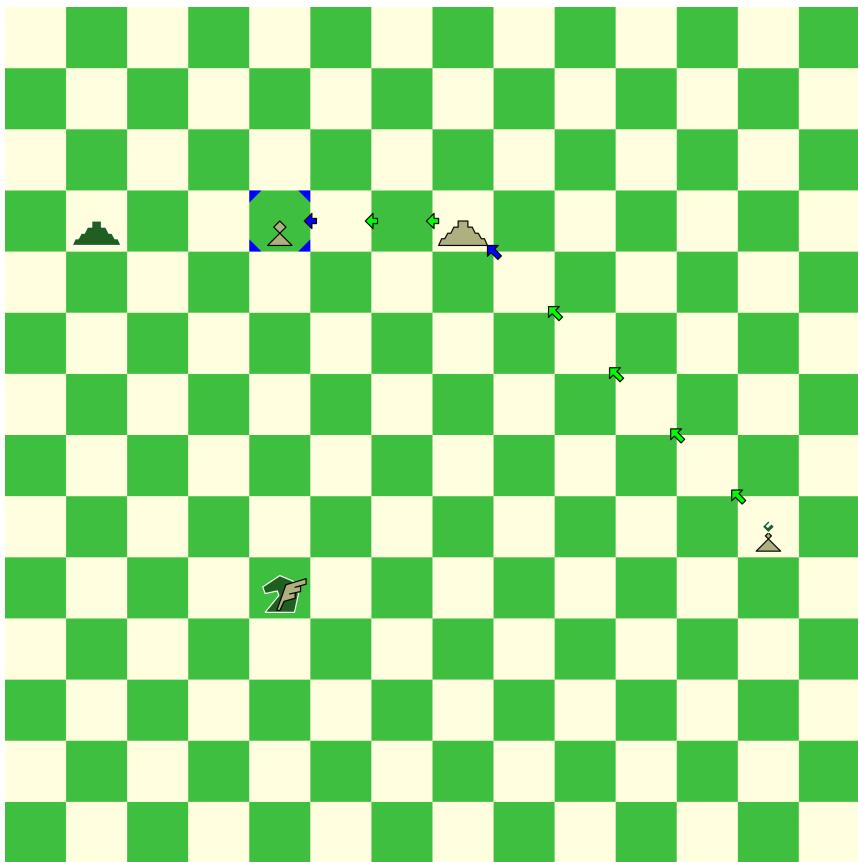


Figure 44: Tagging Pawn for promotion

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.

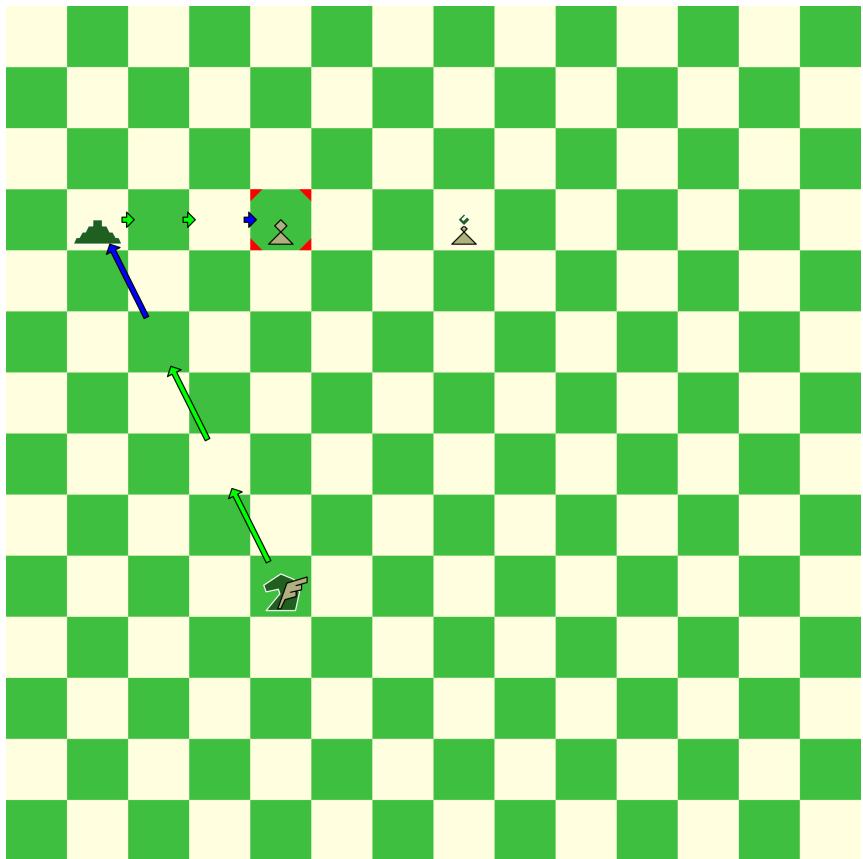


Figure 45: Converting tagged Pawn

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.

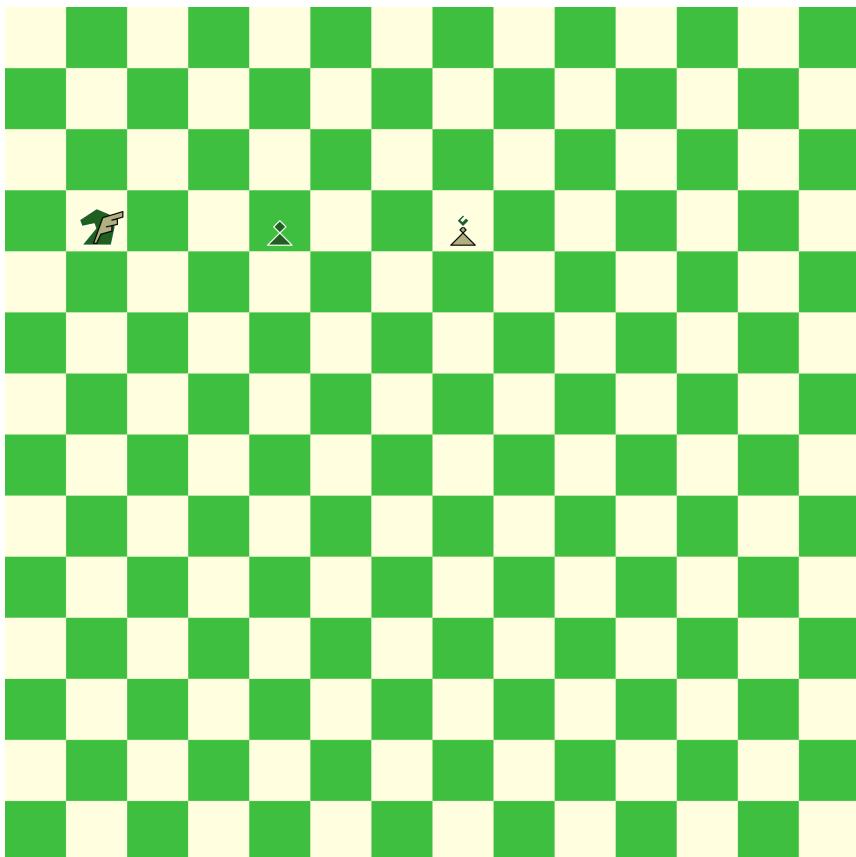
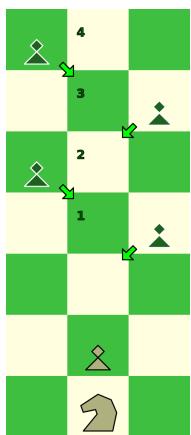


Figure 46: Tagged Pawn converted

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

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

# Rush, en passant



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

Figure 47: 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 48: Castling

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



Figure 49: Castling long left

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

## Initial setup

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

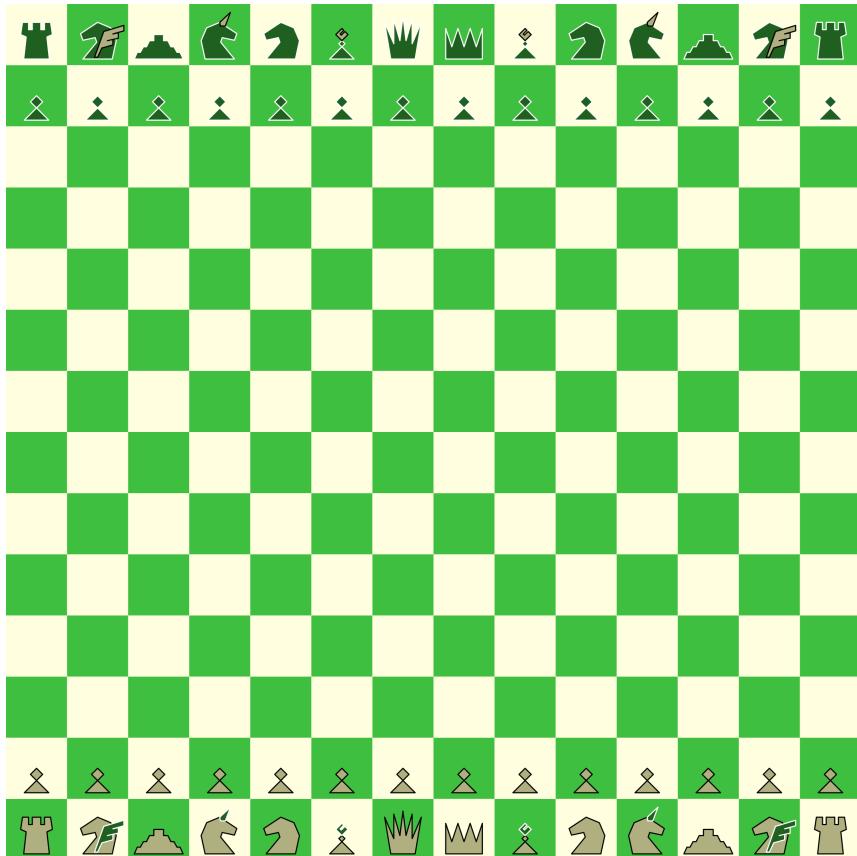


Figure 50: Age of Aquarius board



# 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

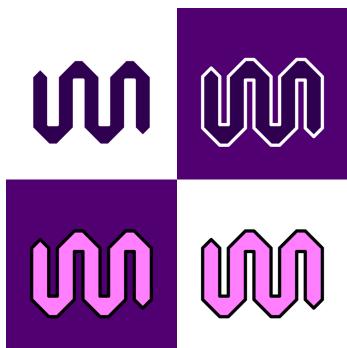


Figure 51: Wave

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

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

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

Wave is divergent; own piece (or opponent's Wave) can continue its movement in a different direction, limited by momentum it had when Wave was encountered.

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

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

In algebraic notation symbol for Wave is 'W'.

## Activation

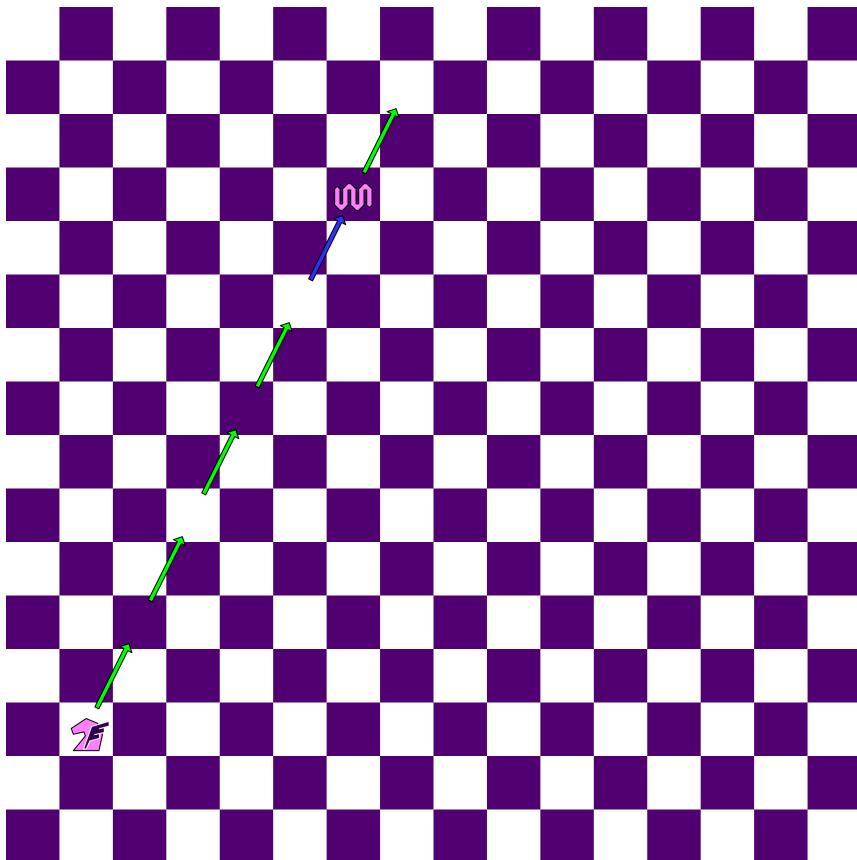


Figure 52: Activating Wave

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

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

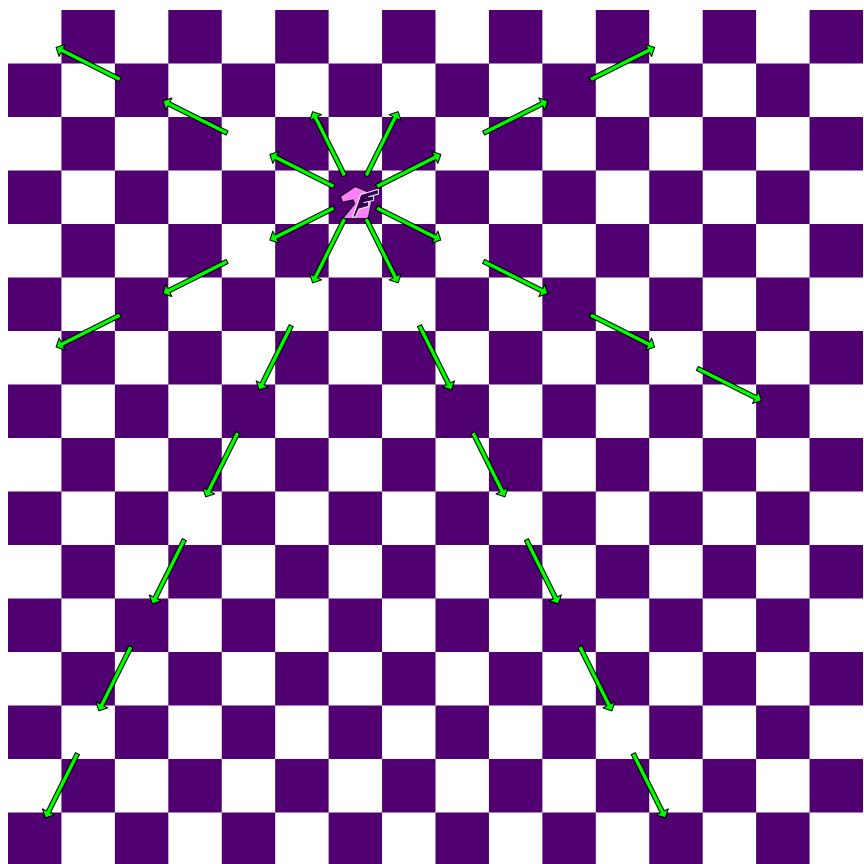


Figure 53: Wave activated

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

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

## Activating pieces

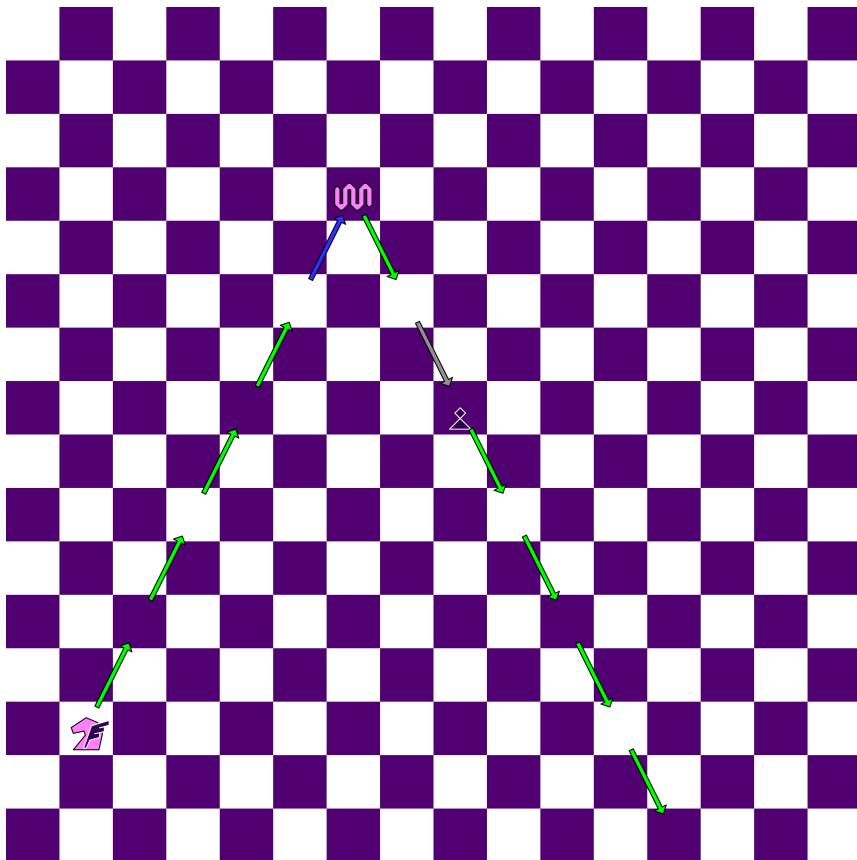


Figure 54: Passing opponent's Pawn

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

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

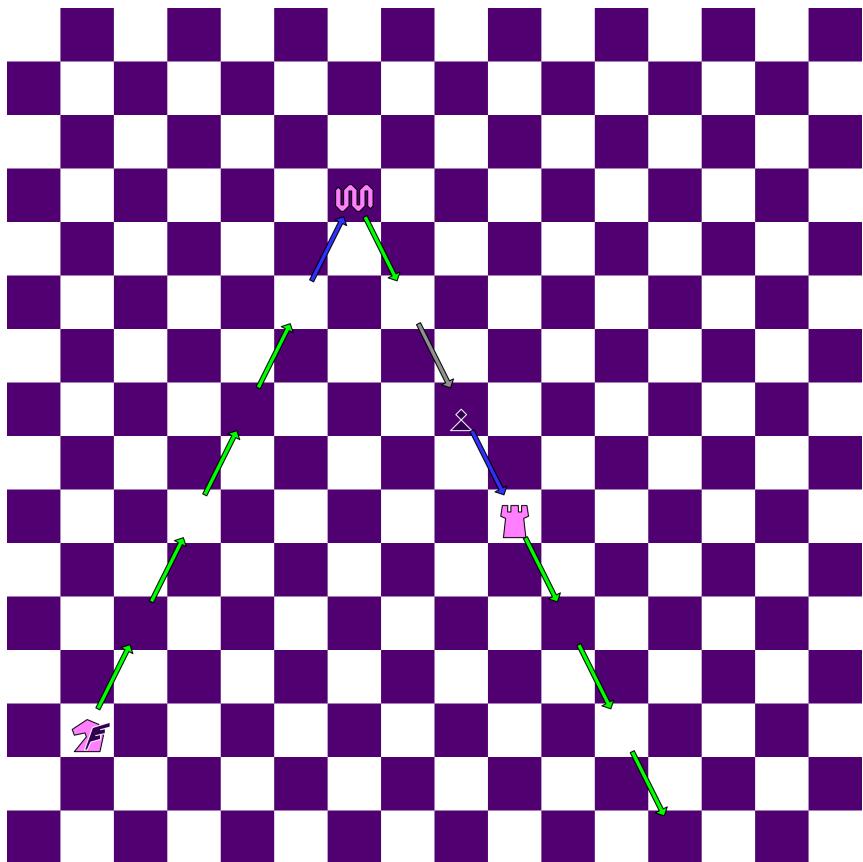


Figure 55: Activating Rook

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

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

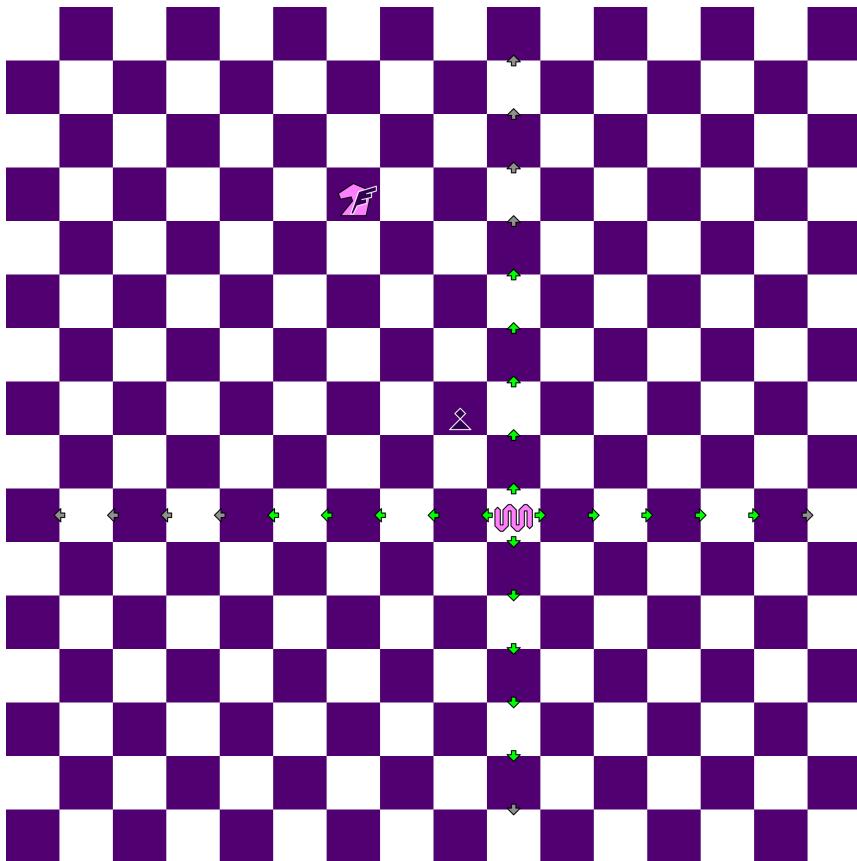


Figure 56: Rook activated

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

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

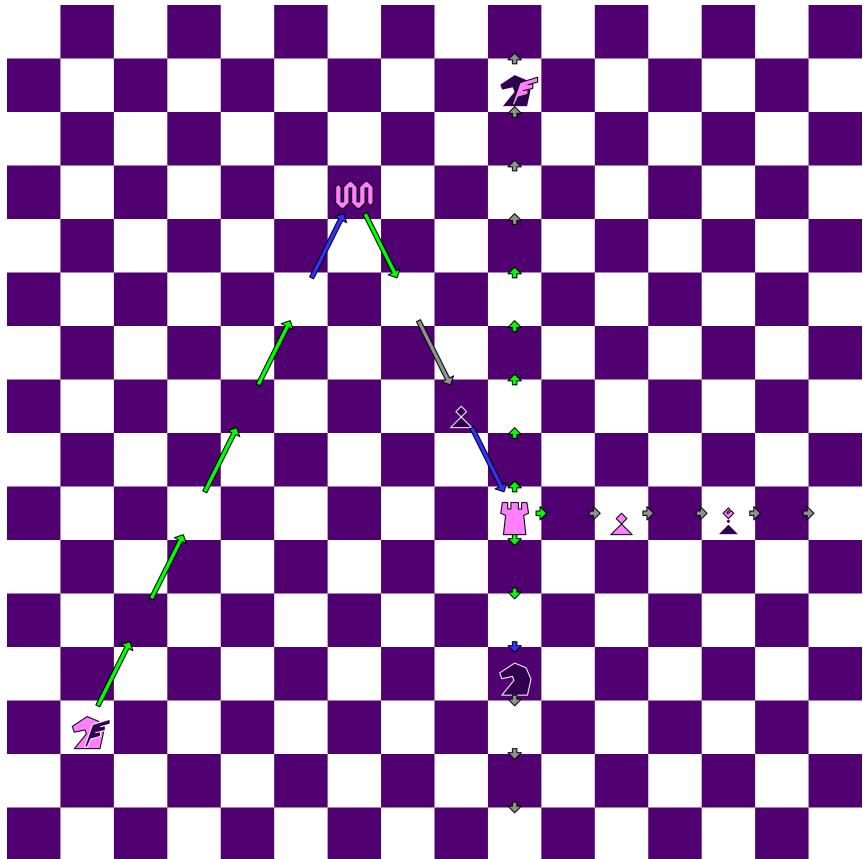


Figure 57: Rook captures

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

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

## Wave is transparent

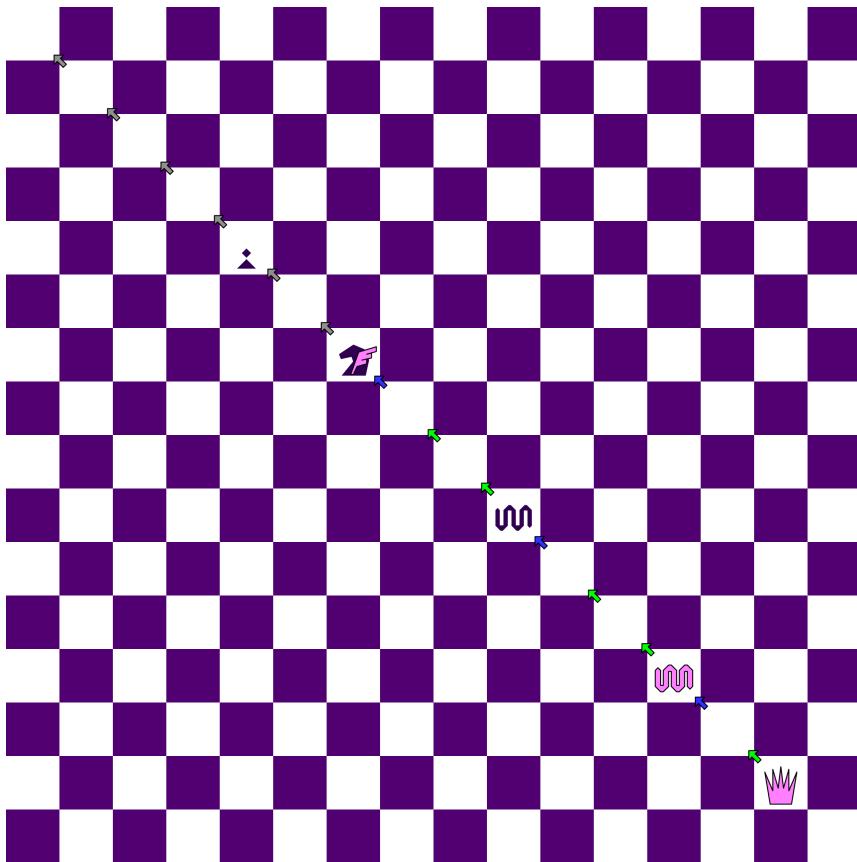


Figure 58: Wave is transparent

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

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

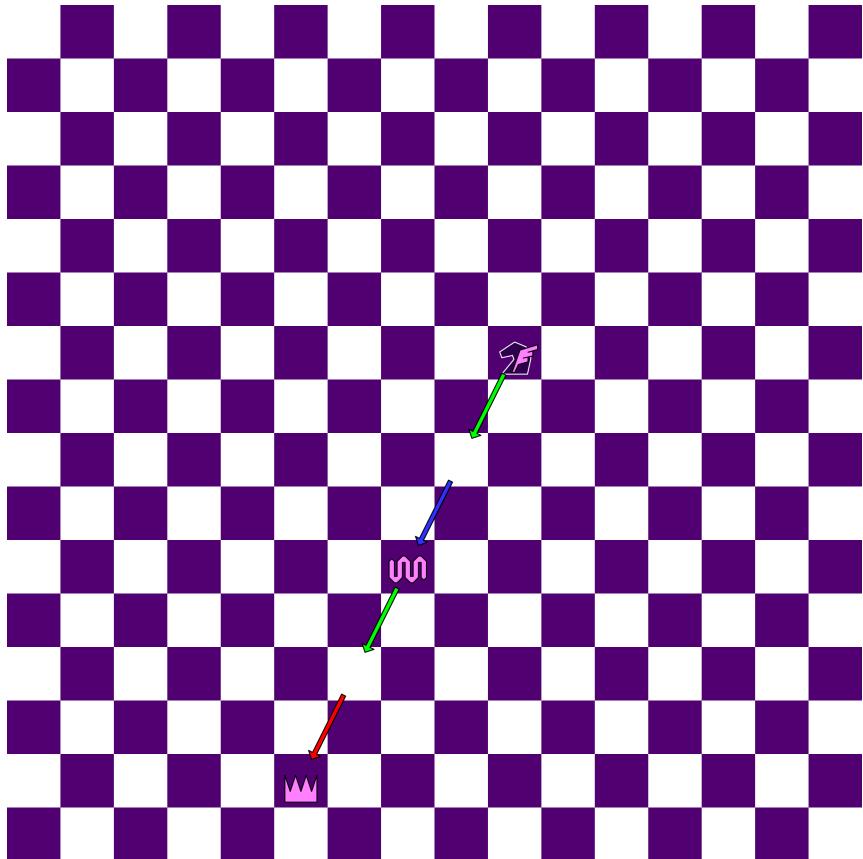


Figure 59: Wave is not pinned

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

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

## Piece blocked

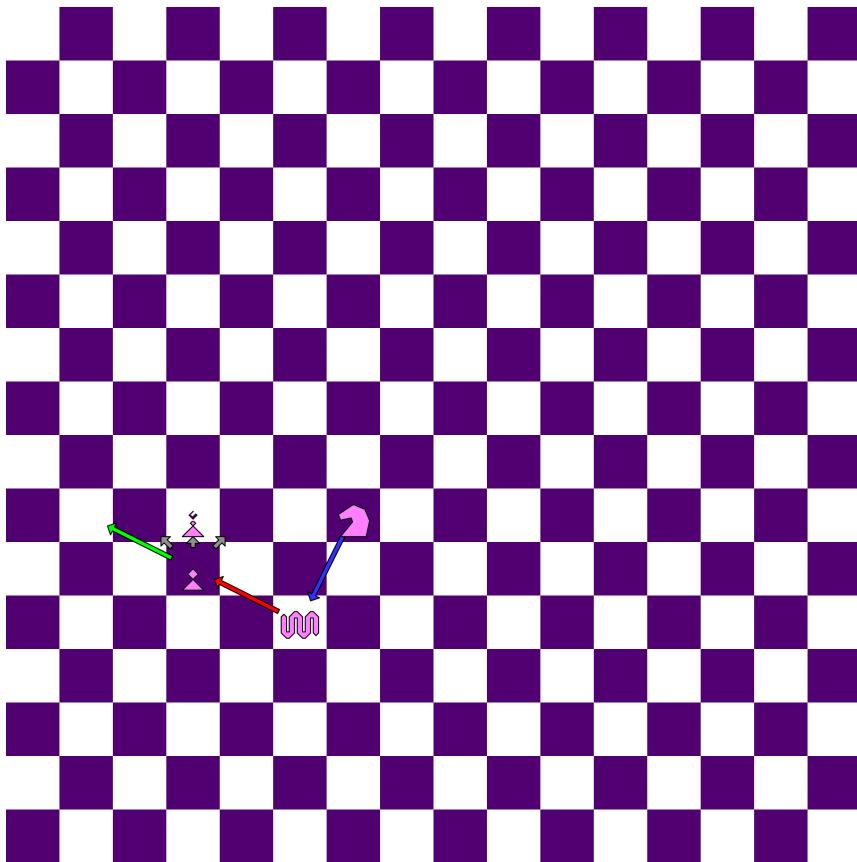


Figure 60: Piece blocked

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

## Movement

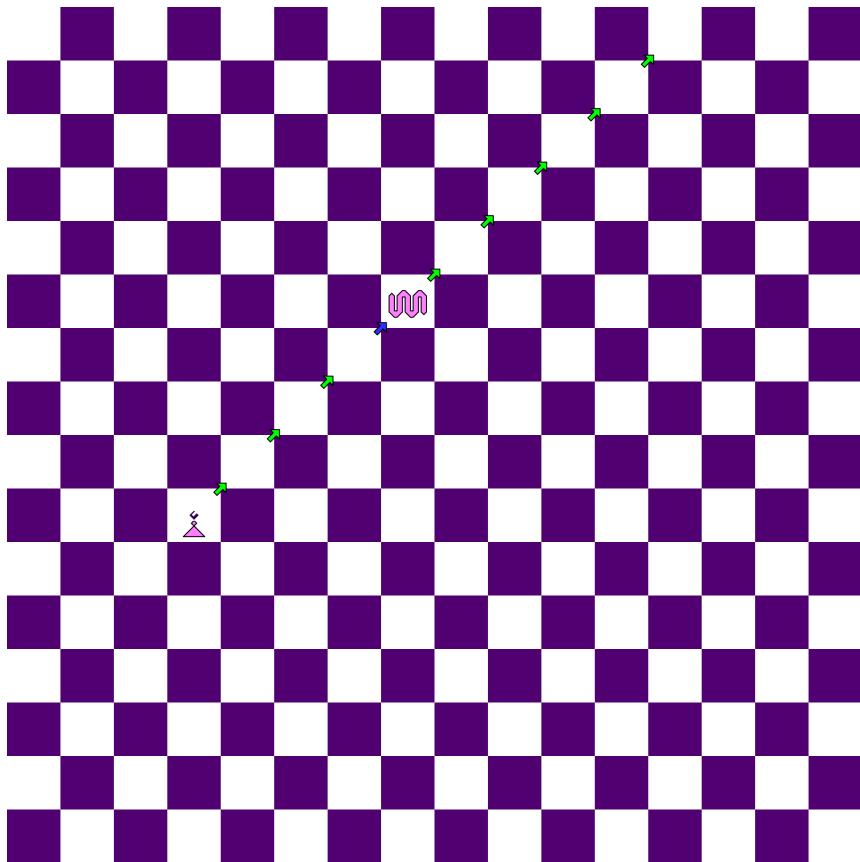


Figure 61: Bishop activating Wave

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

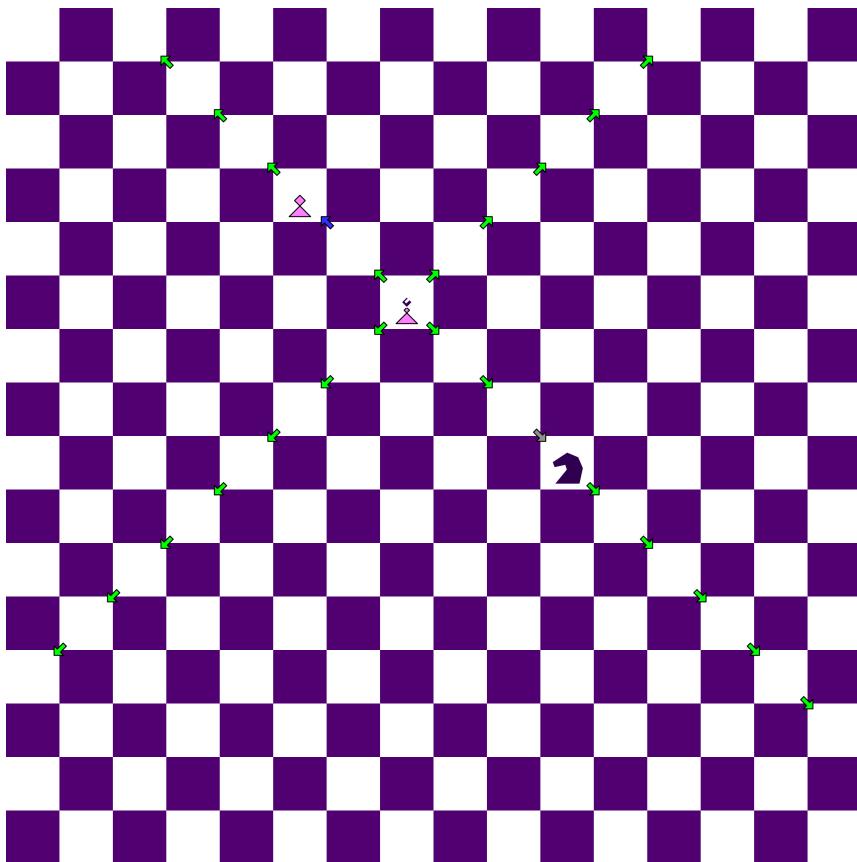


Figure 62: Wave activated by Bishop

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

## Activated by Knight

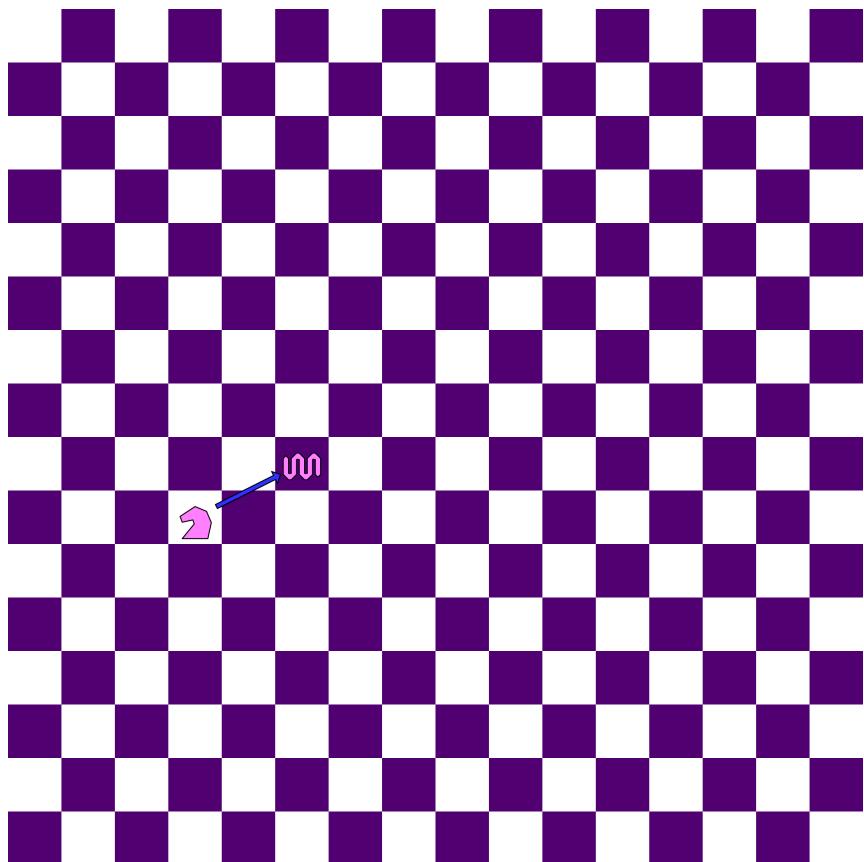


Figure 63: Knight activating Wave

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

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

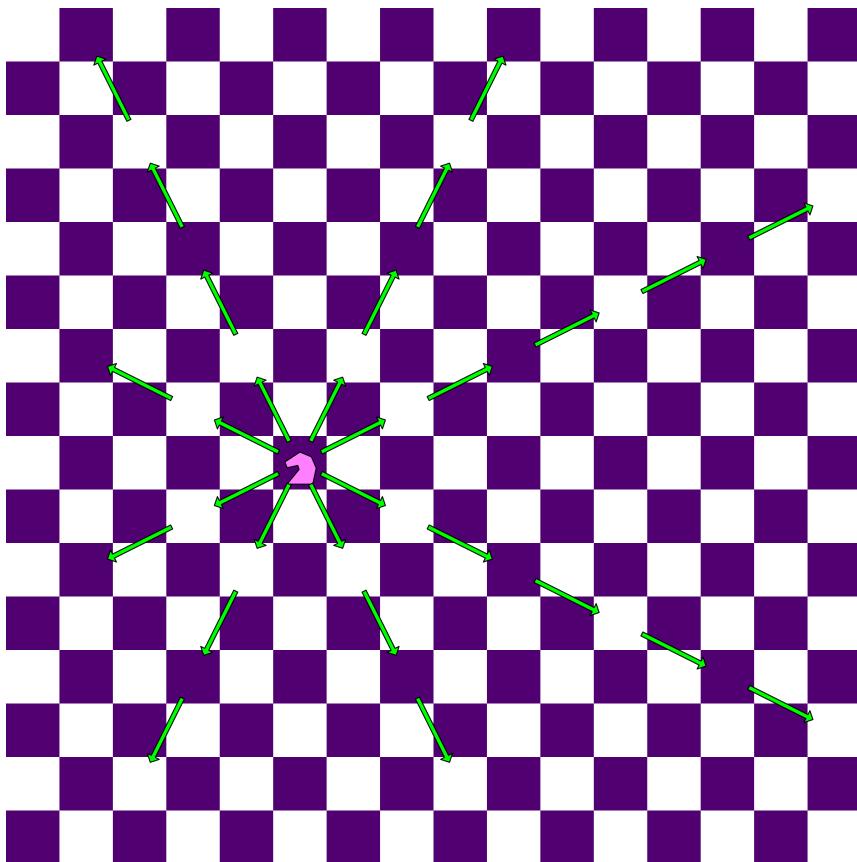


Figure 64: Wave activated by Knight

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

## Activated by King

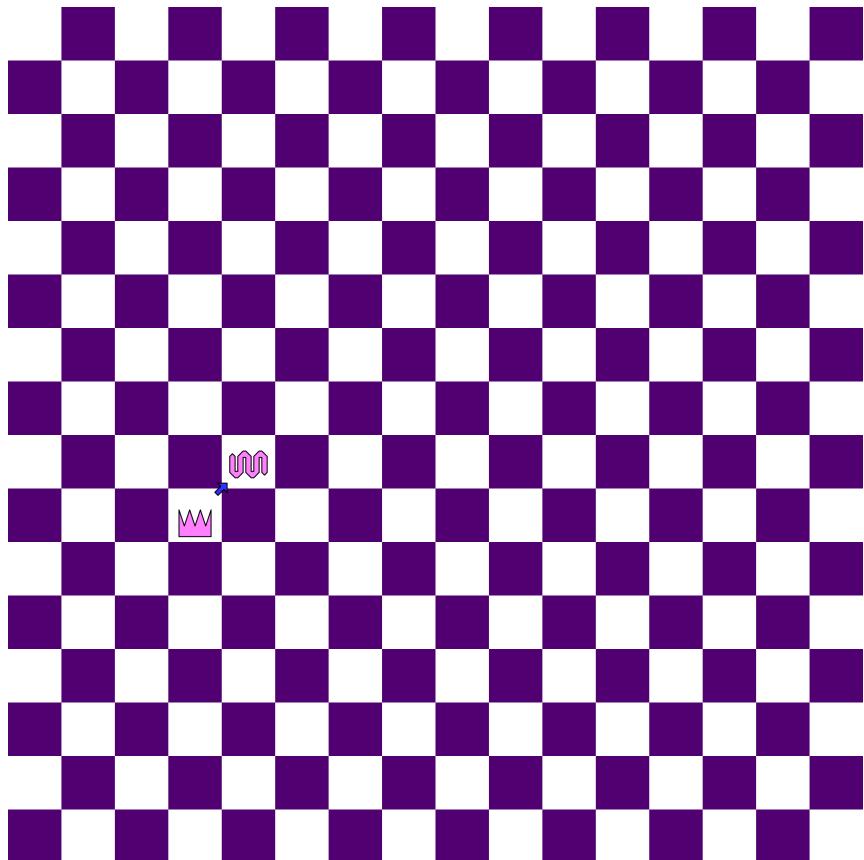


Figure 65: King activating Wave

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

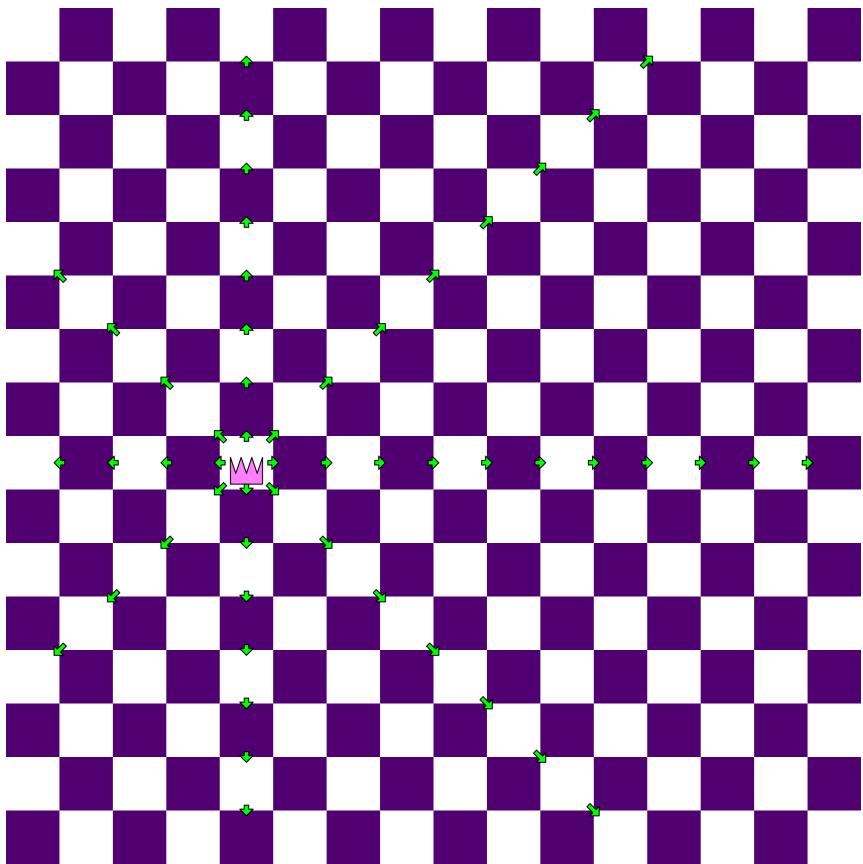


Figure 66: Wave activated by King

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

## Activated by Pawn

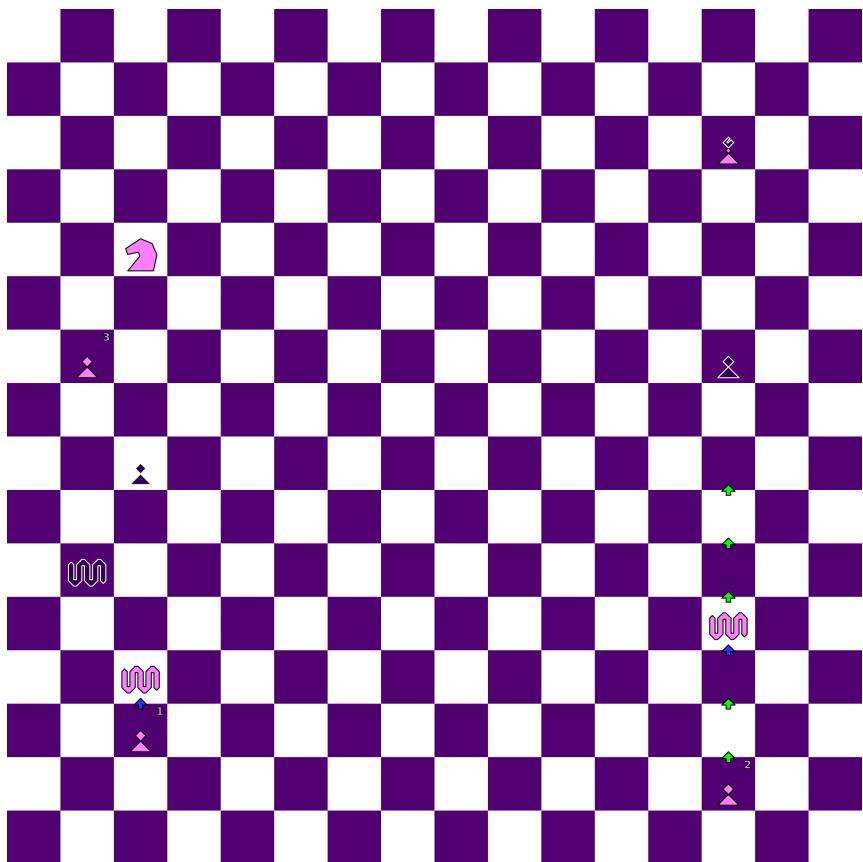


Figure 67: Pawn activates Wave on step-field

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

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

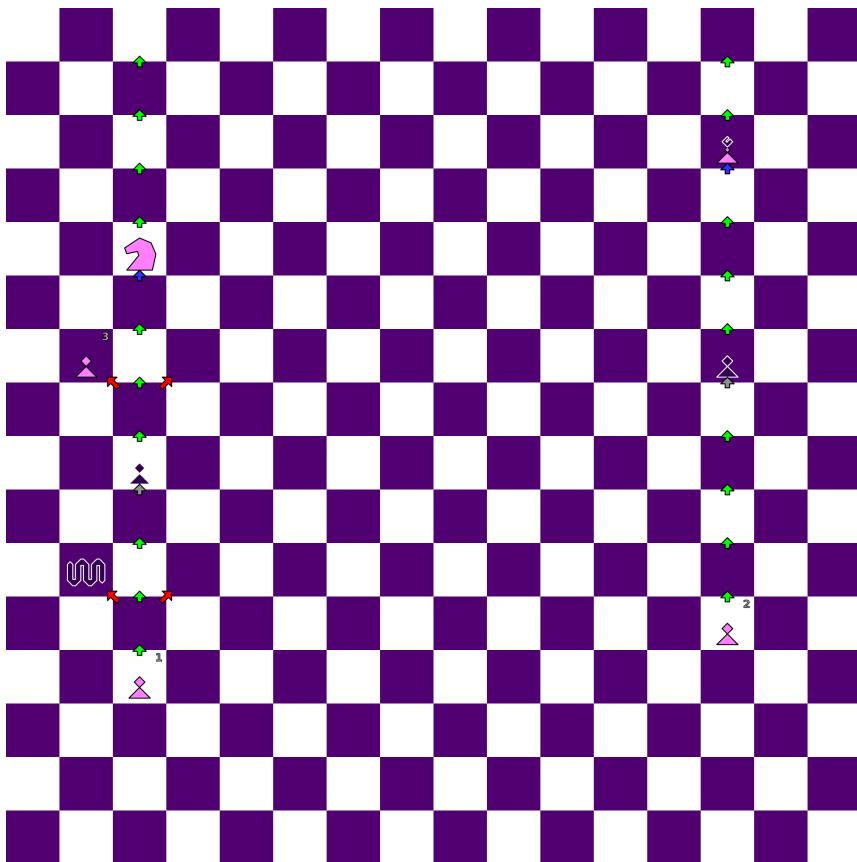


Figure 68: Wave activated on Pawn's step-field

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).

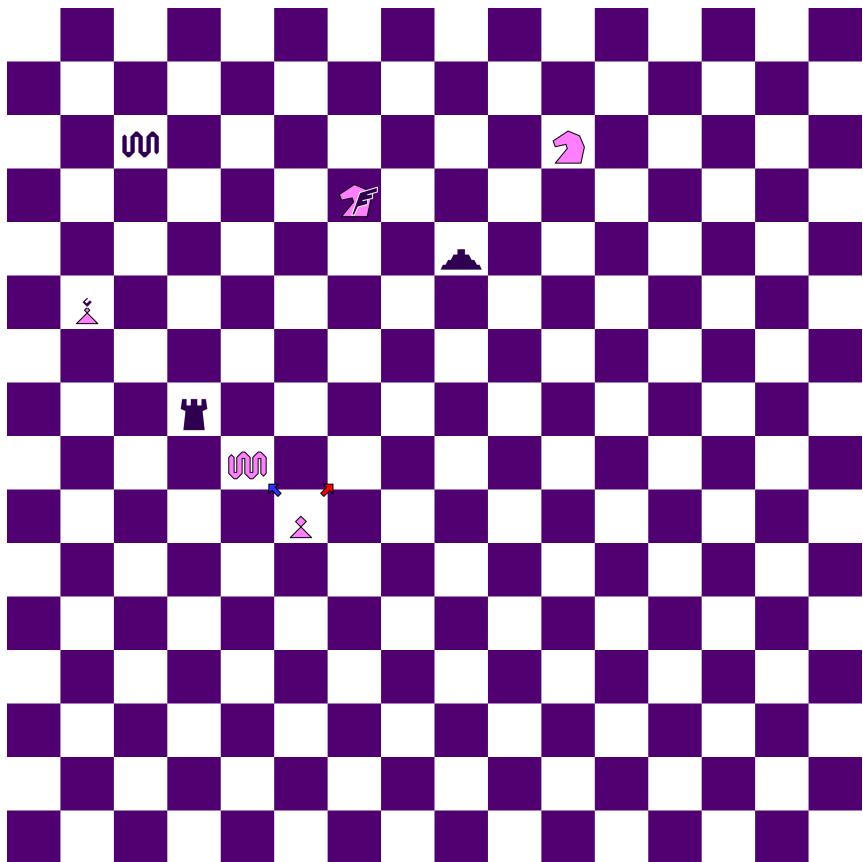


Figure 69: Pawn activates Wave on capture-field

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.

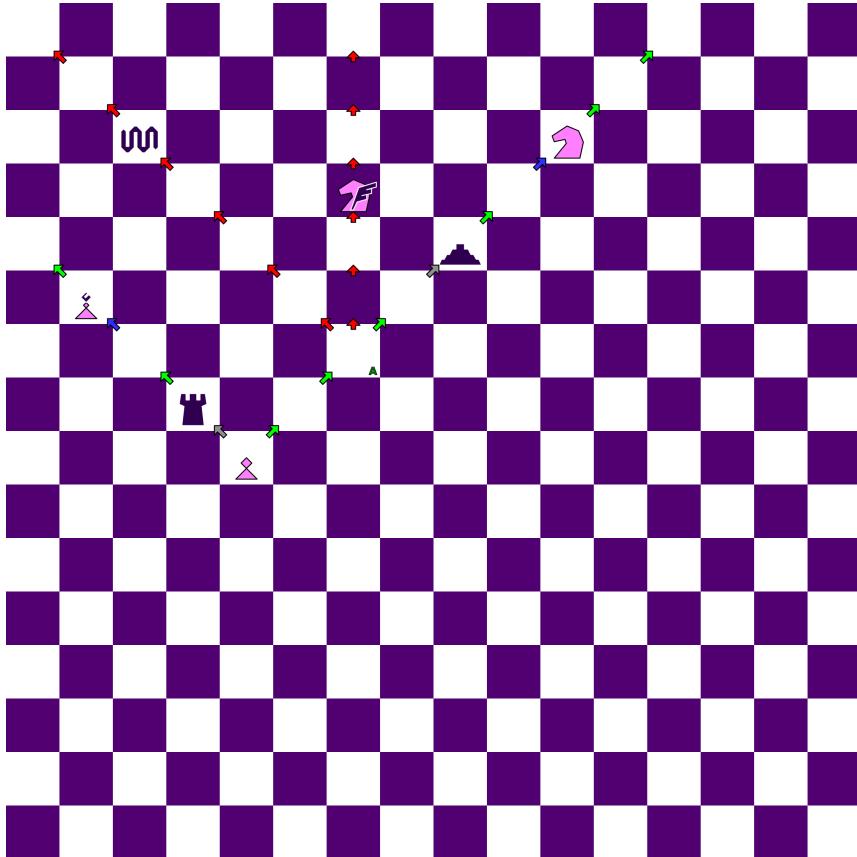


Figure 70: Wave activated on Pawn's capture-field

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.

## Activated by Unicorn

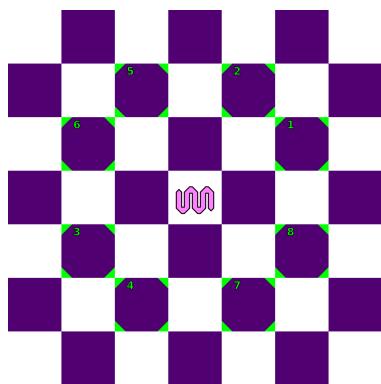


Figure 71: Wave short jump

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

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

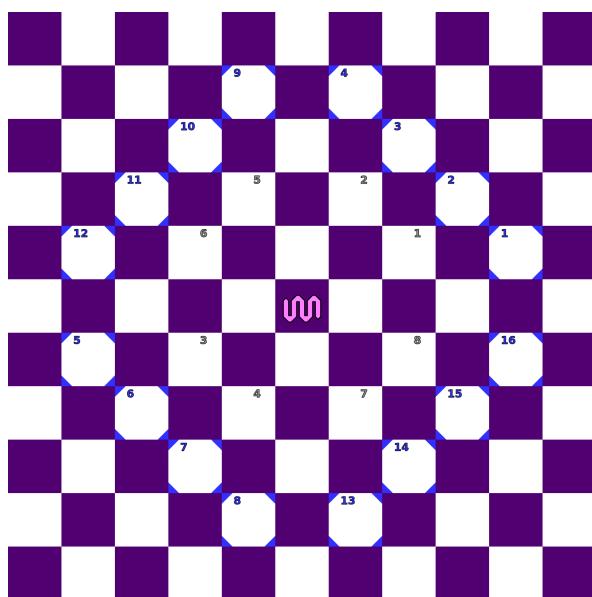


Figure 72: Wave long jump

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

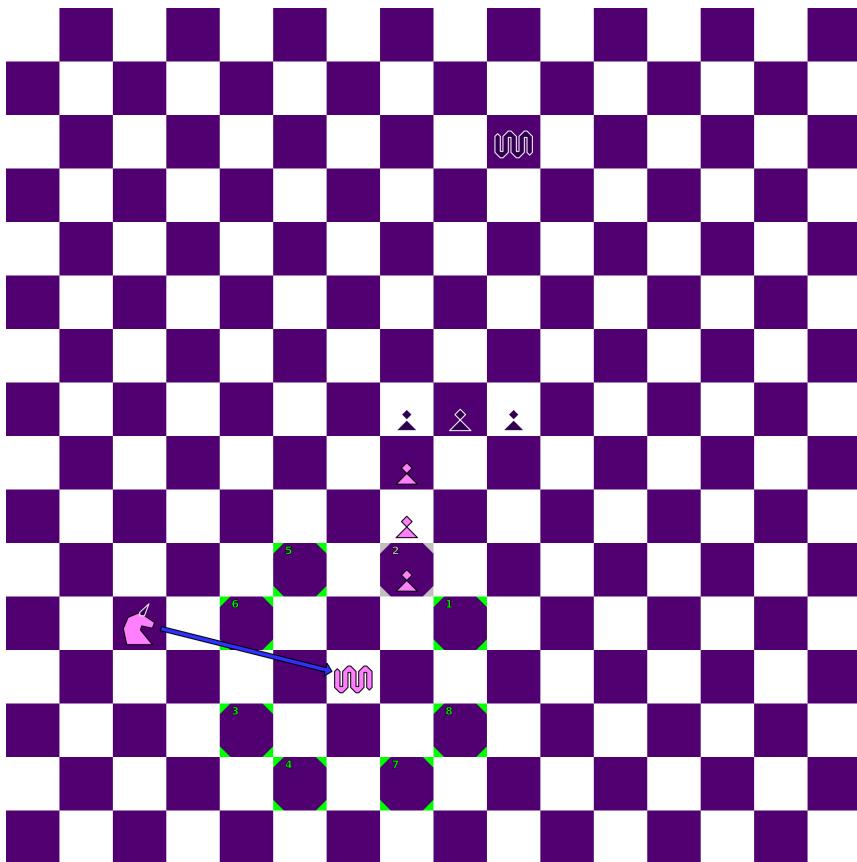


Figure 73: Unicorn activates Wave

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

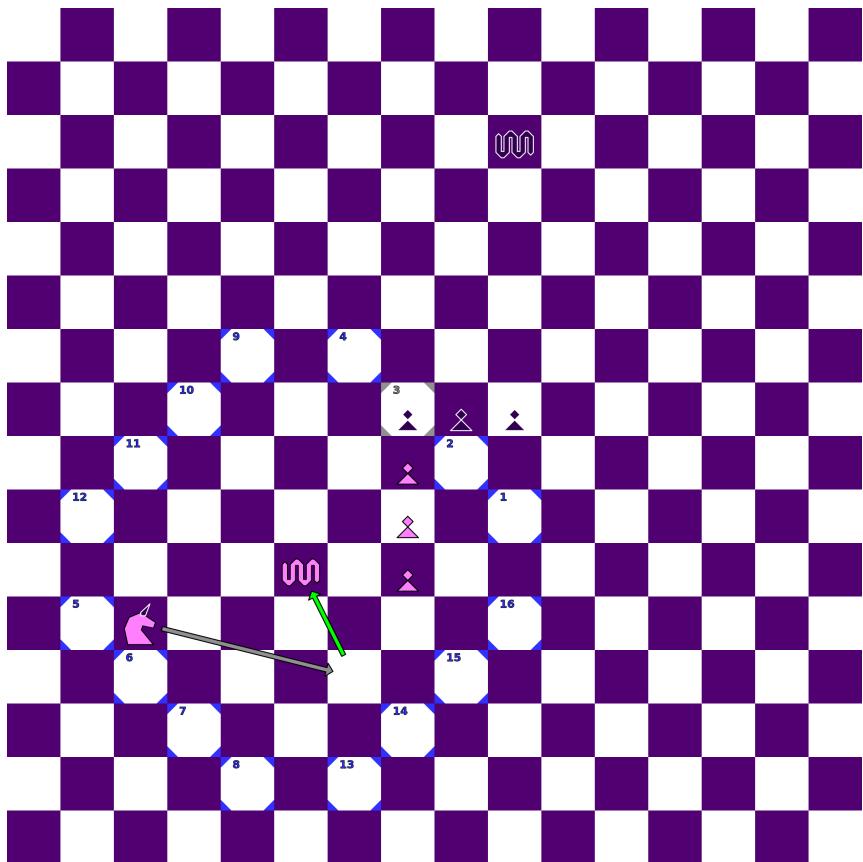


Figure 74: Wave activated by Unicorn, step 1

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

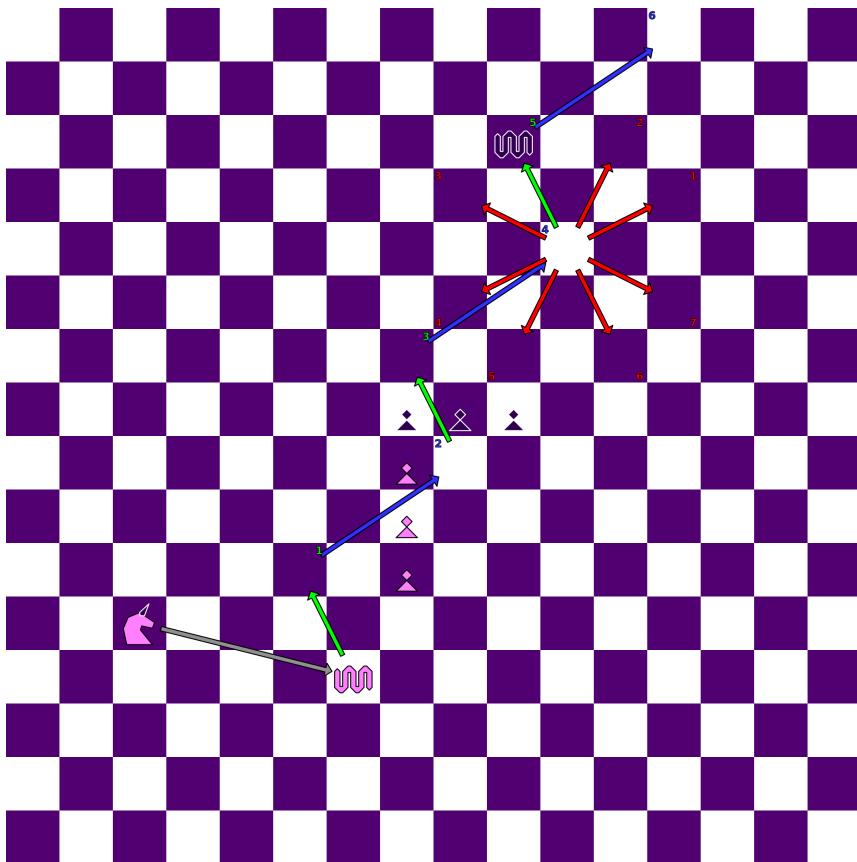


Figure 75: Wave activated by Unicorn, complete ply

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

## Out of board steps

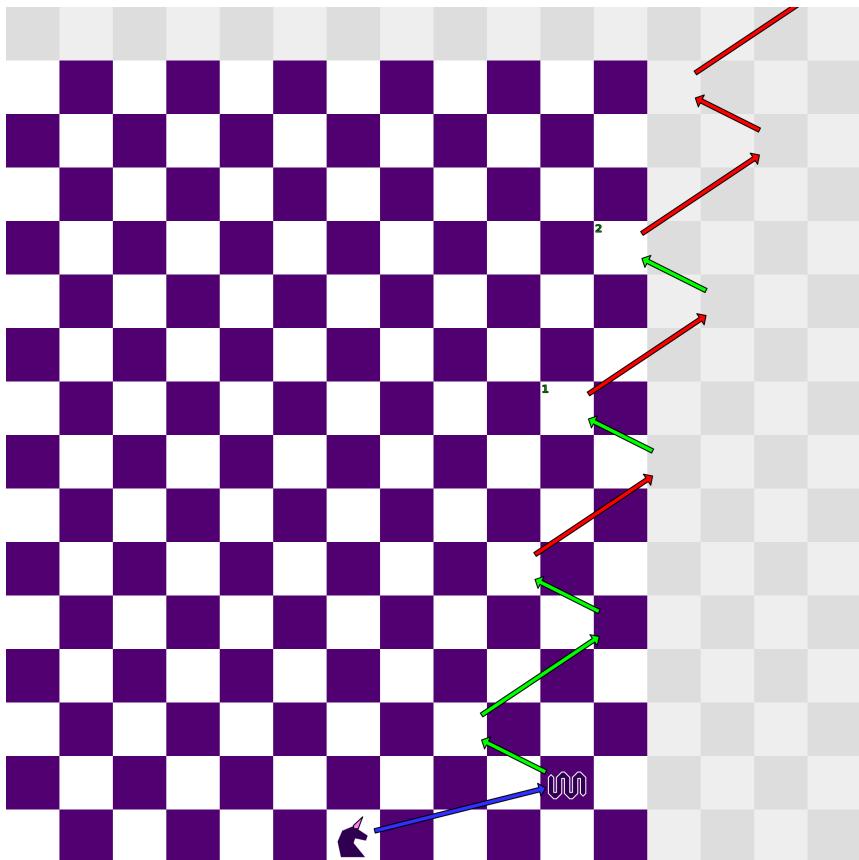


Figure 76: Wave off-board steps

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

## Cascading Waves

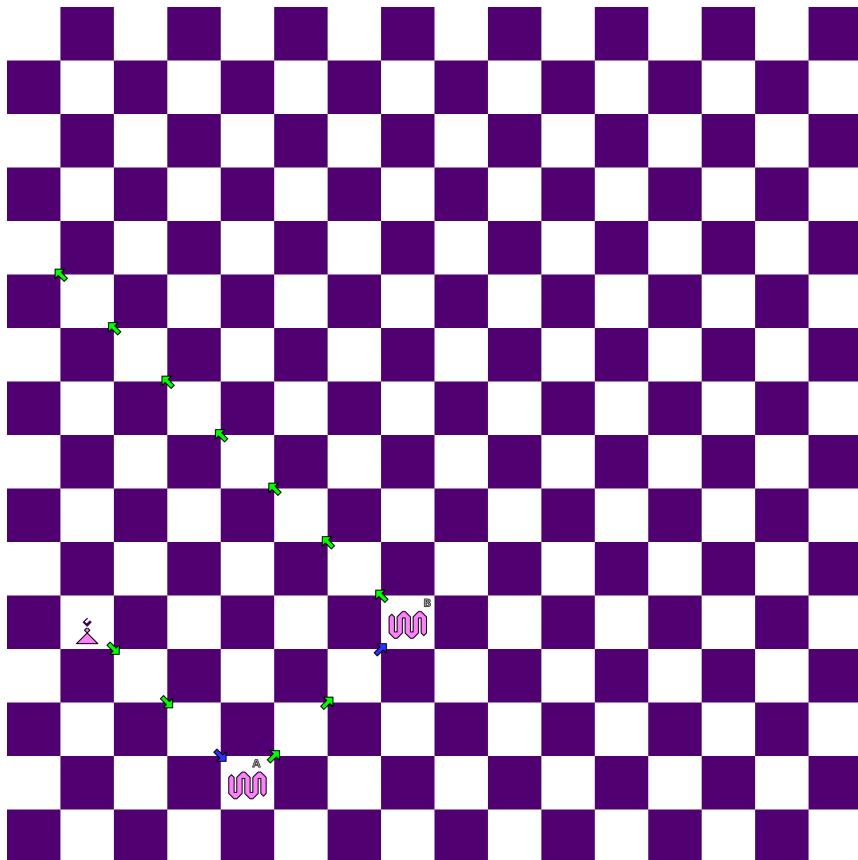


Figure 77: Cascade start

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

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

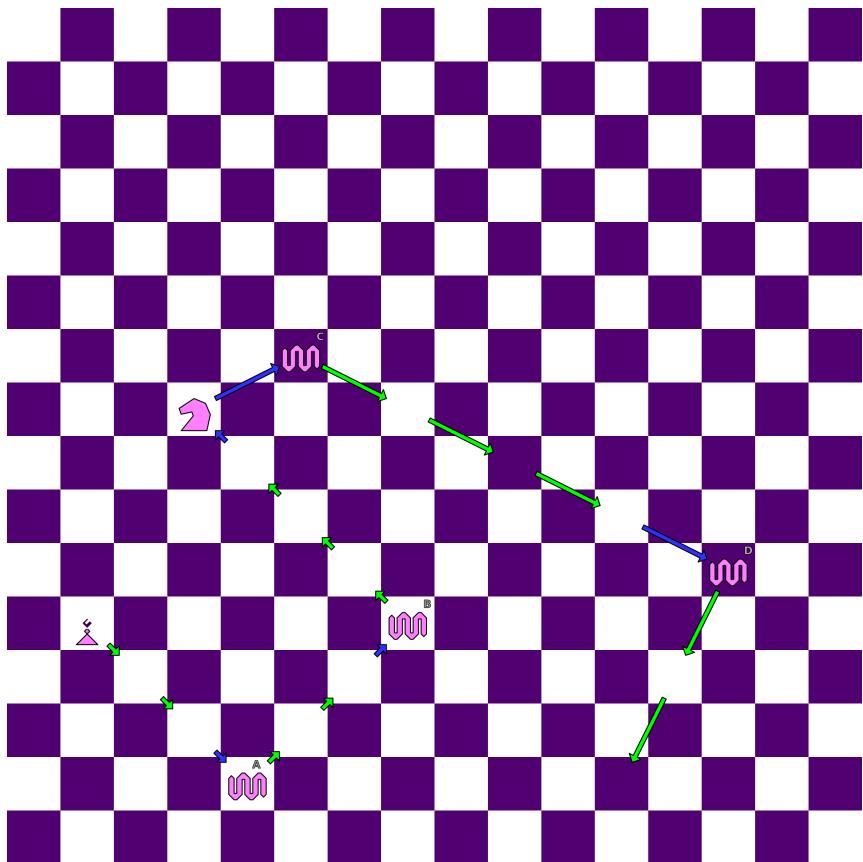


Figure 78: Active piece cascaded

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

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

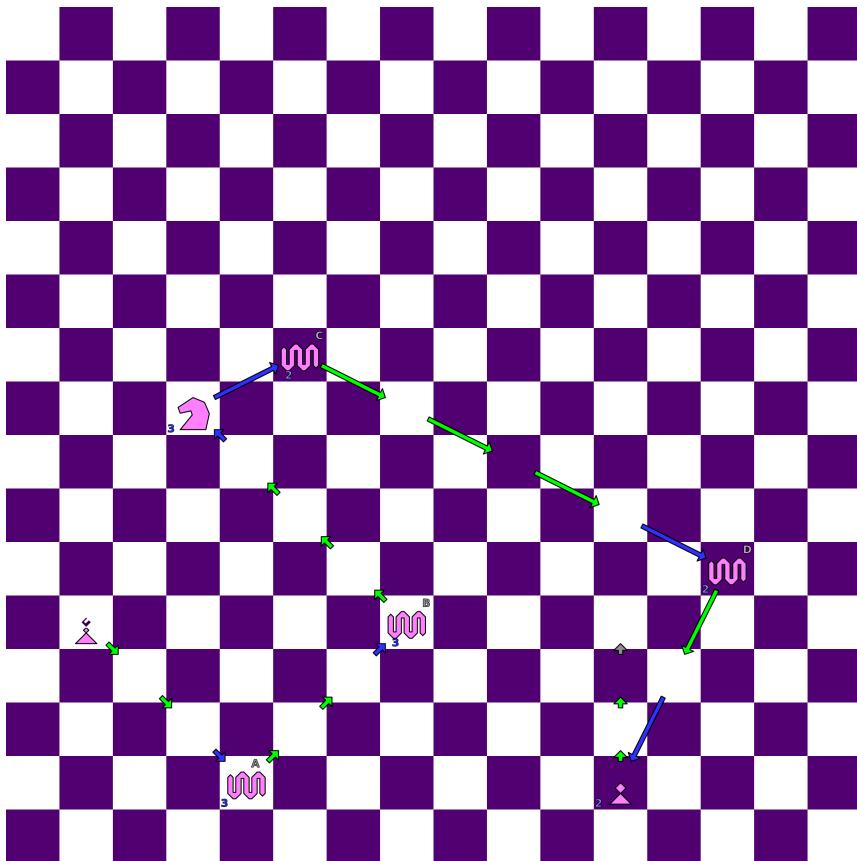


Figure 79: Cascade end

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

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

## No momentum

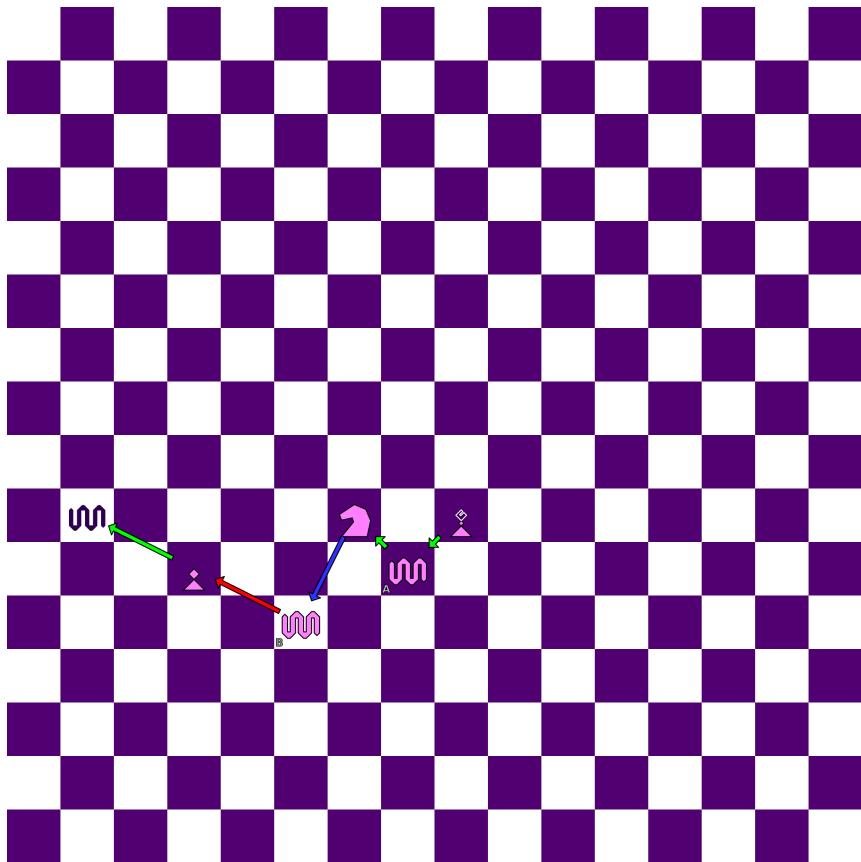


Figure 80: No momentum

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

## Single-step piece and momentum

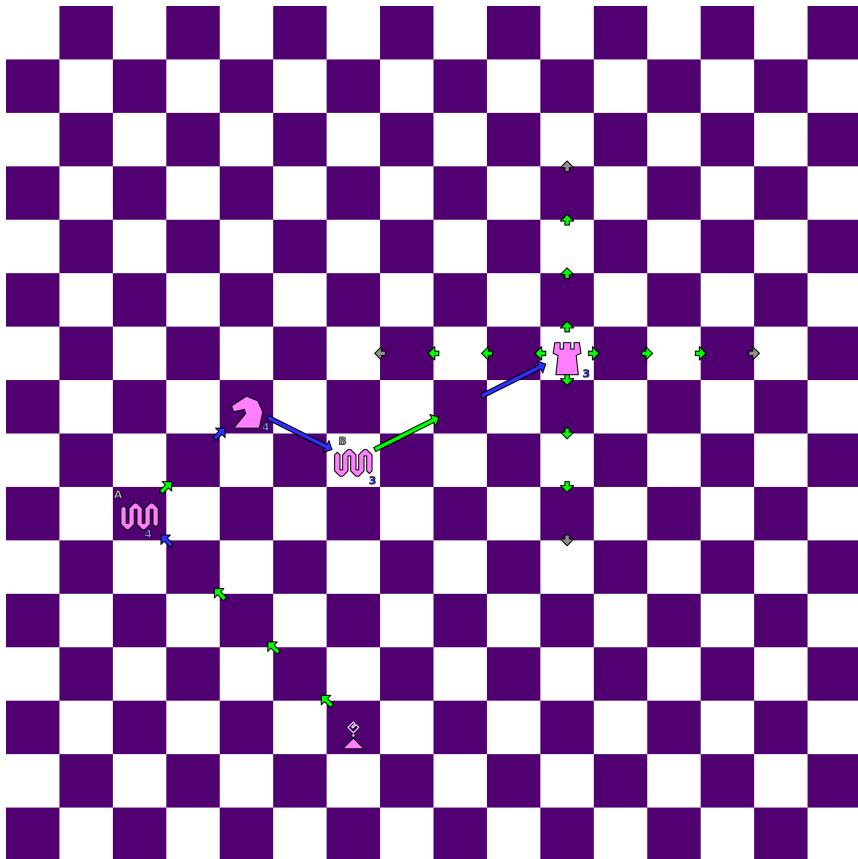


Figure 81: Single-step piece and momentum

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

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

## Activating Pawn

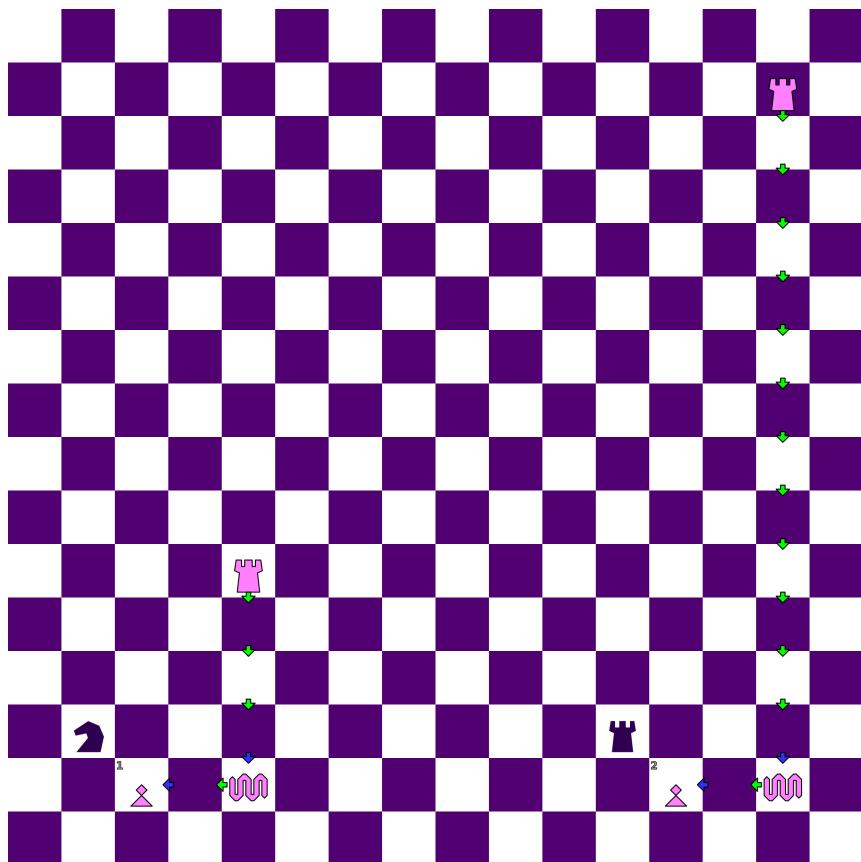


Figure 82: Activating Pawns

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

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

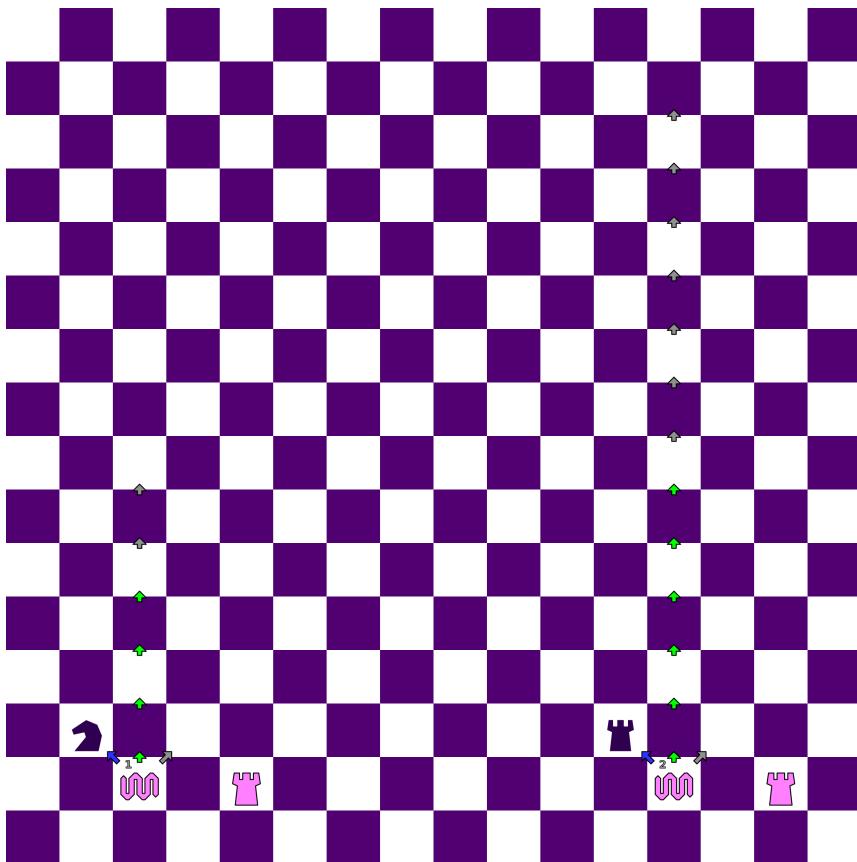


Figure 83: Pawns activated

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

## Activating Pyramid

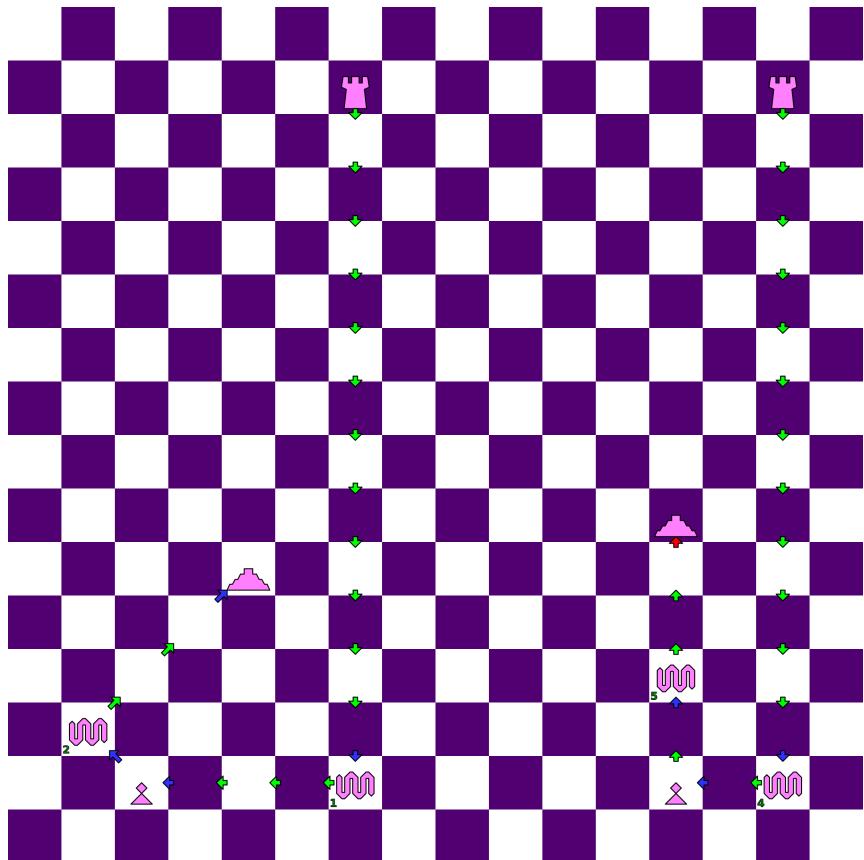


Figure 84: Activating Pyramid by Pawn

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

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

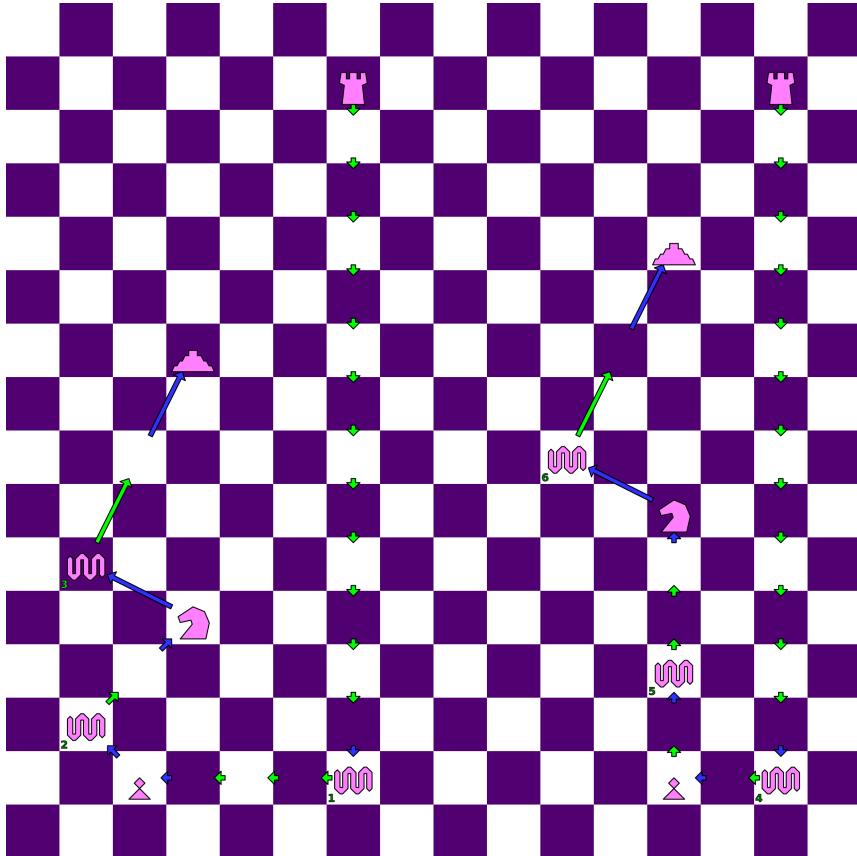


Figure 85: Activating Pyramid by cascading Pawn

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

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

## Reactivating pieces

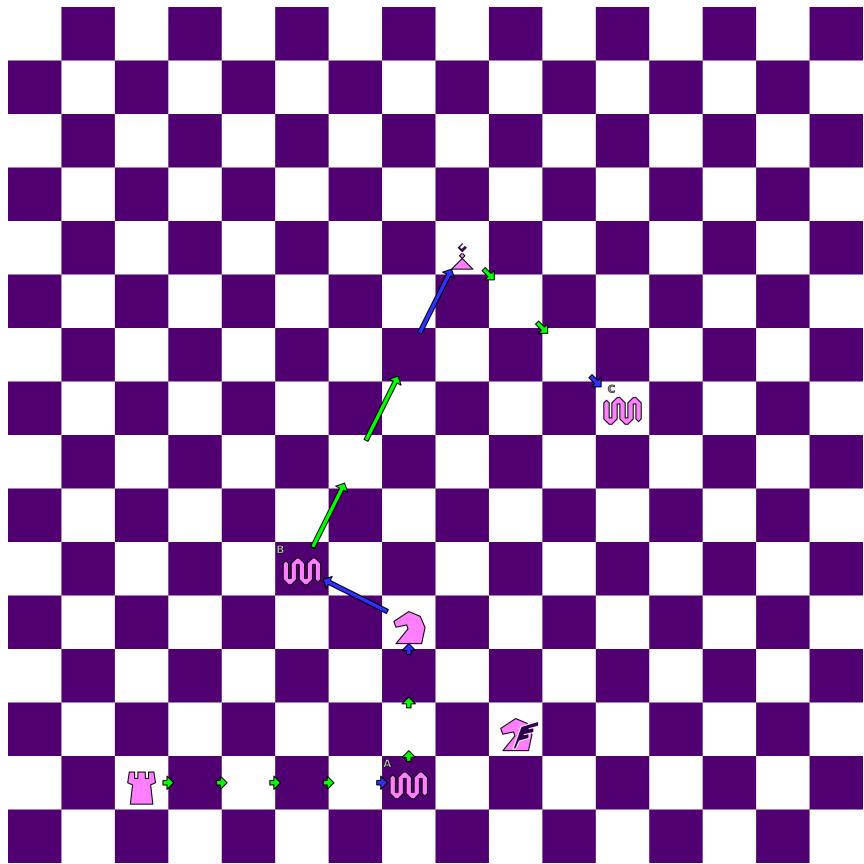


Figure 86: Start reactivating piece

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

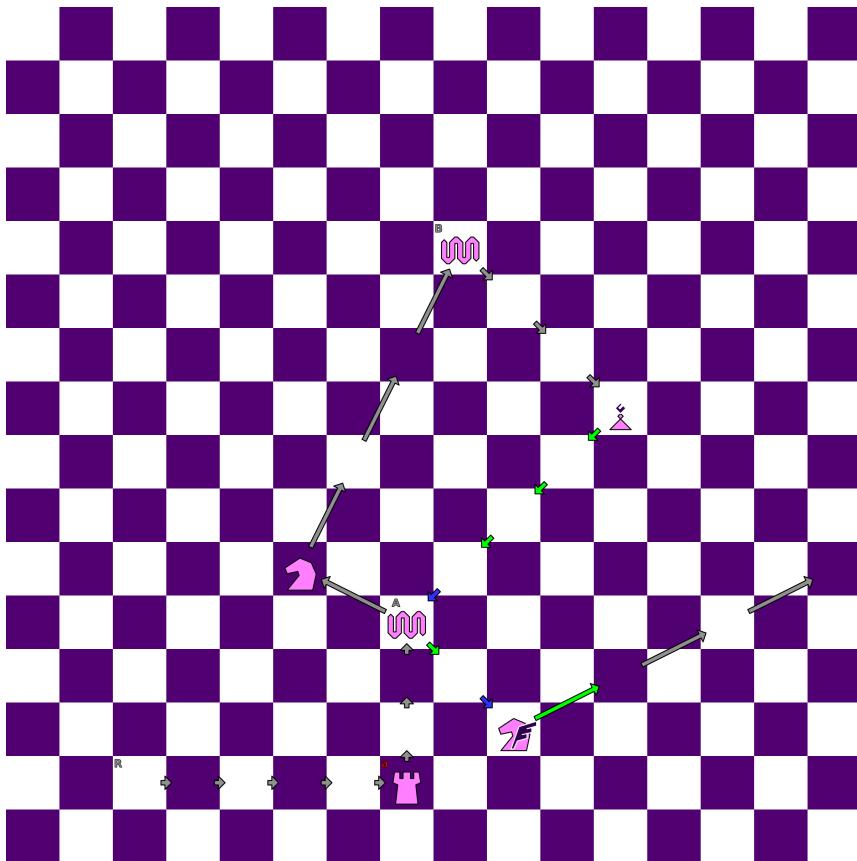


Figure 87: Reactivating piece steps

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

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

## Cascading pinned piece

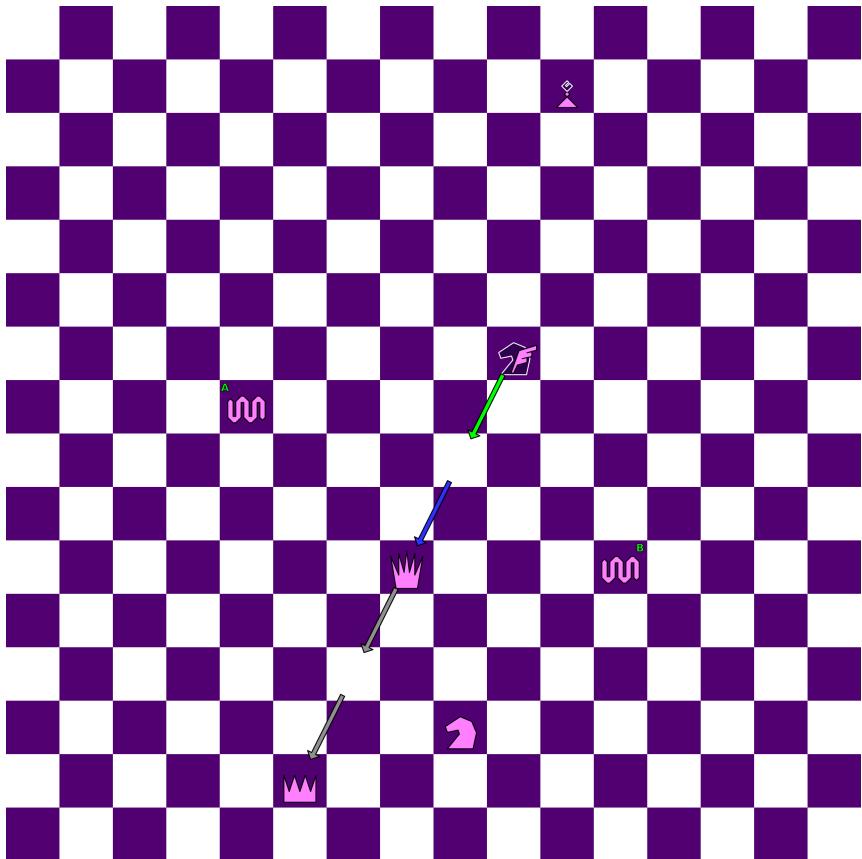


Figure 88: Light Queen is hard-pinned

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

Here, light Queen is hard-pinned.

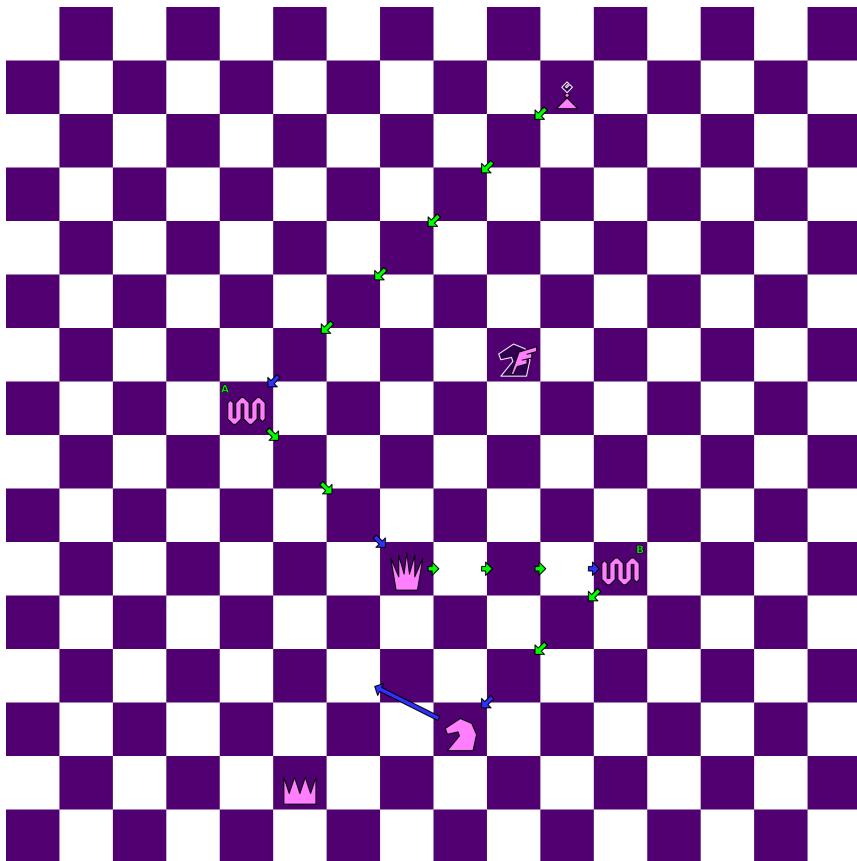


Figure 89: Cascading pinned piece

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

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

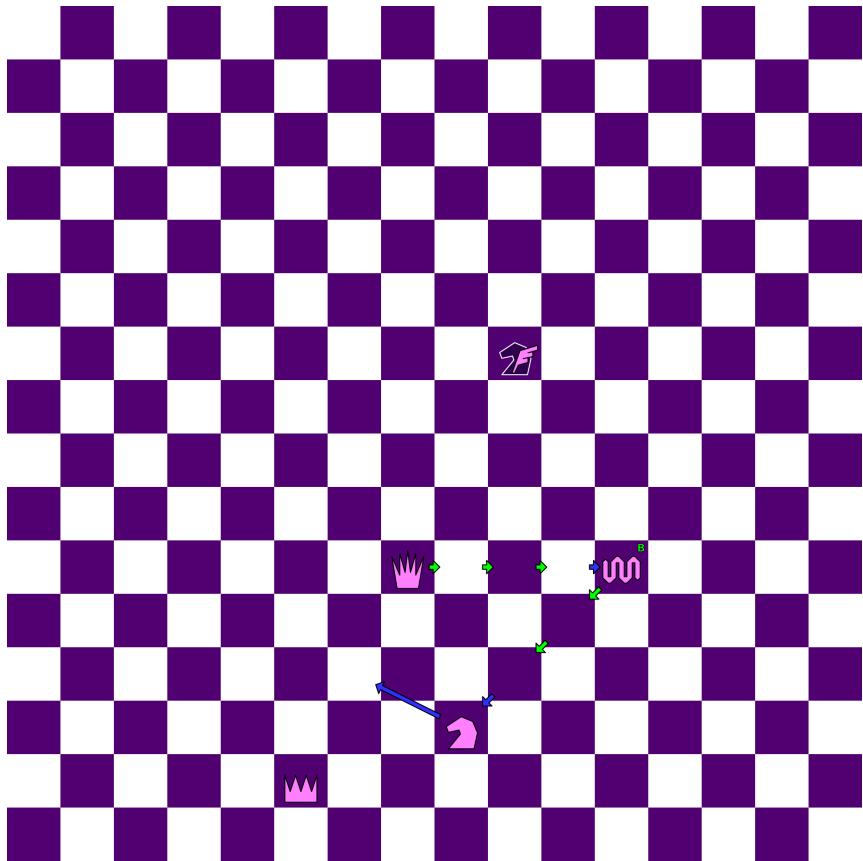


Figure 90: Pinned piece starts a cascade

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

## Cascade check, checkmate

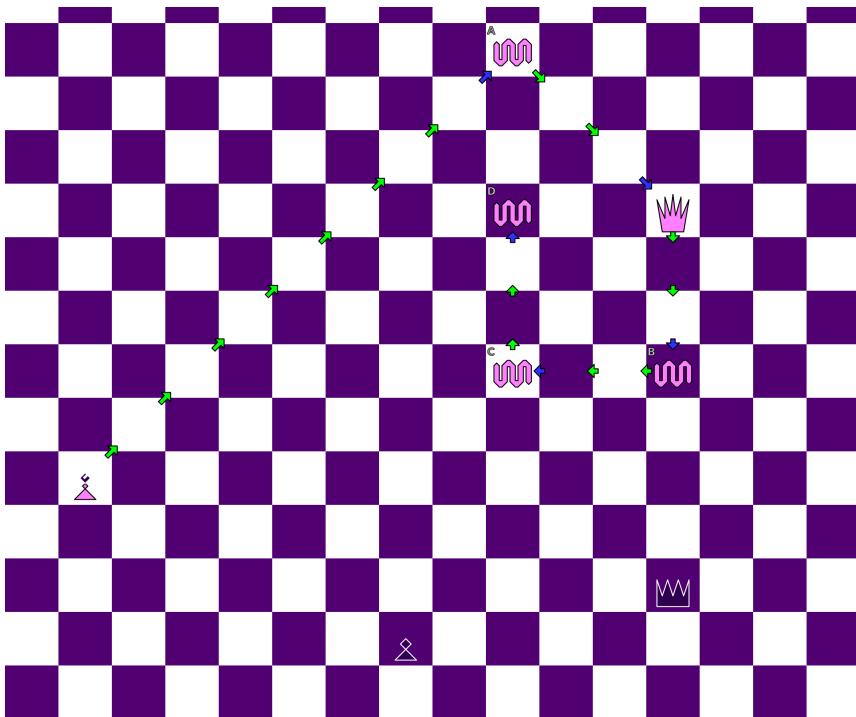


Figure 91: Activating Queen

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

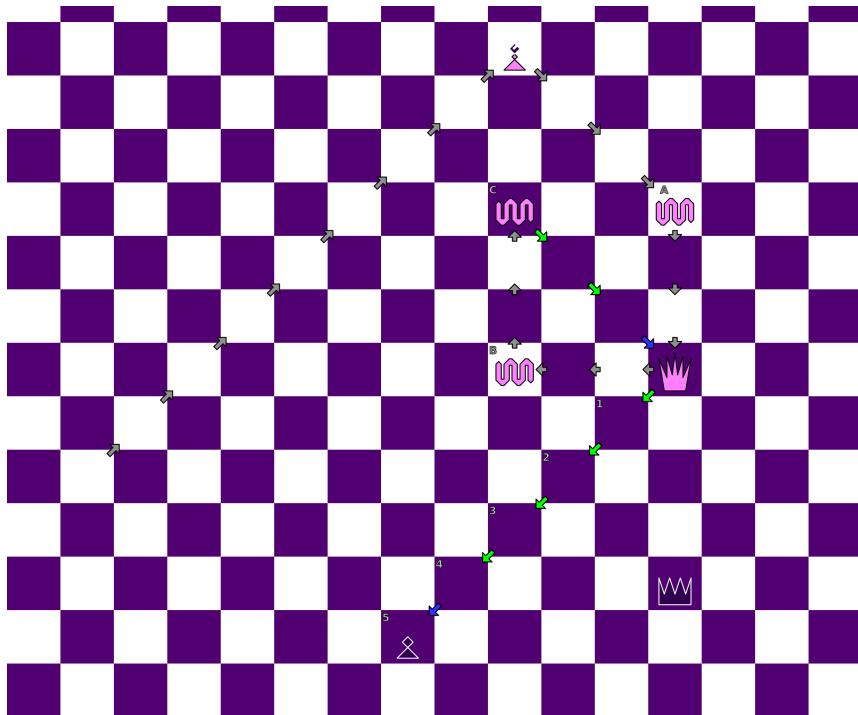


Figure 92: Reactivating Queen

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

## Static move is illegal

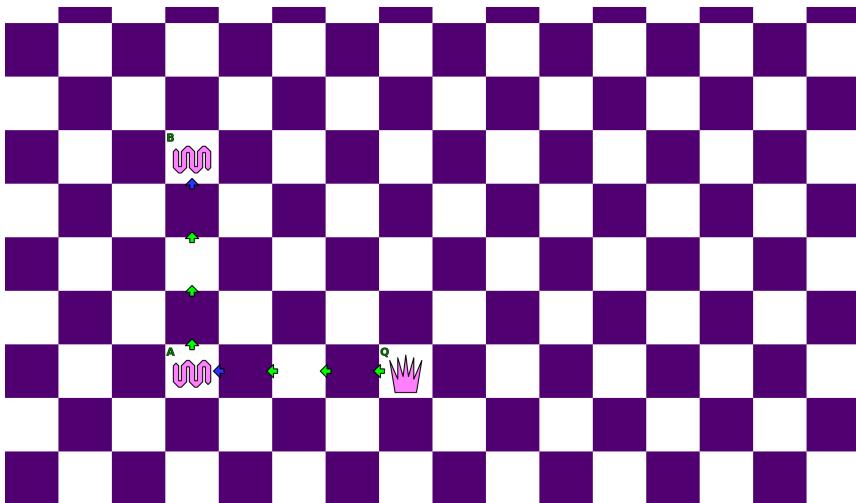


Figure 93: Static move start

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

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

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

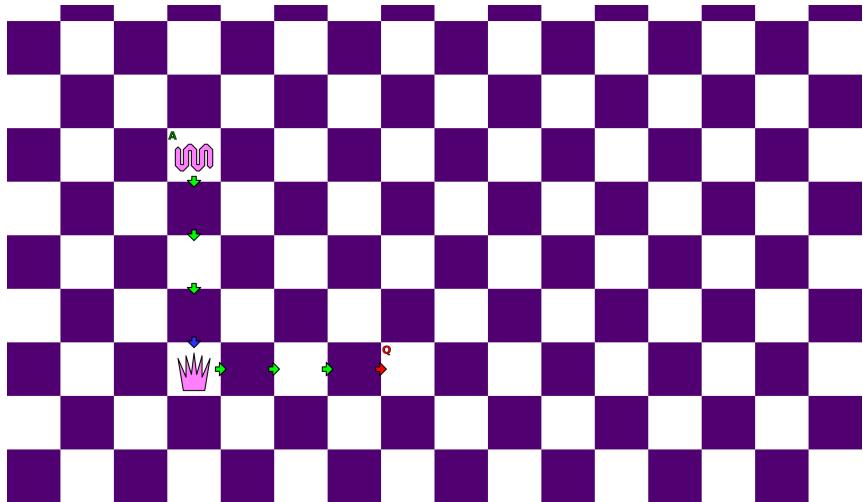


Figure 94: Static move is illegal

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

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

## Static piece is legal

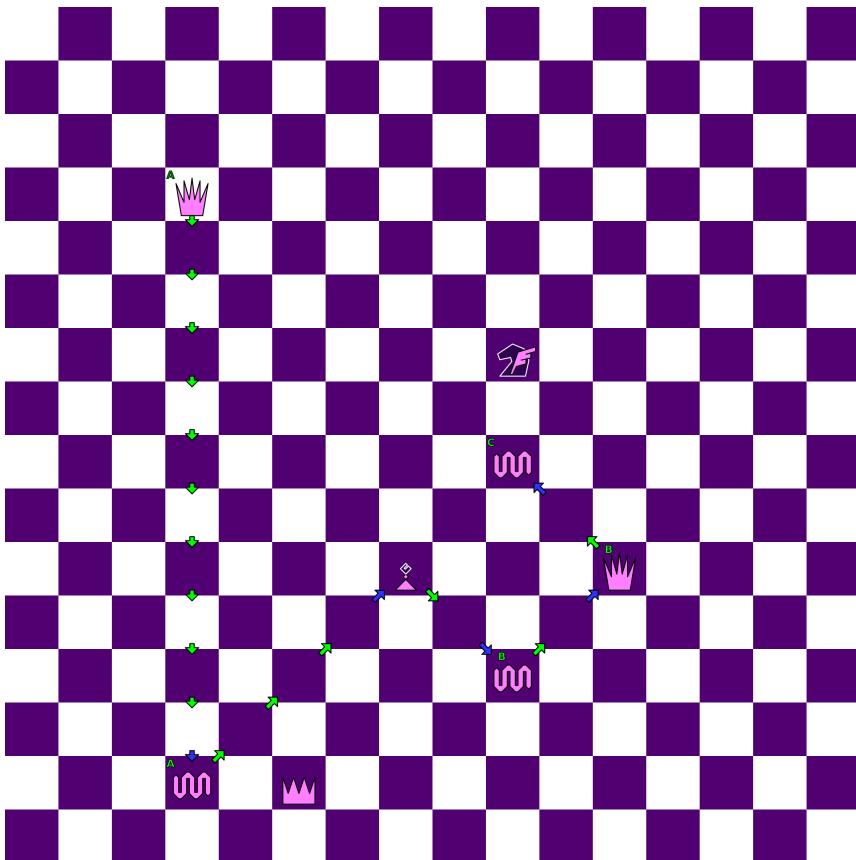


Figure 95: Static piece start

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

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

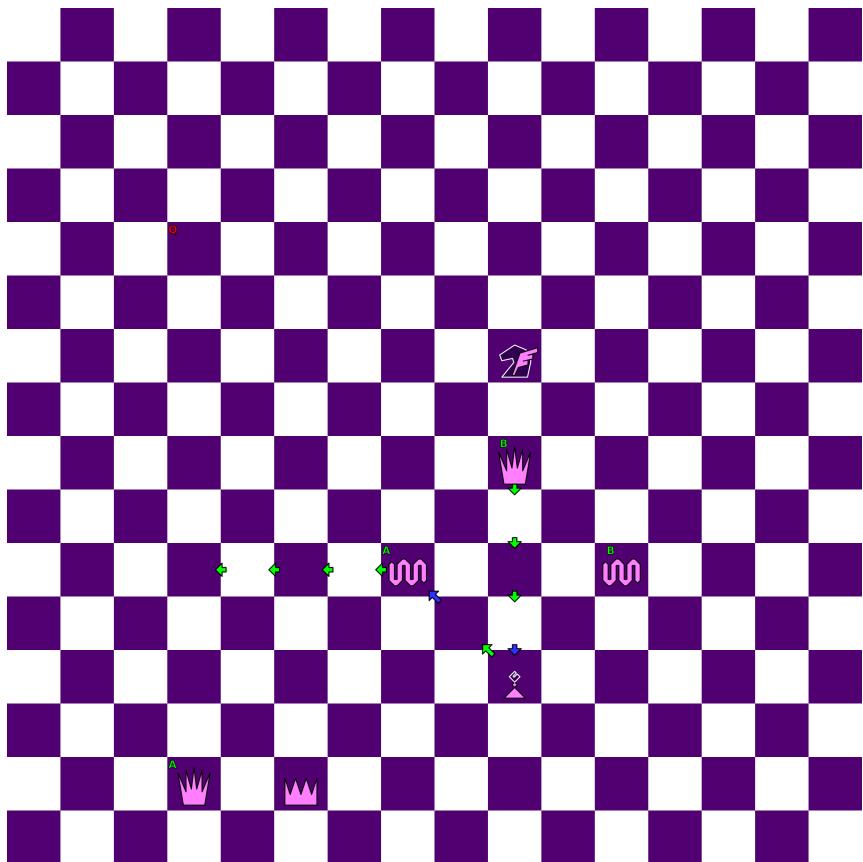


Figure 96: Static piece is legal

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

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

## Delayed promotion is legal

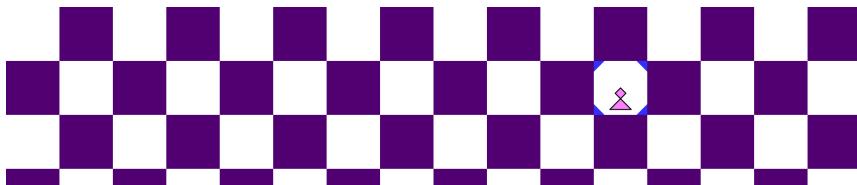


Figure 97: Pawn is tagged for promotion

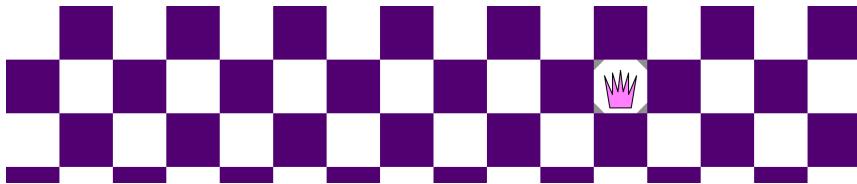


Figure 98: Pawn was promoted to Queen

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

## Cascading opponent

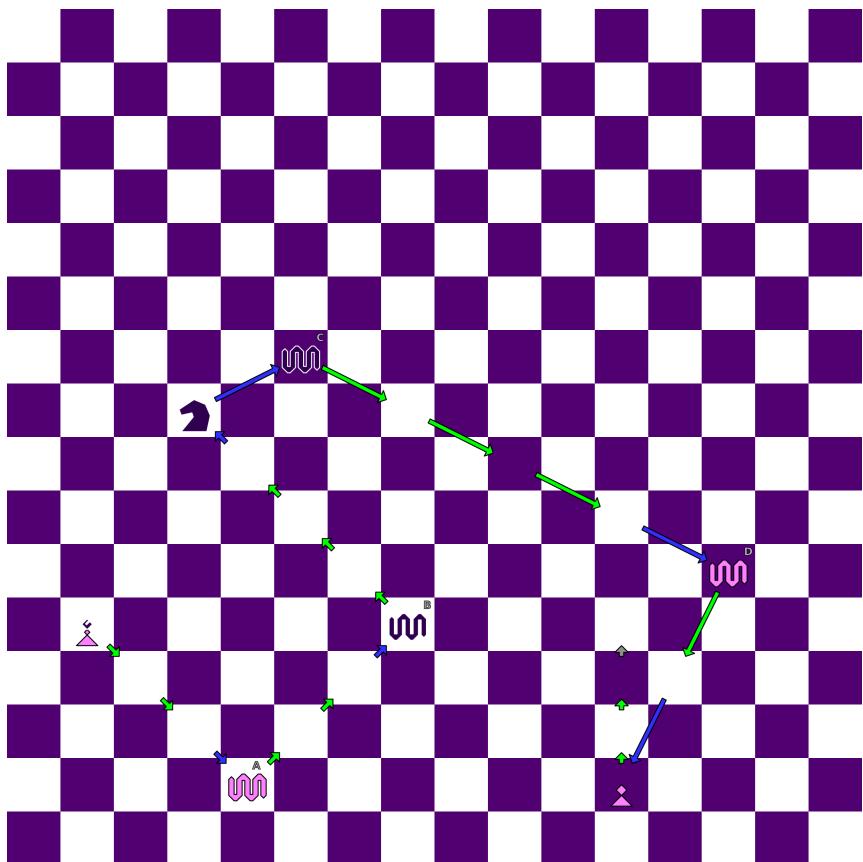


Figure 99: Cascading opponent

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

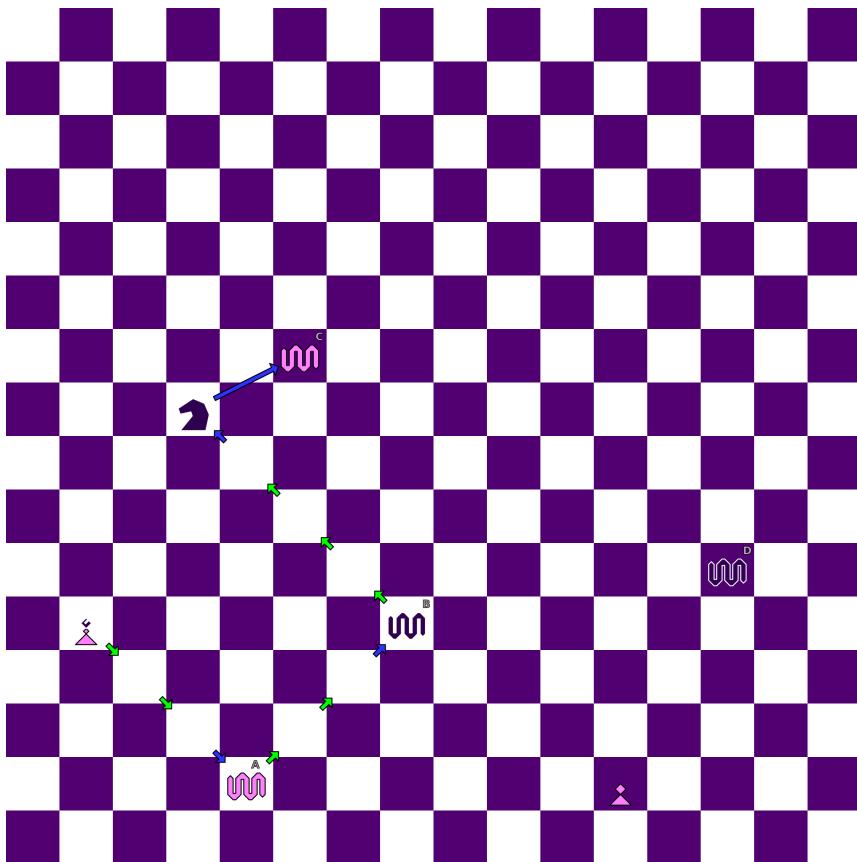


Figure 100: Cascaded opponent capturing piece

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

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

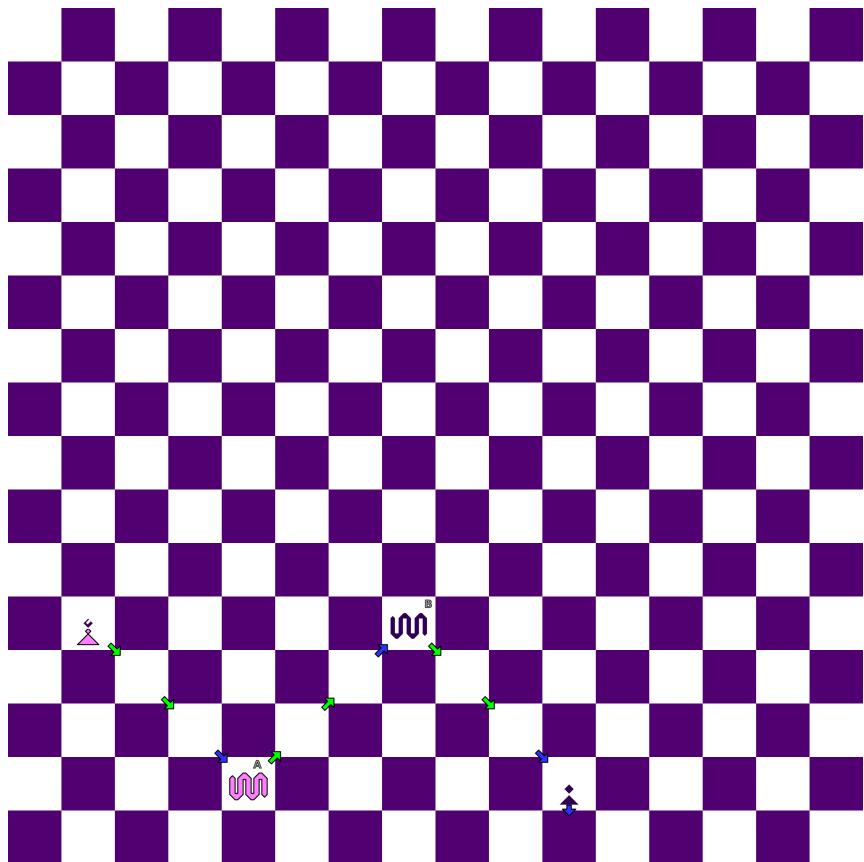


Figure 101: Cascaded opponent promoting Pawn

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

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

# Cascade self-checkmate

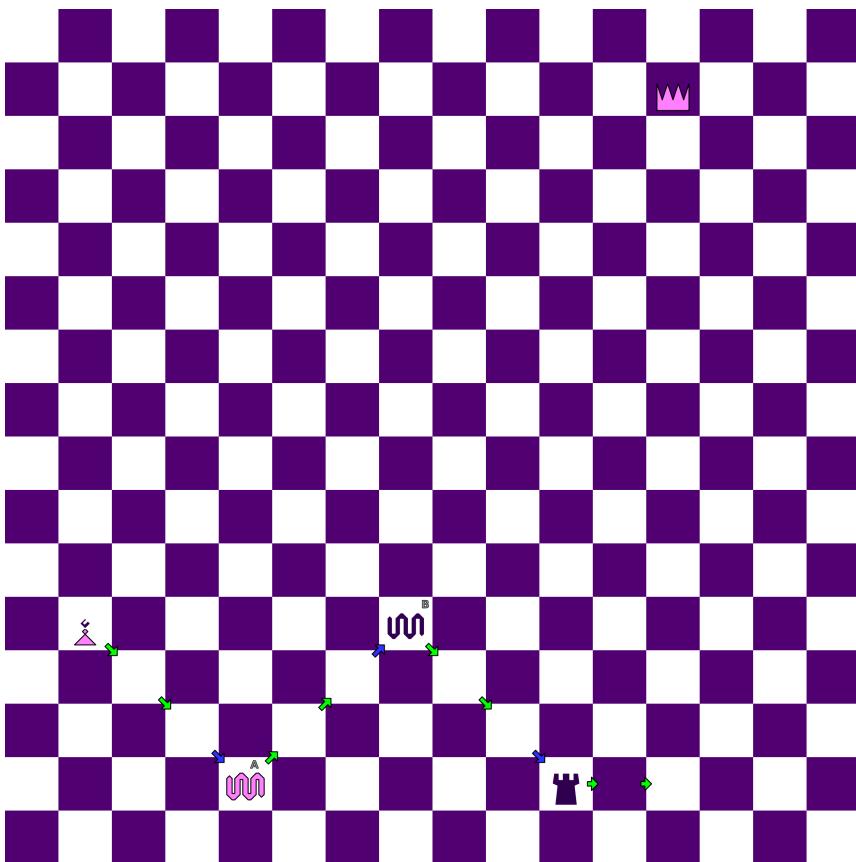


Figure 102: Cascading opponent's Rook

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

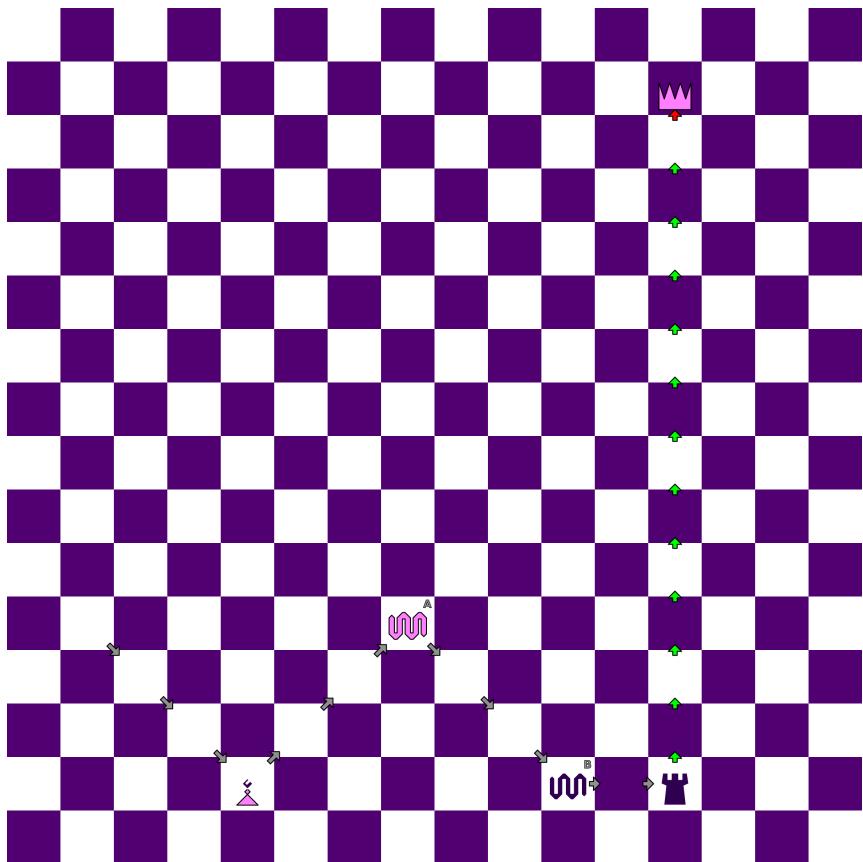


Figure 103: Cascaded self-checkmate

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

## Wave blocked

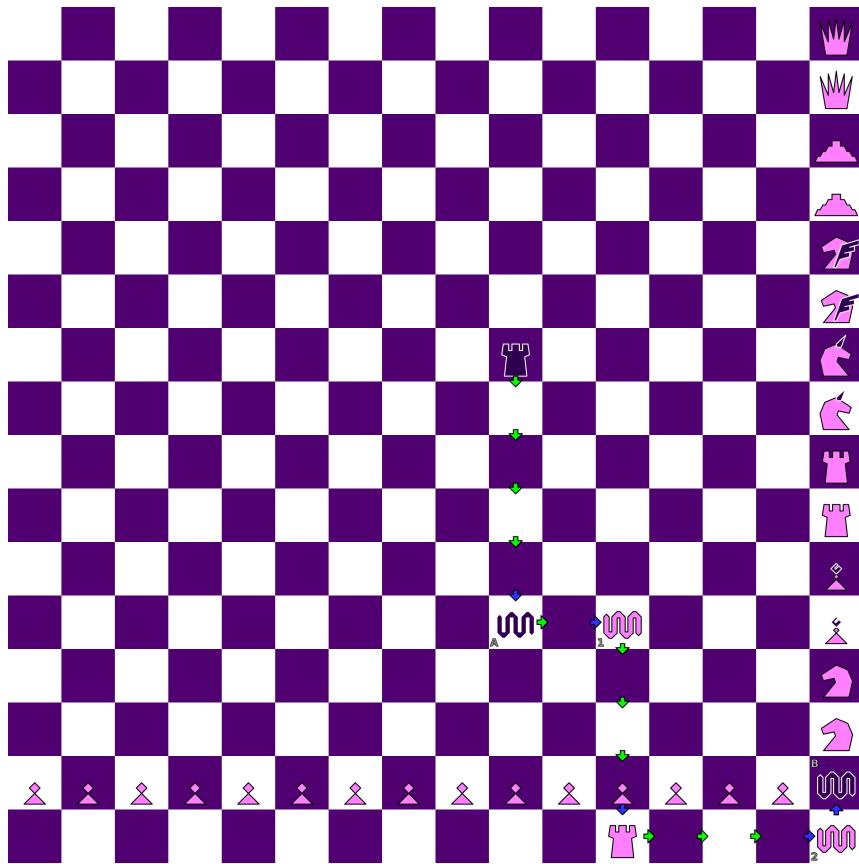


Figure 104: Activating Wave

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

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

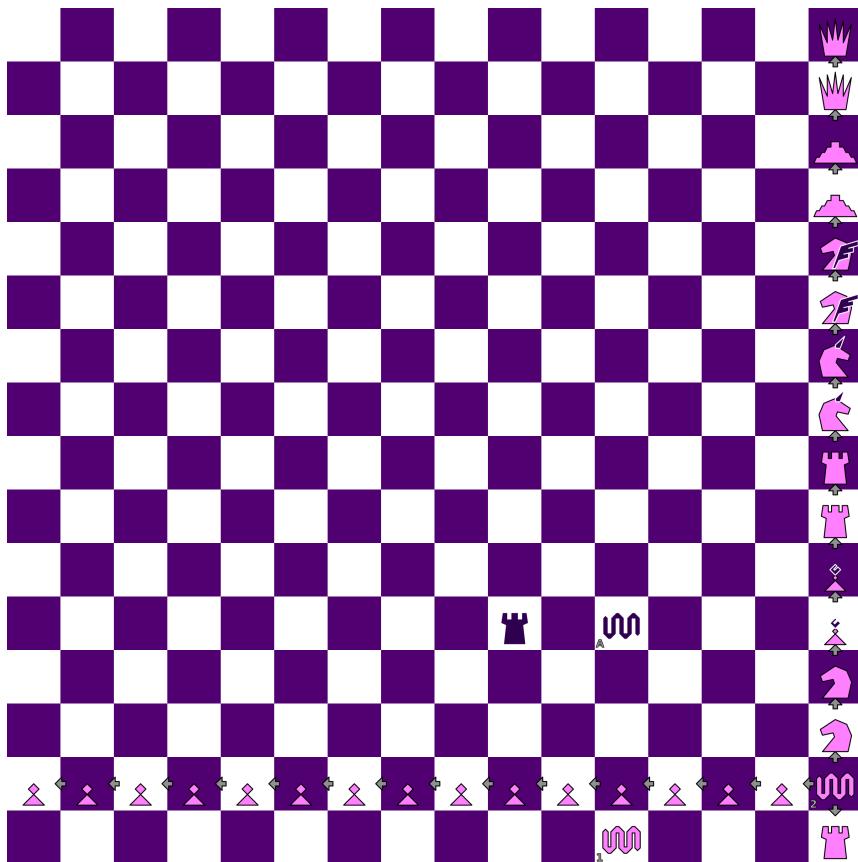


Figure 105: Activated Wave blocked

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

## Divergence

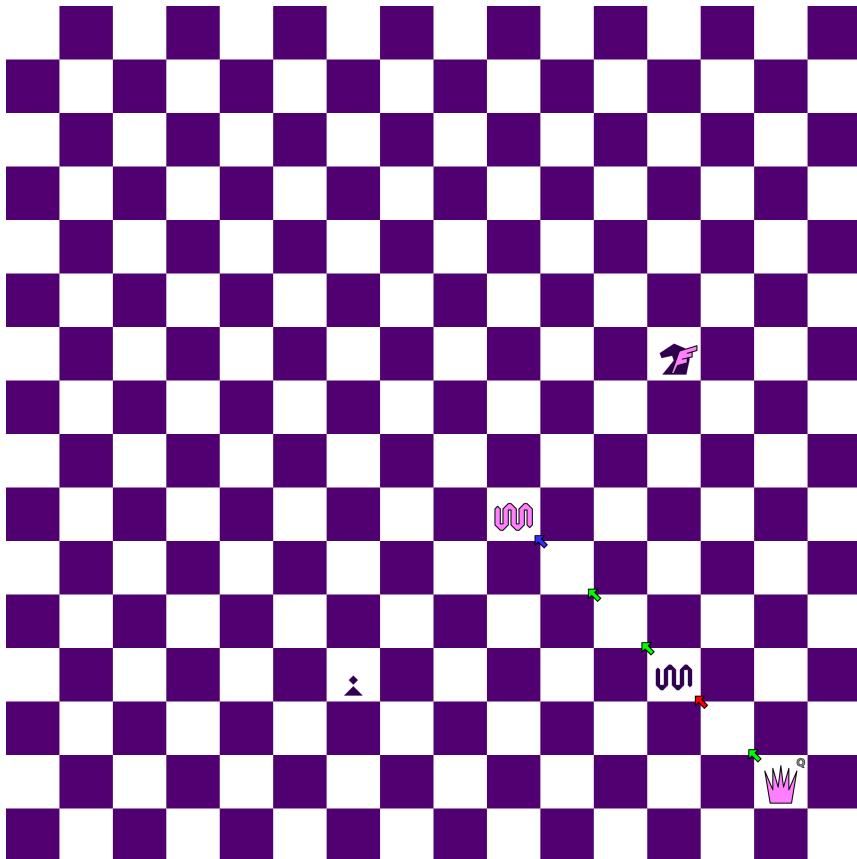


Figure 106: Own Wave is divergent

Piece, when encounters own Wave, can continue its movement in direction different to the one taken before the encounter. Direction change is divergence. Divergence is optional, own Wave could instead be activated, or ignored. After divergence, piece is limited by momentum it had when own Wave was encountered.

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

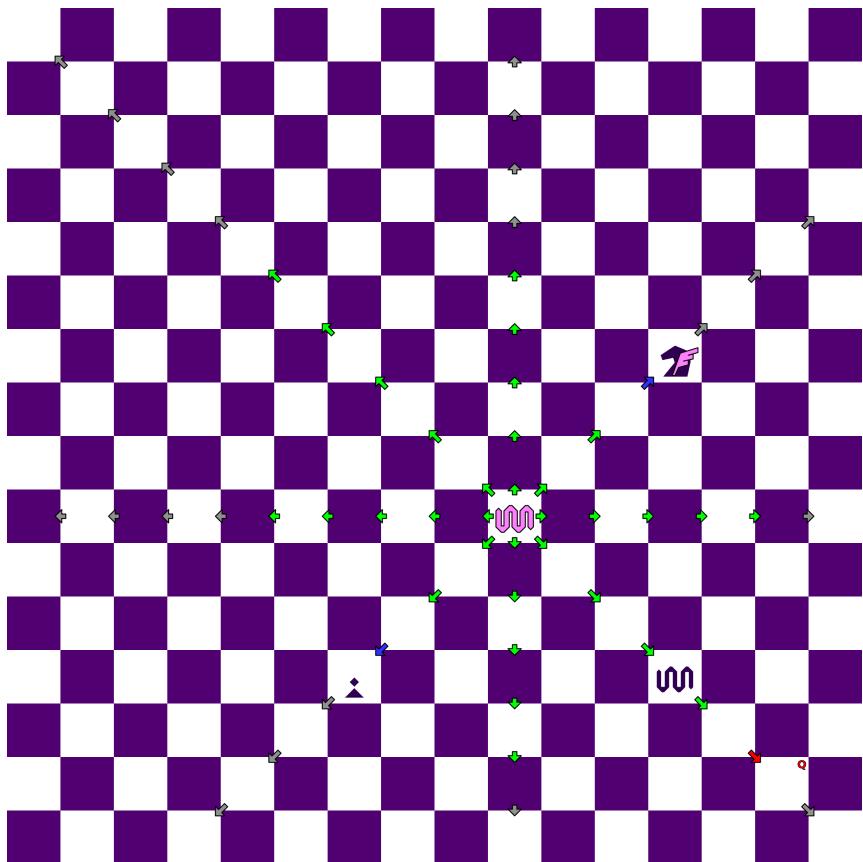


Figure 107: Diverging Queen

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

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

## Diverging Pawn

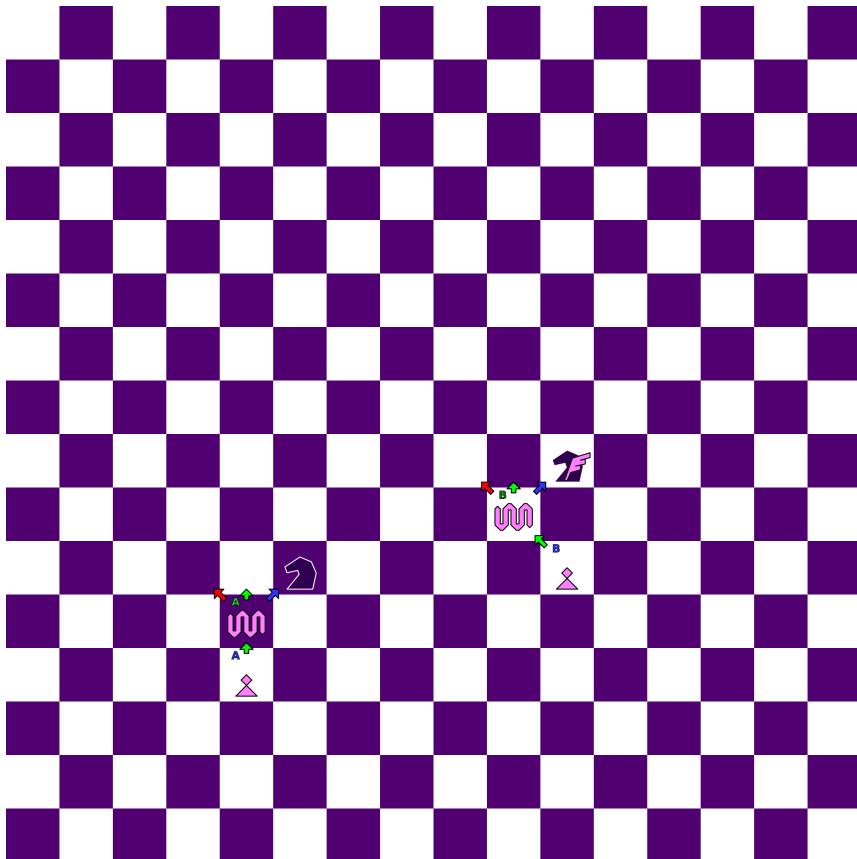


Figure 108: Diverging Pawn

Image above have two examples in parallel; left, and right. Pawns can diverge regardless if own Wave is encountered on step-, or capture-field. Similar to [activated Pawn](#), diverging Pawn can also choose to step, or to capture opponent's piece, if it's positioned on a capture-field accessible after divergence.

Here, both Pawns can step forward, or capture a piece after divergence, regardless if own Wave is encountered on a step-, or capture-field.

## Diverging rushing Pawn

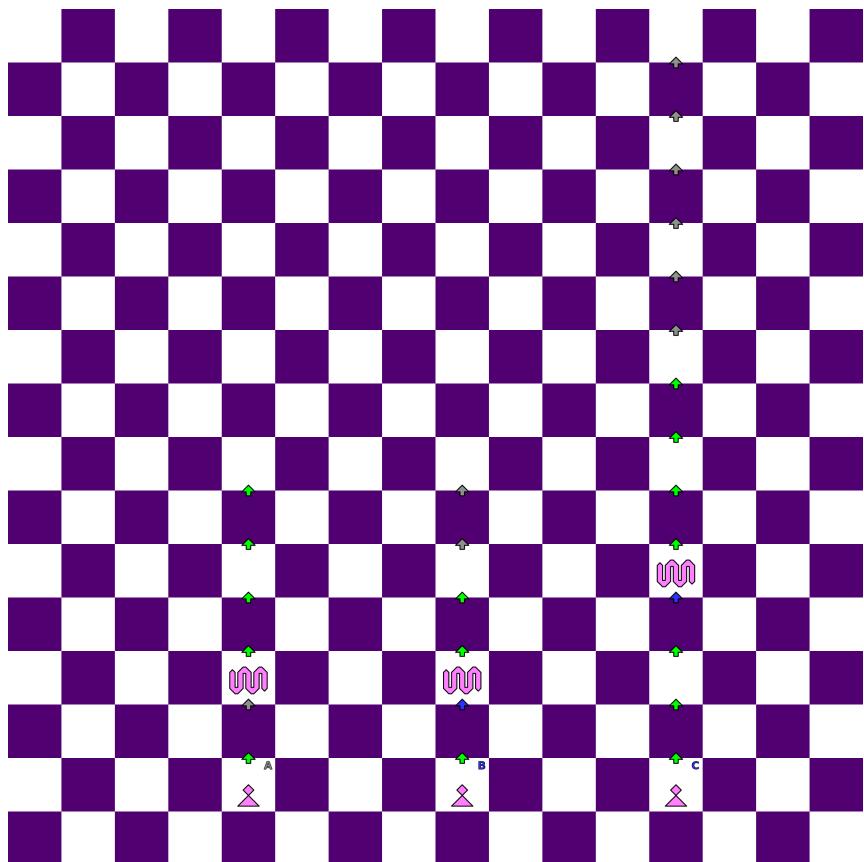


Figure 109: Diverging rushing Pawn

Image above have three examples presented in parallel; left, center, and right. Pawn, when rushing, can activate own Wave, ignore it (in this example, Pawn A), or diverge from it (here, Pawns B, C). Diverging Pawns are limited by momentum, so divergent Wave closer to starting field will limit Pawn's reach (Pawn B), while Wave farther apart will extend it (Pawn C), compared to full extent of a rush (Pawn A).

## Diverging activated piece

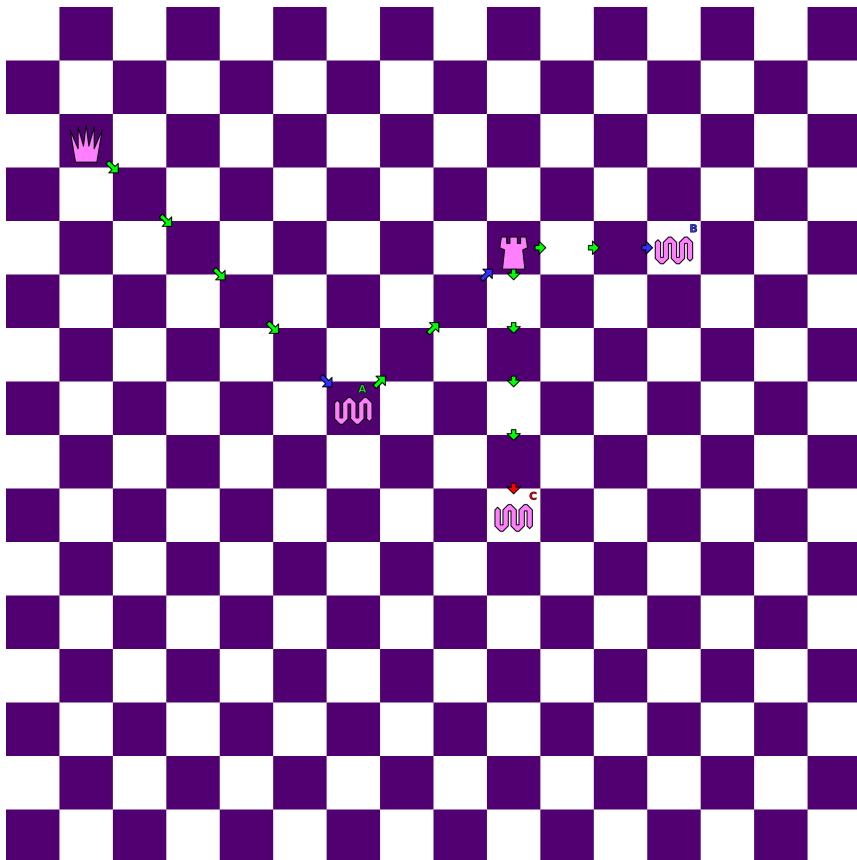


Figure 110: Activating Rook

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

Activated, material piece which has no momentum when reached own Wave cannot diverge from it (nor ignore it), only activate that Wave.

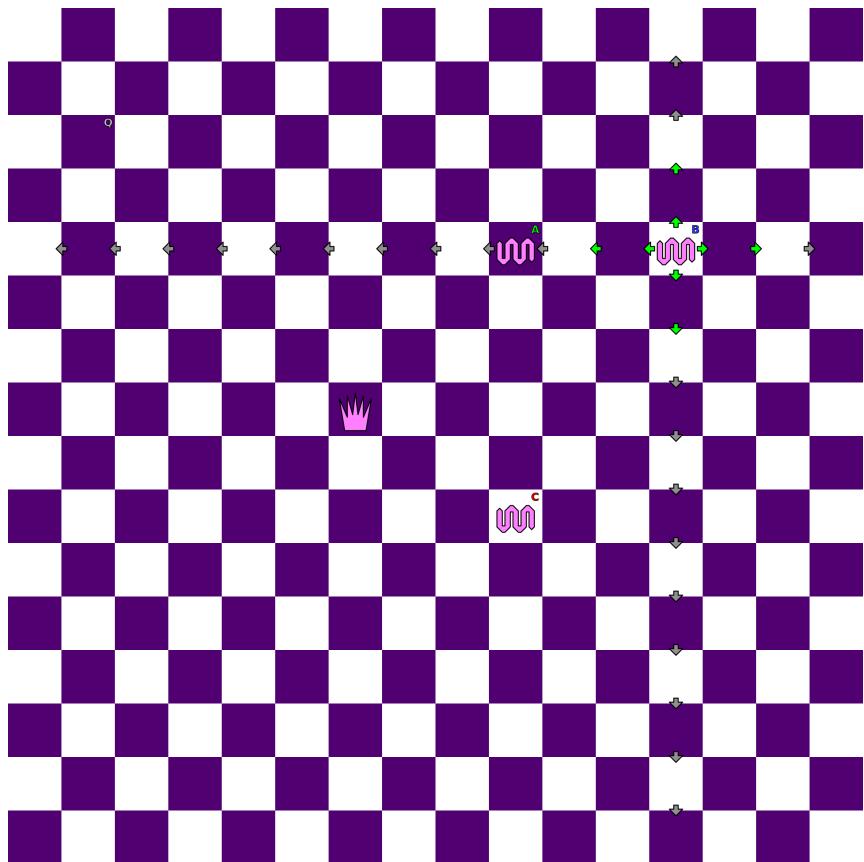


Figure 111: Diverging activated Rook

In previous example, activated Rook couldn't diverge from Wave C, only activate it, since all received momentum would be spent moving towards Wave C.

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

## Diverging Wave

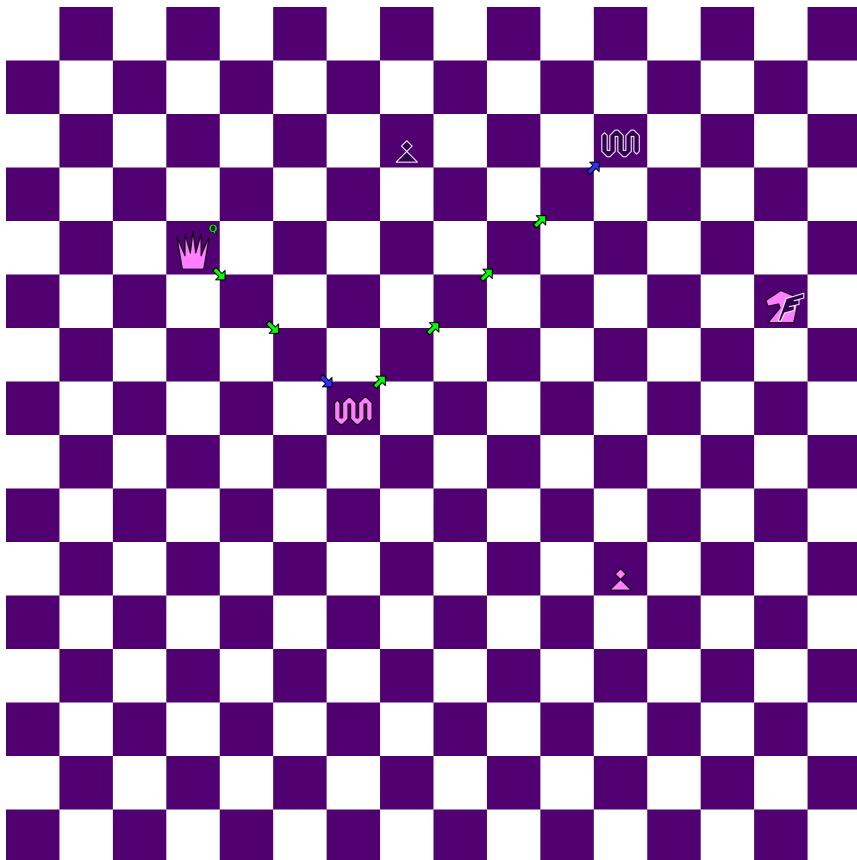


Figure 112: Diverging Wave

Wave can diverge not only from own Wave, but also from opponent's. After divergence, Wave can choose any direction its **activator** can; that is, last material (i.e. non-Wave) piece preceding it in a cascade.

Again, **divergence is optional**, opponent's Wave could be activated, or ignored (i.e. passed-through as if not present on a chessboard).

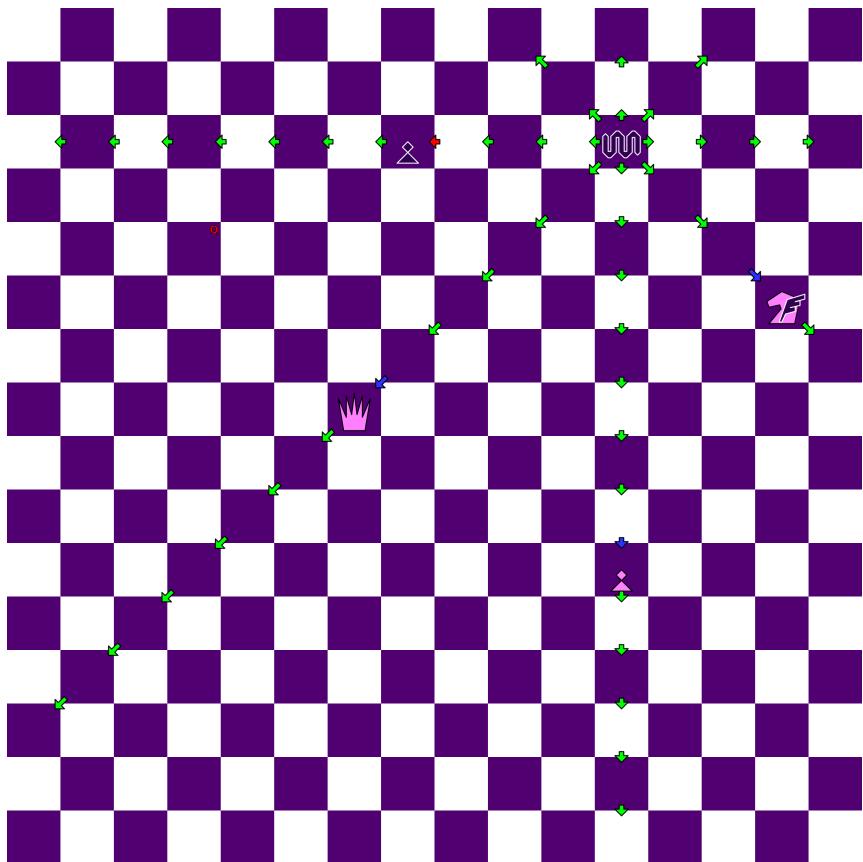
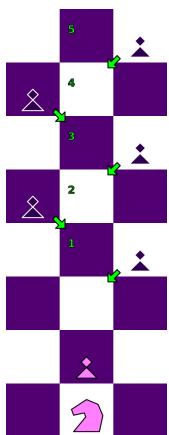


Figure 113: Wave diverted

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

## 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 114: En passant

## Promotion

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

# Castling

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



Figure 115: Castling

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



Figure 116: 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:

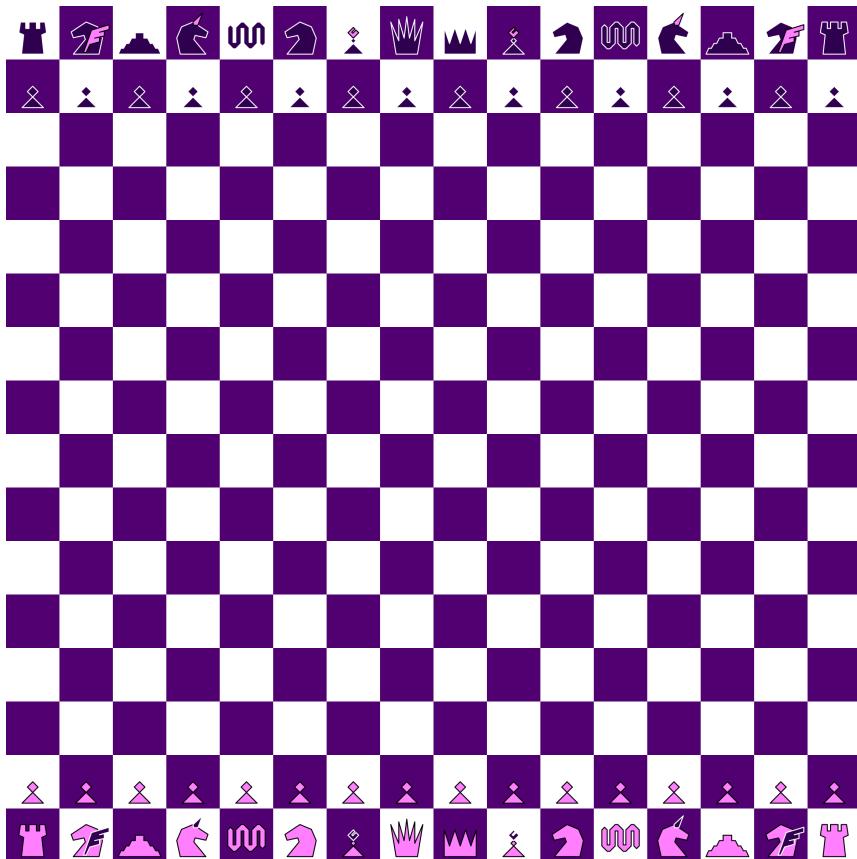


Figure 117: Miranda's veil board



# 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

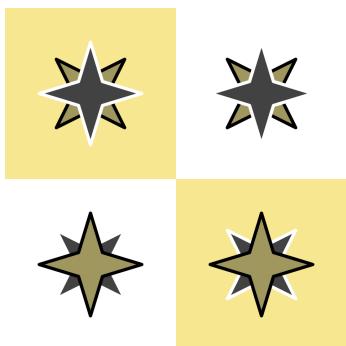


Figure 118: Star

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

Star is a teleporting piece. Teleportation is initiated by touching a 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, piece can't move any further from emerging portal-field, and so a move (cascade) is finished. Teleportation is not limited by matching colors of a piece and a Star, any piece can use any Star to start teleporting.

Player initiating teleportation can choose which opposite color Star will be destination, and at which empty portal-field piece will reappear. If there is no empty portal-field near both Stars of opposite color piece is oblationed, 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

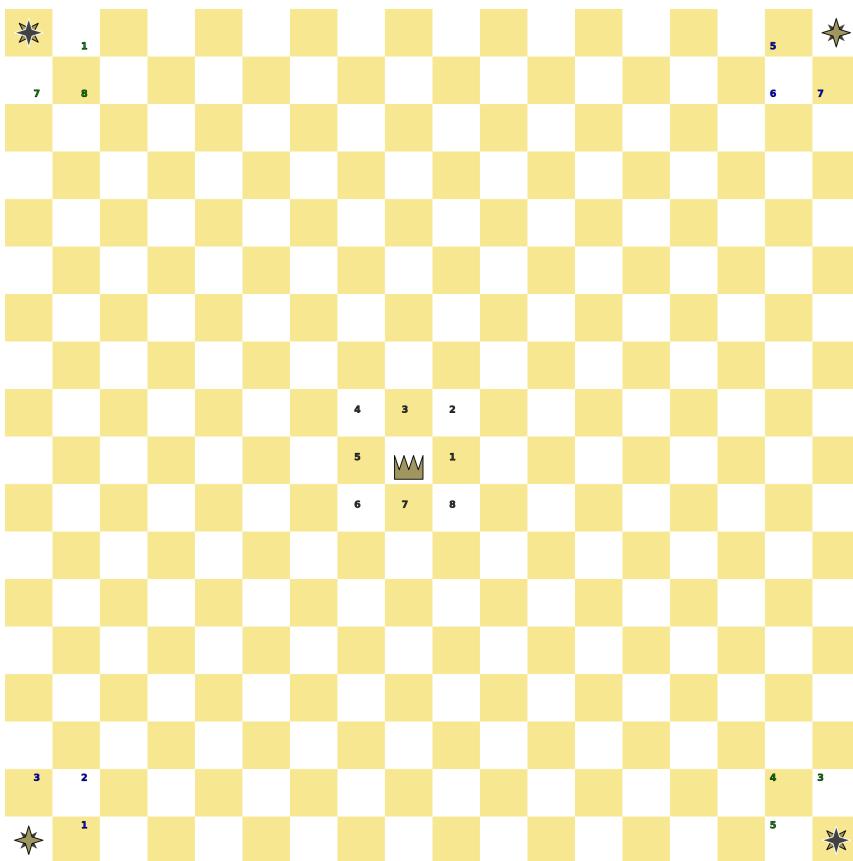


Figure 119: Portal-fields

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

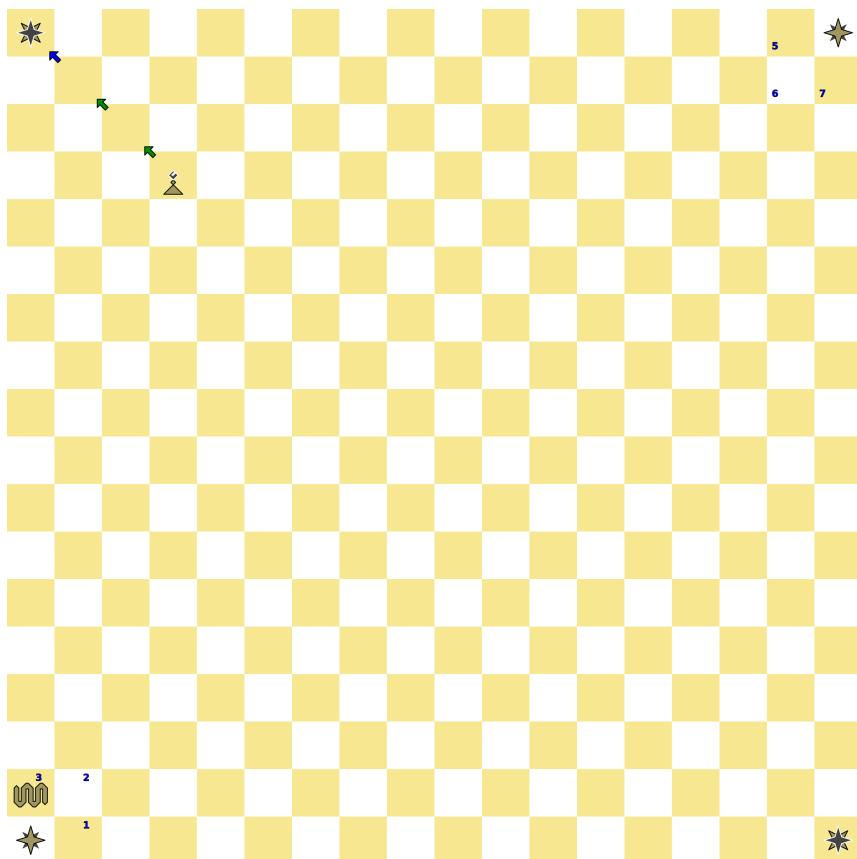


Figure 120: Teleportation start

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

## Teleportation blocked

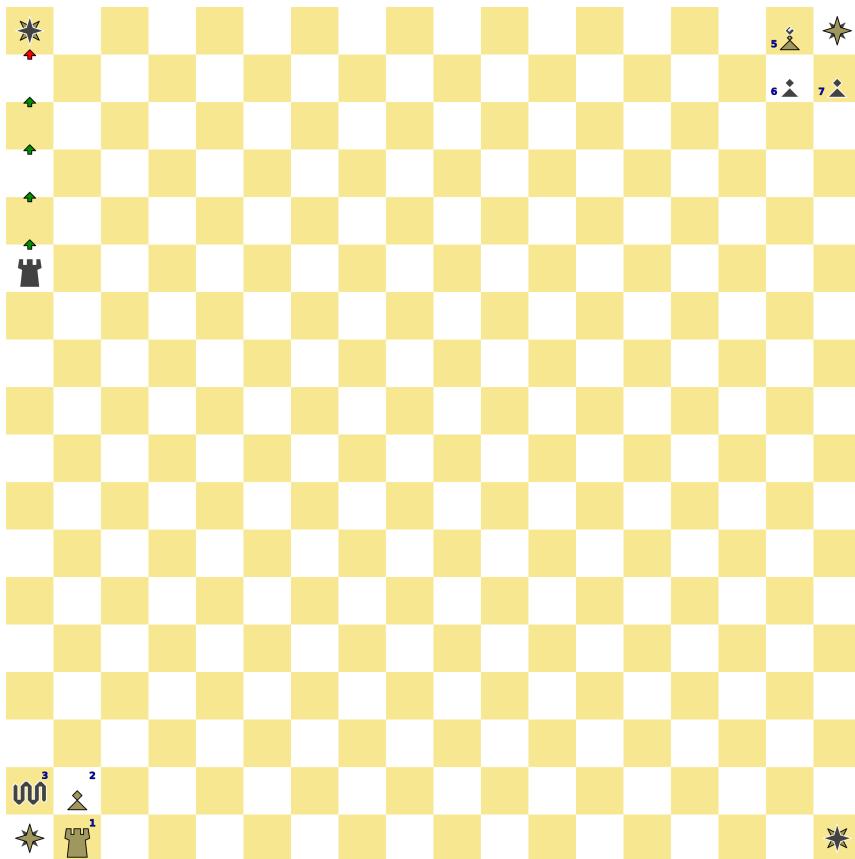


Figure 121: Teleporting dark Rook

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

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

## Teleporting Wave

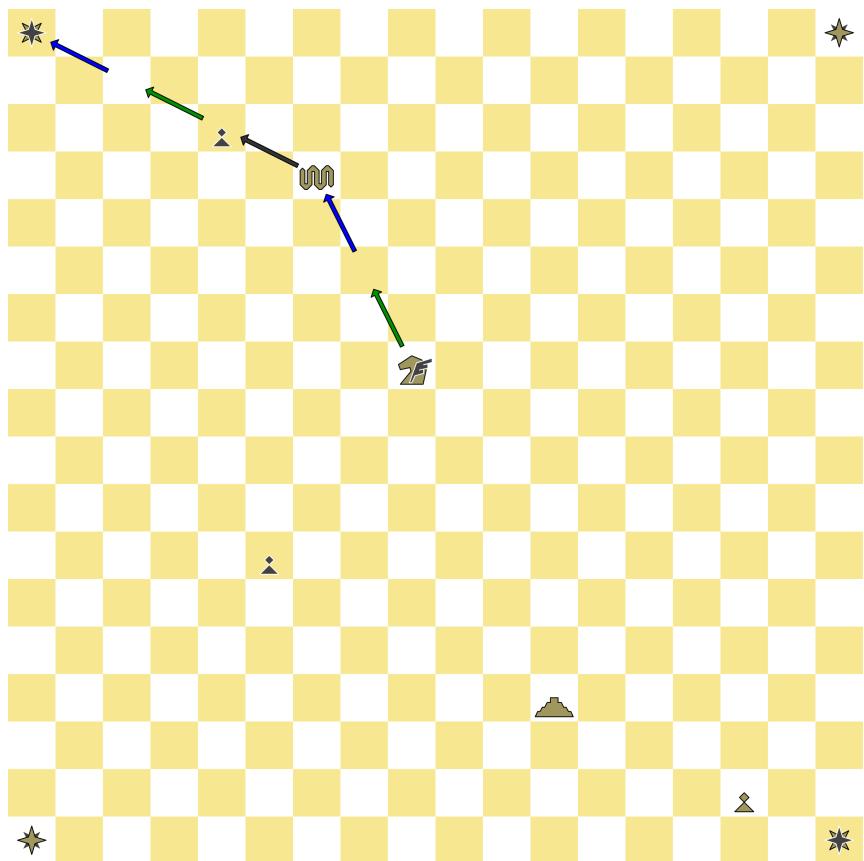


Figure 122: Teleporting light Wave

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

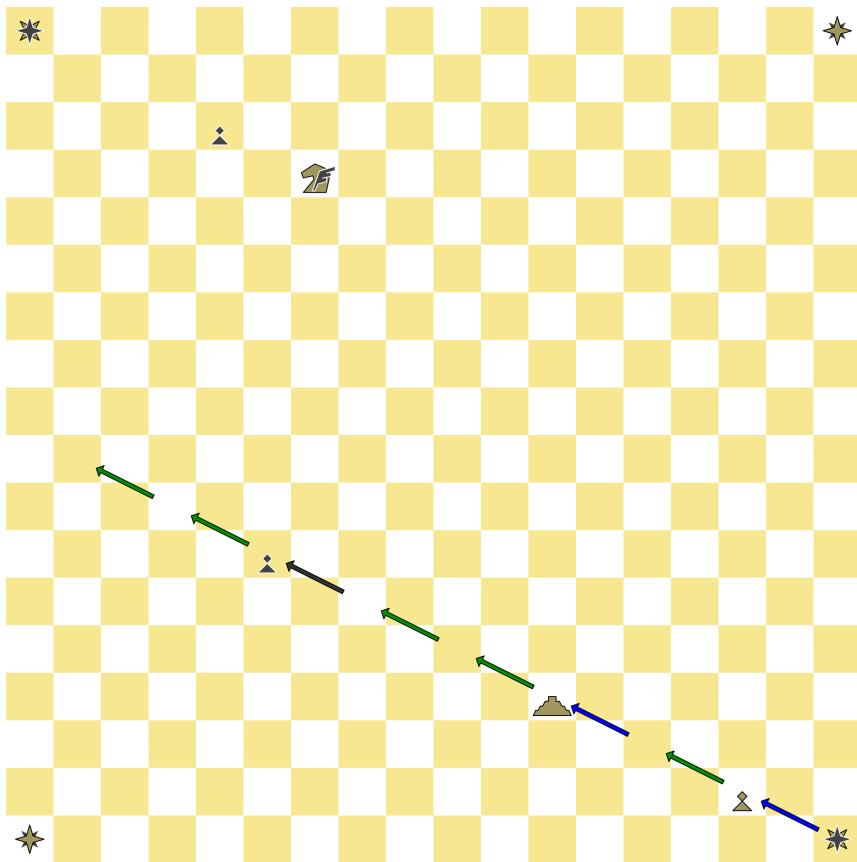


Figure 123: Teleportation end

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

## Teleporting Wave blocked

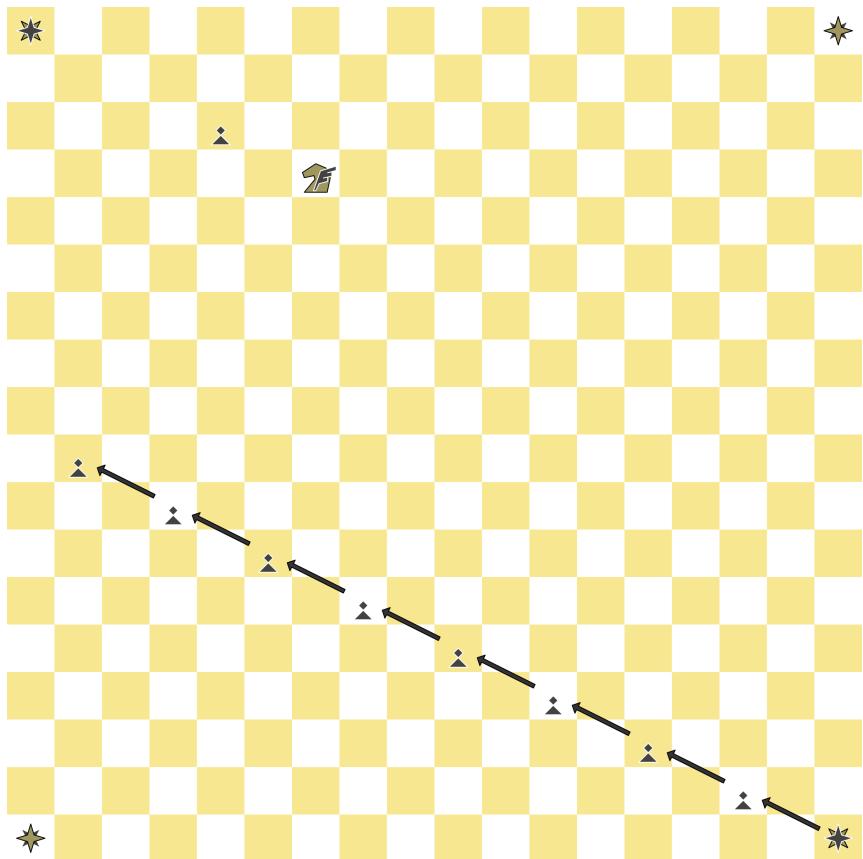


Figure 124: Teleported Wave blocked

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

## Teleporting off-board

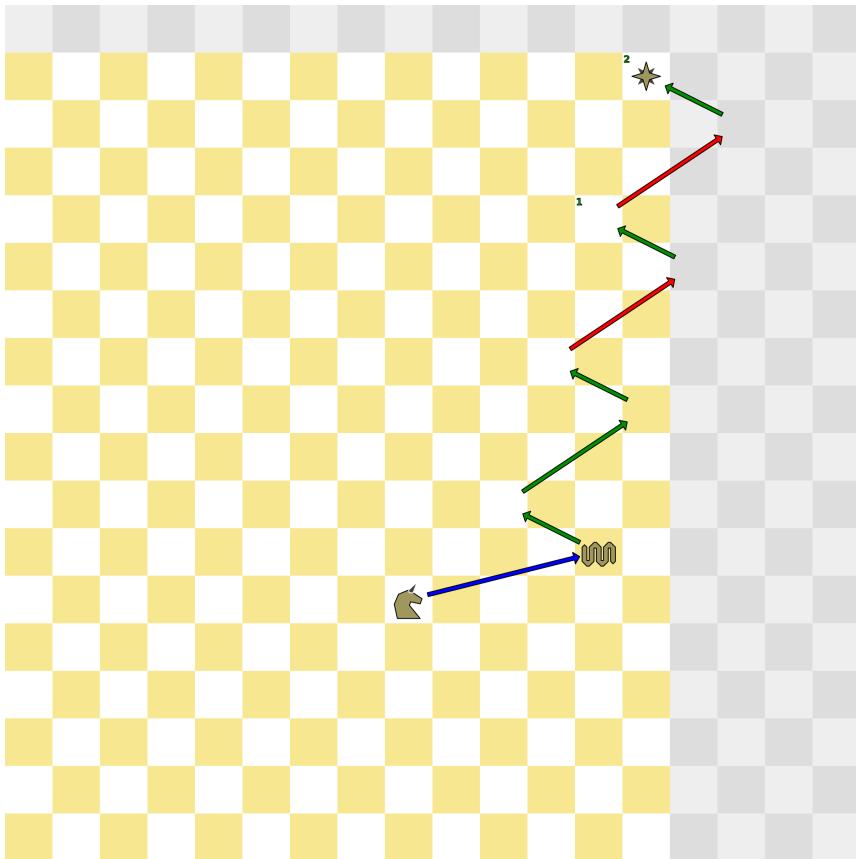


Figure 125: Wave out-of-board before teleportation

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.

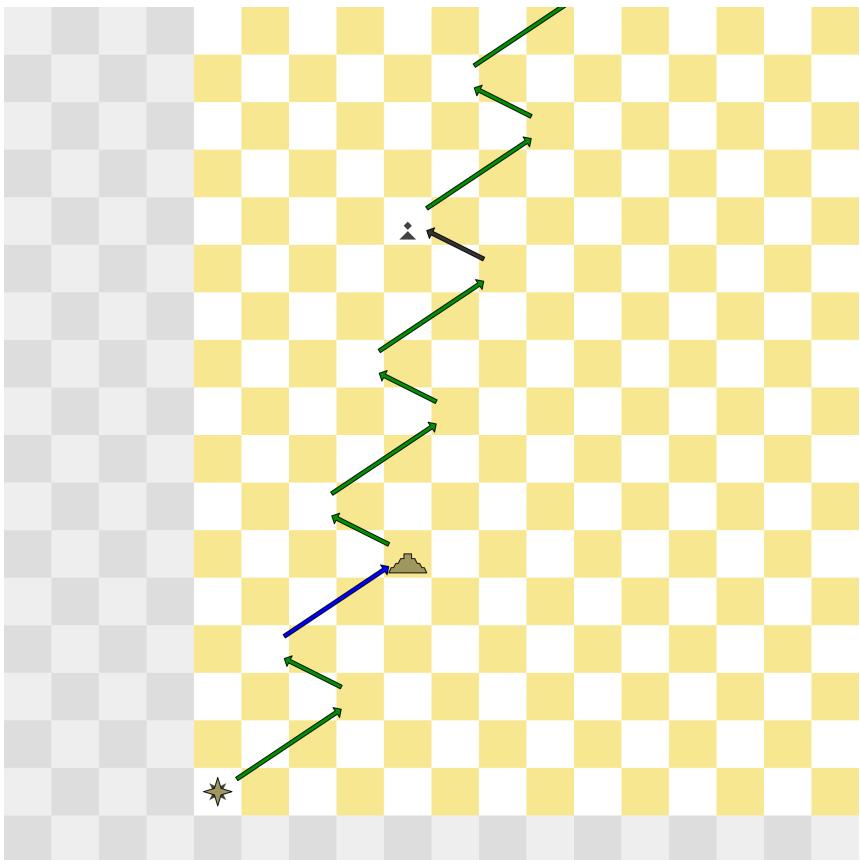


Figure 126: Wave teleported

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

## Emerging off-board

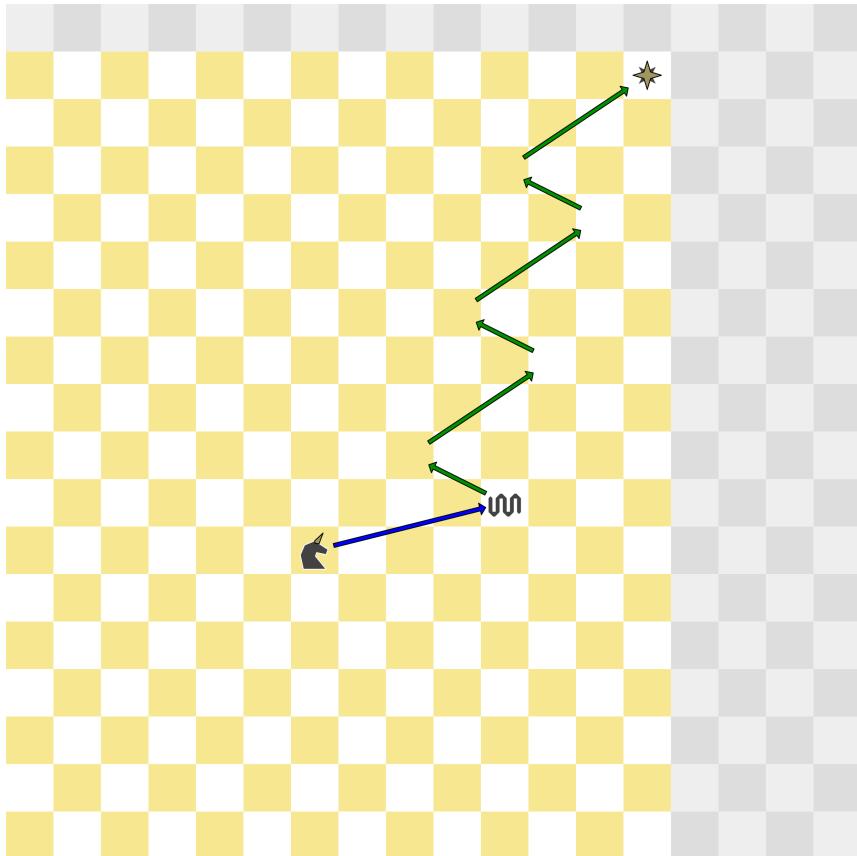


Figure 127: Wave before teleportation

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).

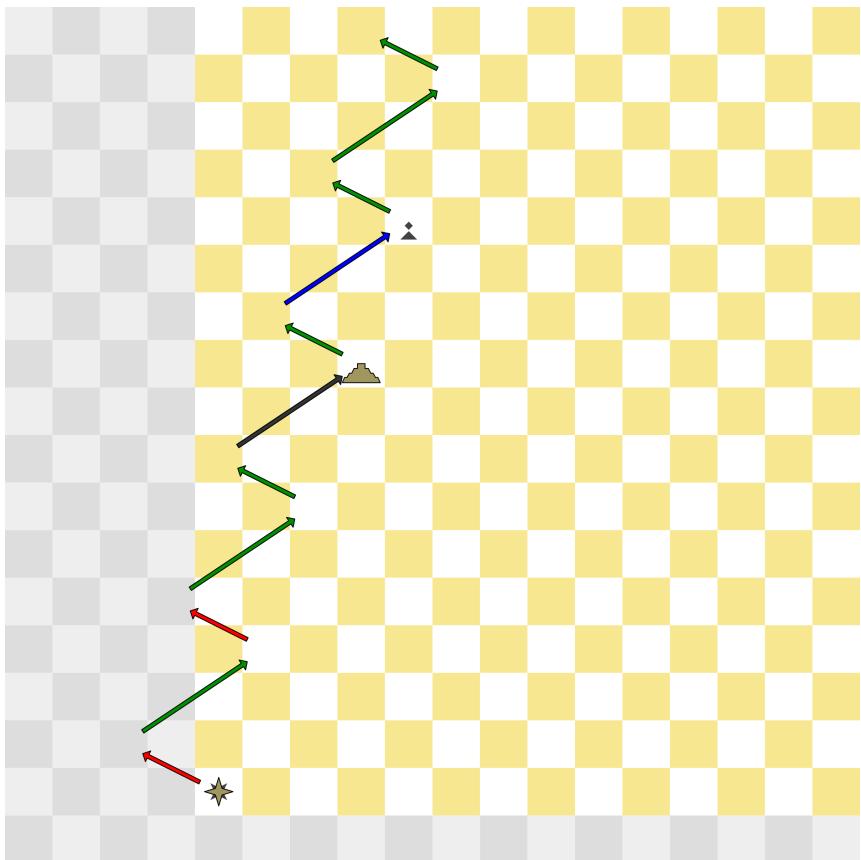


Figure 128: Wave out-of-board after teleportation

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

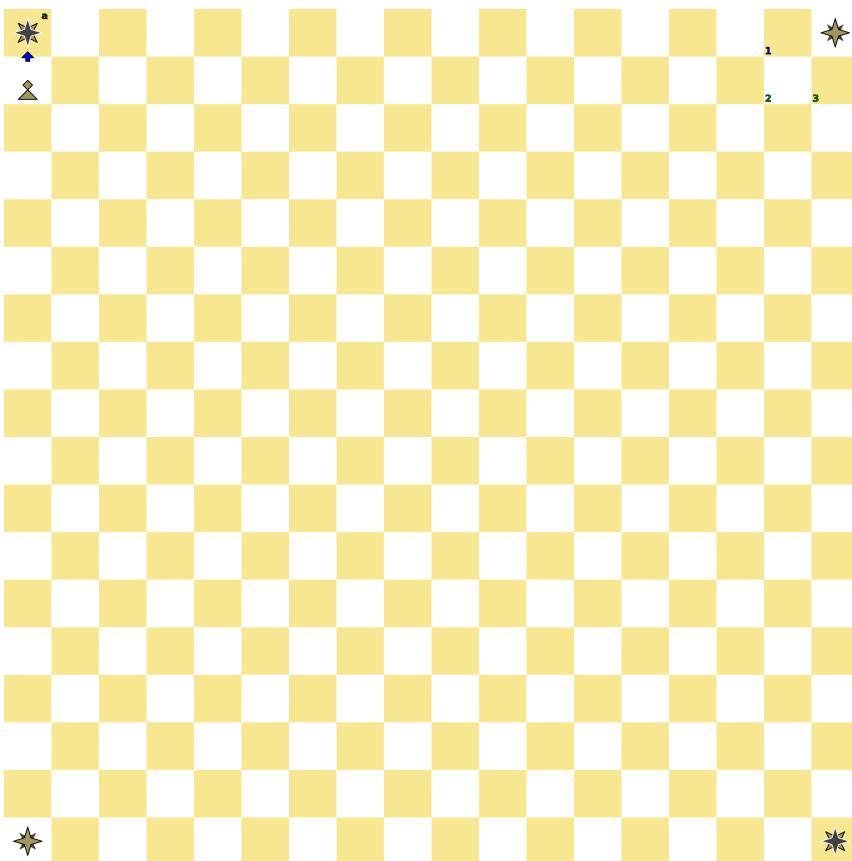


Figure 129: Pawn teleporting on step-field

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

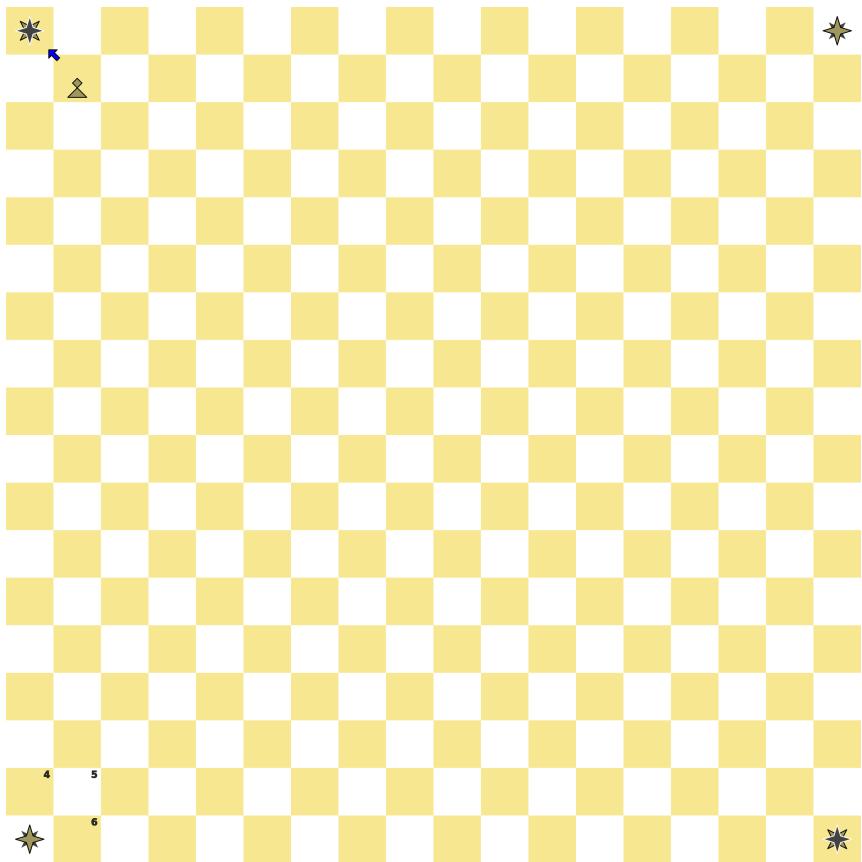


Figure 130: Pawn teleporting on capture-field

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.

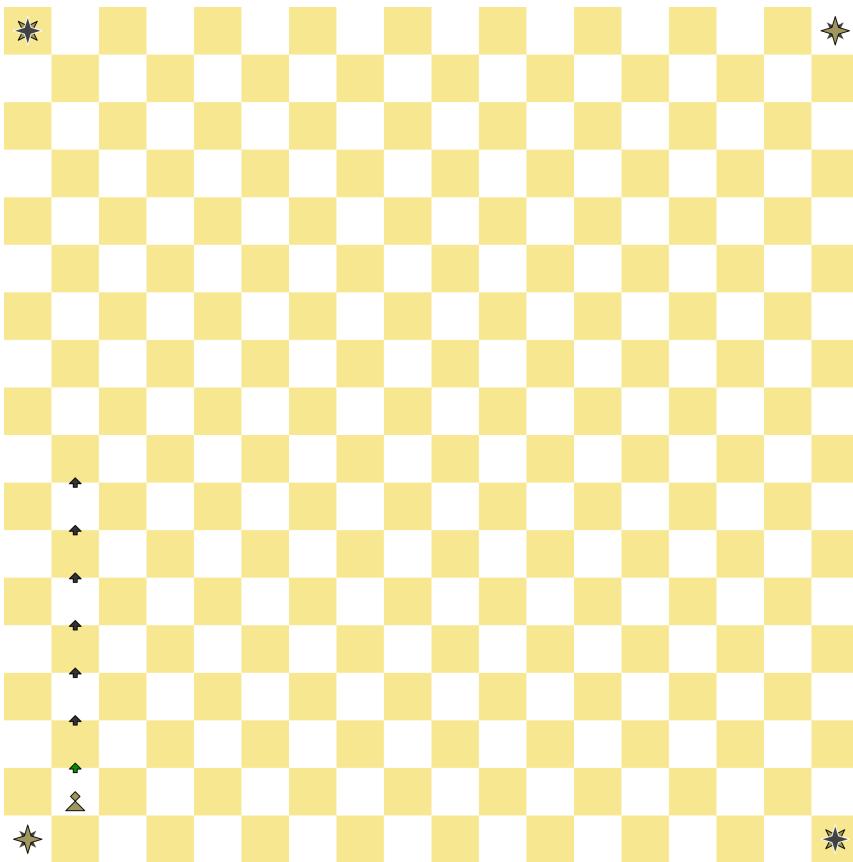


Figure 131: Pawn teleporting end

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

## Teleporting Bishop

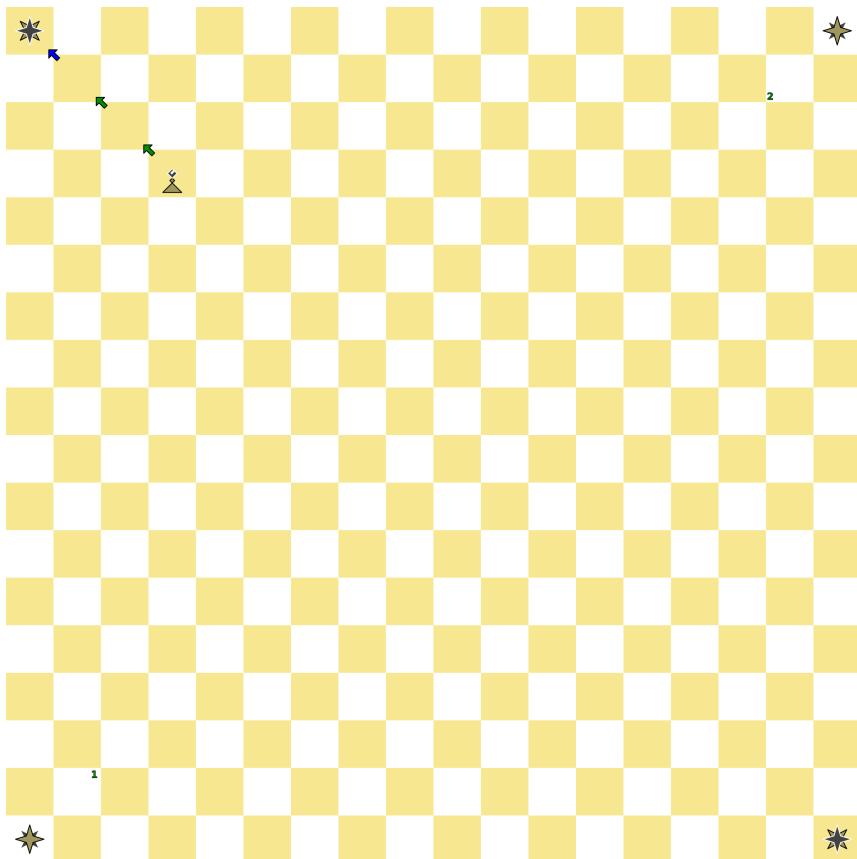


Figure 132: Bishop teleportation

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

## Sideways Pawns

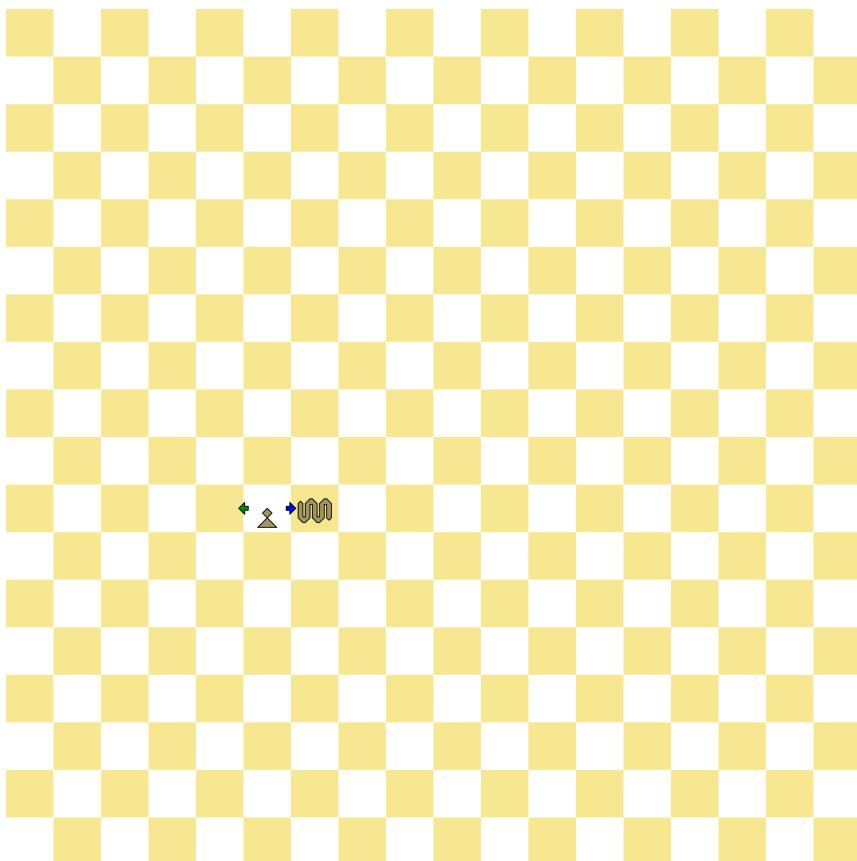


Figure 133: Sideways moving Pawn

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

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

## Activating Wave

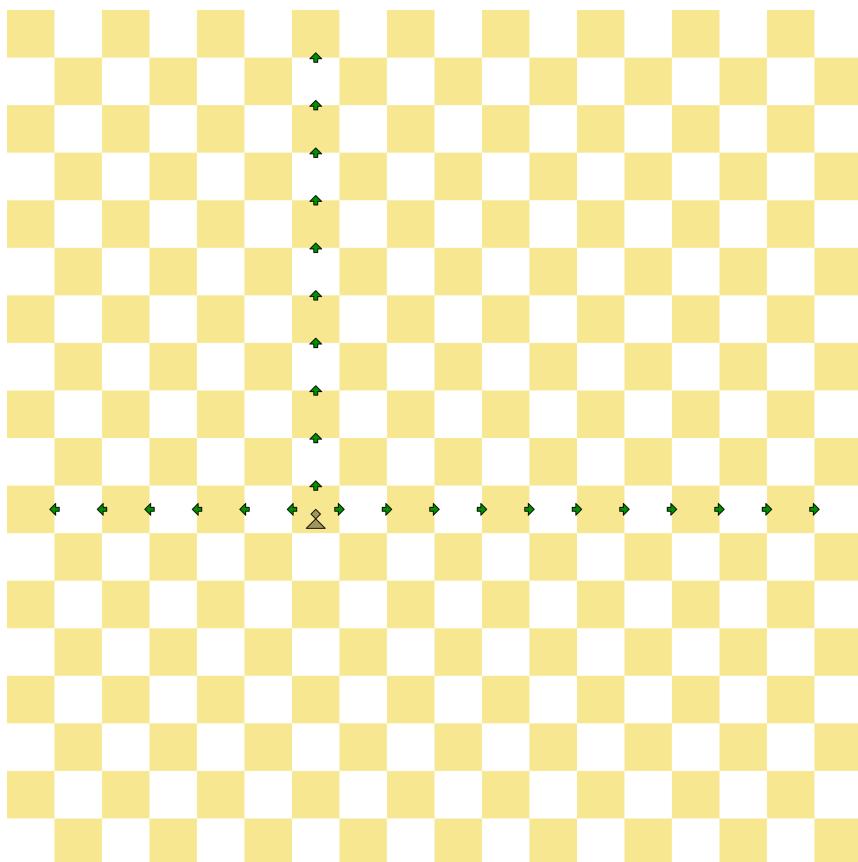


Figure 134: Wave activated by stepping Pawn

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

## Activating Pyramid

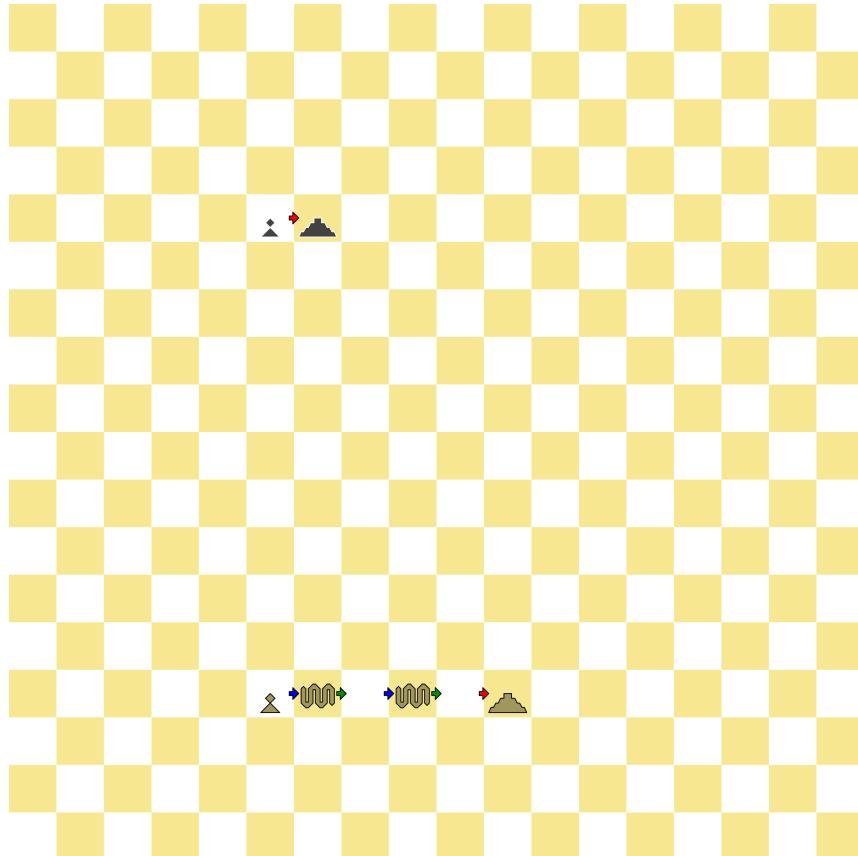


Figure 135: Pyramid can't be activated

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

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

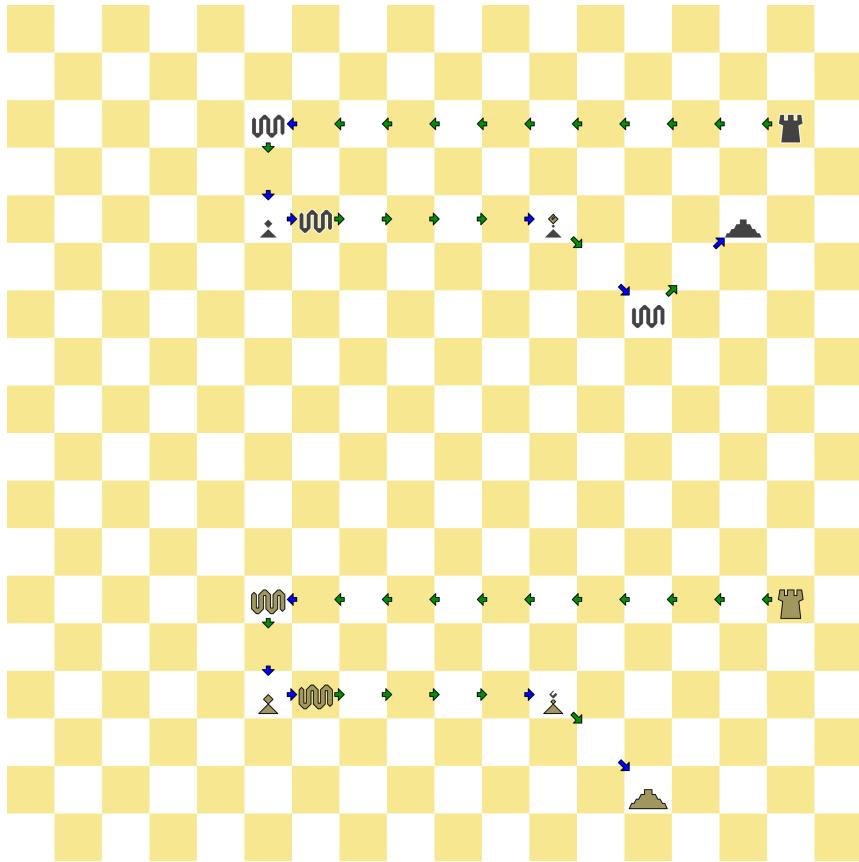


Figure 136: Pyramids cascaded by sideways Pawns

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

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

## Diverging Pawn

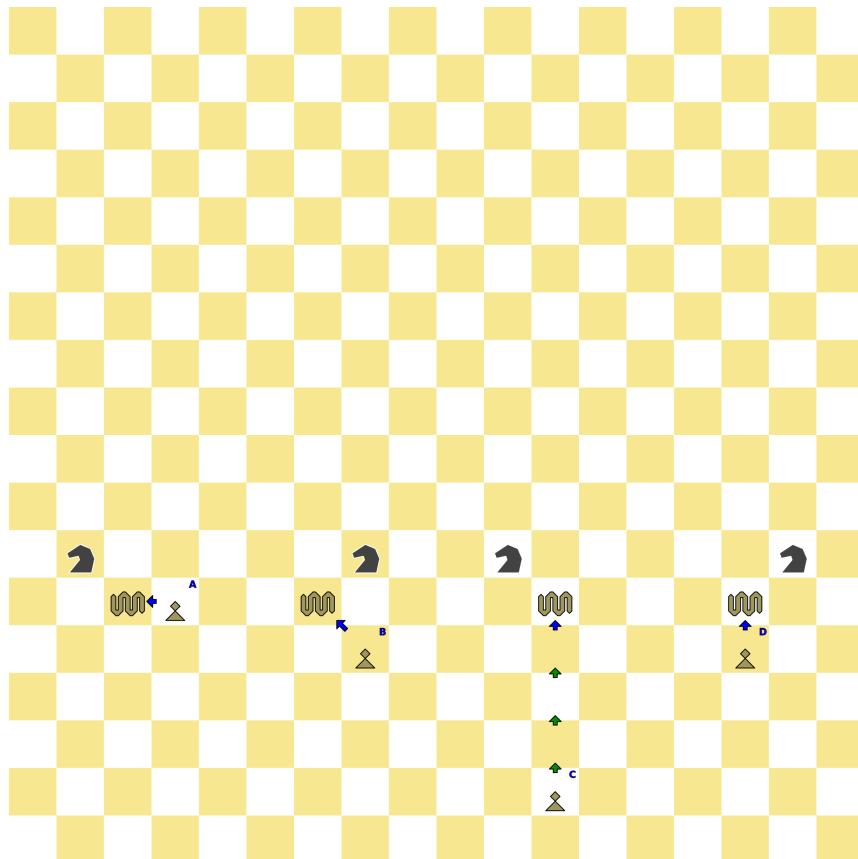


Figure 137: Diverging Pawns start

Image above and the next one have four examples presented in parallel; each with marked Pawn starting a cascade.

Pawn, in this and all subsequent variants, can **diverge from Wave** by making forward-, sideways-, or capture-step, or by rushing. After divergence, steps are available as if starting a new ply; forward- and sideways-steps if not blocked; capture-steps if opponent's piece is placed on a Pawn's capture-field

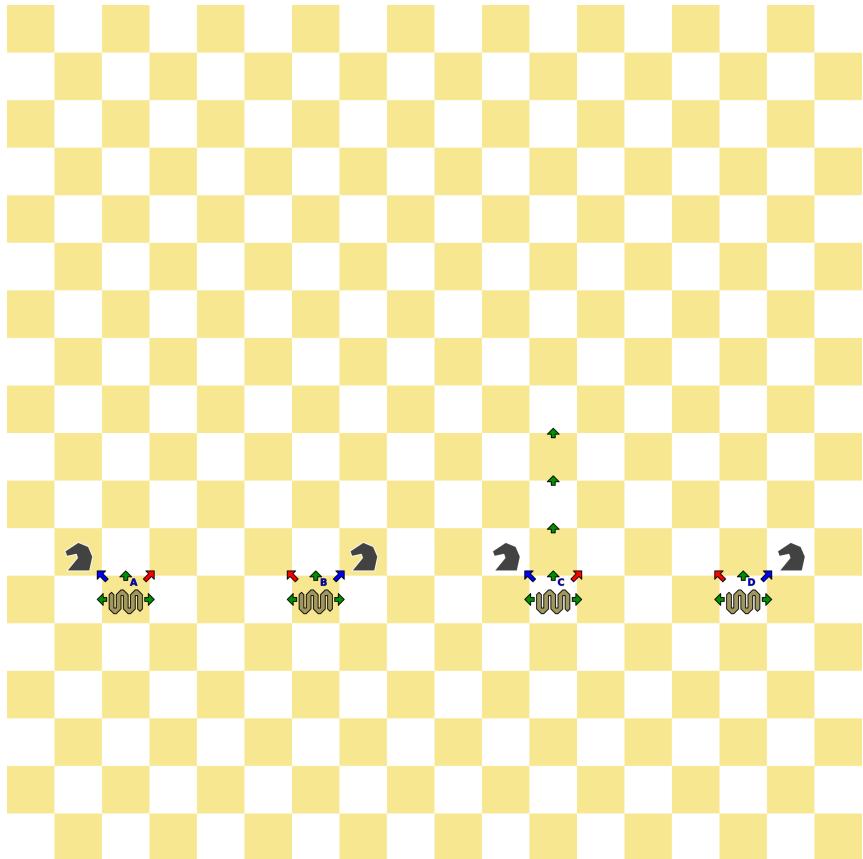


Figure 138: Diverging Pawns end  
behind own, divergent Wave.

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

Diverging Pawn is limited by momentum it had when own Wave was encountered; so, only rushing Pawn (here, C) can step forward for more than one field.

## Pawn ranks, rows

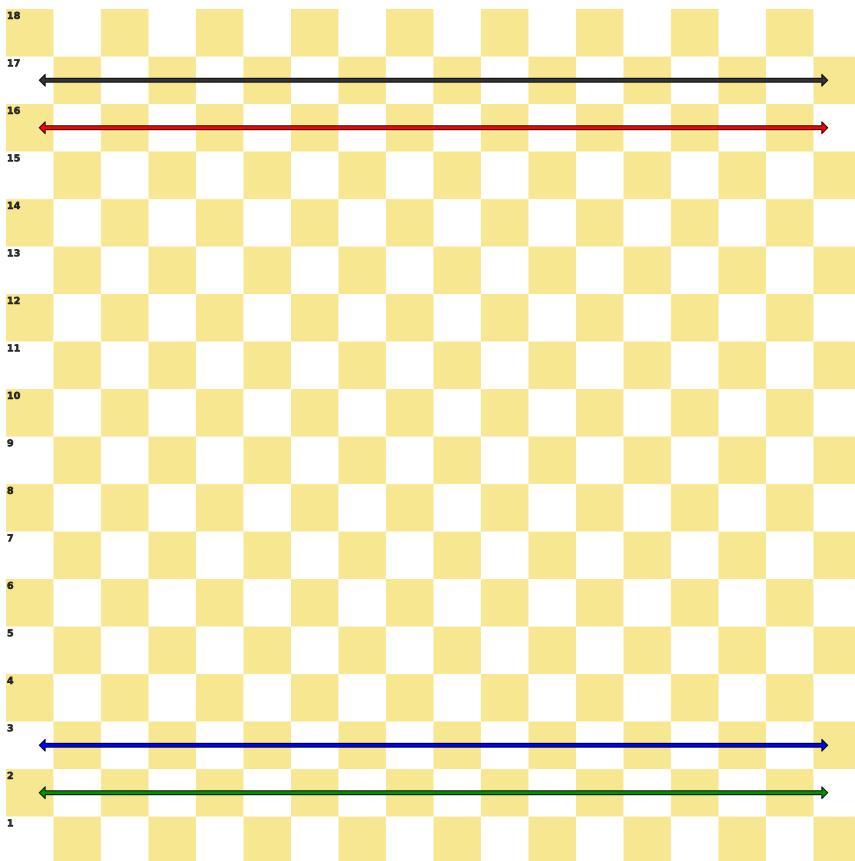
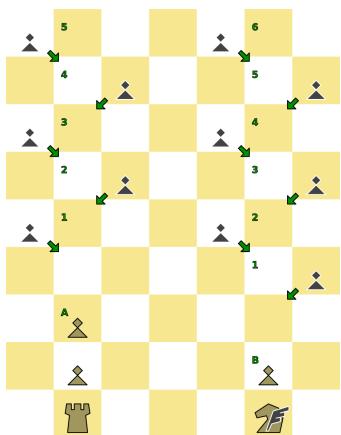


Figure 139: Pawn rows

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



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.

Figure 140: En passant

# 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 chessboard at any given time.

## Only one Queen

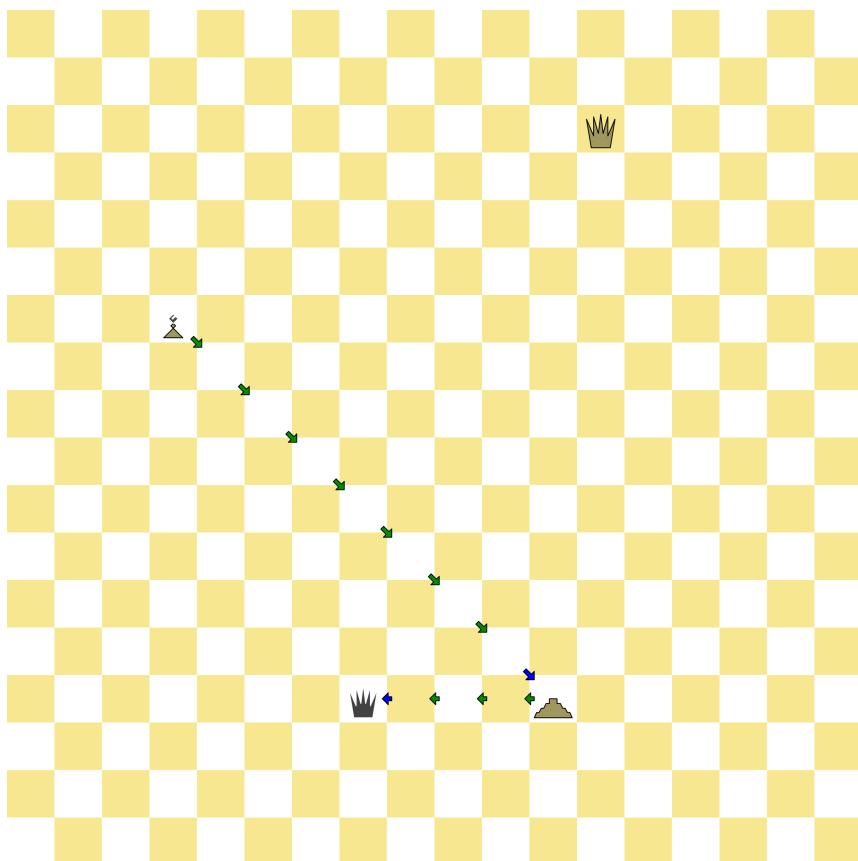


Figure 141: Not converting a Queen

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

# Castling

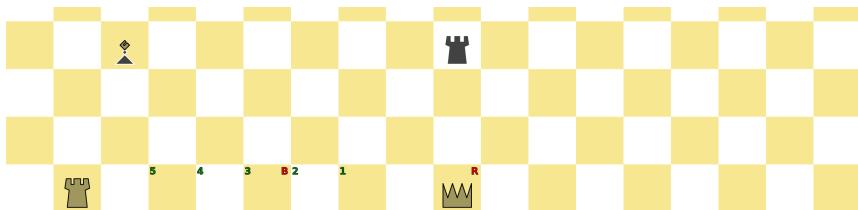


Figure 142: New castling start

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

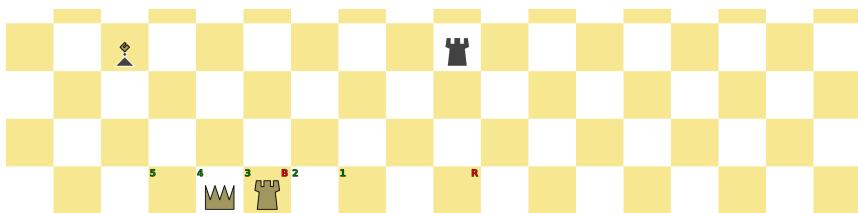


Figure 143: New castling end

All other constraints from Classical Chess remains the same; namely, King and Rook can only castle on their first move, there must be no pieces between castling King and Rook, King cannot end its movement on an attacked field.



Figure 144: Castling

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

## Initial setup

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

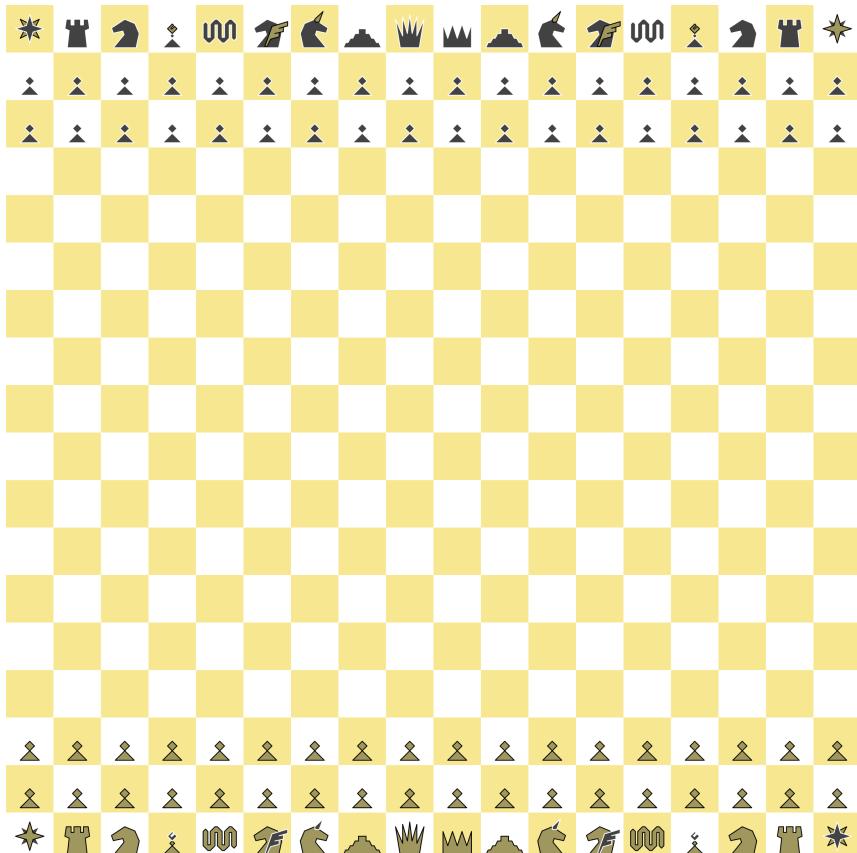


Figure 145: Nineteen board



# 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.

## Centaurs

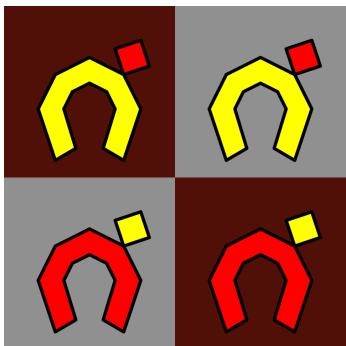


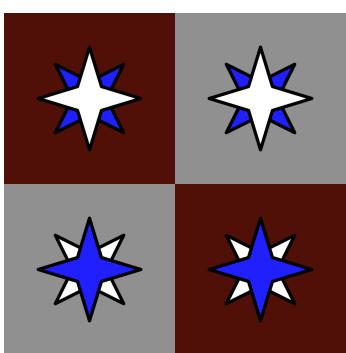
Figure 146: Centaur

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

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

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

In algebraic notation symbol for Centaur is 'C'.



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

Figure 147: Star

## Movement

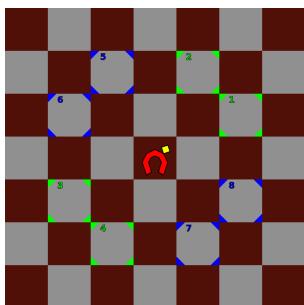


Figure 148: Centaur short jump

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

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

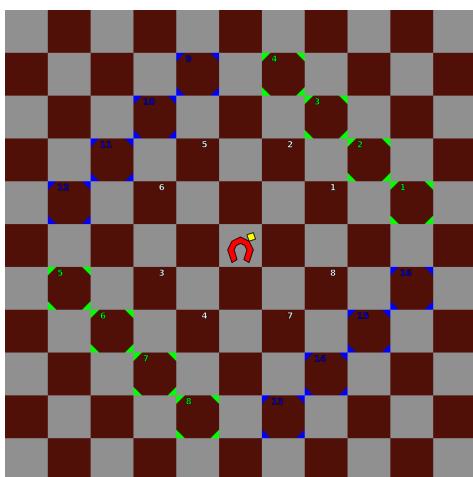


Figure 149: Centaur long jump

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

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

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

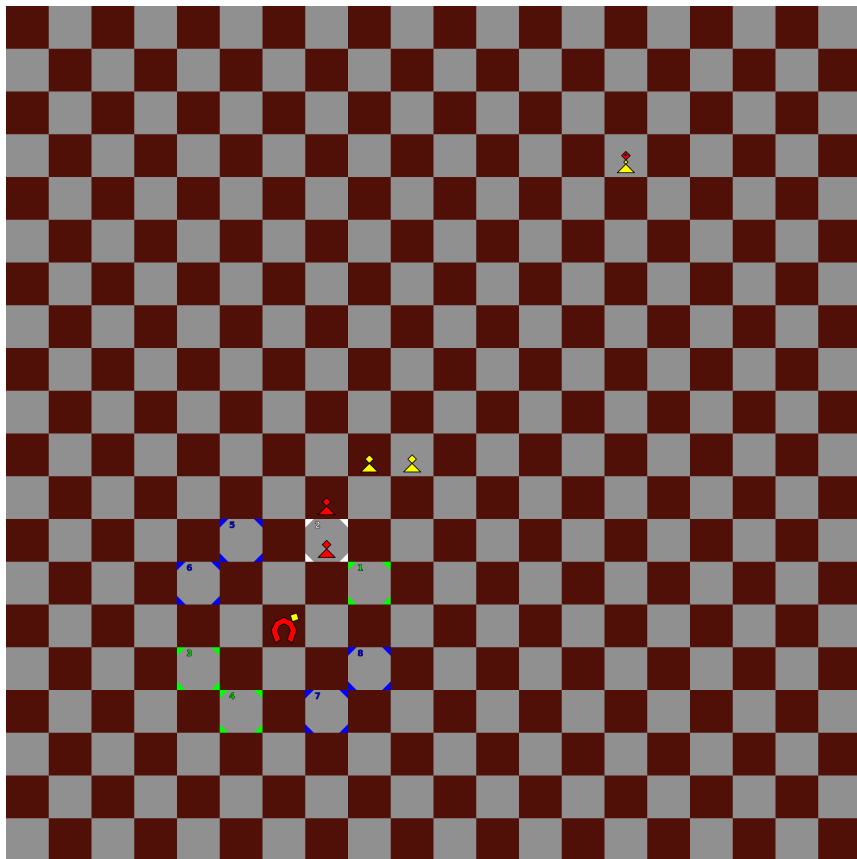


Figure 150: Centaur initial step

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

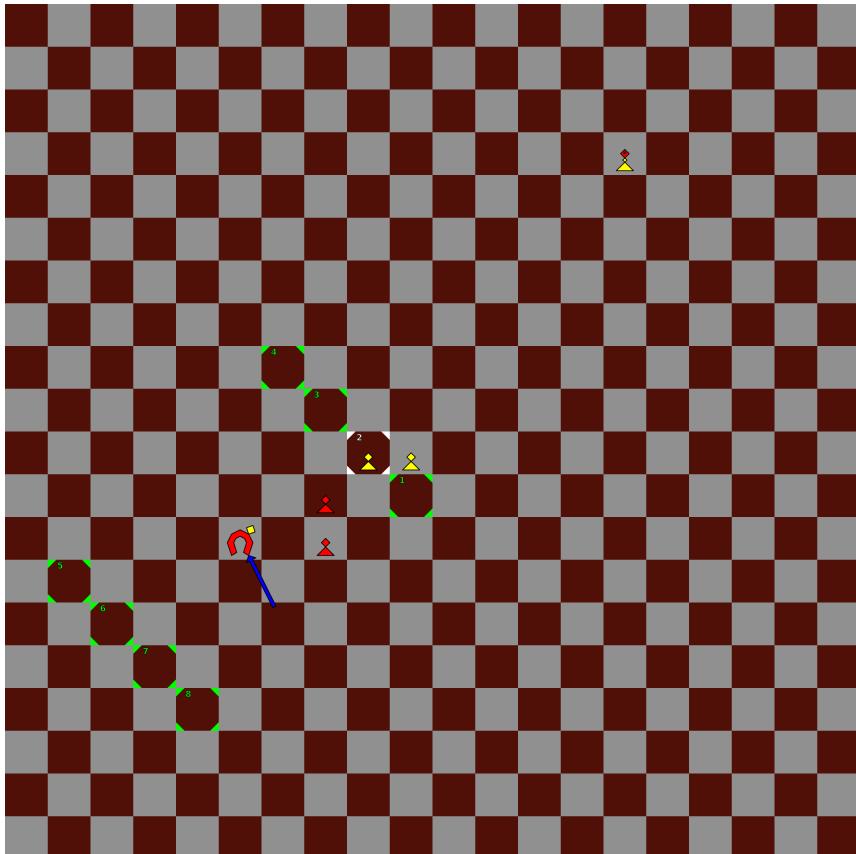


Figure 151: Centaur second step

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

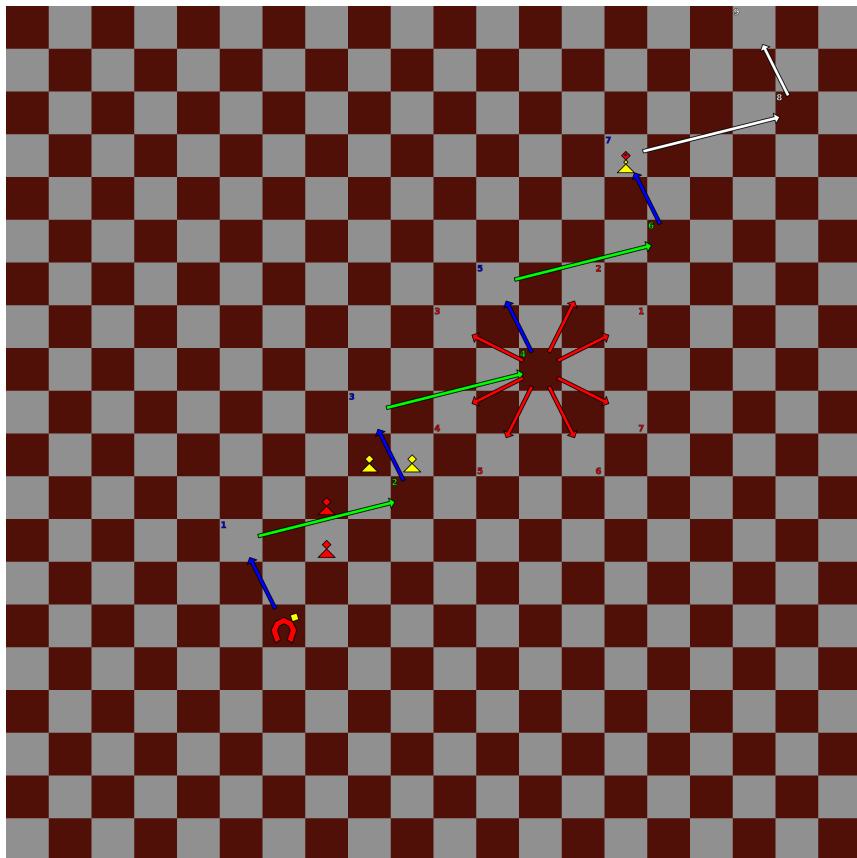


Figure 152: Centaur complete move

After second step is chosen, complete movement of Centaur consists of alternating between the two initial steps. Centaur for the rest of a ply has to follow those two initial steps, e.g. after reaching field 4, it cannot move to any other step-field (red). Light Centaur could also capture dark Bishop, but is prevented from moving any further (grey). Pieces on all other fields are ignored (Pawns).

## Out of board steps

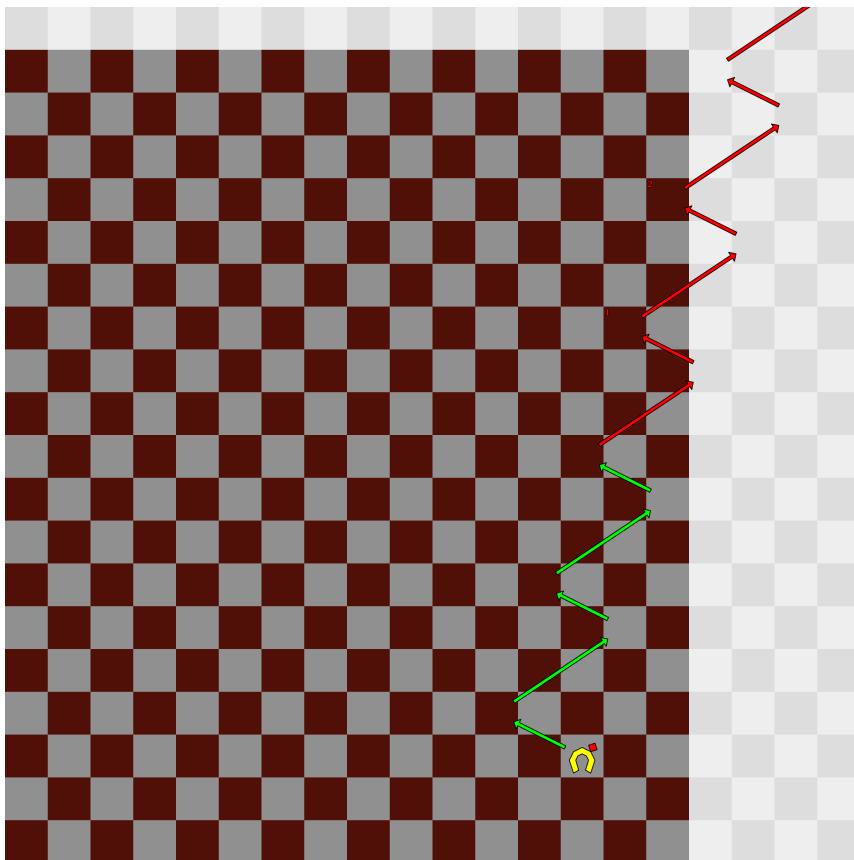


Figure 153: Centaur off-board steps

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

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

## Activating Wave

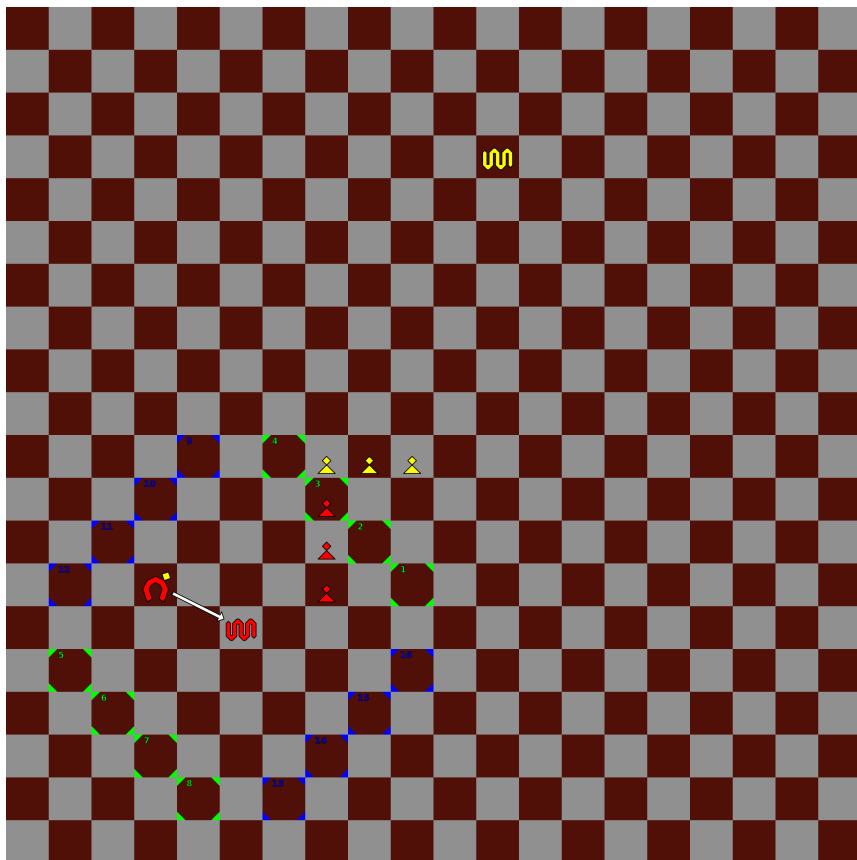


Figure 154: Wave activation by Centaur, first step

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

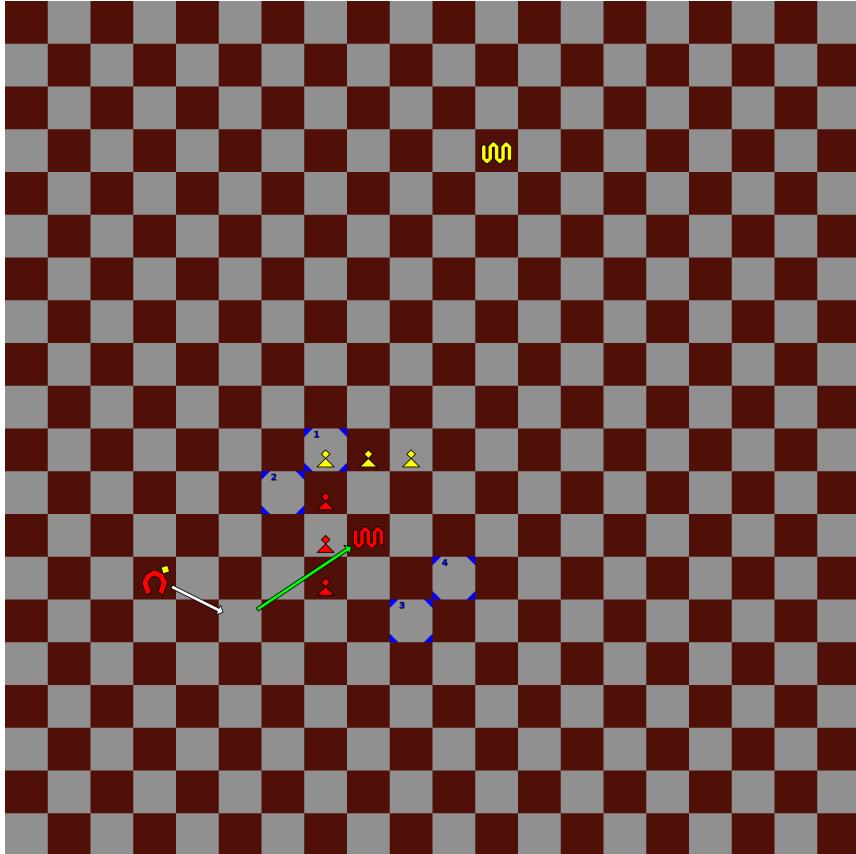


Figure 155: Wave activation by Centaur, second step

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

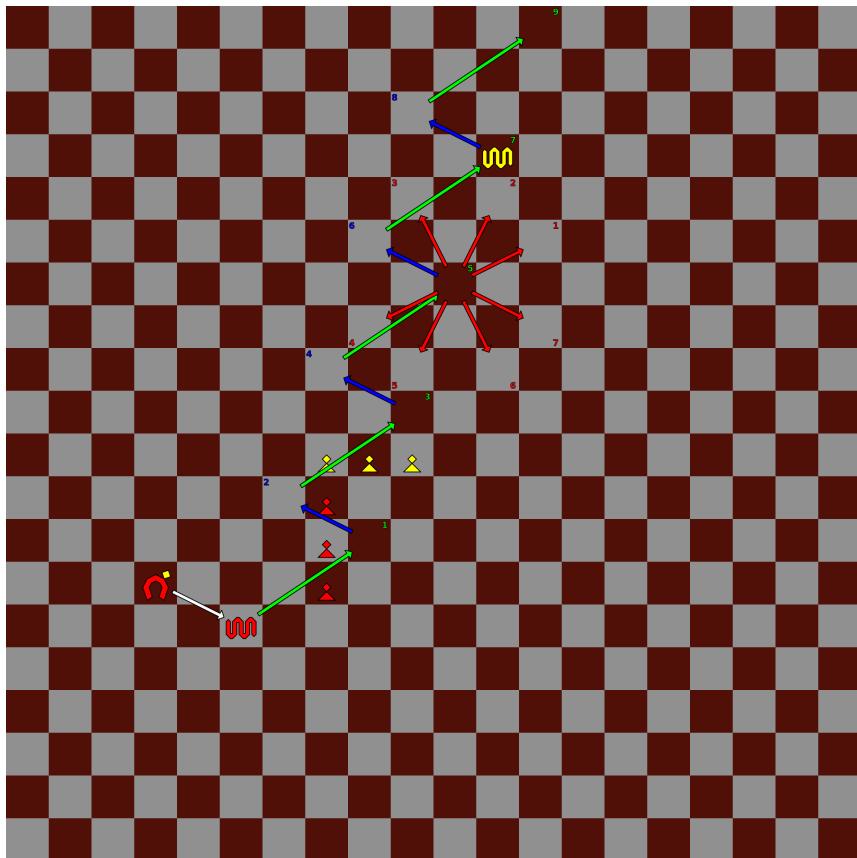


Figure 156: Wave activation by Centaur

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

## Out of board steps

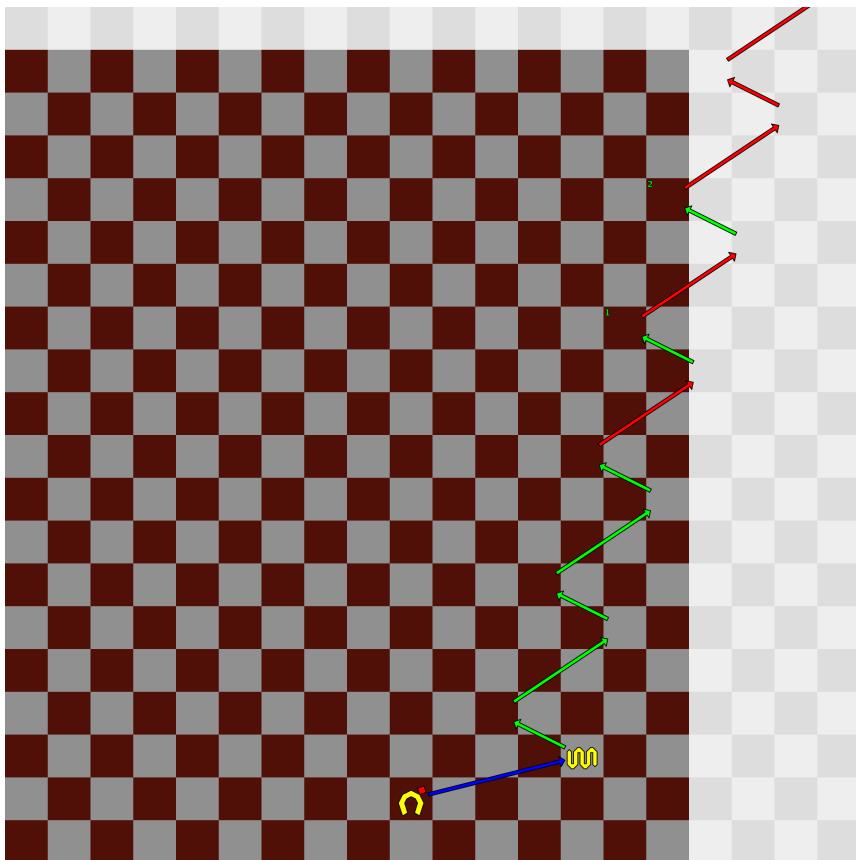


Figure 157: Wave off-board steps

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 158: Wave off-board teleporting

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

## Scout Pawns

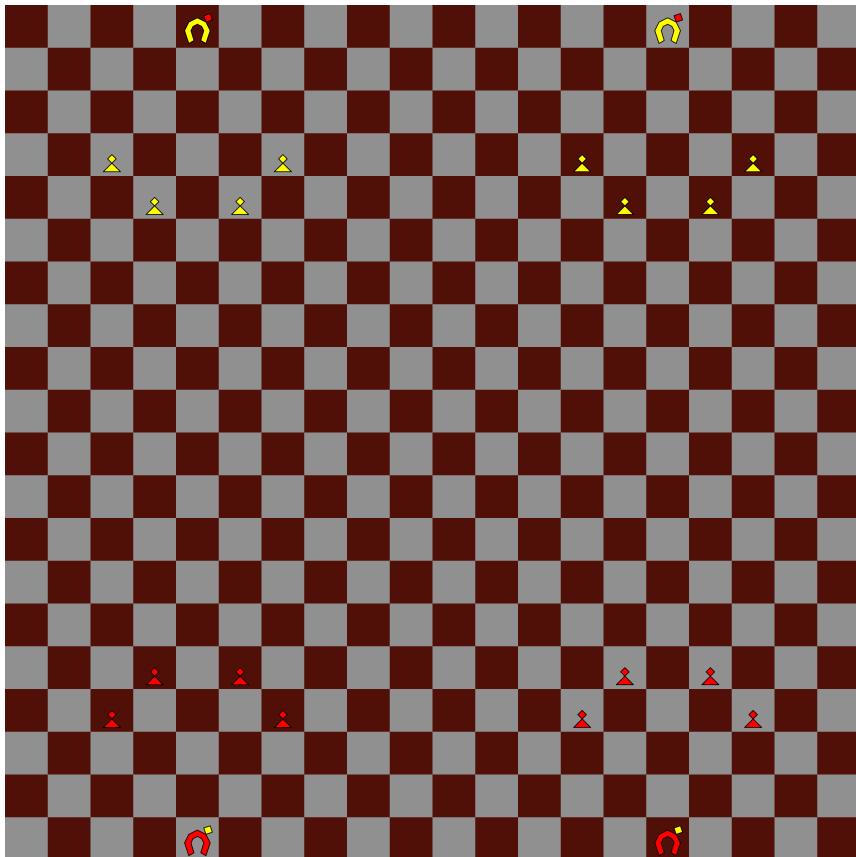


Figure 159: Scout Pawns

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

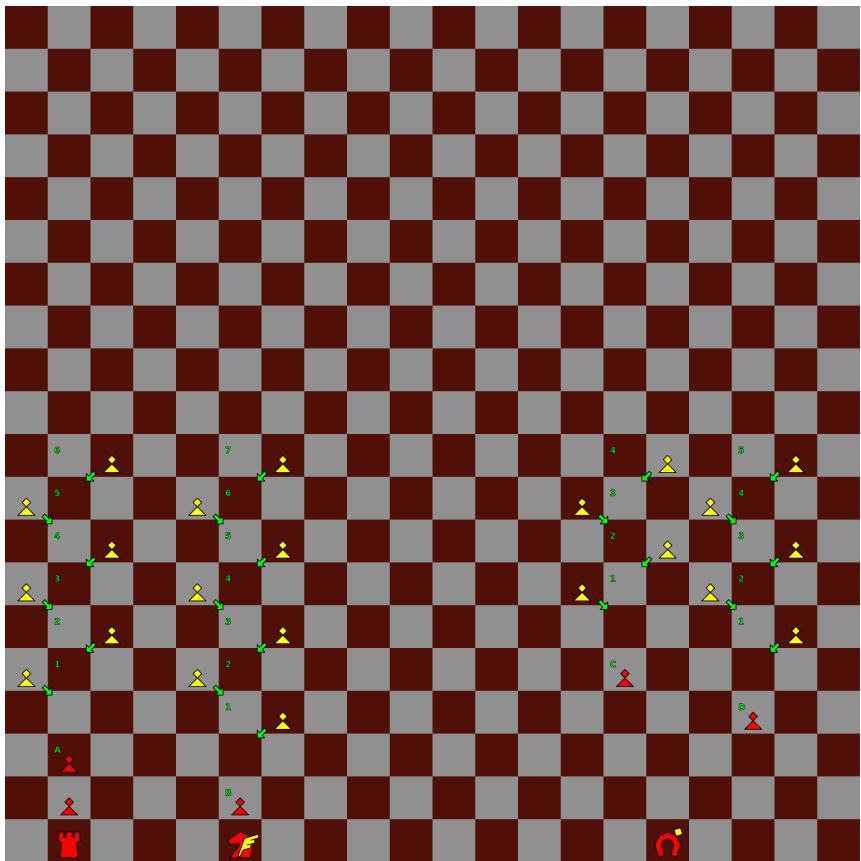


Figure 160: En passant

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.

## Promotion

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

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

# Castling

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



Figure 161: Castling

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



Figure 162: Castling short right

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

## Initial setup

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

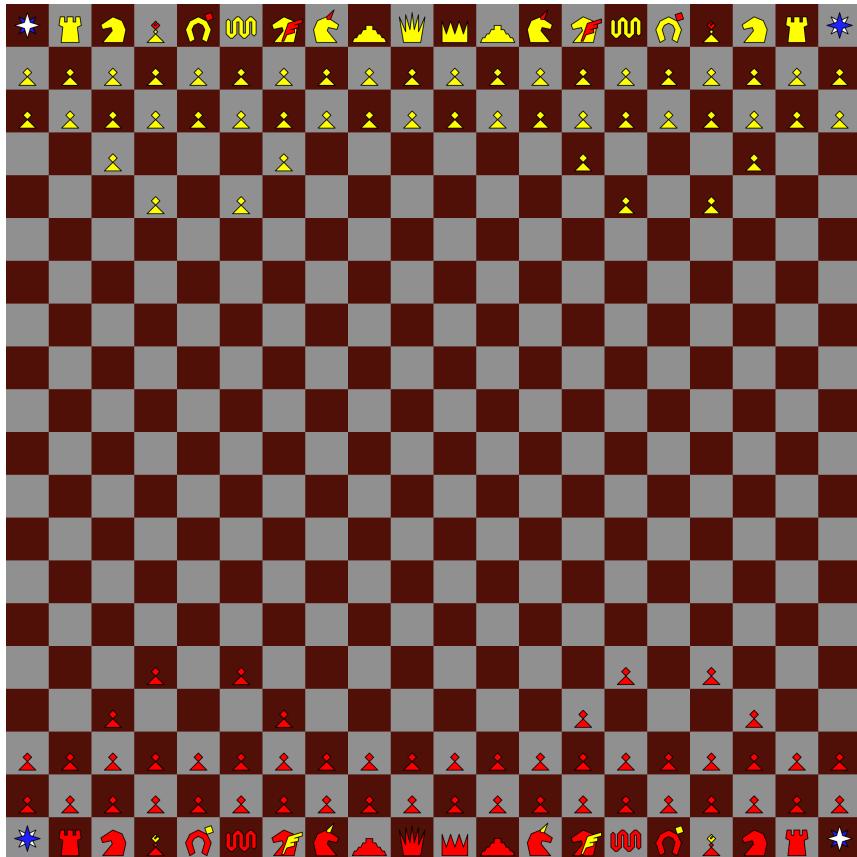


Figure 163: Hemera's Dawn board



# 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

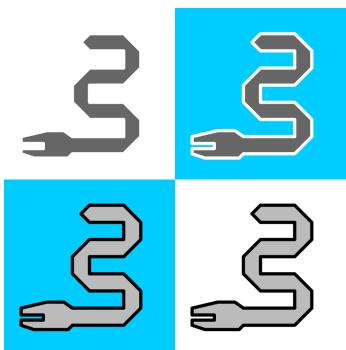


Figure 164: Serpent

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.

As an alternative move, Serpent can move one field vertically or horizontally if it's unoccupied, to change color of accessible fields. Serpent can also teleport using this color-changing move; teleporting or not, this move finishes cascade, if Serpent was activated.

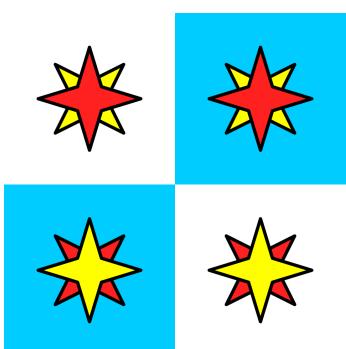


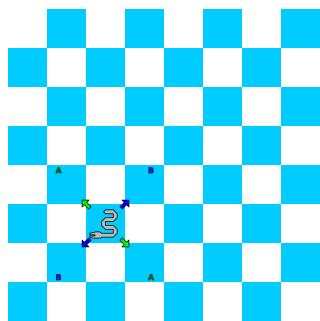
Figure 165: Star

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.

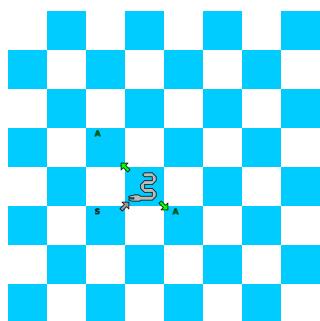
## Movement



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.

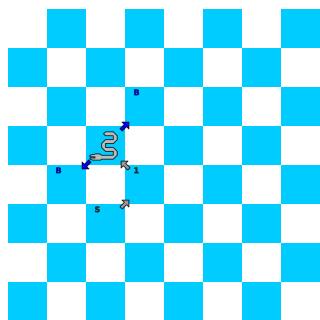
Figure 166: Diagonals



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.

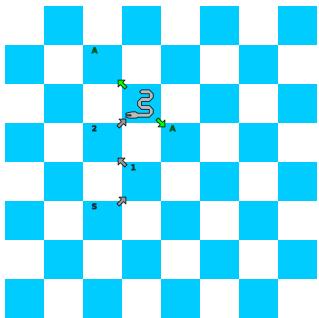
Figure 167: Step 1



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.

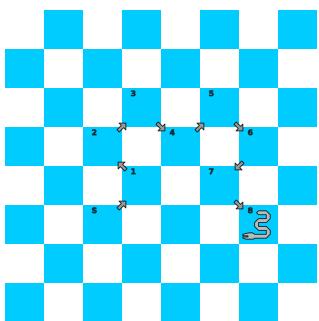
Figure 168: Step 2



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 169: Step 3



Finished move with completely exhausted movement limit.

Figure 170: End step

## Revisiting fields, loops

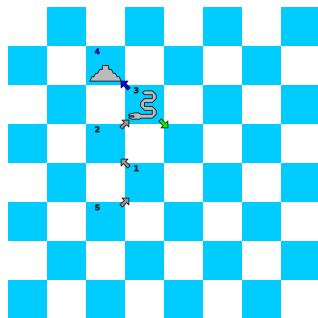


Figure 171: Activating Pyramid

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.

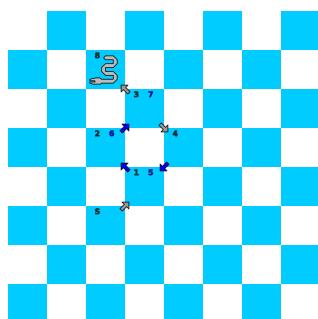
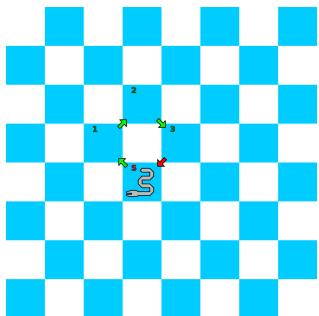


Figure 172: Building momentum

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.

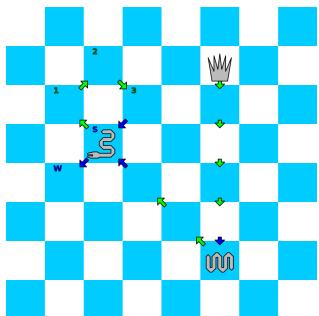
## Static move is illegal



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

Figure 173: Static move

## Static piece is legal

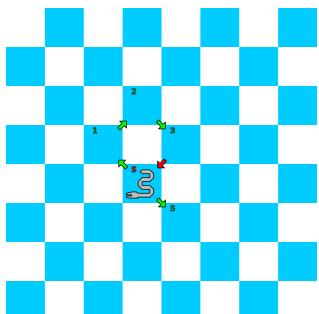


Also similar to [previous example](#), for a piece activated in a cascade it's legal to end its movement on its starting field.

Here, Serpent activated in a cascade can return to its originating field S, reactivate Wave, and force it to move over to field W.

Figure 174: Static piece

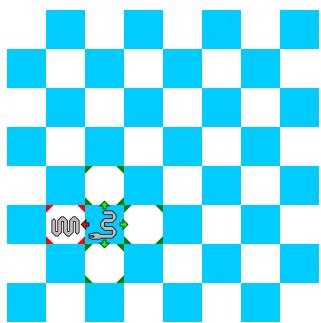
## Static loop is legal



Static loop is a movement of a Serpent over its starting position, to e.g. [build momentum](#). Static loop is a legal move, even if Serpent was the only piece in a move, or was starting a cascade, as long as its final destination is different from its starting position.

Figure 175: Static loop

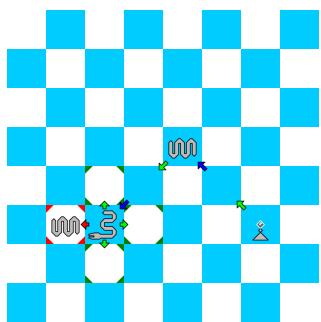
## Color-changing move



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

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

Figure 176: Color-changing move



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

Figure 177: Color-changing cascade

## Out-of-board steps

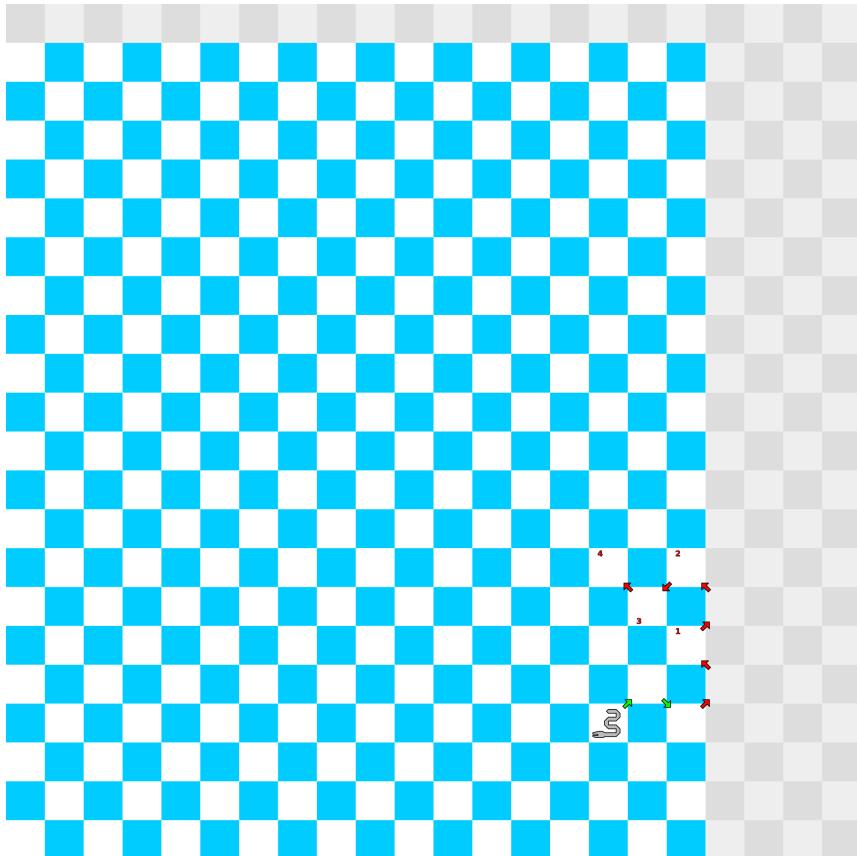


Figure 178: Serpent out-of-board steps

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

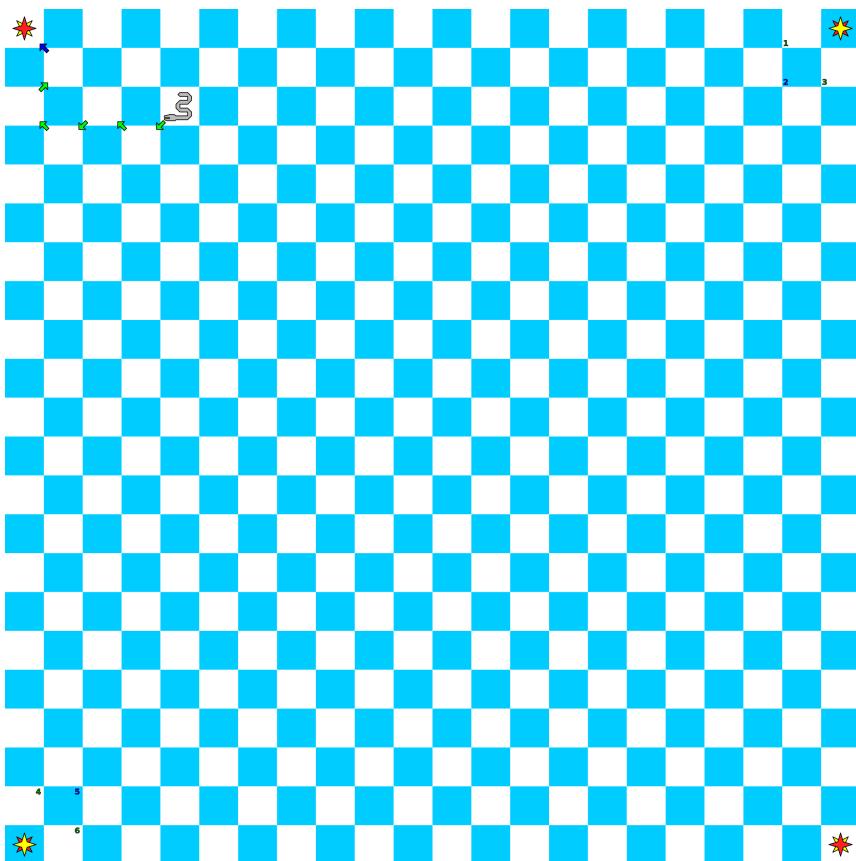


Figure 179: Teleporting Serpent

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**.

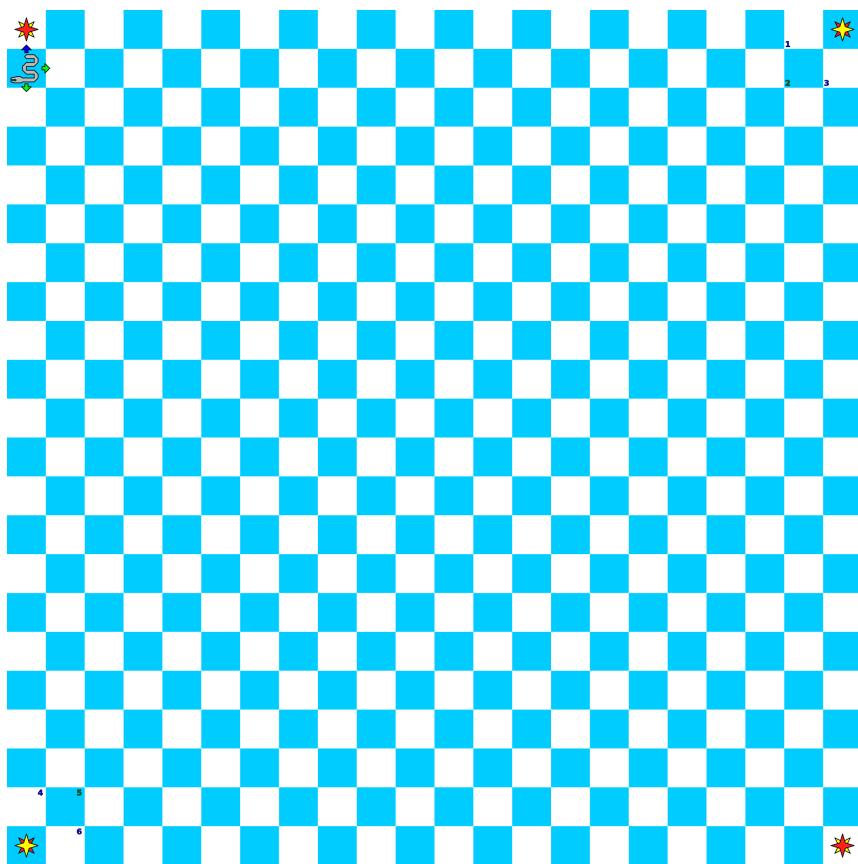


Figure 180: Color-changing step

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

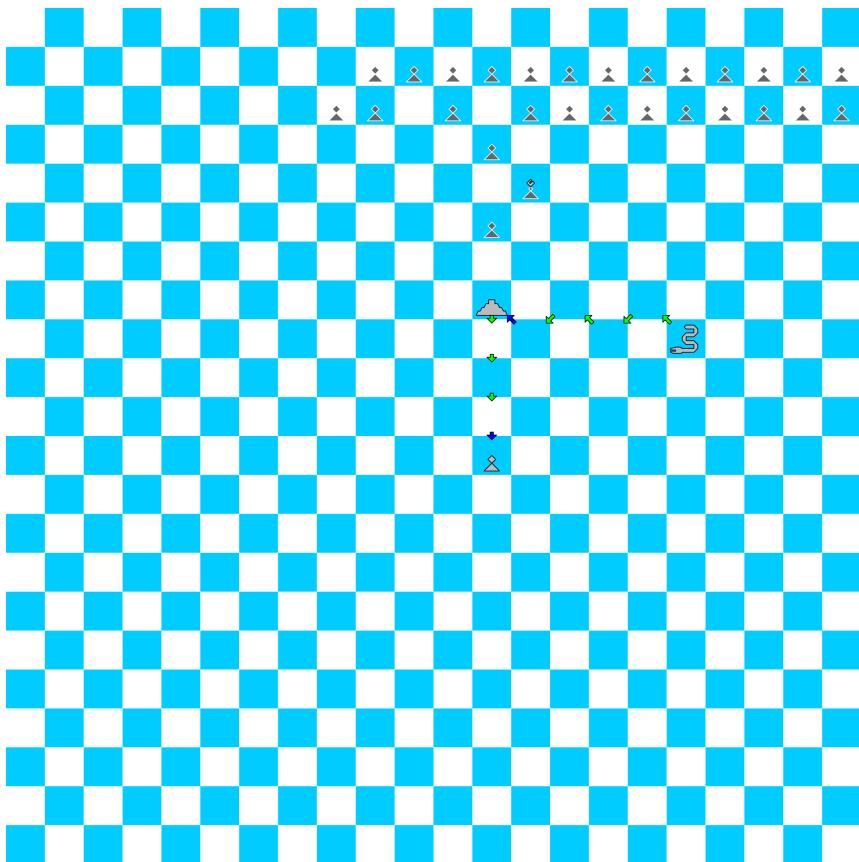


Figure 181: Pawn-sacrifice start

Pawn-sacrifice move is initiated by Serpent activating Pyramid, which then captures field at which own Pawn is located. Pawn is then **obliterated**, 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.

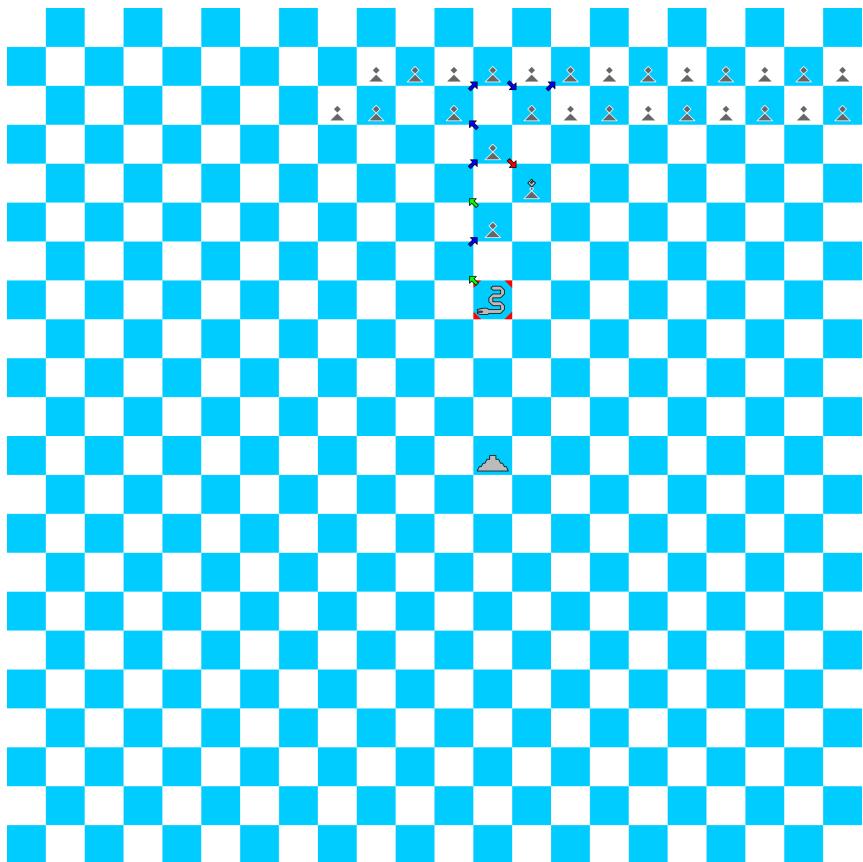
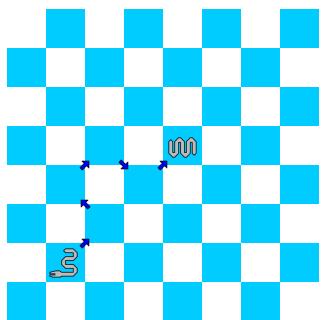


Figure 182: Pawn-sacrifice end

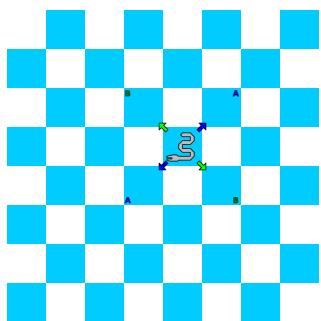
In a new ply, Serpent can capture all opponent's Pawns in it's path, or move over empty fields. Serpent can't capture any other opponent's piece (here, dark Bishop). Pawn-sacrifice tag lasts until normal limit of Serpent's ply is reached (in this variant, 8 fields inclusively), or by any action other 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



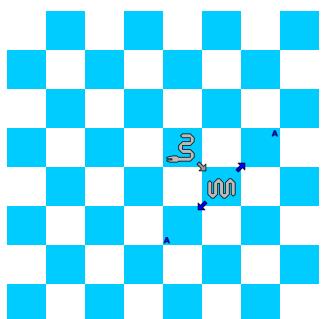
Serpent can activate Wave on its step-fields only, it cannot activate Wave on color-changing fields.

Figure 183: Activating



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

Figure 184: Activated



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

Figure 185: First step

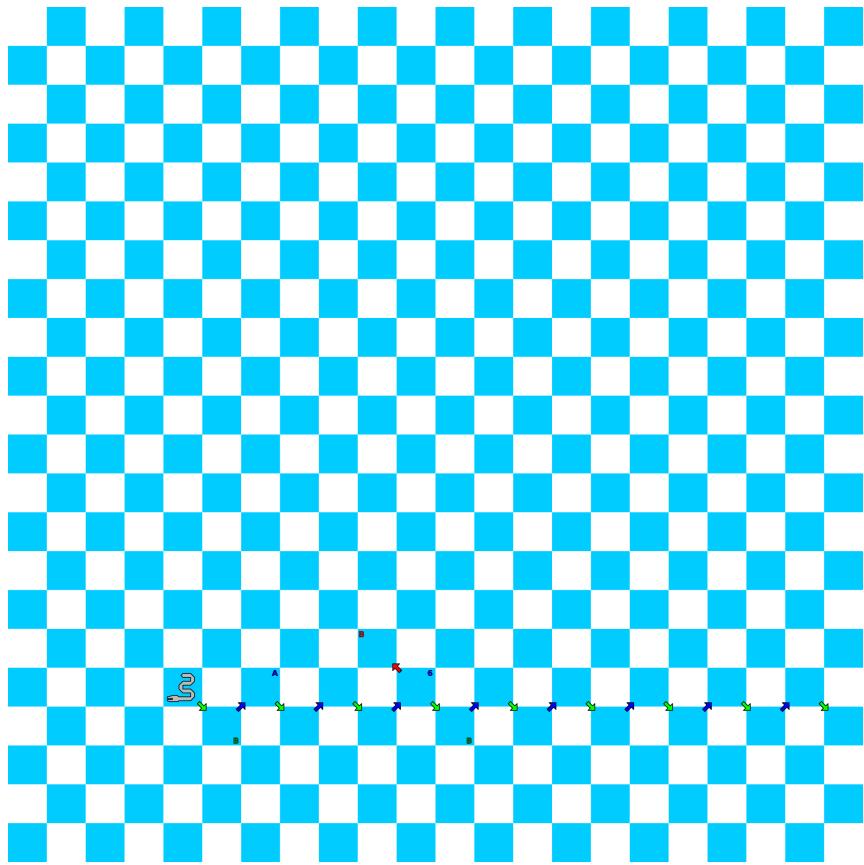


Figure 186: Activated Wave ply

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

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

## Out-of-board steps

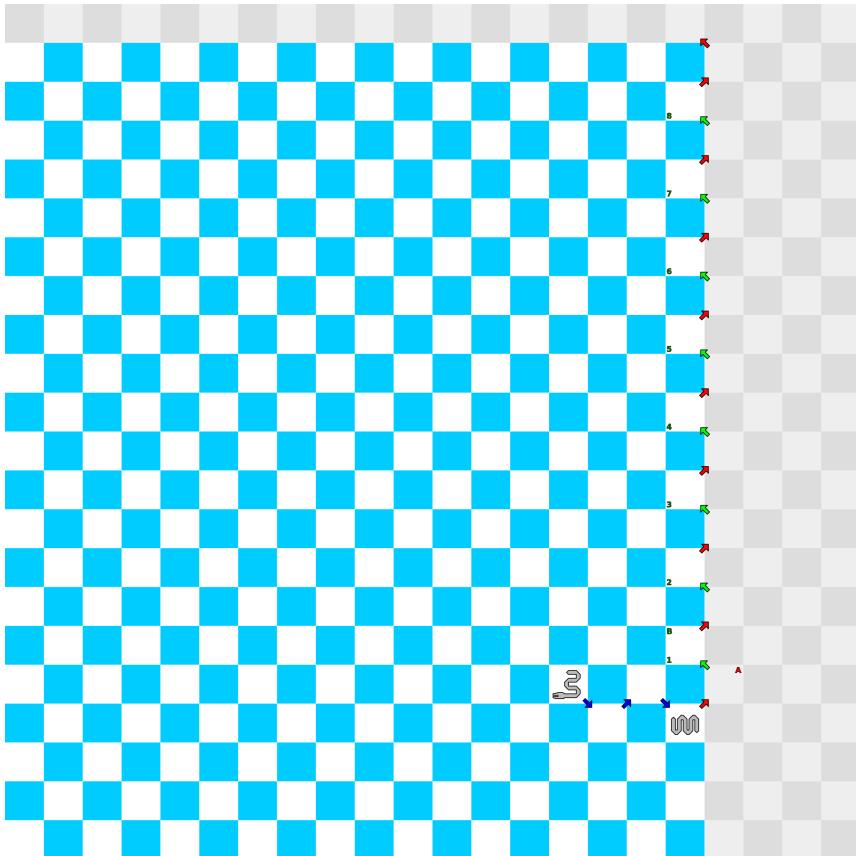


Figure 187: Wave out-of-board steps

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

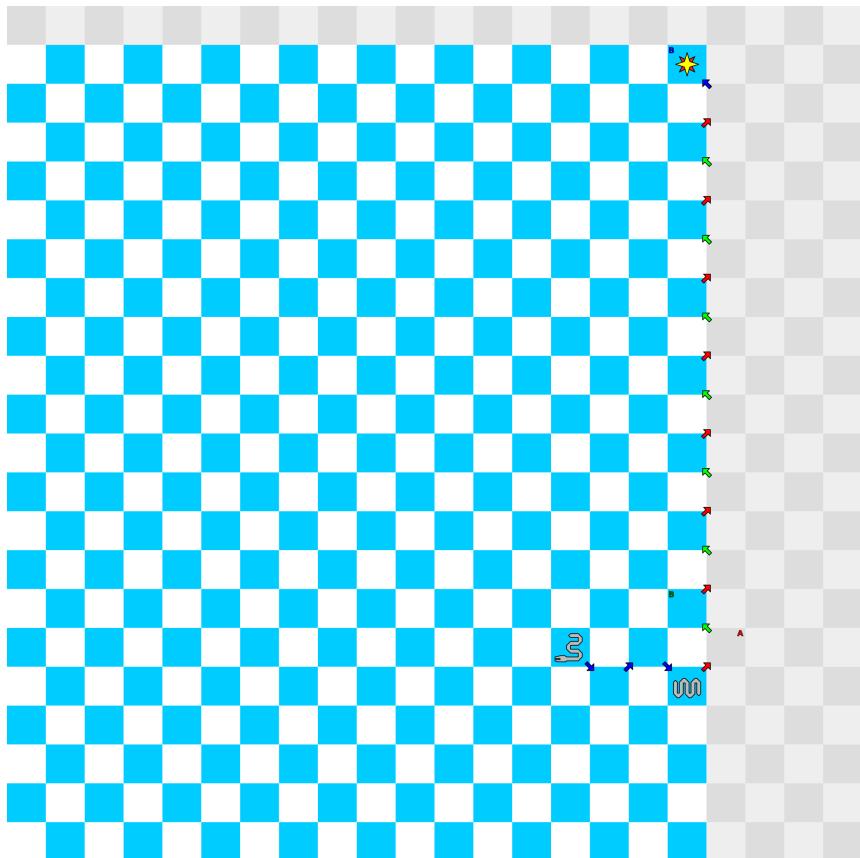


Figure 188: Teleporting off-board Wave

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.

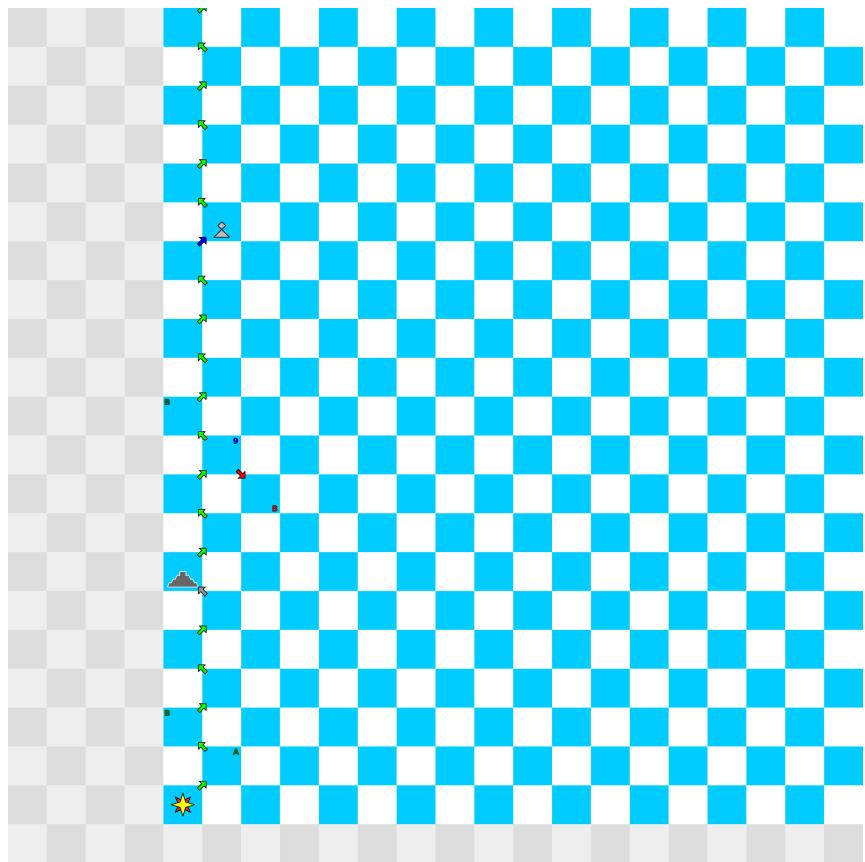


Figure 189: Teleported Wave

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.

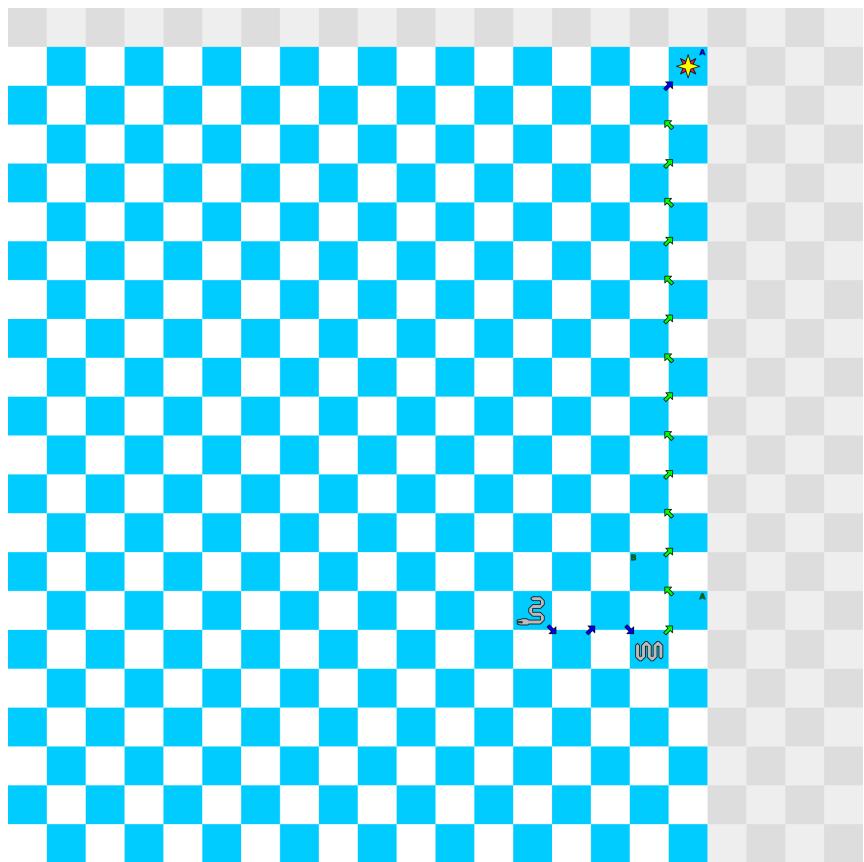


Figure 190: Teleporting Wave

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 191: Wave teleported off-board

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

## Rush, en passant

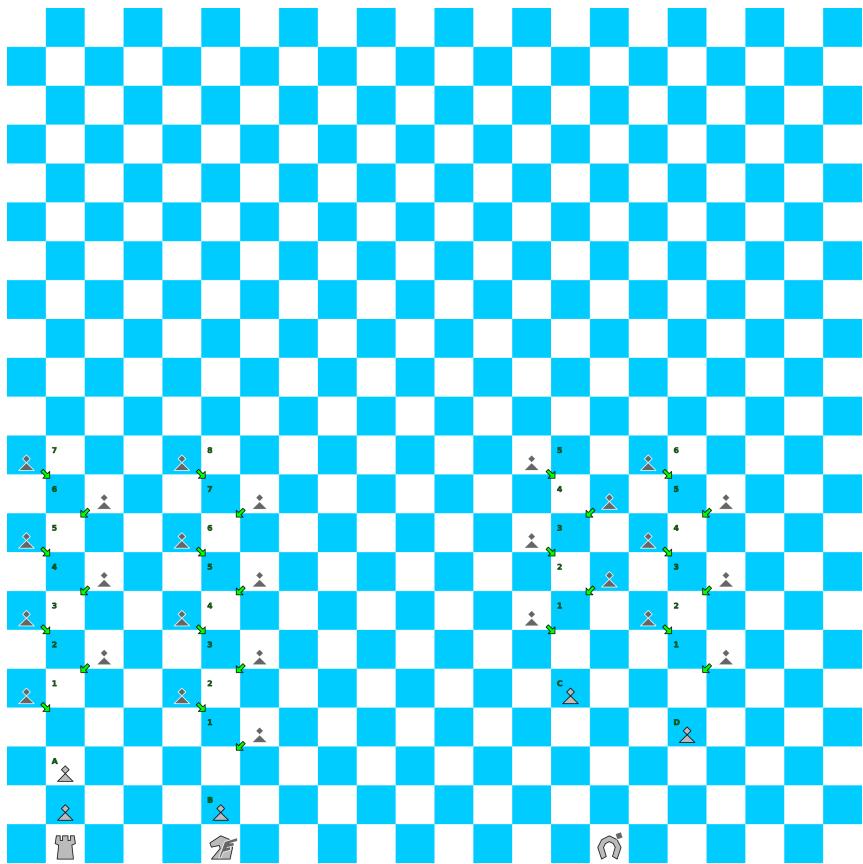


Figure 192: En passant

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.

# Promotion

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

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

# Castling

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



Figure 193: Castling

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



Figure 194: Castling short left

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

## Initial setup

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

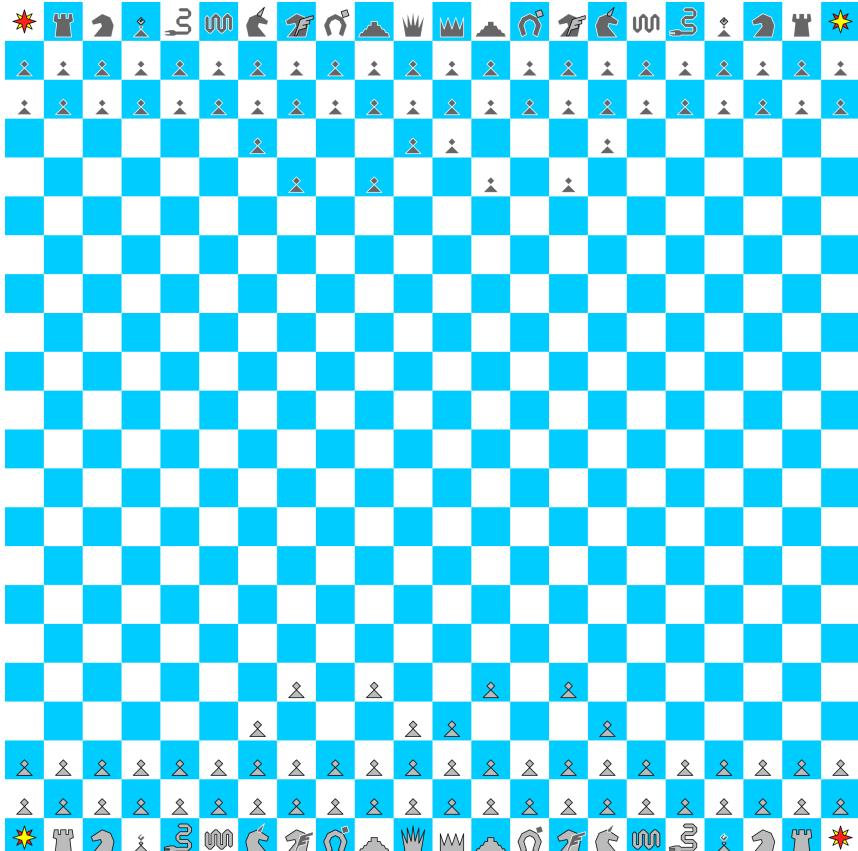


Figure 195: Tamoanchan Revisited board

# Conquest of Tlalocan

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

... Roy L. Smith

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

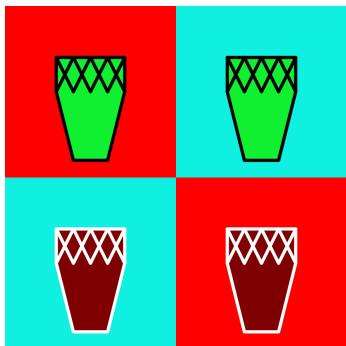


Figure 196: Shaman

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.

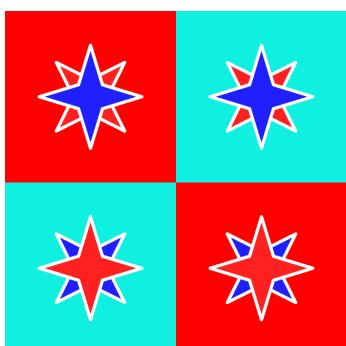


Figure 197: Star

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.

## Movement

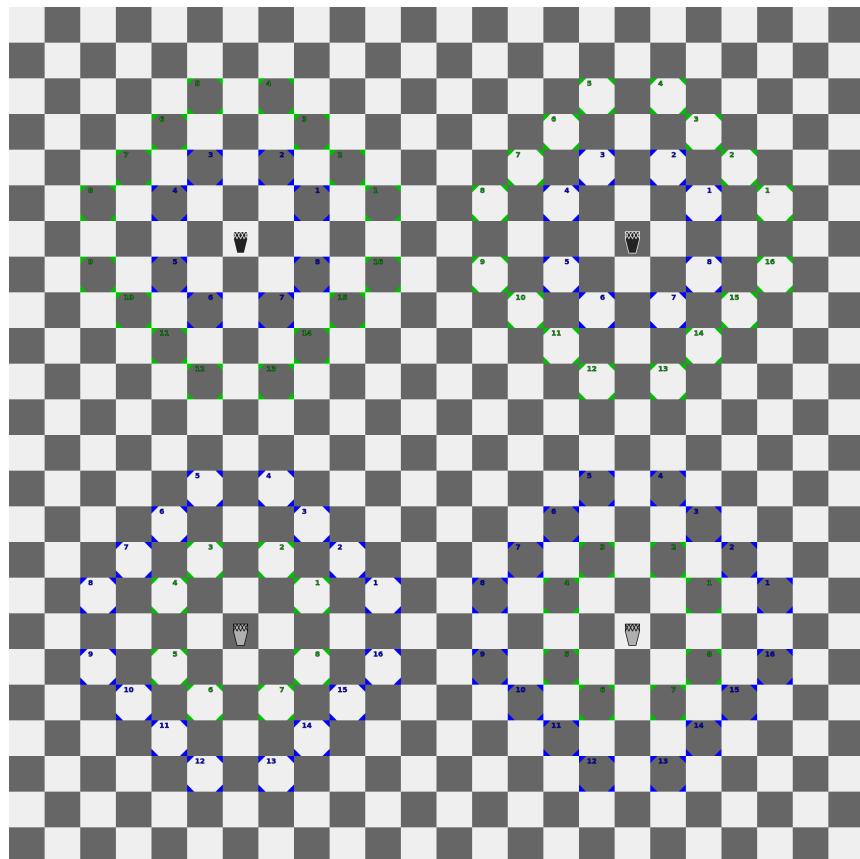


Figure 198: Shaman's movement

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.

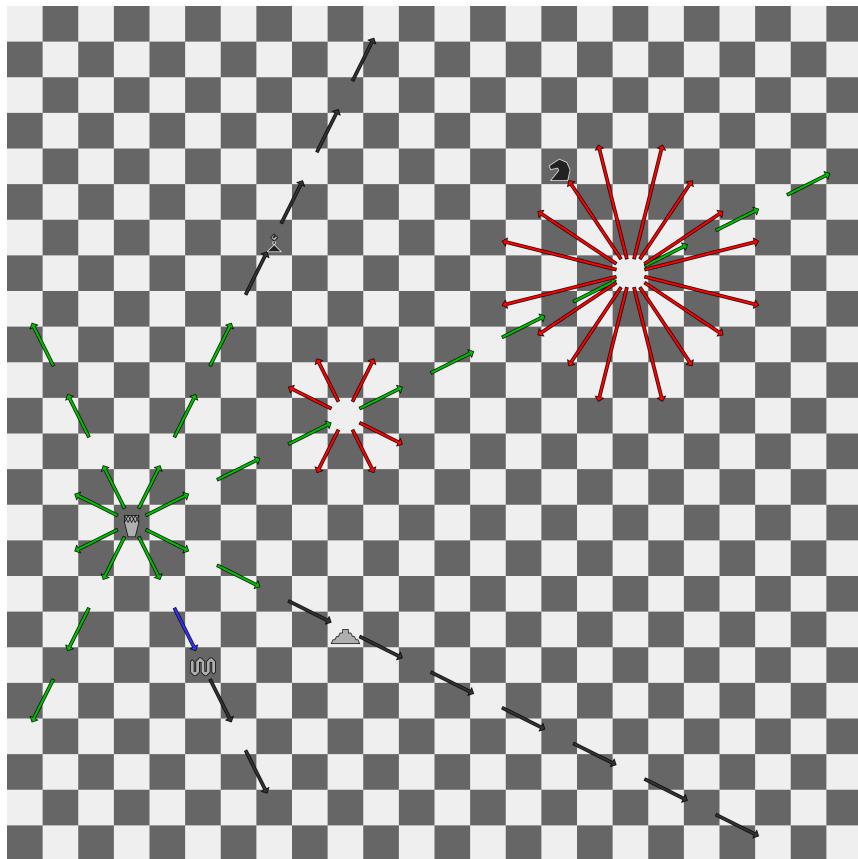


Figure 199: Light Shaman's step-ply

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.

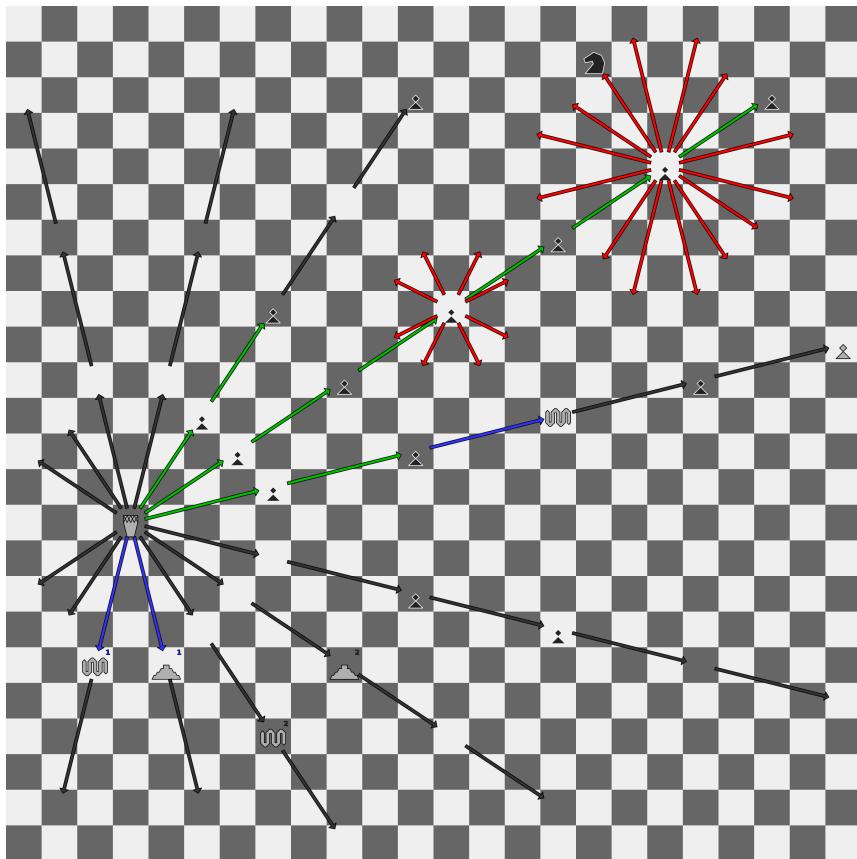


Figure 200: Light Shaman's capture-ply

Capture-ply can only be started with immediate capture, after which Shaman can continue its movement as long as it keeps 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 its 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 its ply.

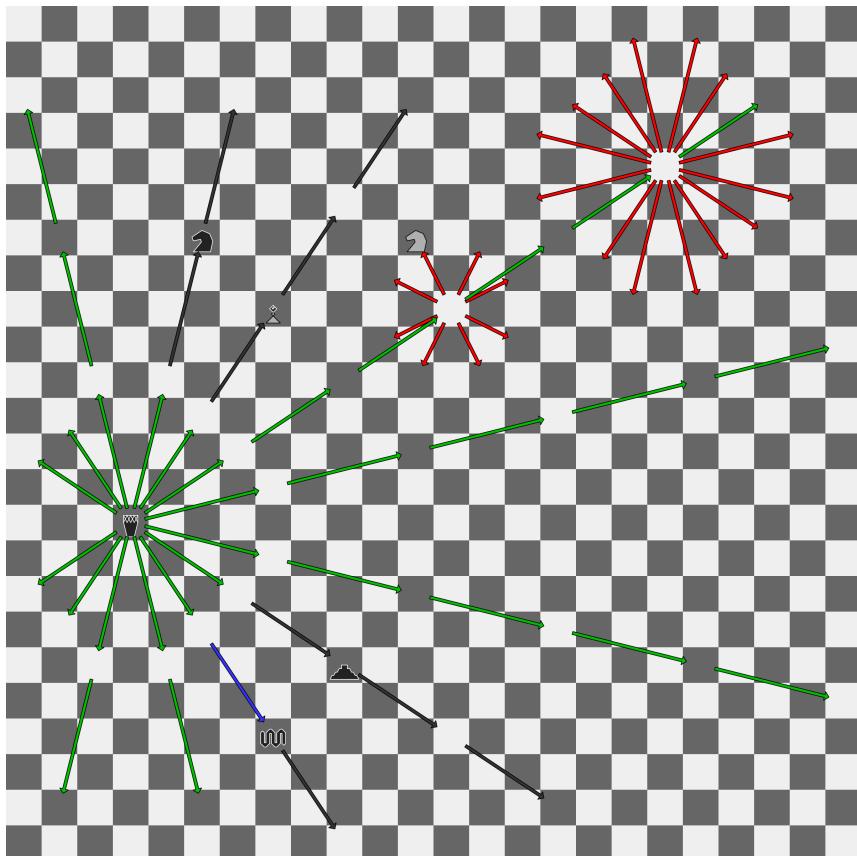


Figure 201: Dark Shaman's step-ply

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.

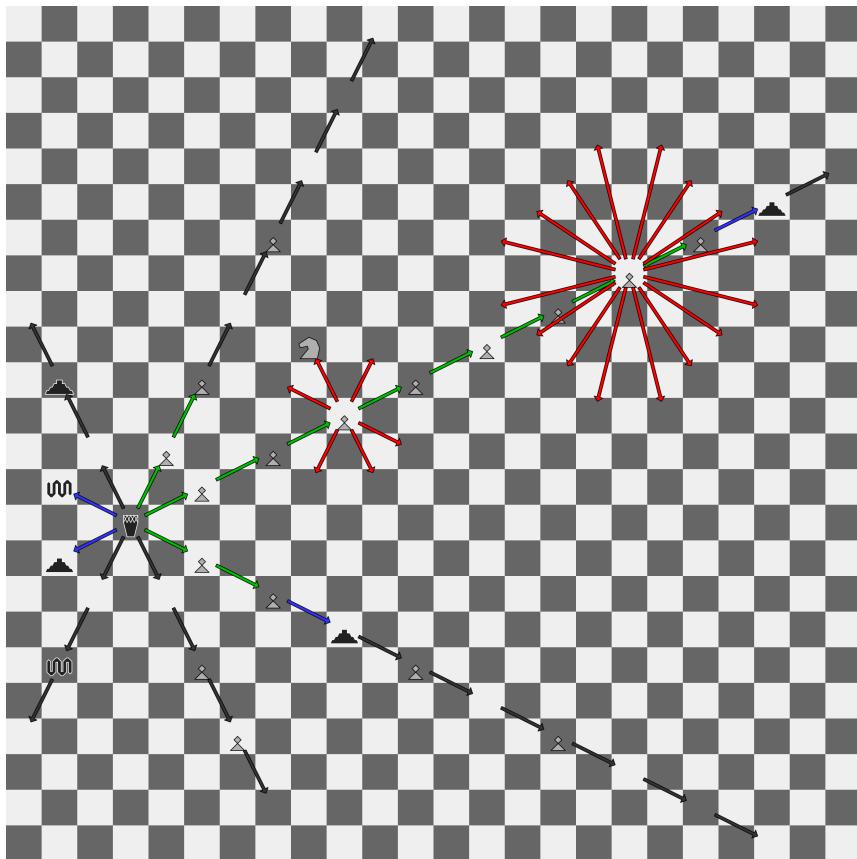


Figure 202: Dark Shaman's capture-ply

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 its heading to any other direction. Shaman can also activate Pyramid or Wave on a capture-field, even on its first step, thus ending its ply.

## Activating Wave

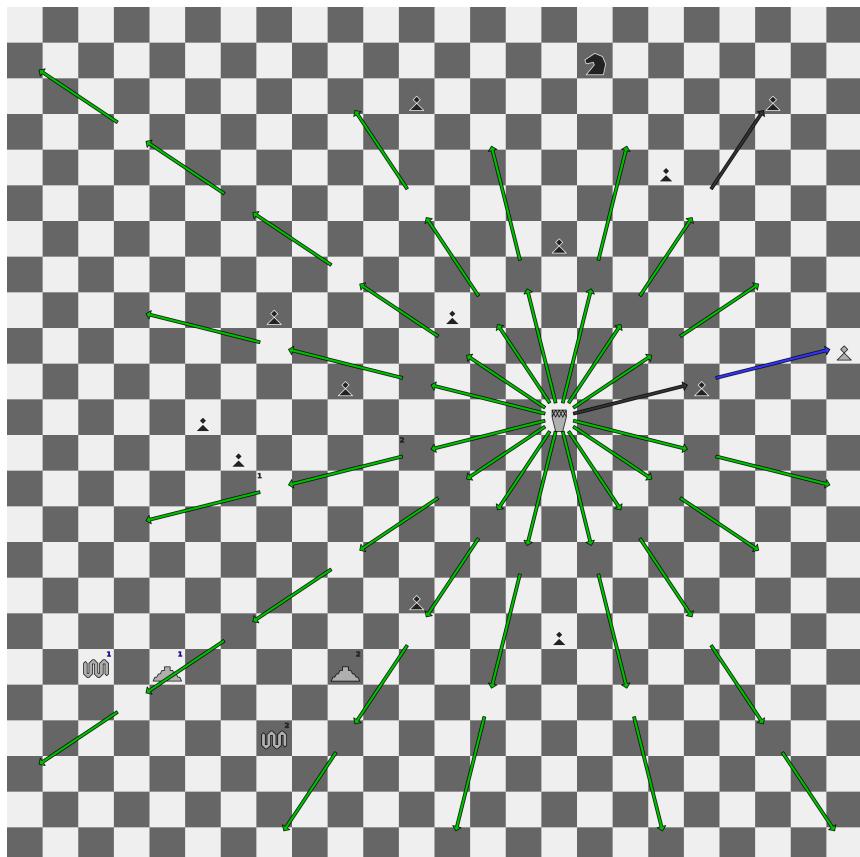


Figure 203: Shaman activated Wave

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.

Note, Wave activated by Shaman can move over its empty capture-fields, even though Shaman itself cannot.

## Teleporting Shaman

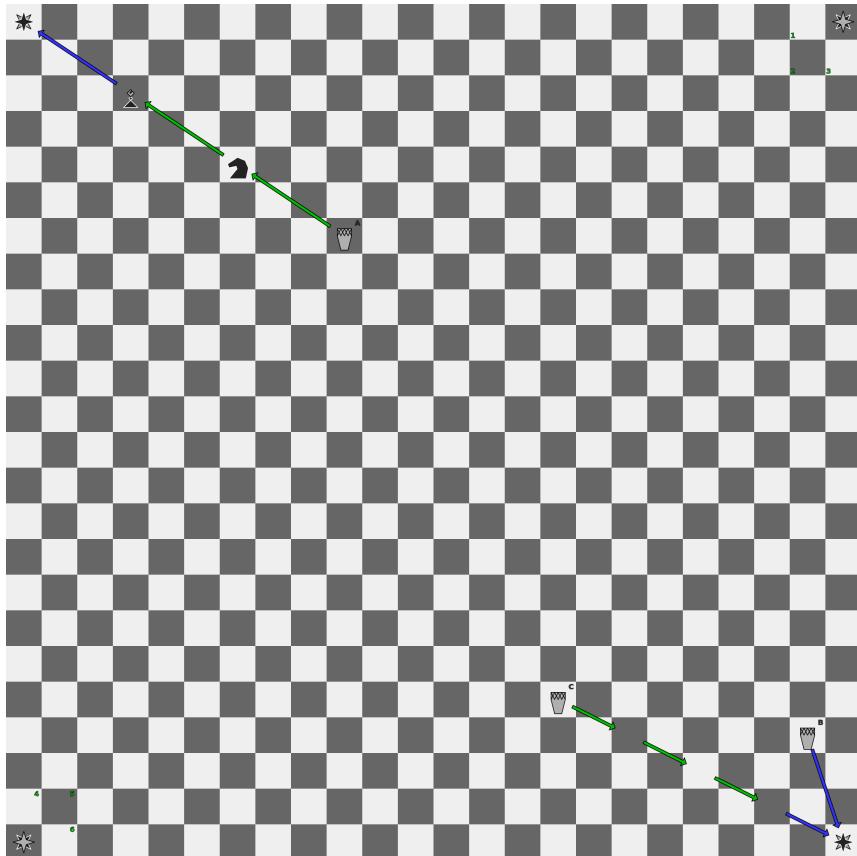


Figure 204: Teleporting Shaman

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

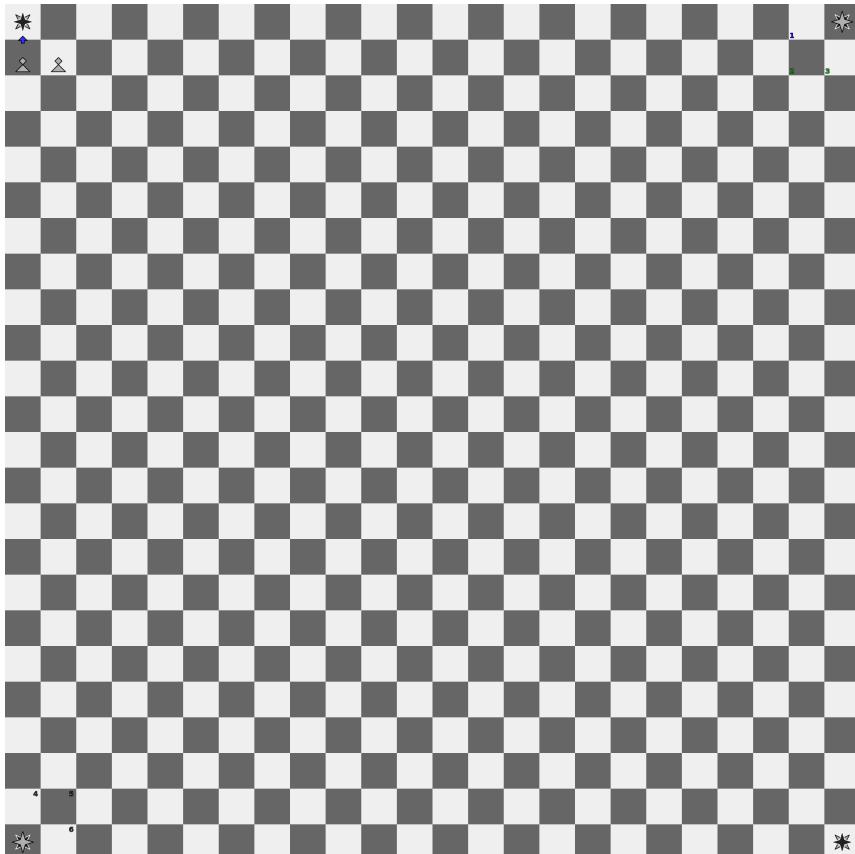


Figure 205: Teleporting Pawn

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.

## Diverging Shaman

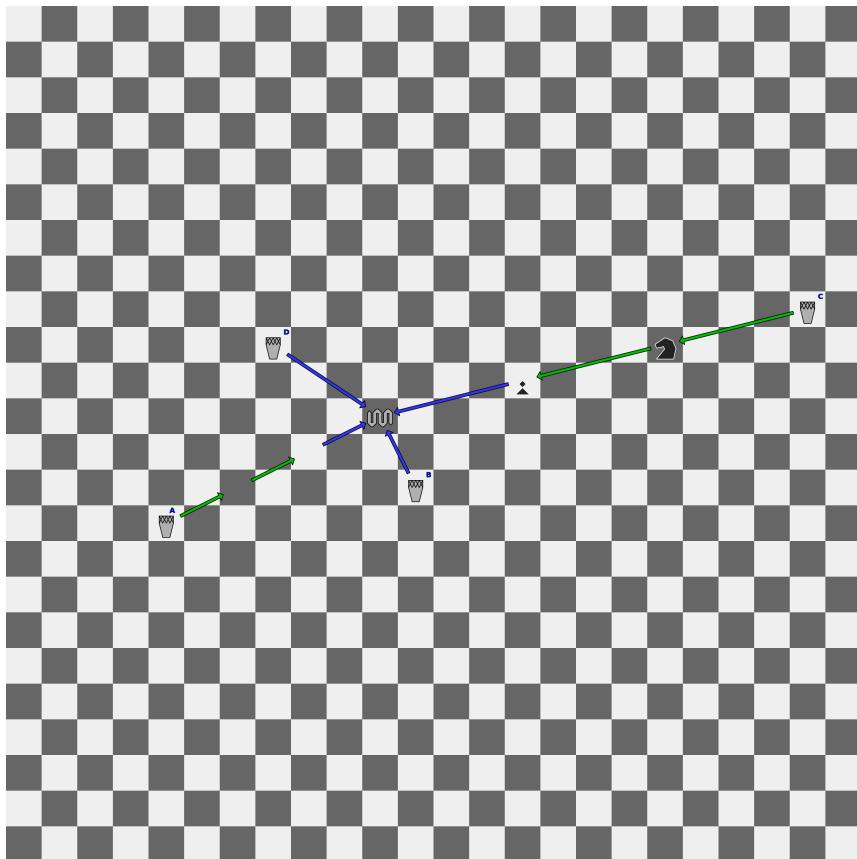


Figure 206: Diverging Shamans

Image above contains four examples; each started by a marked Shaman.

Shaman can diverge from own Wave, regardless if it has been moved over ordinary (Shamans A, B), or capture-steps (C, D); over single (B, D), or multiple steps (A, C). **Like before**, activated Shaman has to have momenmen to be able to diverge; otherwise it could only activate Wave.

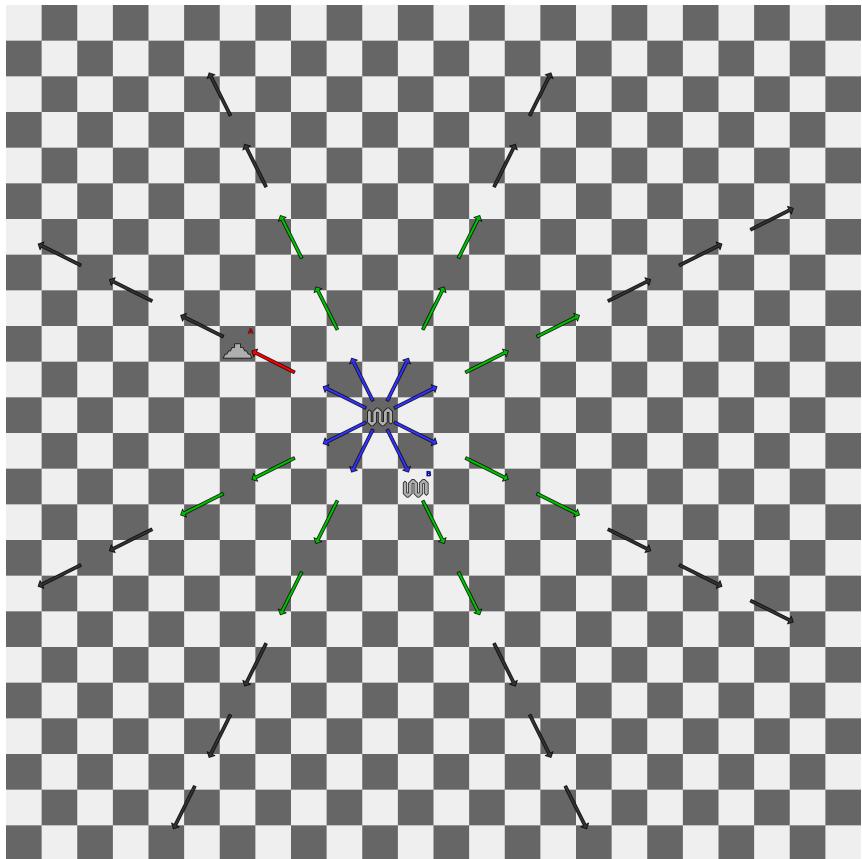


Figure 207: Steps after divergence

Regardless how any of Shamans got to own Wave, it can diverge (if it has momentum), and choose any of ordinary steps (pictured here), or capture-steps (on following page) as its next movement direction. Regardless of chosen direction, diverging Shaman is **limited by momenum it had when own Wave was encountered.**

On its step-fields, any Shaman can e.g. activate own other Wave (field B), but none can activate own Pyramid (field A), even if it has momentum.

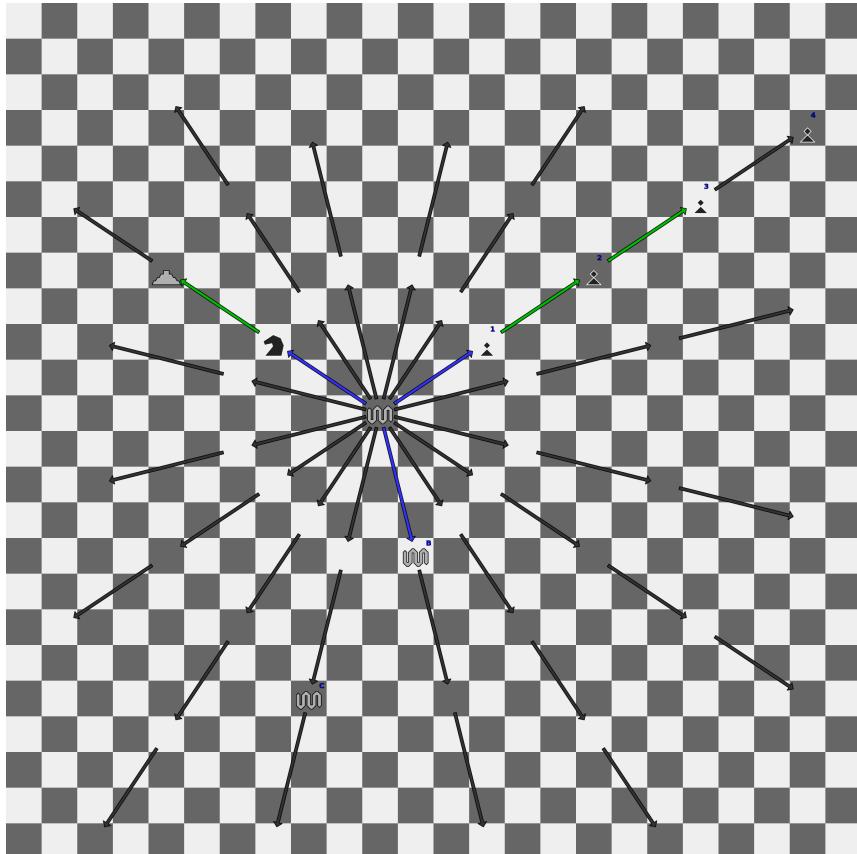


Figure 208: Capture-steps after divergence

After divergence, Shaman can choose next direction, and go only so far as opponent's pieces are present on capture-fields (here, dark Pawns, Knight), or own pieces to activate (light Pyramid, Wave B).

Again, Shaman is limited by momentum it had immediately before divergence. So, single-step Shamans (here B, D) can capture dark Knight, only one dark Pawn, or activate Wave B (blue arrows); multi-step Shamans (A, C) can also capture two more Pawns, or activate light Pyramid (green).

## Trance-journey

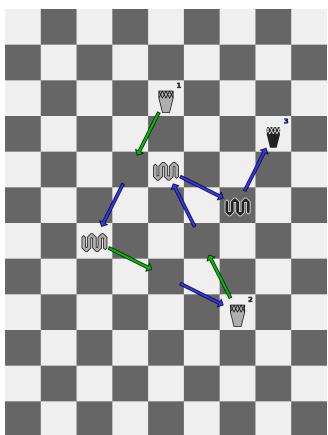


Figure 209: Start

Trance-journey can be started by activating a Shaman, if other Shaman precedes it in a cascade, with only Waves between the two. 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 existence of two consecutive Shamans in a cascade, with only Waves separating them, 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.

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

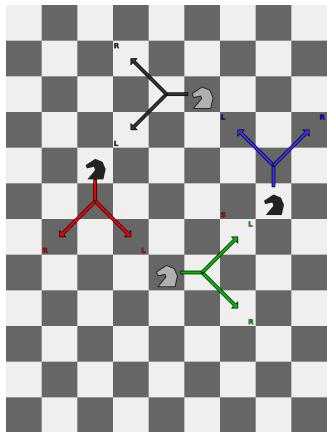


Figure 210: Knight directions

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.

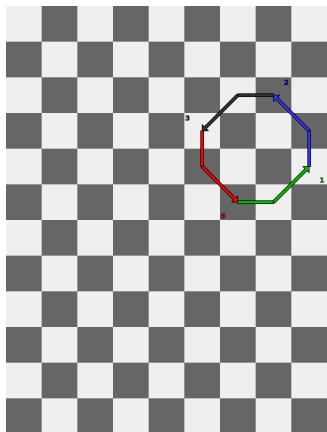


Figure 211: Stop sign pattern

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.

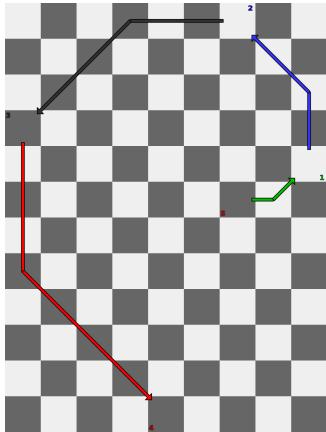


Figure 212: Stop sign pattern unwinded

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

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

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

## Light Shaman

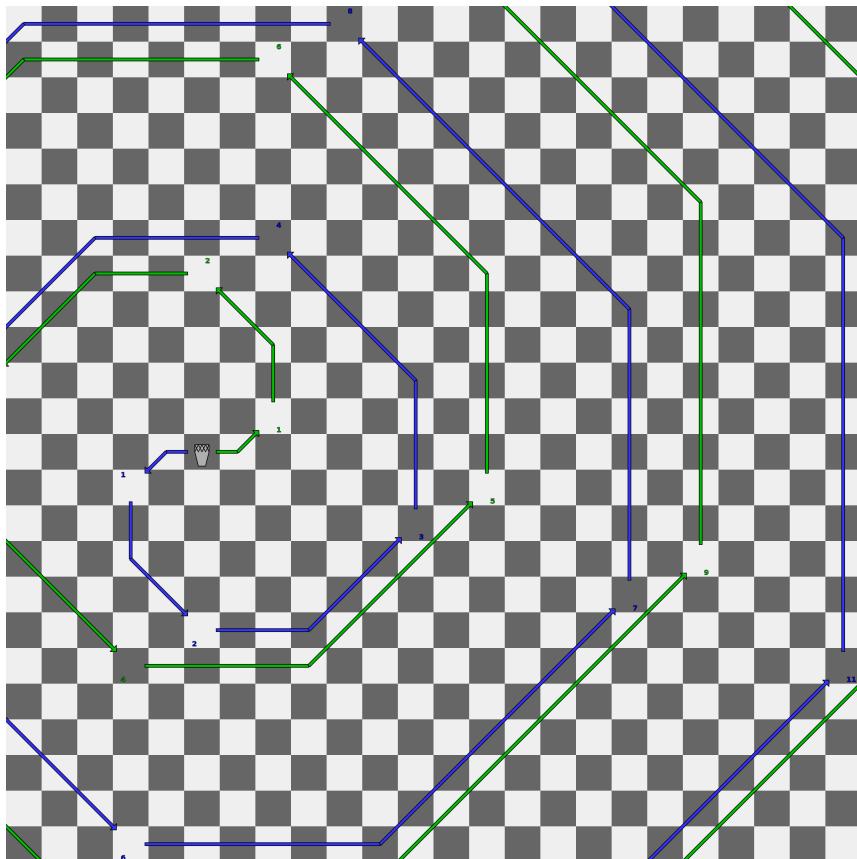


Figure 213: Light Shaman trance-journey

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 oblationed.

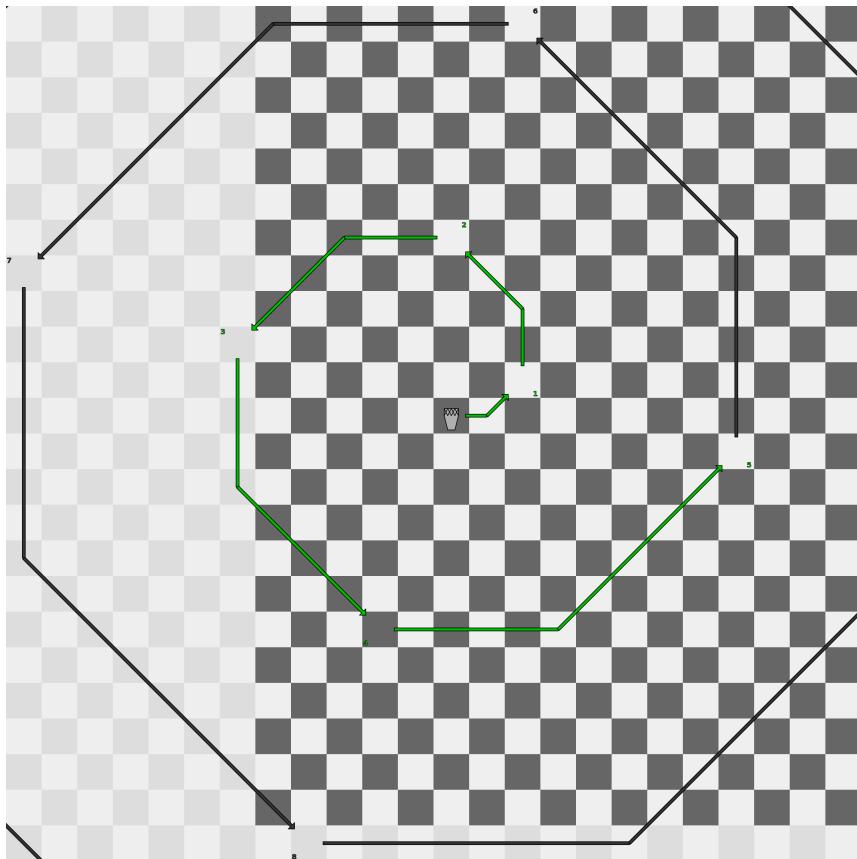


Figure 214: Light Shaman trance-journey with offset

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

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

## Dark Shaman

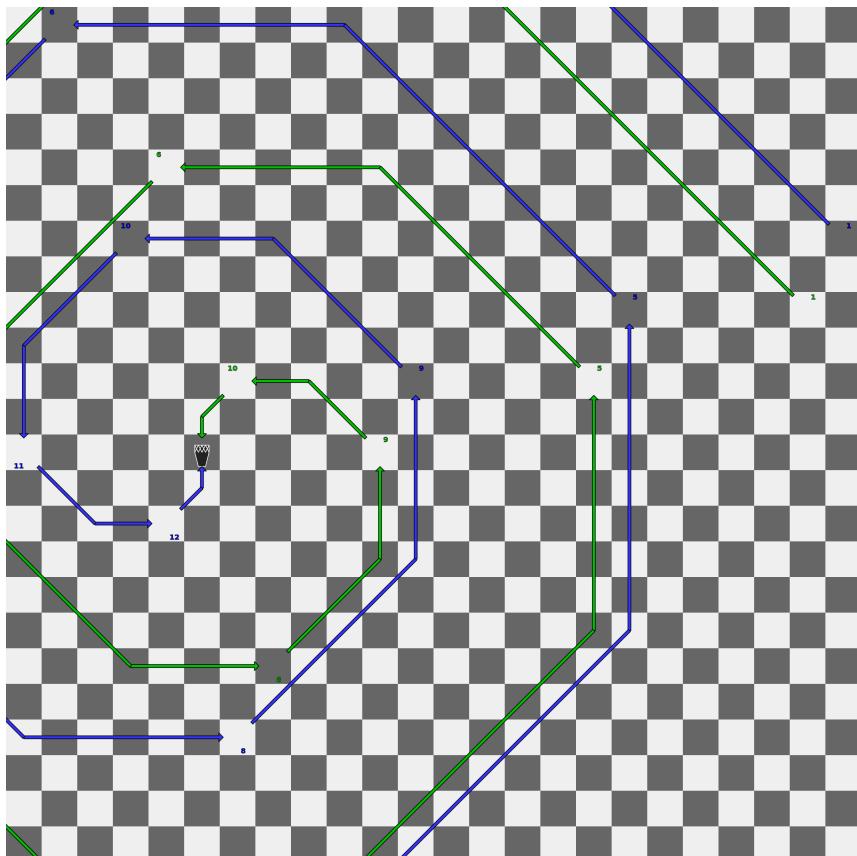


Figure 215: Dark Shaman trance-journey

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.

## Interactions

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 chessboard as if captured by the opponent).

## Displacement-fields

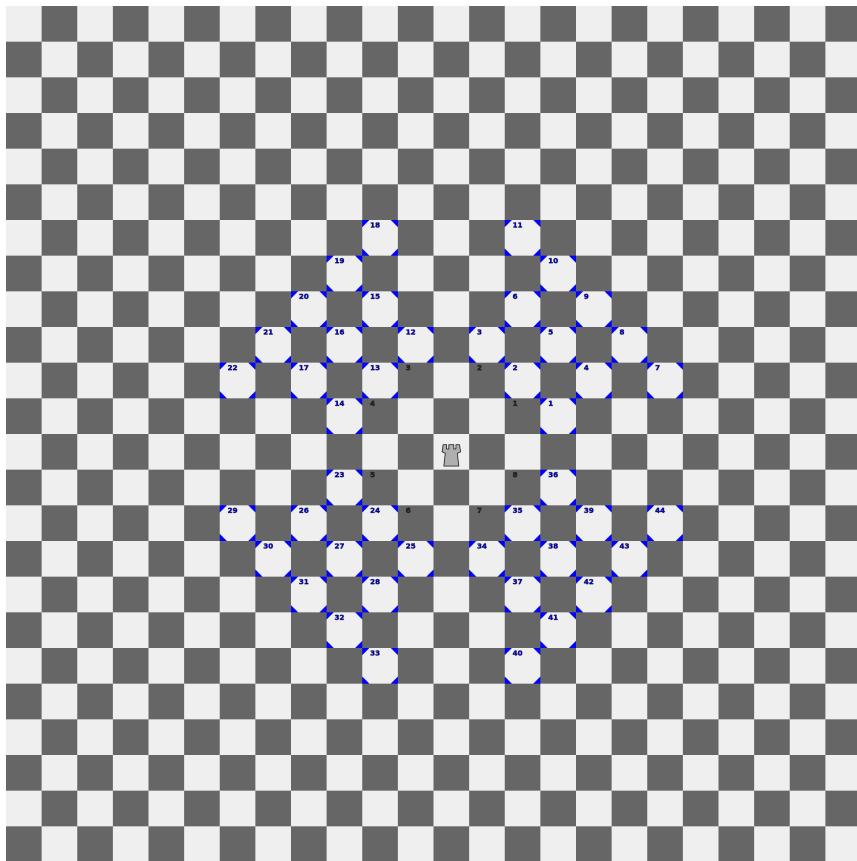


Figure 216: Displacement-fields

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.

## Light → light Shaman

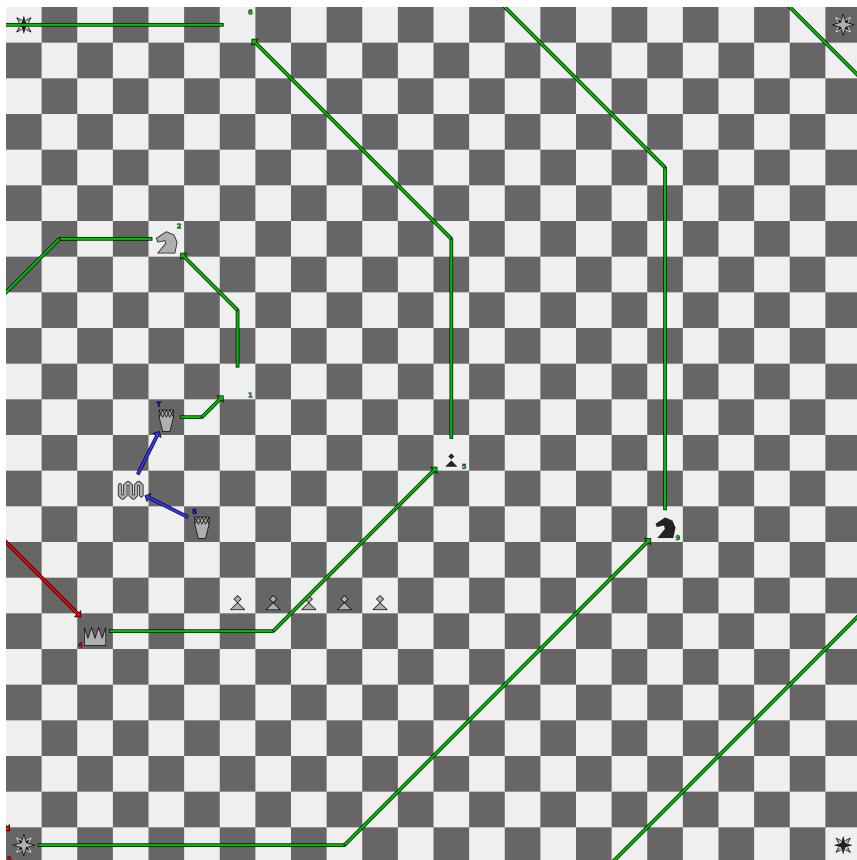


Figure 217: Light → light Shaman interaction start

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.

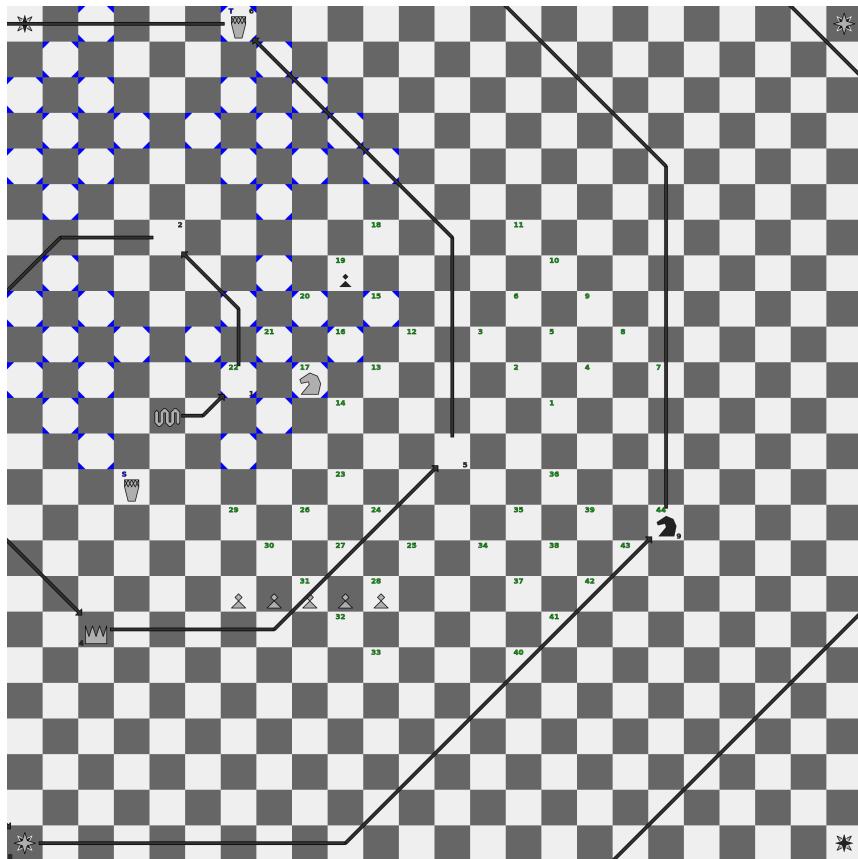


Figure 218: Light → light Shaman interaction end

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

## Dark → light Shaman

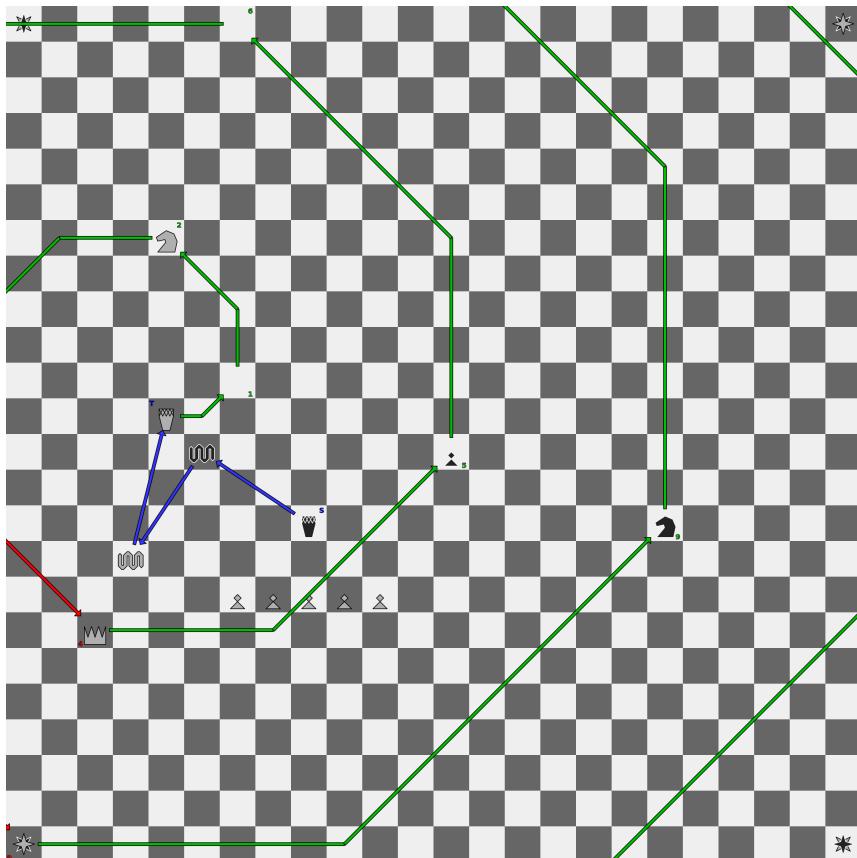


Figure 219: Dark → light Shaman interaction start

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.

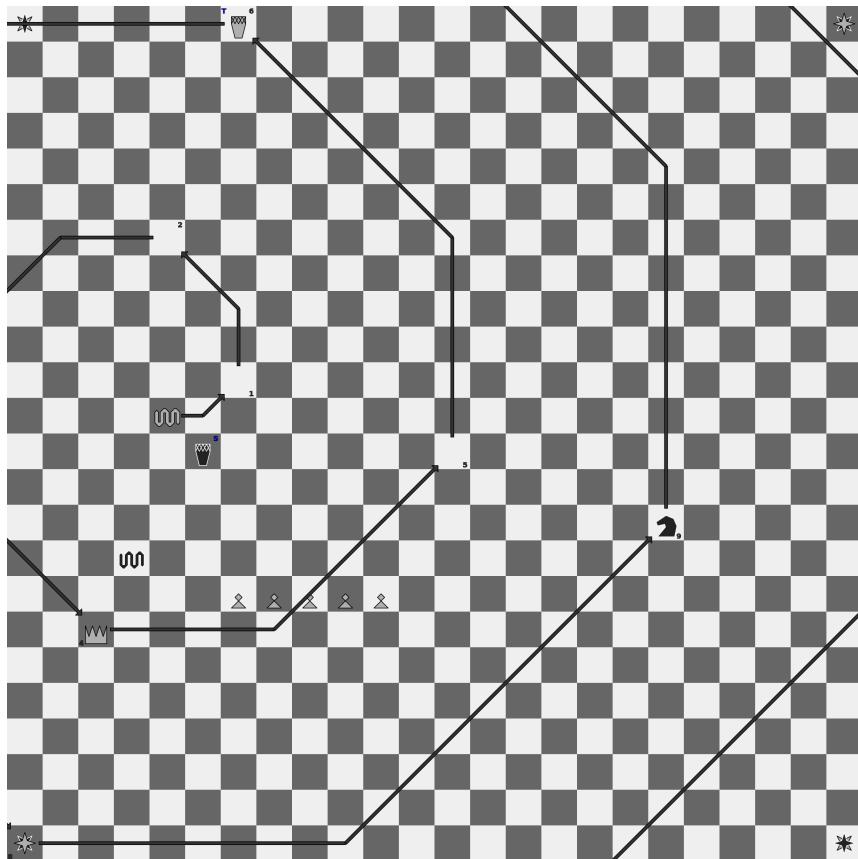


Figure 220: Dark → light Shaman interaction end

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

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

## Dark → dark Shaman

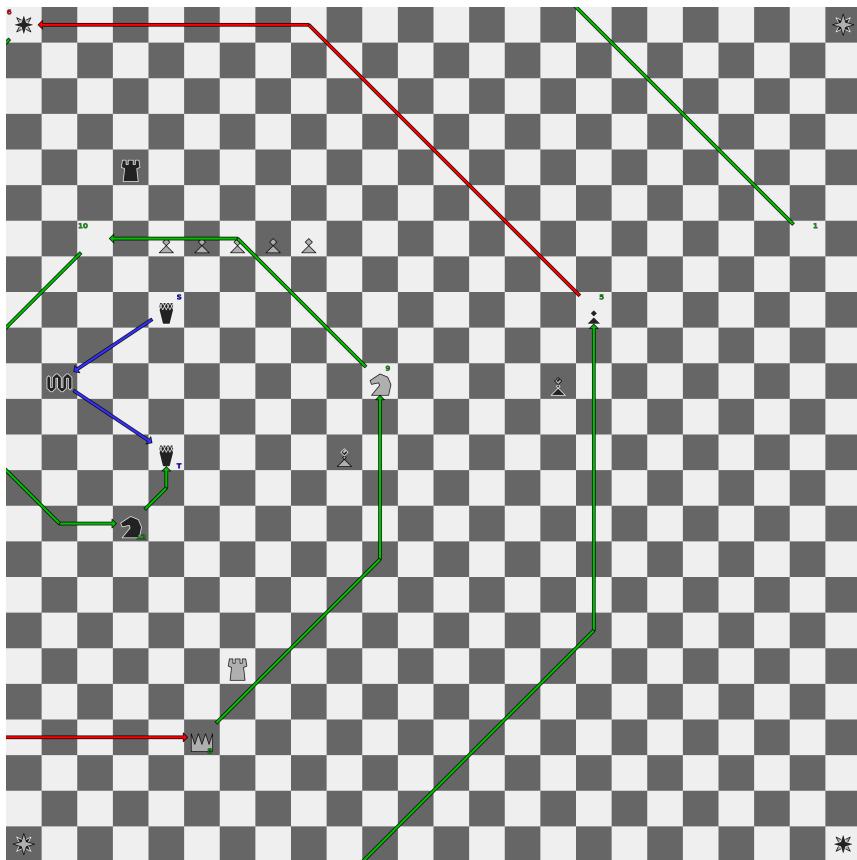


Figure 221: Dark → dark Shaman interaction start

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).

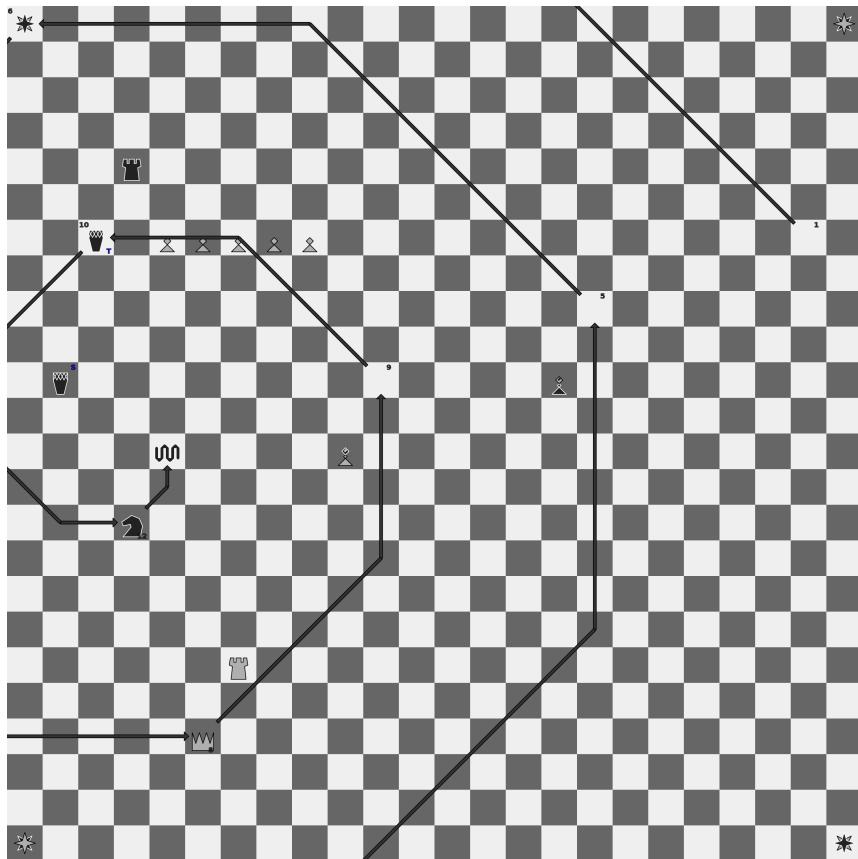


Figure 222: Dark → dark Shaman interaction end

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.

## Dark → dark Shaman double

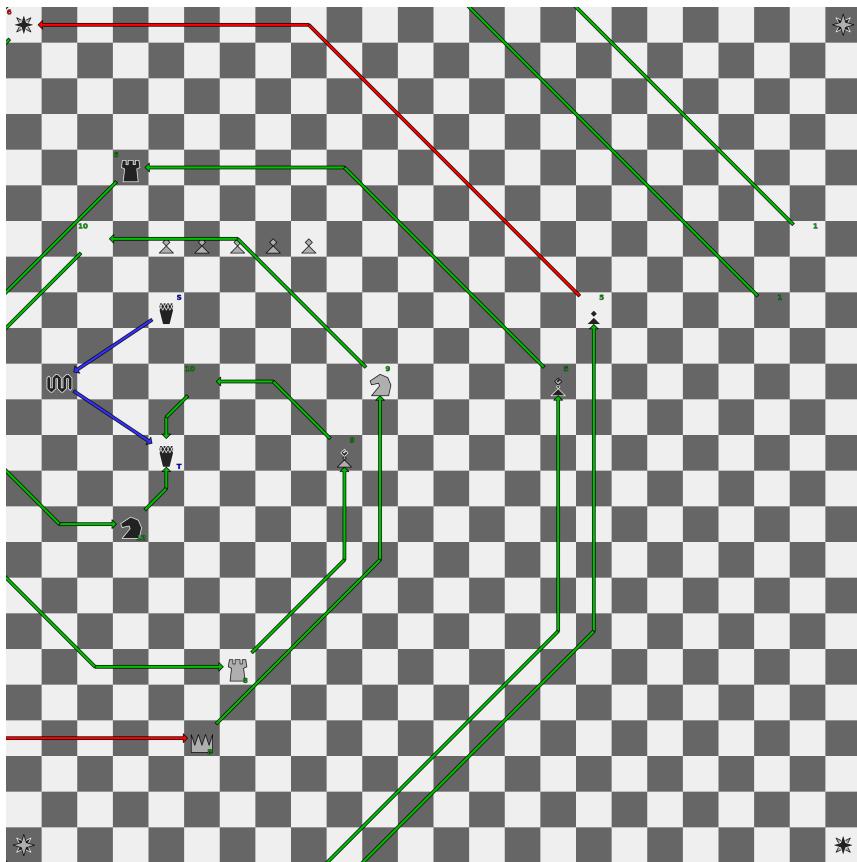


Figure 223: Dark → dark Shaman double start

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.

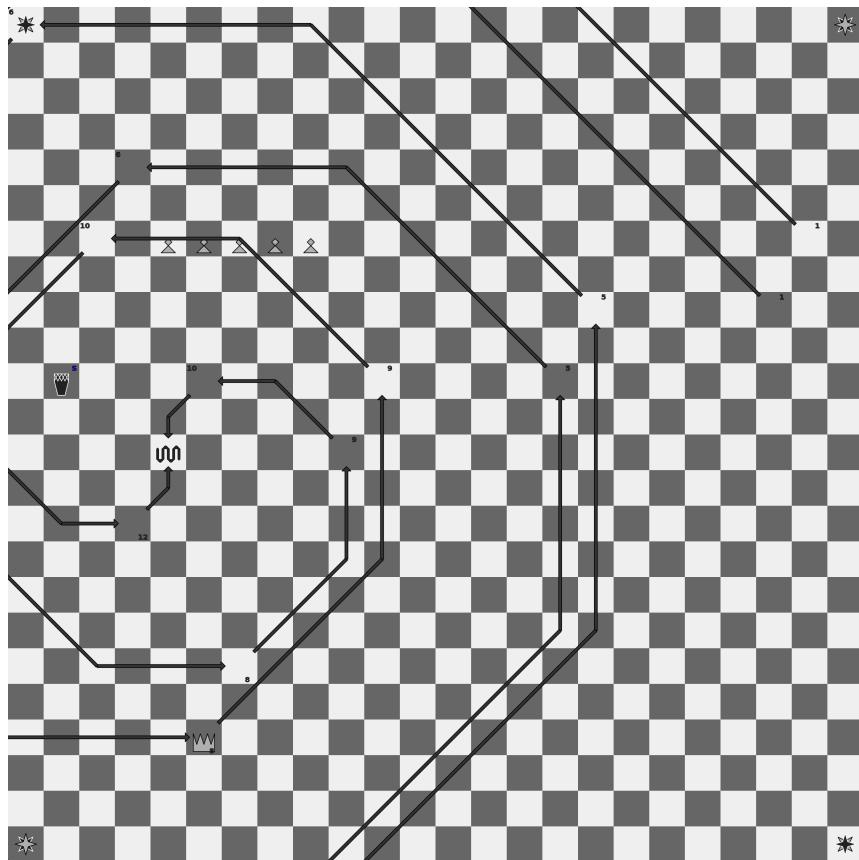


Figure 224: Dark → dark Shaman double end

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

## Light → dark Shaman

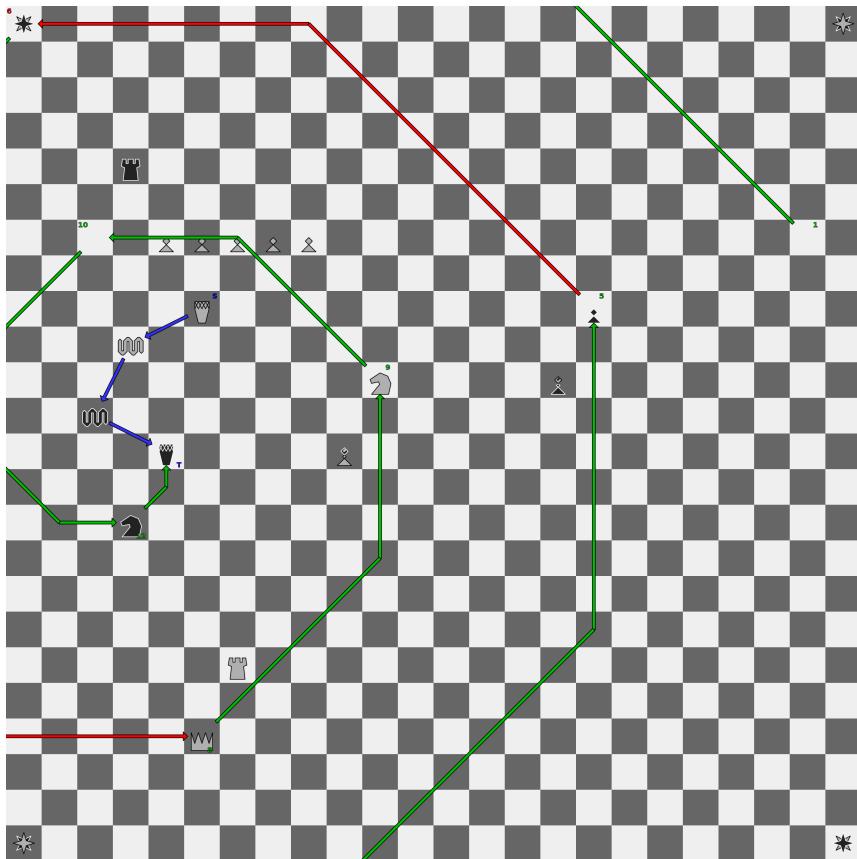


Figure 225: Light → dark Shaman interaction start

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.

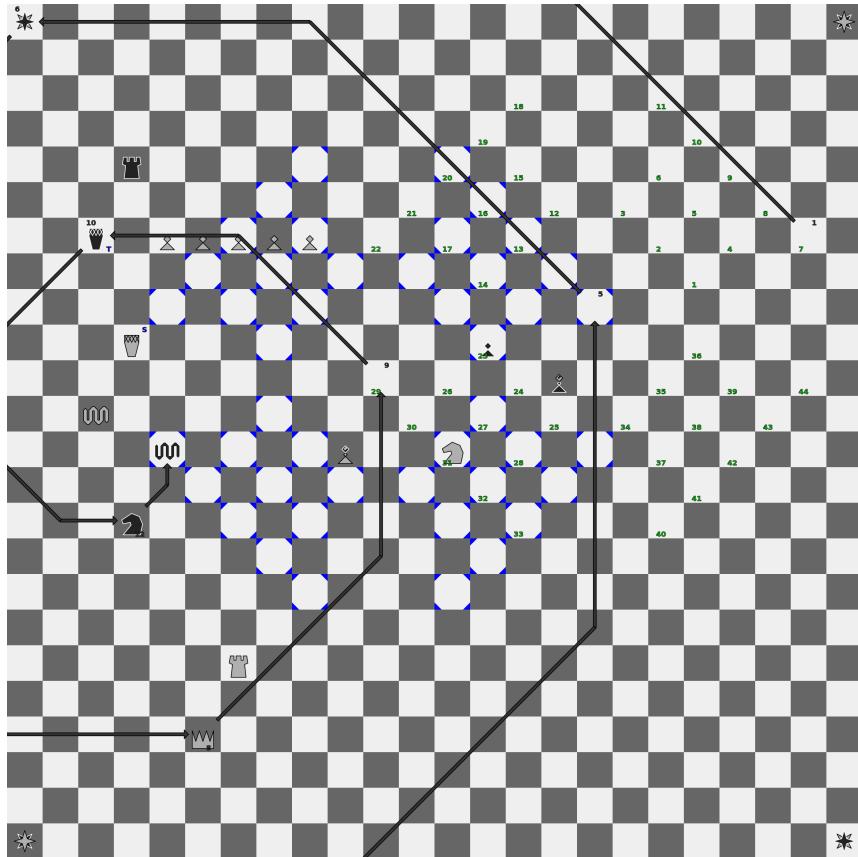


Figure 226: Light → dark Shaman interaction end

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

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

## Backward displacements

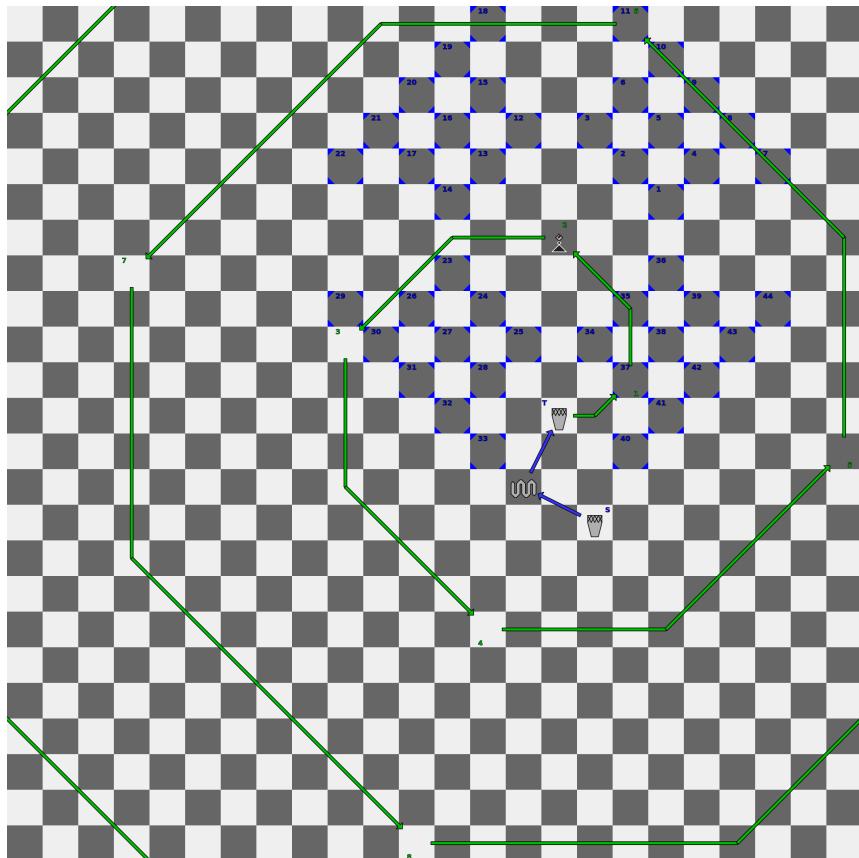


Figure 227: Backward displacement start

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.

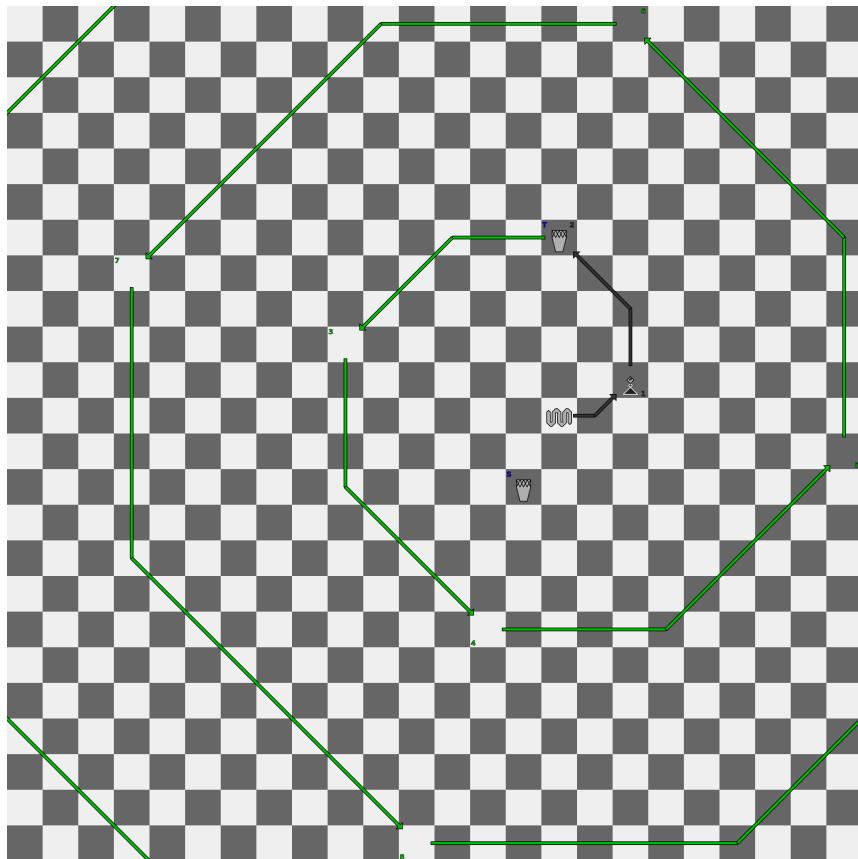


Figure 228: Backward displacement end

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.

## Forward displacements

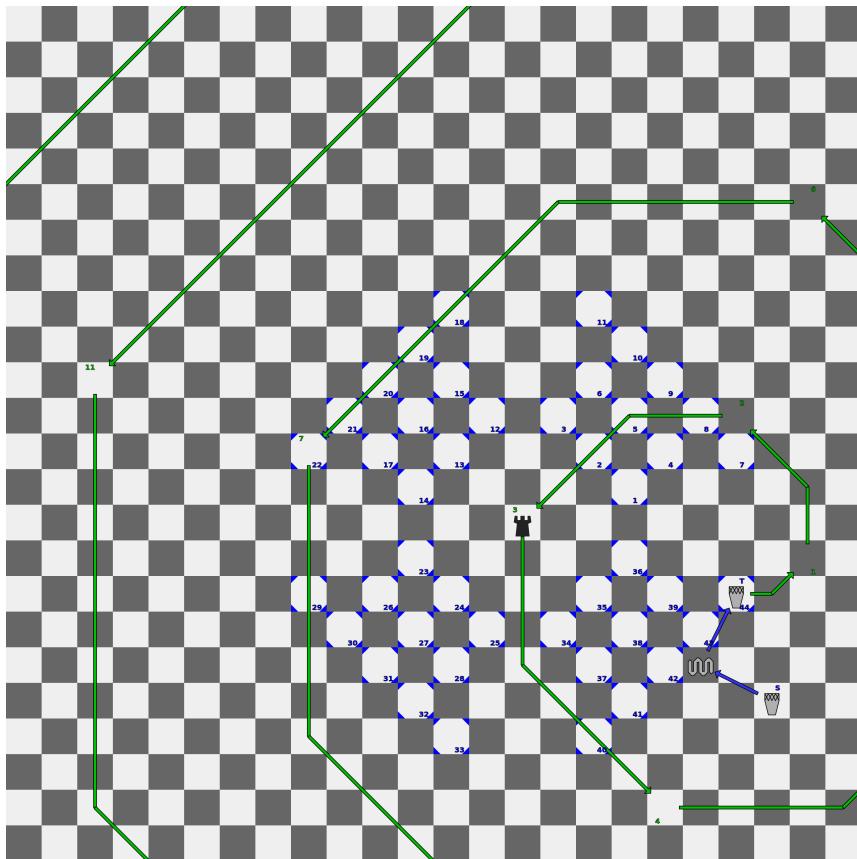


Figure 229: Forward displacement start

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.

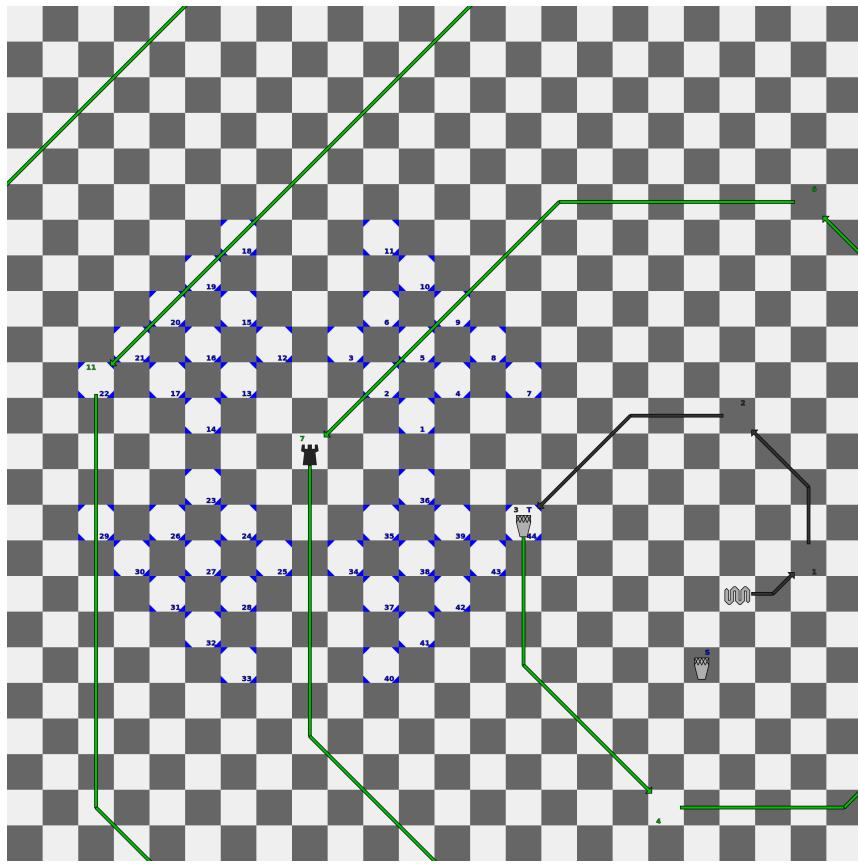


Figure 230: Forward displacement, step 2

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.

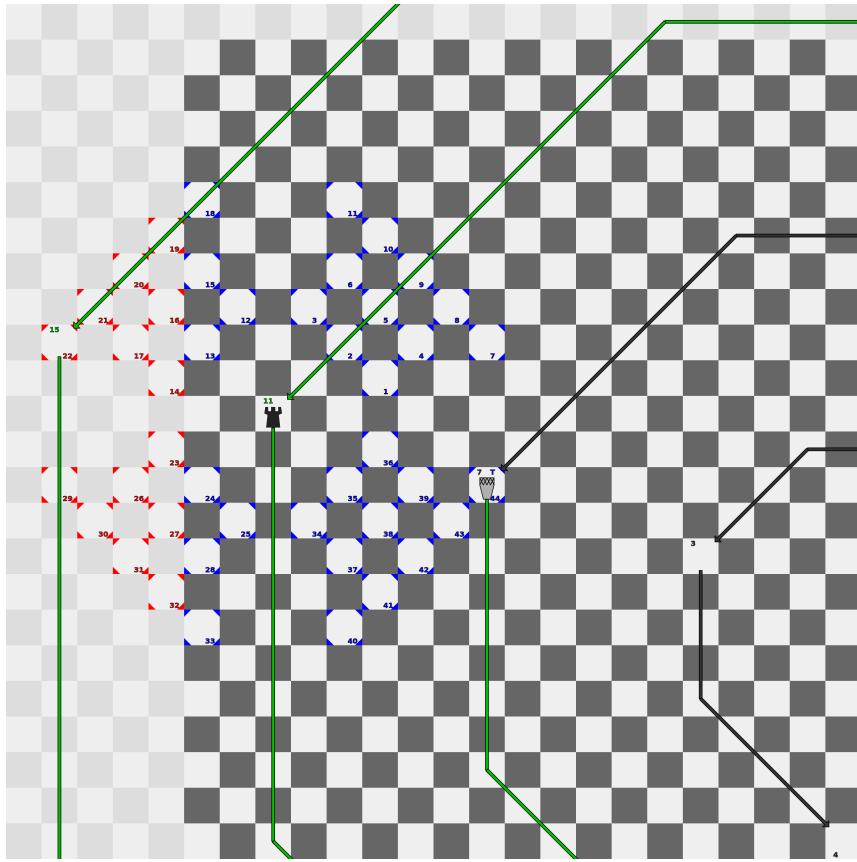


Figure 231: Forward displacement end

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

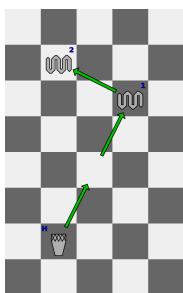


Figure 232: Push-pull entrancement start

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.

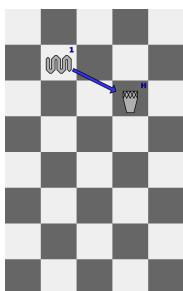


Figure 233: Push-pull entrancement step

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.

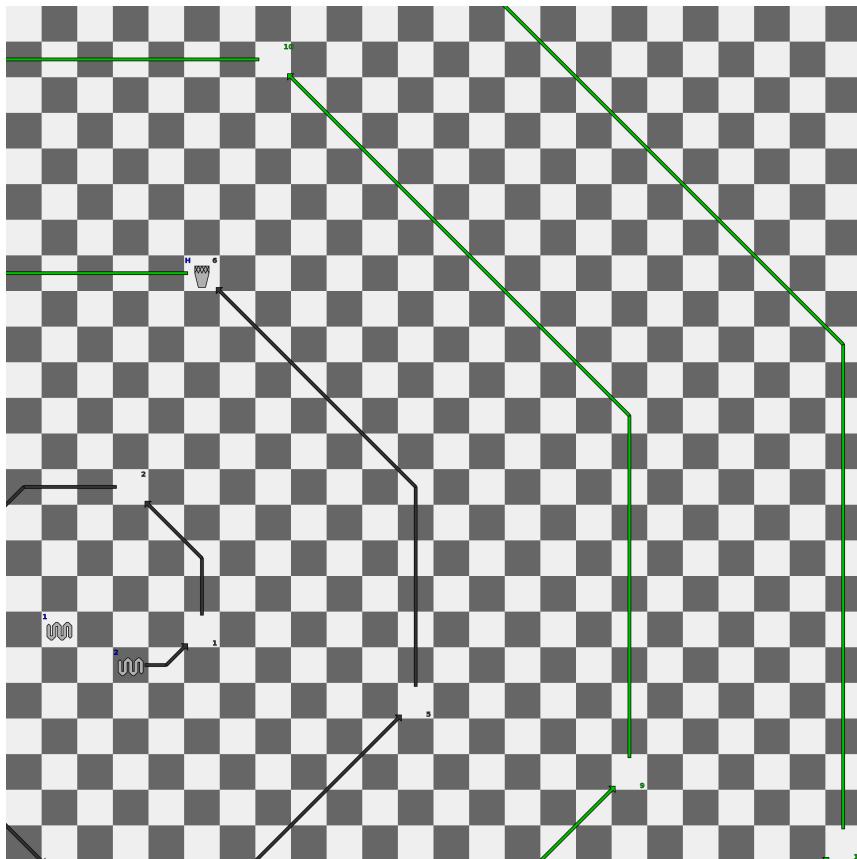


Figure 234: Push-pull entrance end

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.

## Scout Pawns

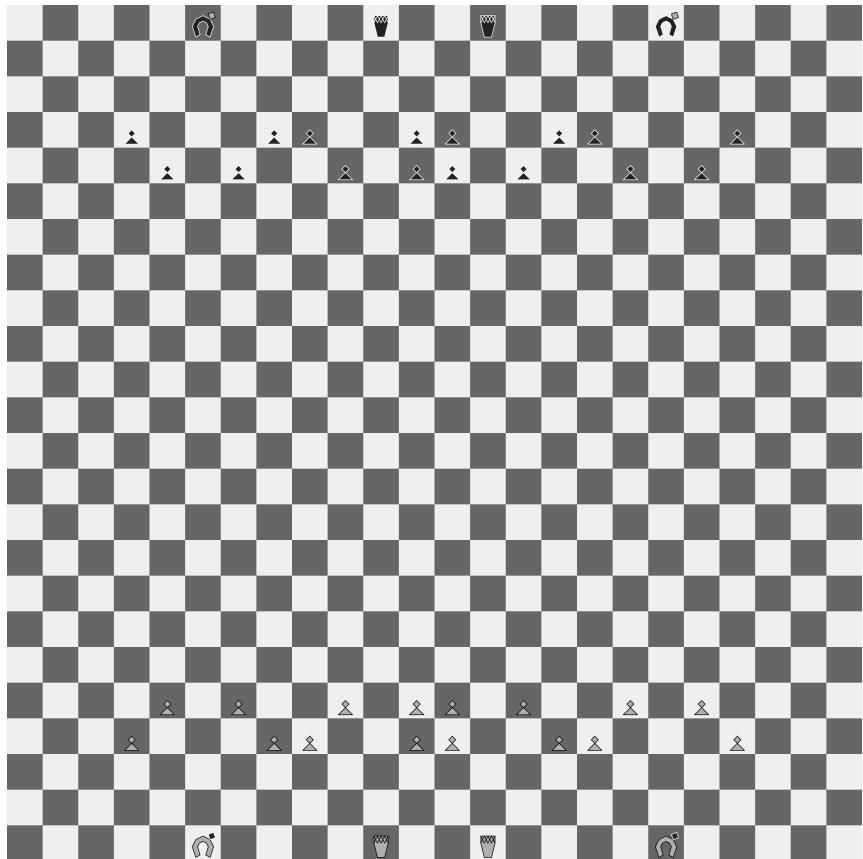


Figure 235: Scout Pawns

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

## Rush, en passant

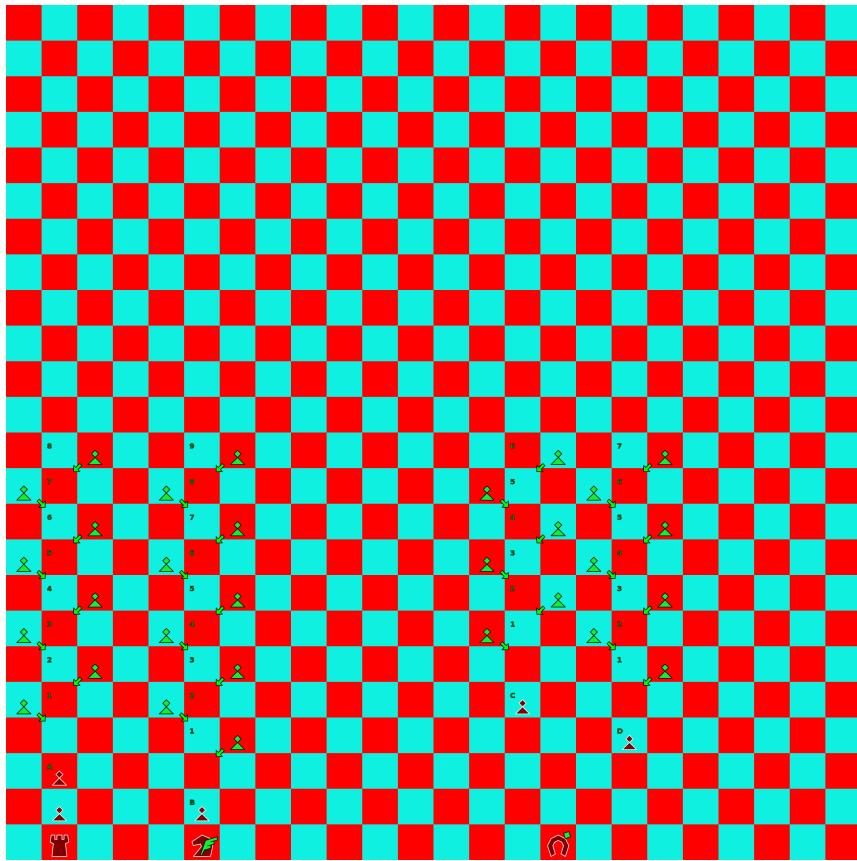


Figure 236: En passant

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.

## Promotion

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

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

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

# Castling

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



Figure 237: Castling

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



Figure 238: Castling long right

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

## Initial setup

Compared to initial setup of Tamoanchan Revisited, Shaman is inserted between King (or Queen) and Pyramid symmetrically, on both sides of chessboard. This can be seen in the image below:



Figure 239: 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

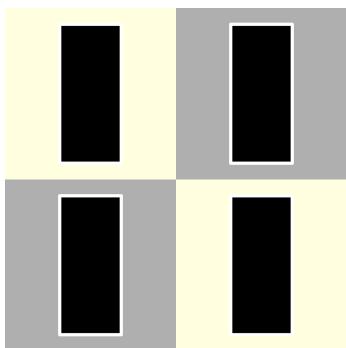


Figure 240: Monolith

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.

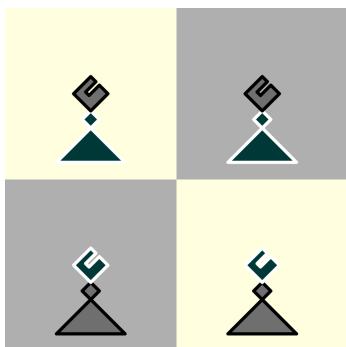
Piece, if not Wave, then reappears on a chosen empty portal-field around any Star or the other Monolith. Wave teleported from a Monolith can emerge only from the other Monolith. Kings, Monoliths cannot be teleported.

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.

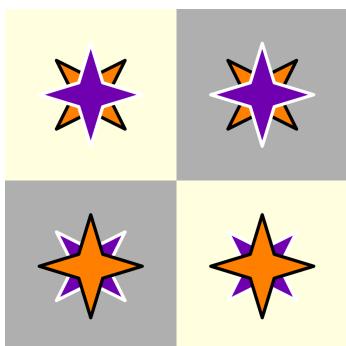
Alternative move for Monolith is syzygy.

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



Piece colors in this variant are presented on the left.

Figure 241: Bishop



Star colors in this variant are presented on the left.

Figure 242: Star

## Movement

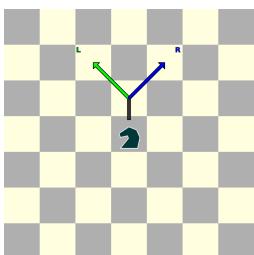


Figure 243: Knight steps

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.

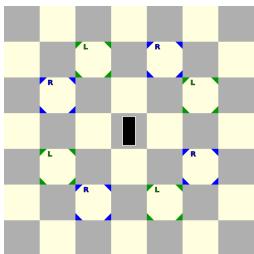


Figure 244: Monolith steps

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.

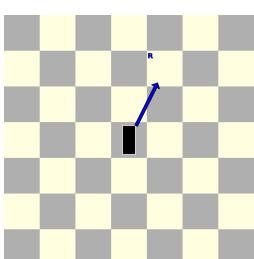


Figure 245: Monolith first step

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.

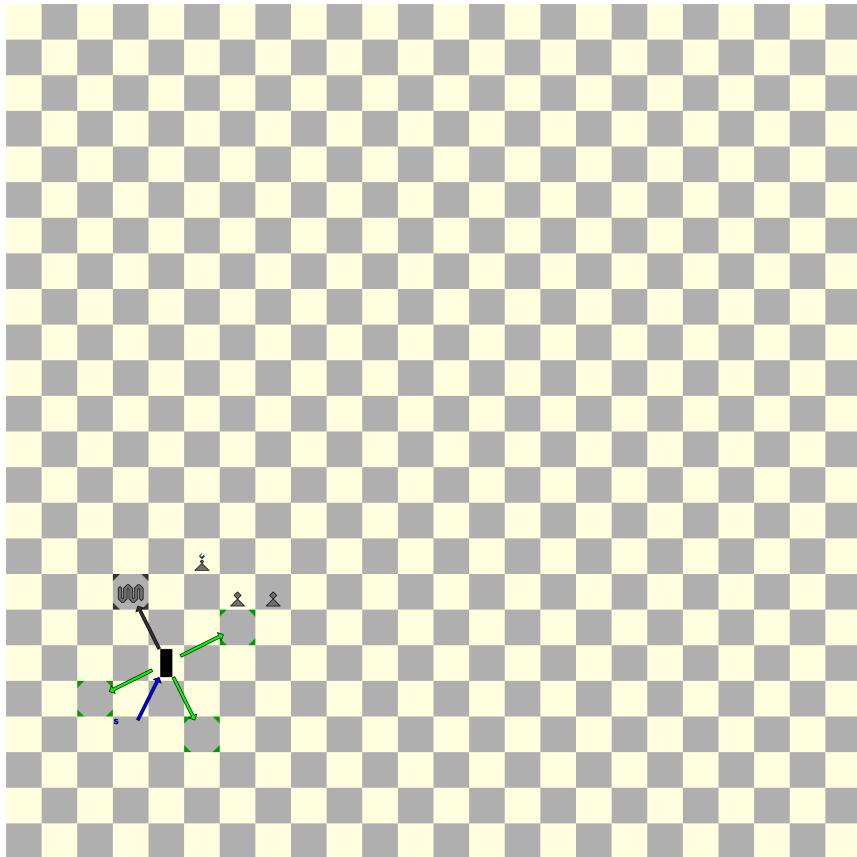


Figure 246: Monolith step 2

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.

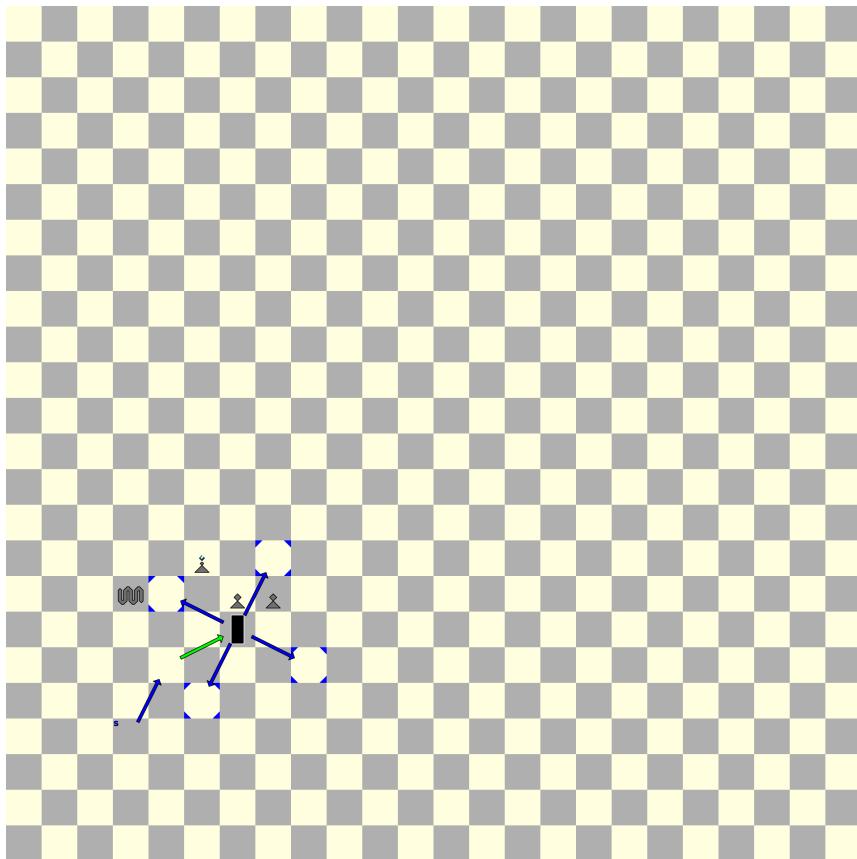


Figure 247: Monolith step 3

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.

## Off-board Monolith

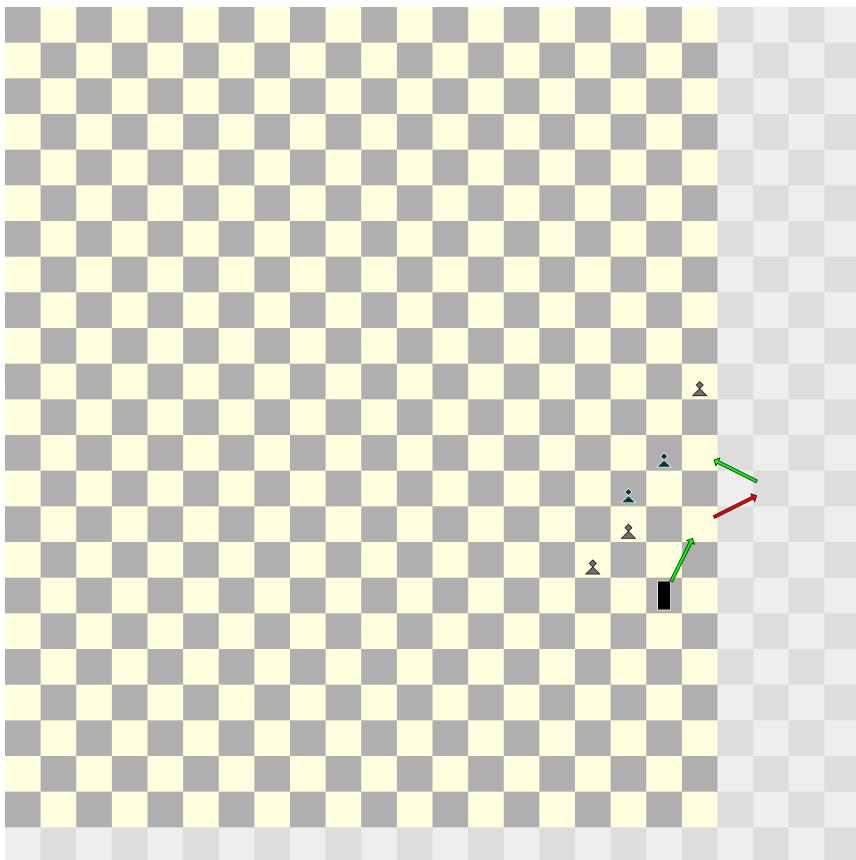


Figure 248: Monolith off-board

Here, light grey fields are virtual fields extending existing chessboard. Monolith, just like Wave, can leave chessboard and all subsequent steps are also legal, as long as its ply ends on a chessboard, and all of its on-board step-fields are empty.

## Teleporting

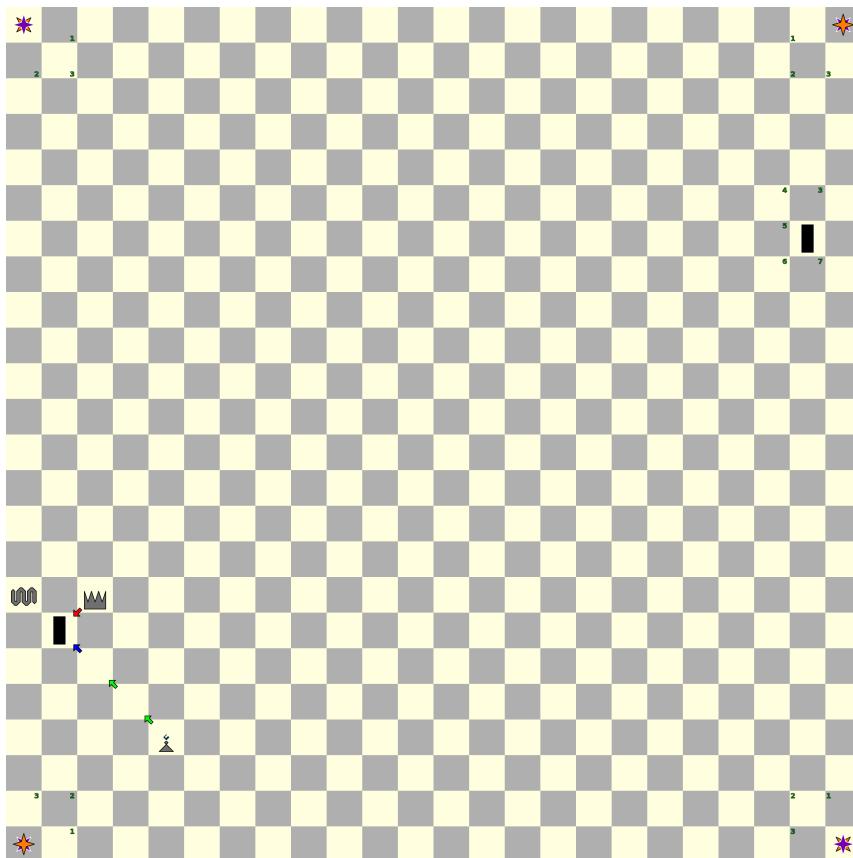


Figure 249: Teleporting piece via Monolith

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.

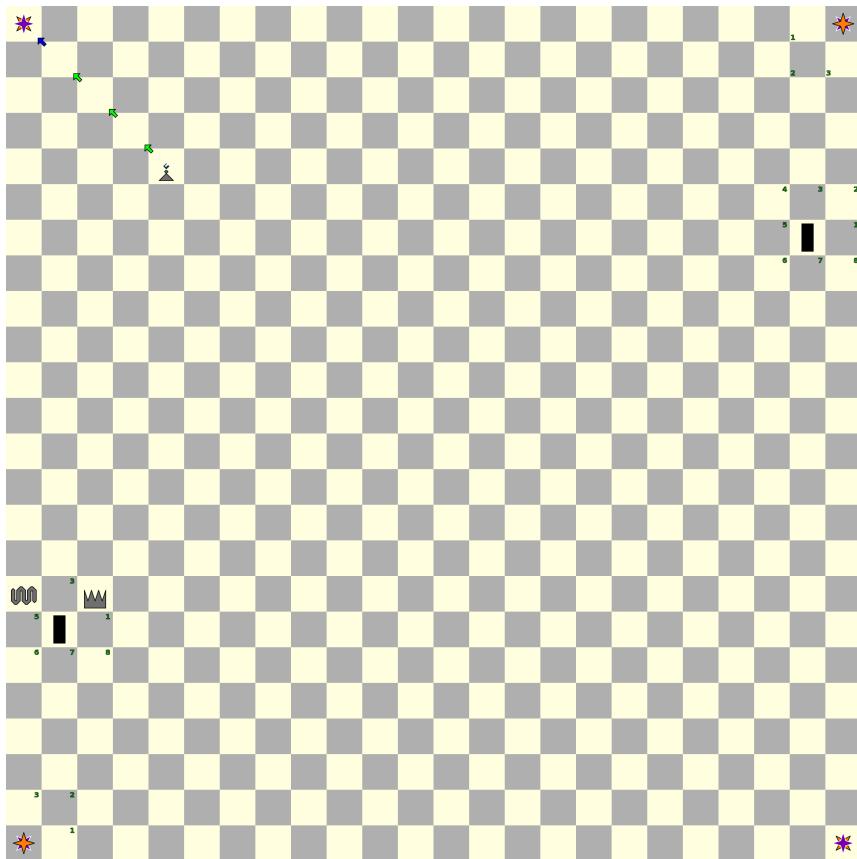


Figure 250: Teleporting piece via Star

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.

## Teleporting Wave

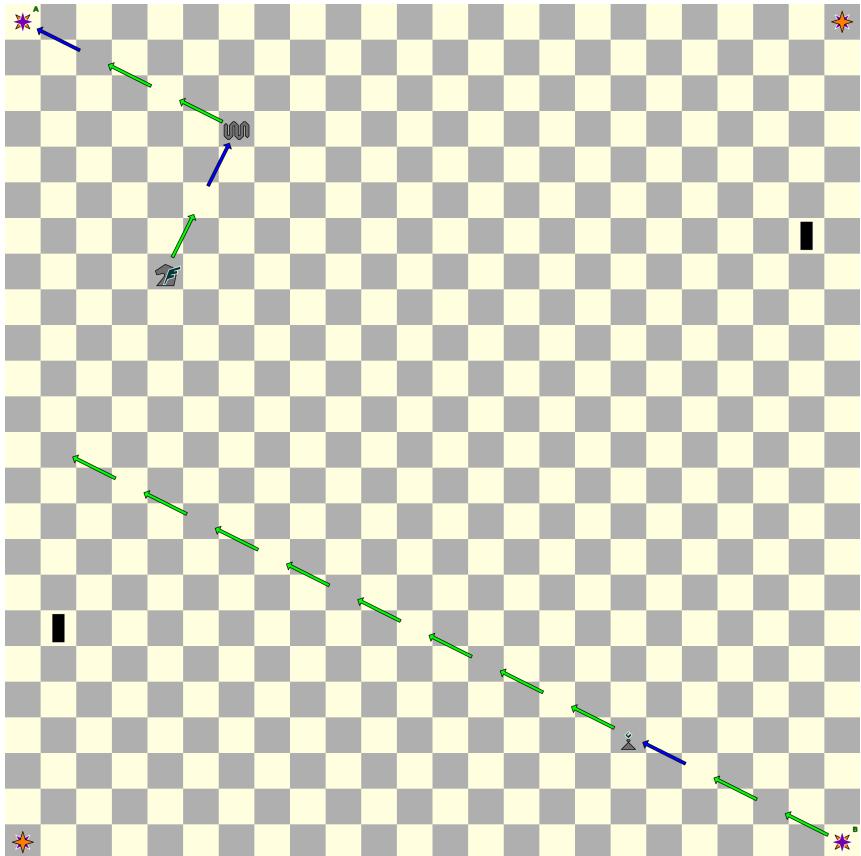


Figure 251: Teleporting Wave via Star

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.

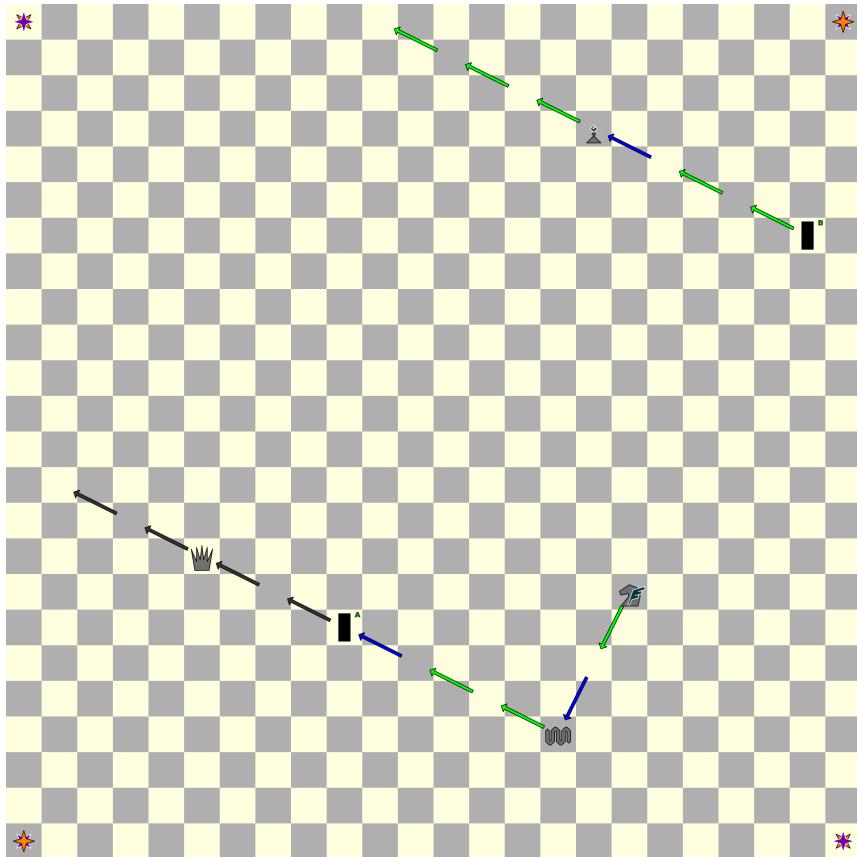


Figure 252: Teleporting Wave via Monolith

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.

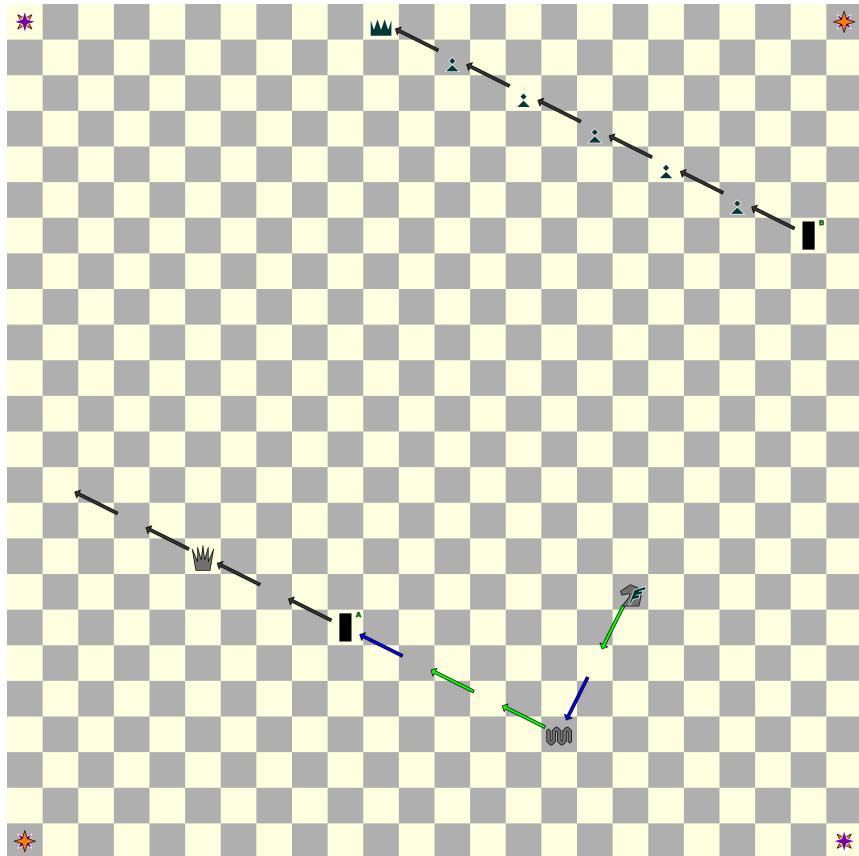


Figure 253: Teleported Wave blocked

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

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

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

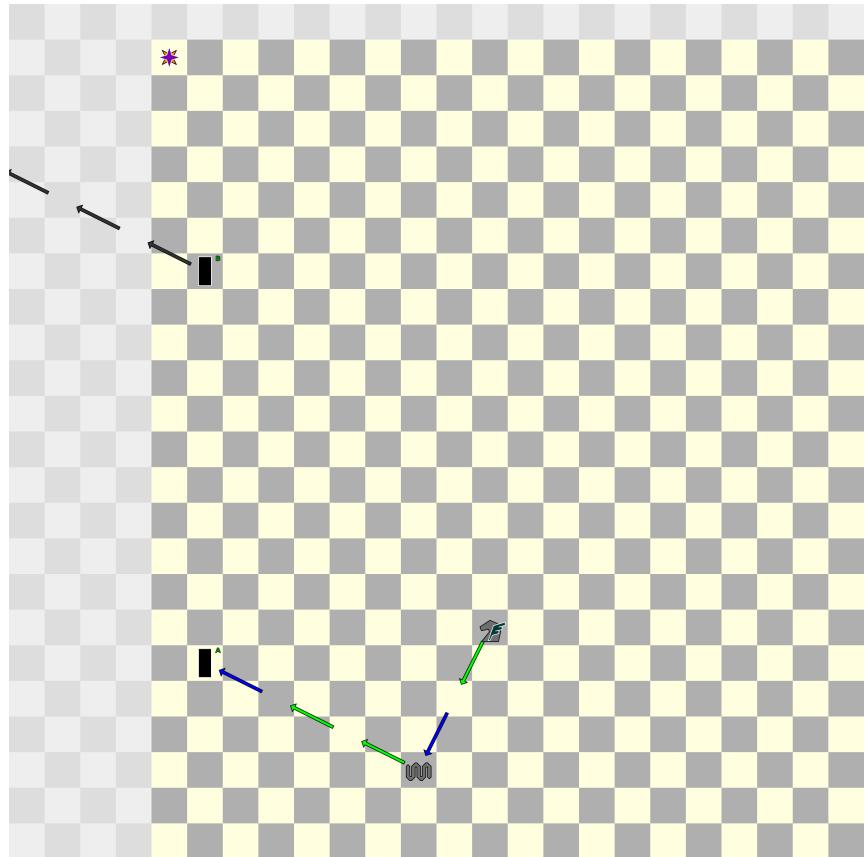


Figure 254: Wave teleported off-board

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

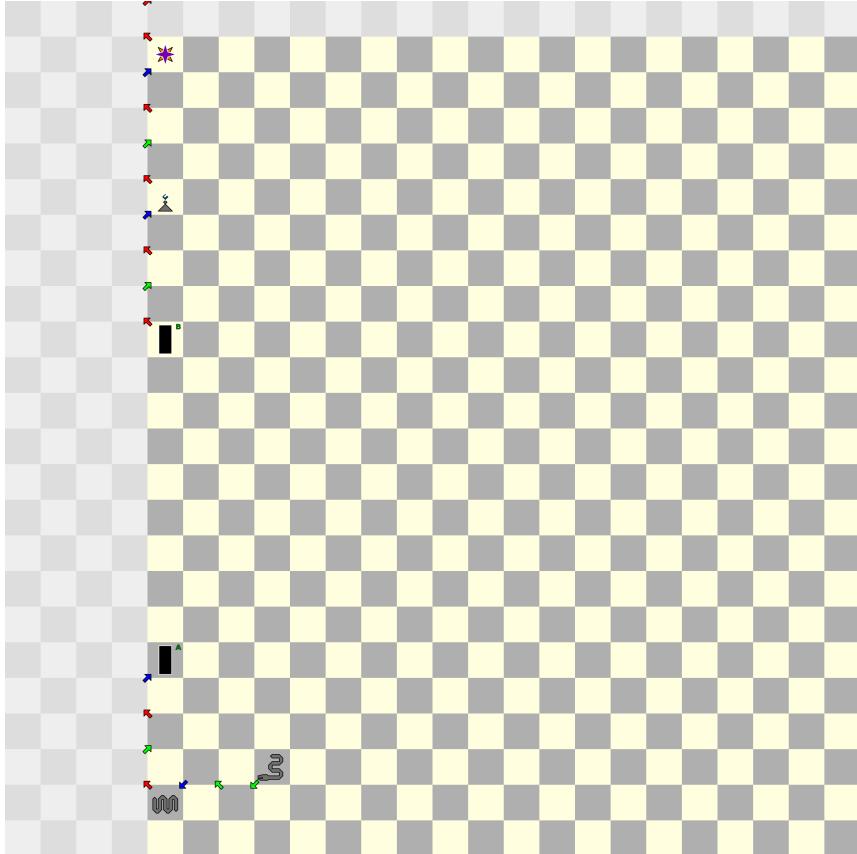


Figure 255: Teleporting Wave on- and off-board

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

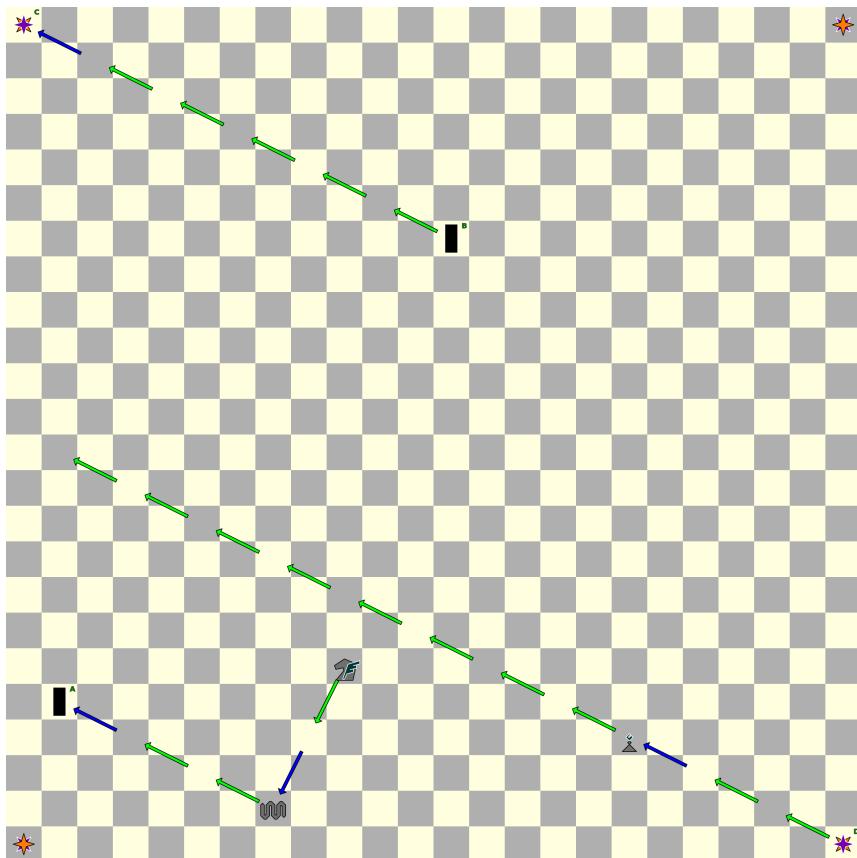


Figure 256: Cascading teleportations

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

## Steps after teleportation

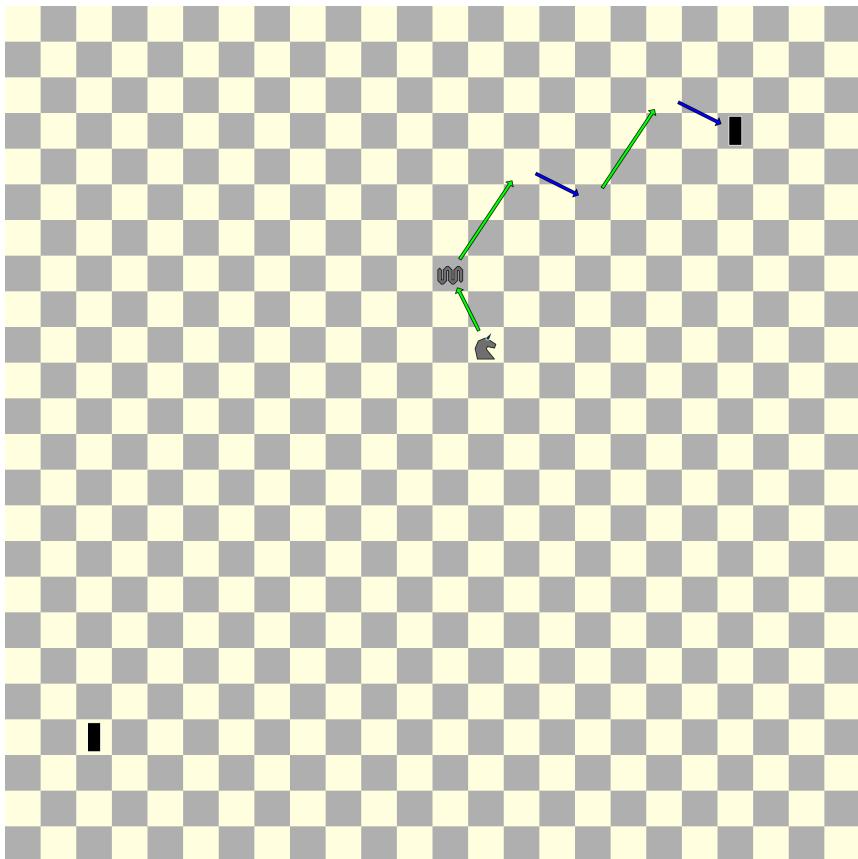


Figure 257: Steps before teleportation

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

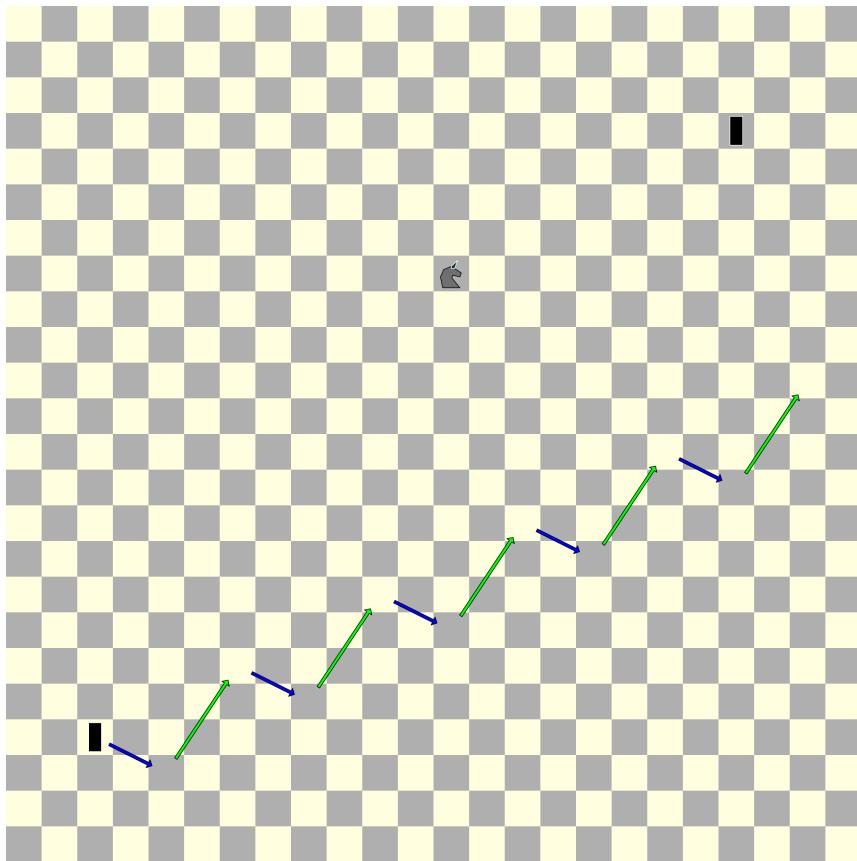


Figure 258: Steps after teleportation

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

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

## Trance-journey interaction

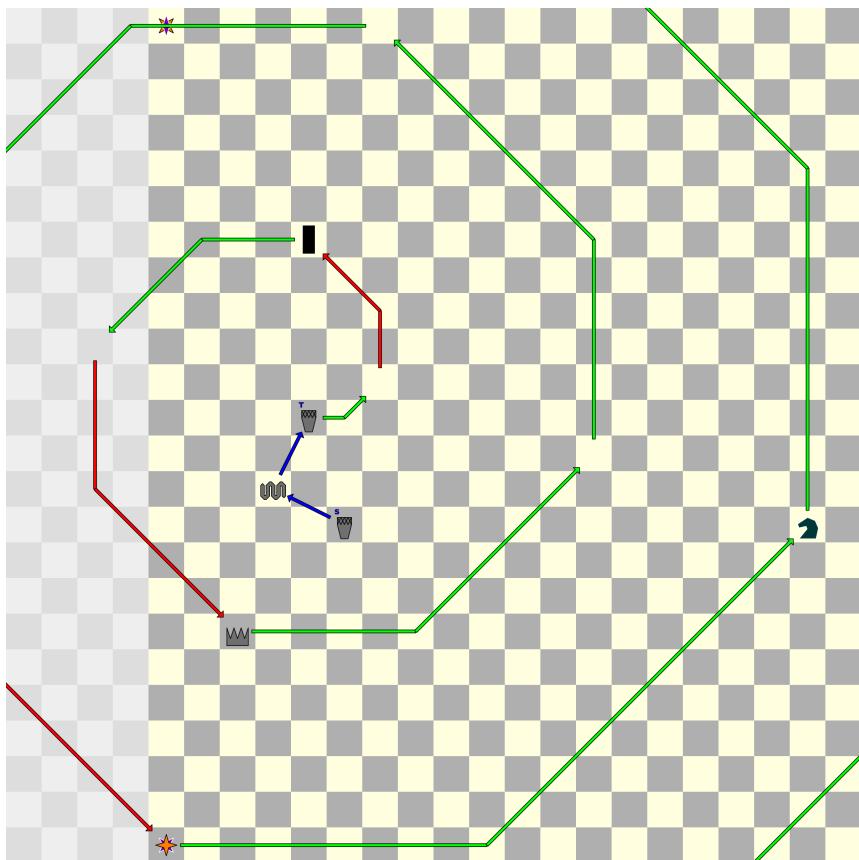


Figure 259: Trance-journey interaction

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

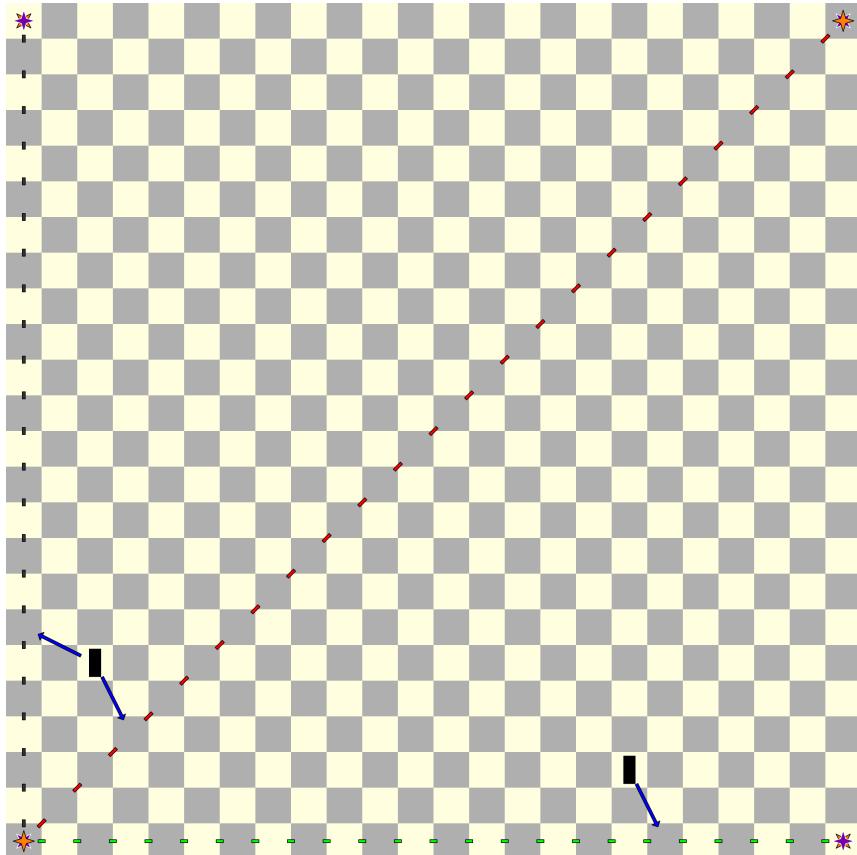


Figure 260: Syzygy with Stars

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.

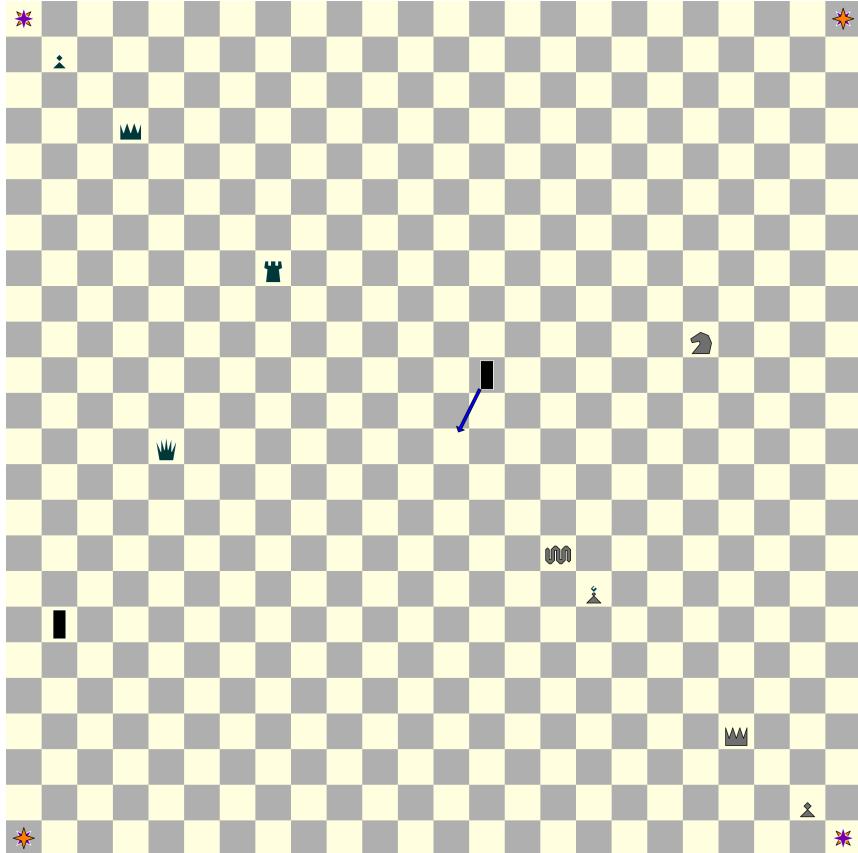


Figure 261: 2-Stars syzygy start

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

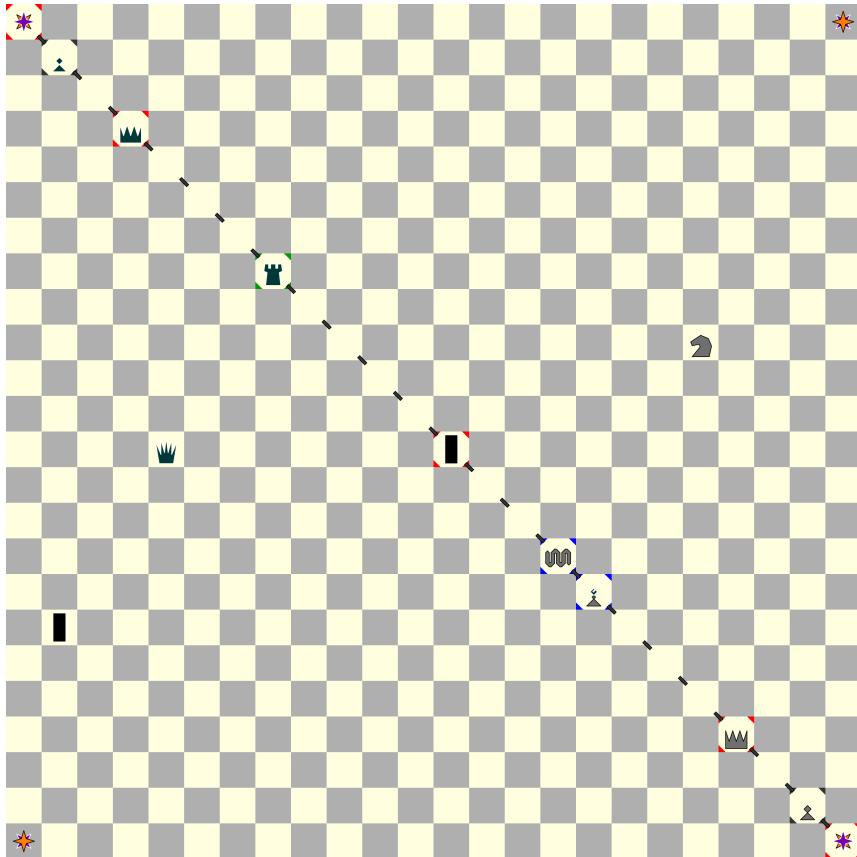


Figure 262: 2-Stars syzygy steps

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

## Two-Monoliths syzygy

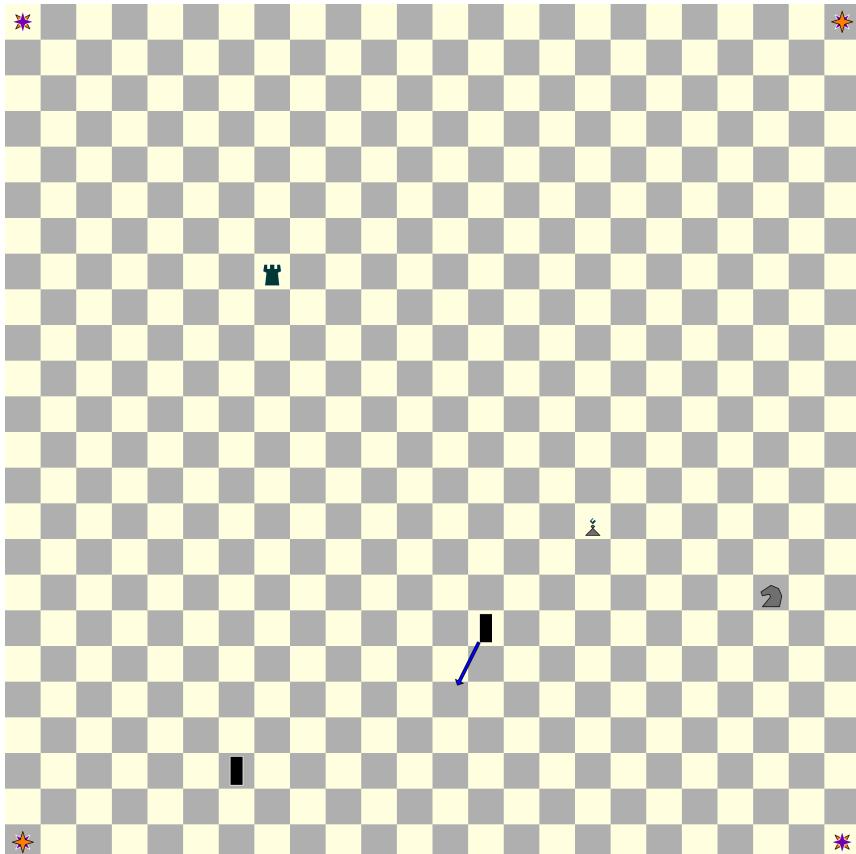


Figure 263: 2-Monoliths syzygy init

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

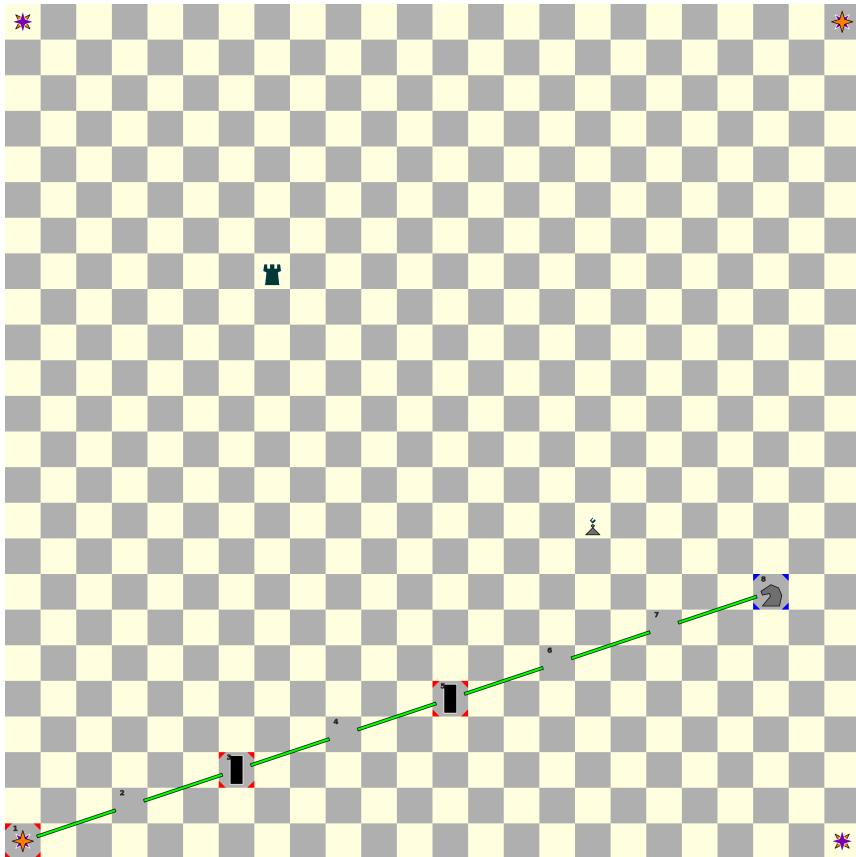


Figure 264: 2-Monoliths syzygy steps

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

## Reentering syzygy

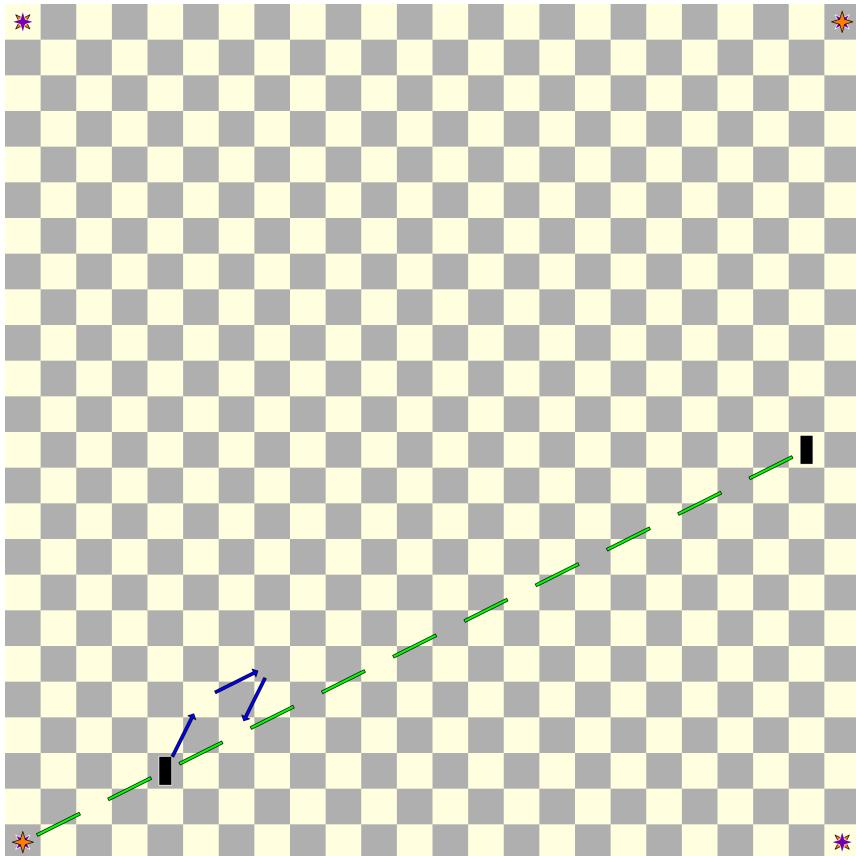


Figure 265: Reentering syzygy in the same move

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.

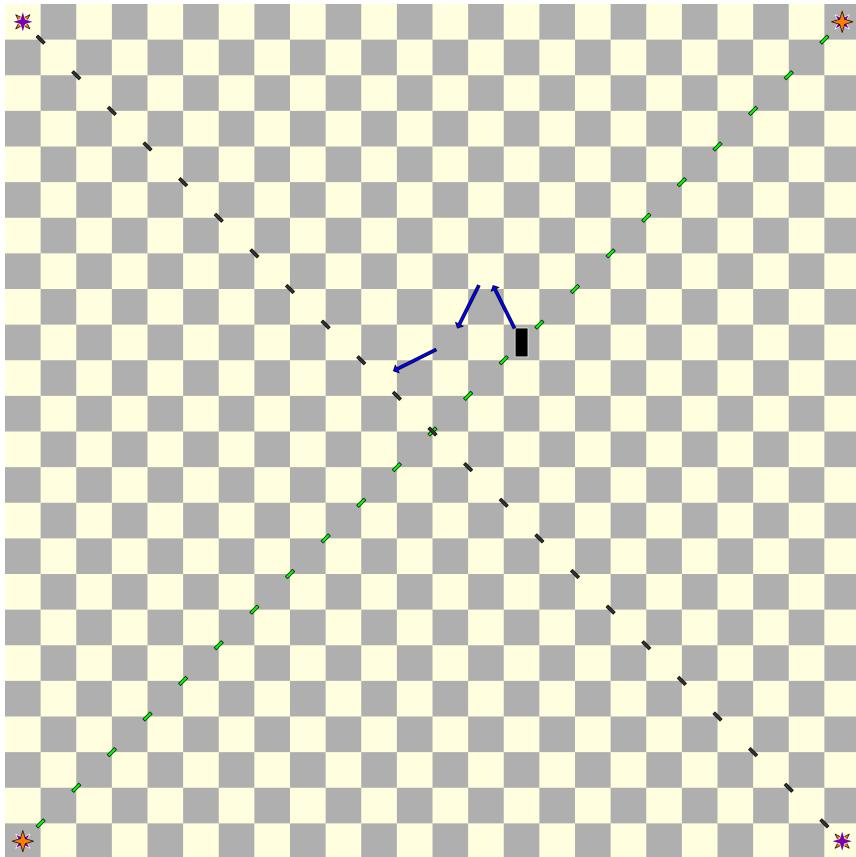


Figure 266: Reentering independent syzygy

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

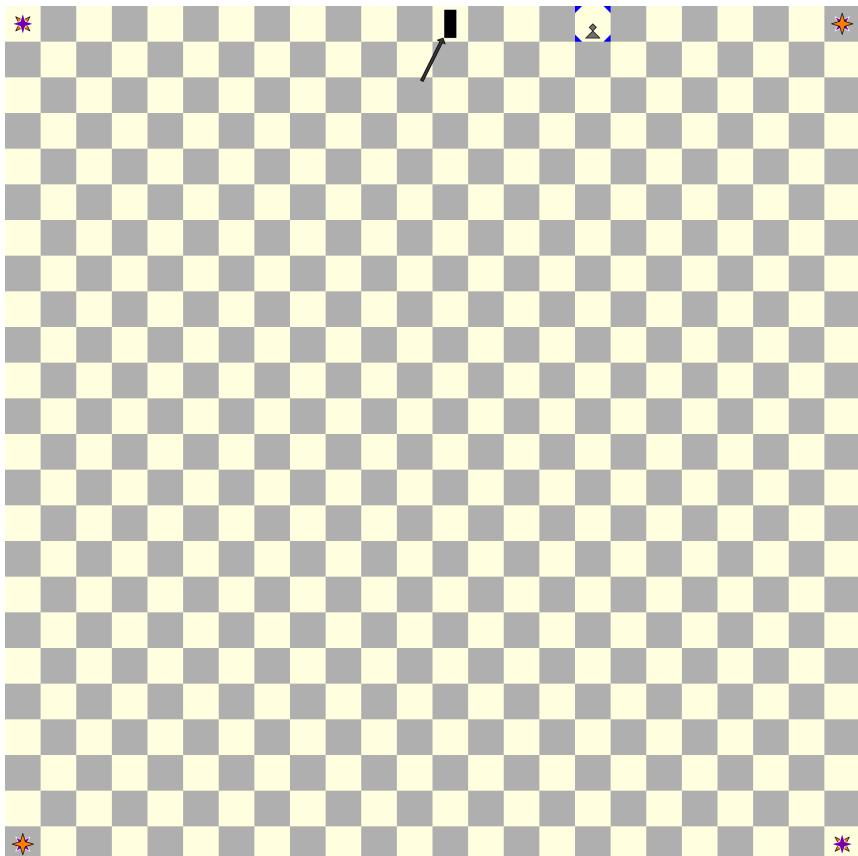


Figure 267: Syzygy ends with Pawn tagged for promotion

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

# Rush, en passant

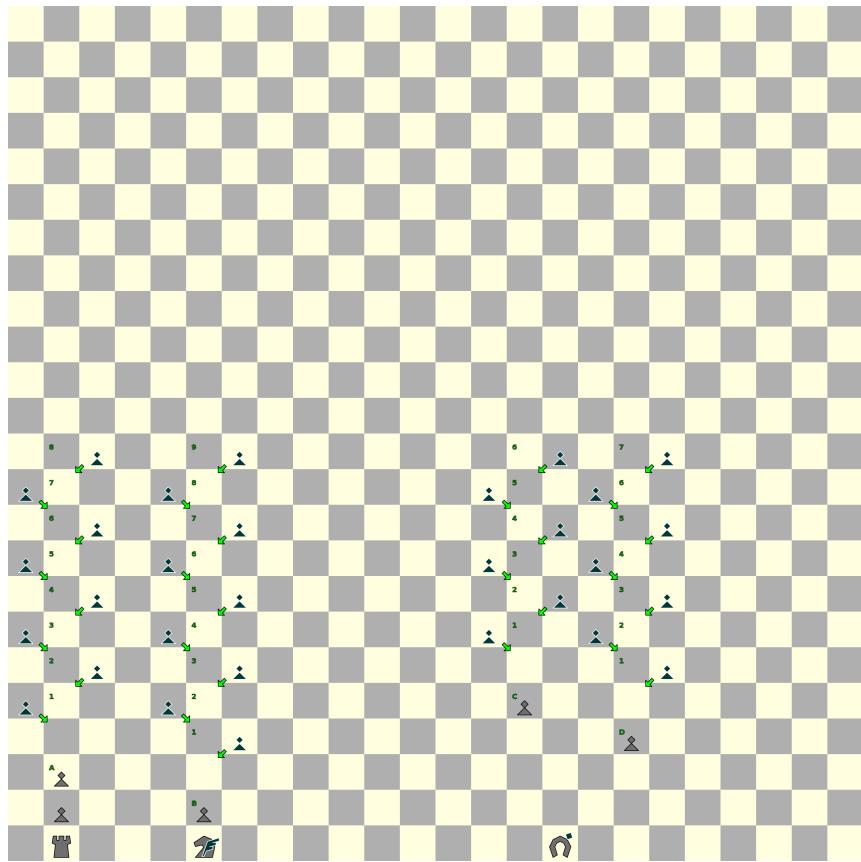


Figure 268: En passant

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.

## Promotion

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

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

Again, Pawn cannot be promoted to Monolith.

# Castling

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



Figure 269: Castling

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



Figure 270: 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:

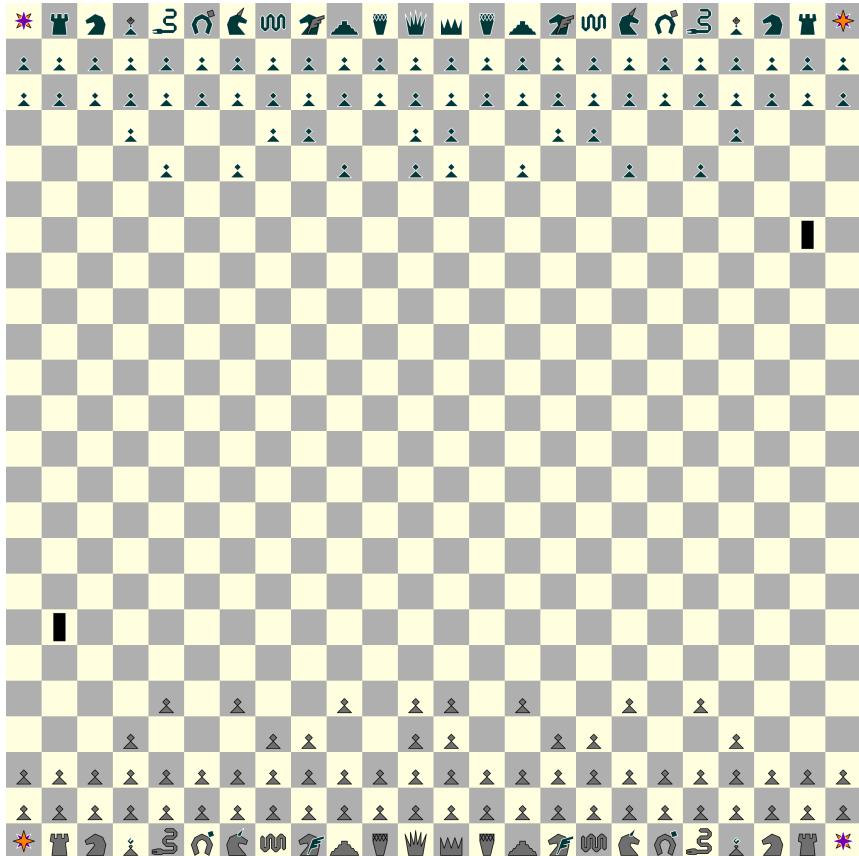


Figure 271: Discovery board

# 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

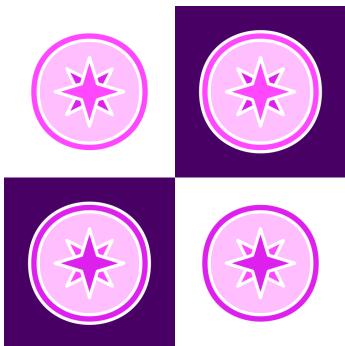


Figure 272: Starchild

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

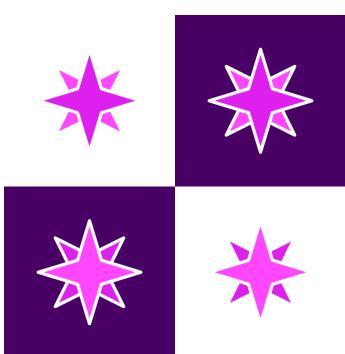


Figure 273: Star

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.

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, Starchilds and Monoliths, for a non-interactive, viewing-only trance-journey.

Star colors in this variant are opposite colors of normal pieces. In algebraic notation, symbol for Starchild is 'T'.

## Movement

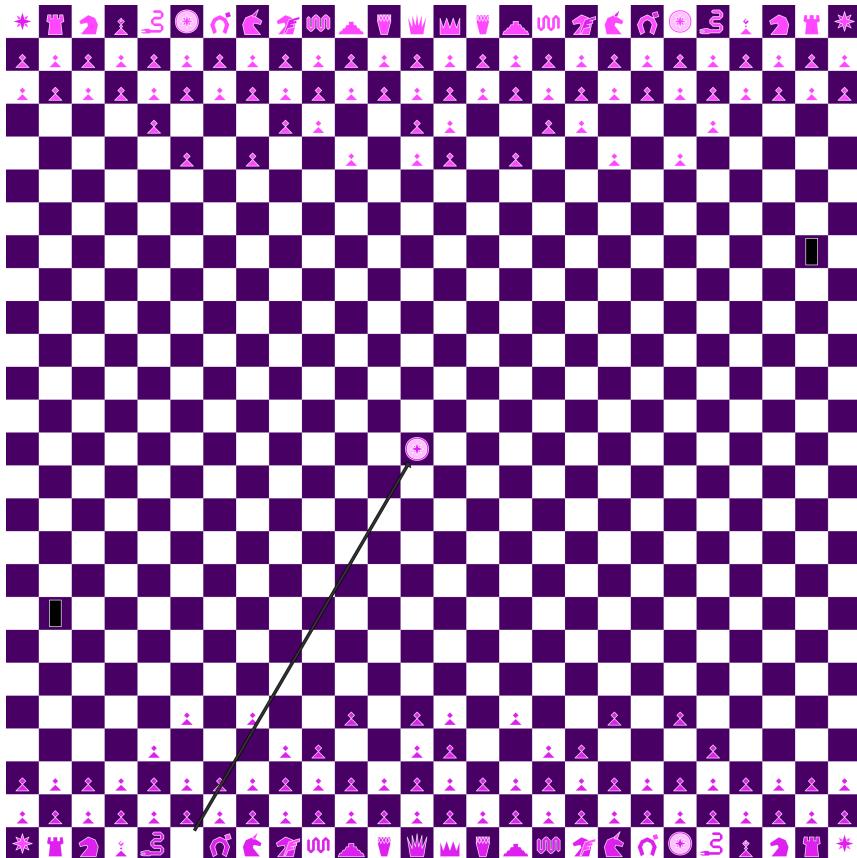


Figure 274: Starchild movement

Starchild can move to any empty field in opposite color to starting location in one step. Starchild is not hampered by any piece between starting and destination field.

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

## Activating on step-fields

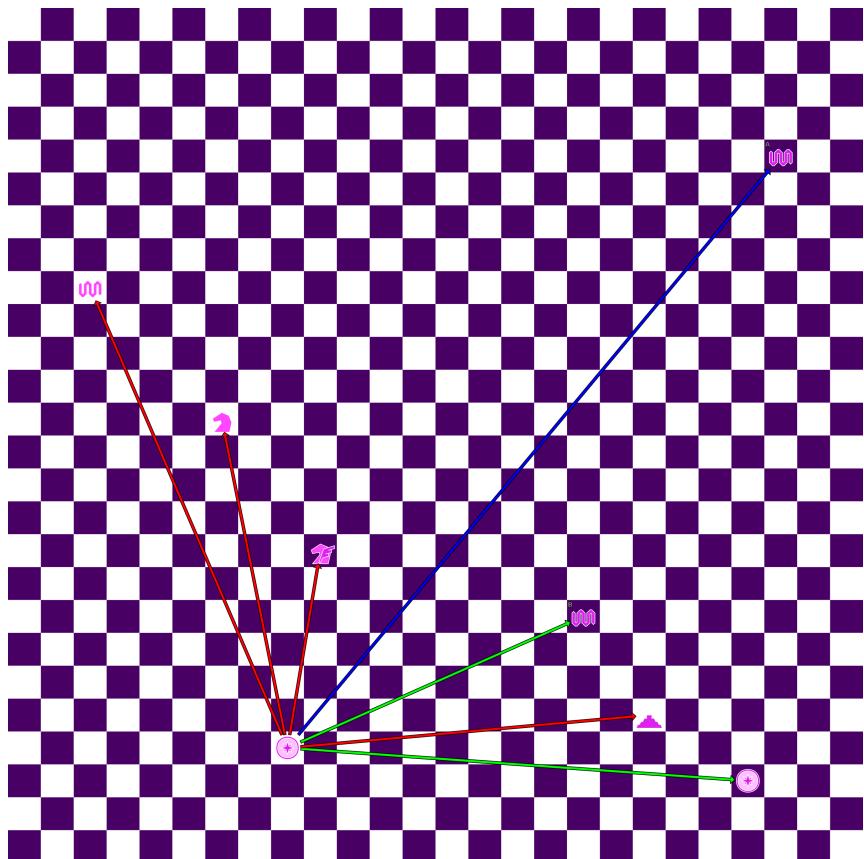


Figure 275: Activating Wave

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

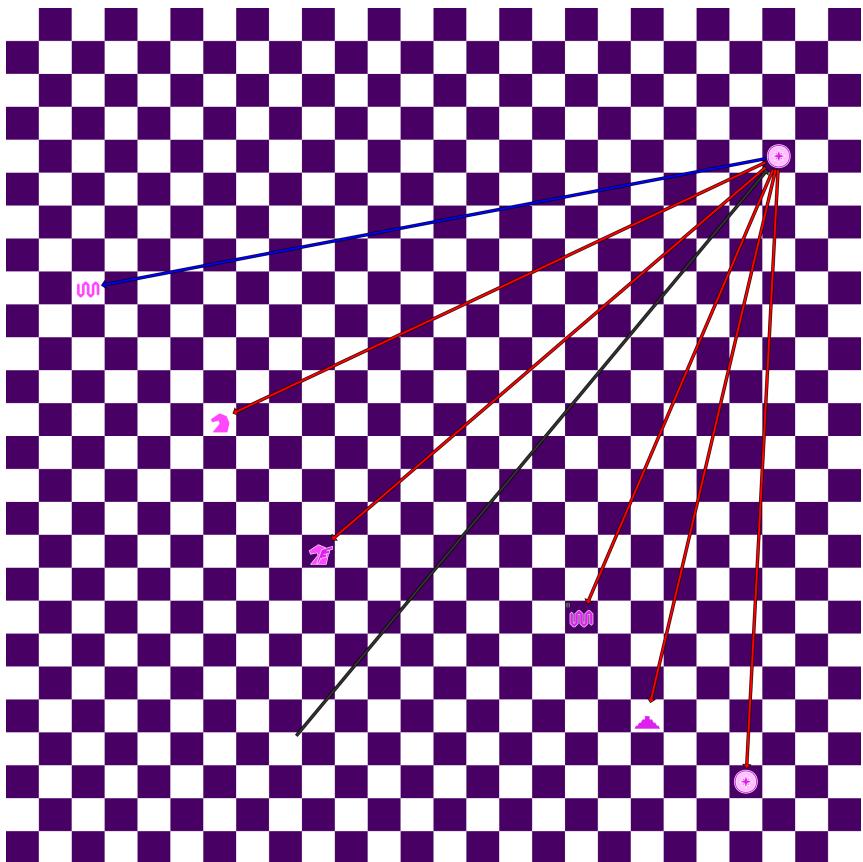


Figure 276: Wave activated

Activated Wave moves the same as Starchild, i.e. to any field in opposite color to its starting position. There it can activate only own Starchilds, own and opponent's Waves, with 1 received momentum.

Here, light Wave A is now activated, and it can only activate dark Wave. It cannot activate opponent's pieces (dark Knight, Pegasus). Own pieces (light Starchild and Wave B) can't be activated because their field is in the same color as Wave's activation field.

## Activating Starchild

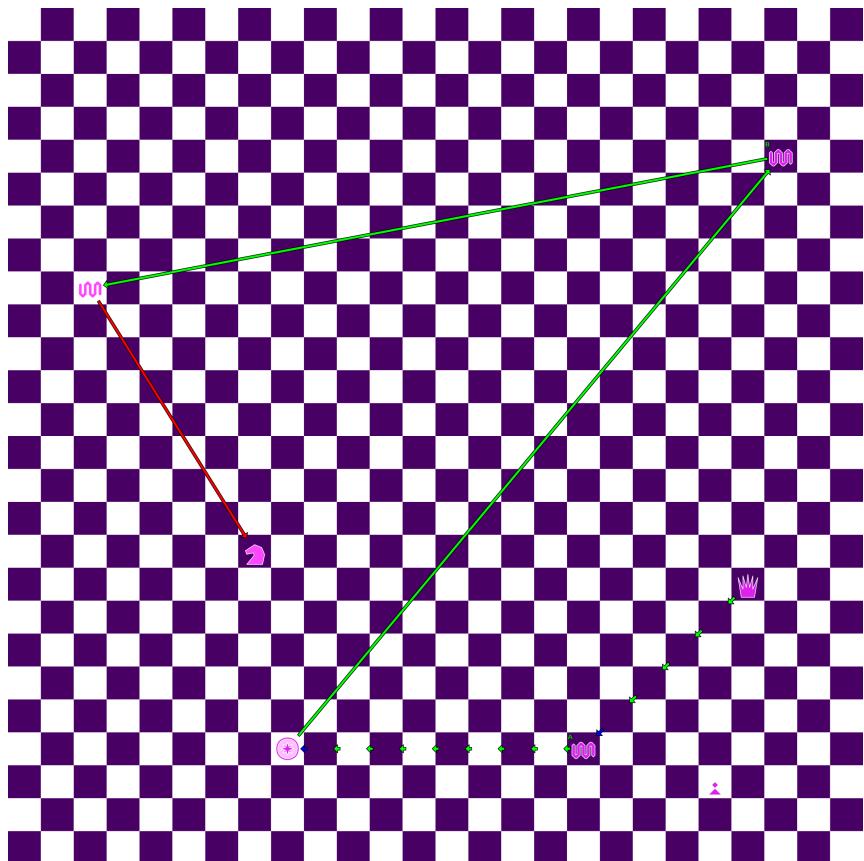
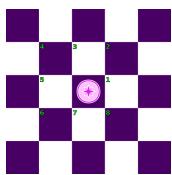


Figure 277: Activating Starchild

Like Wave, activated Starchild does not spend received momentum for moving; if Starchild activates a piece, it transfers all of received momentum to it. Wave activated by Starchild on its step-field moves (and acts) as one; so, it can activate only own Starchilds, own and opponent's Waves on its step-fields, and cannot activate any other pieces, neither own nor opponent's.

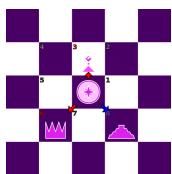
## Miracle-fields



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

Figure 278: Miracle-fields

## Activating on miracle-fields



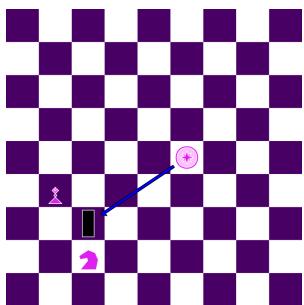
Fields at which Starchild can activate a piece are miracle-fields; pieces that can be activated are all own pieces (except King), and opponent's Starchild.

Figure 279: Activating piece

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

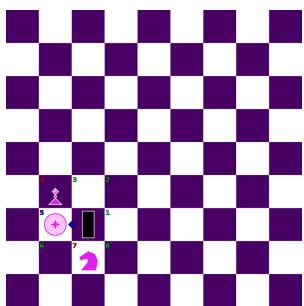
Here, Starchild's activation fields are enumerated. Opponent's Bishop and own King can't be activated, so only own Pyramid can be, with 1 momentum.

## Starchild cannot teleport



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

Figure 280: Moving into  
a Monolith

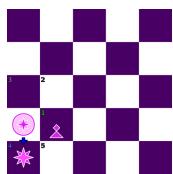


In previous example Starchild moved into a Monolith; here, it emerges on an empty portal-field of that same Monolith.

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

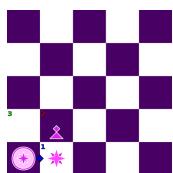
Figure 281: Moving out  
of a Monolith

## Moving a Star



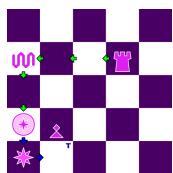
Starchild can activate a Star the same way as any other piece, i.e. by capturing miracle-field at which Star is located. Activated Star receives 1 momentum.

Figure 282: Moving into a Star



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

Figure 283: Star moving



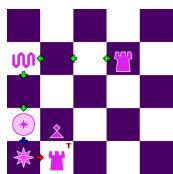
Note, even if activated Starchild received more than 1 momentum, Star can move for only one step.

Figure 284: Activating Starchild

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

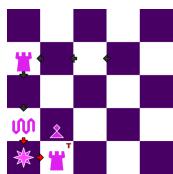
Note that Star movement is optional, Starchild could emerge on an empty portal-field around Star in question; if there are none, Starchild would be obliterated.

## Star movement blocked



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

Figure 285: Activating Star



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

Figure 286: Star blocked

## Conversion immunity

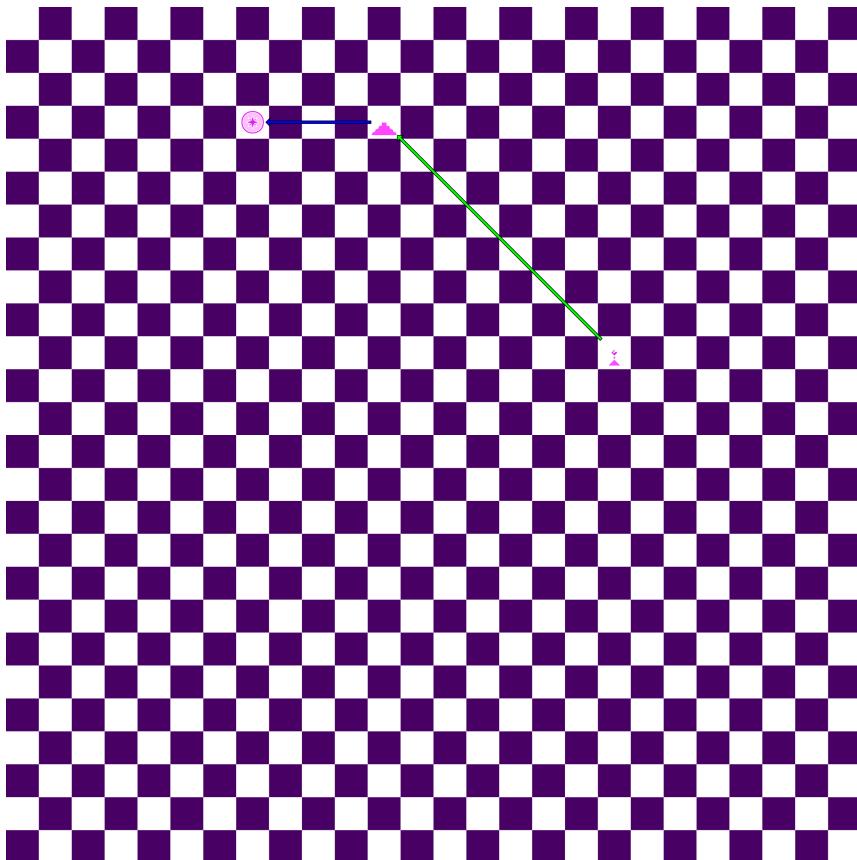


Figure 287: Conversion immunity

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

## Activating Wave

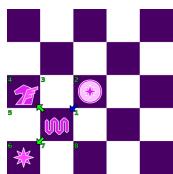


Figure 288: Activating Wave

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

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

## Wave cannot move a Star

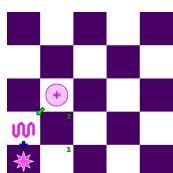


Figure 289: Not moving a Star

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

## Wave cannot teleport

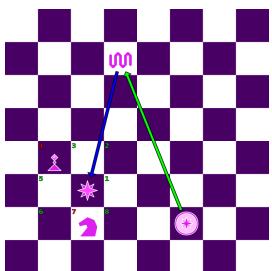


Figure 290: Moving into a Star

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

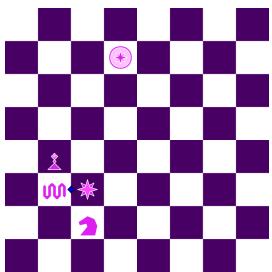


Figure 291: Moving out of a Star

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

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

## Teleporting Wave

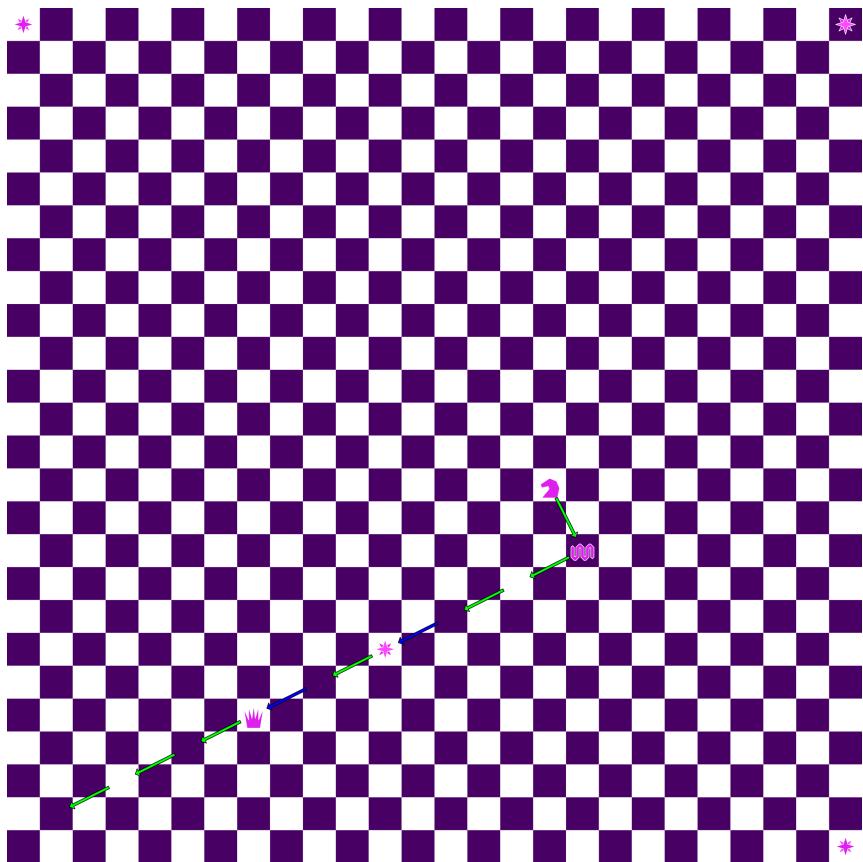


Figure 292: Optional Wave teleportation

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.

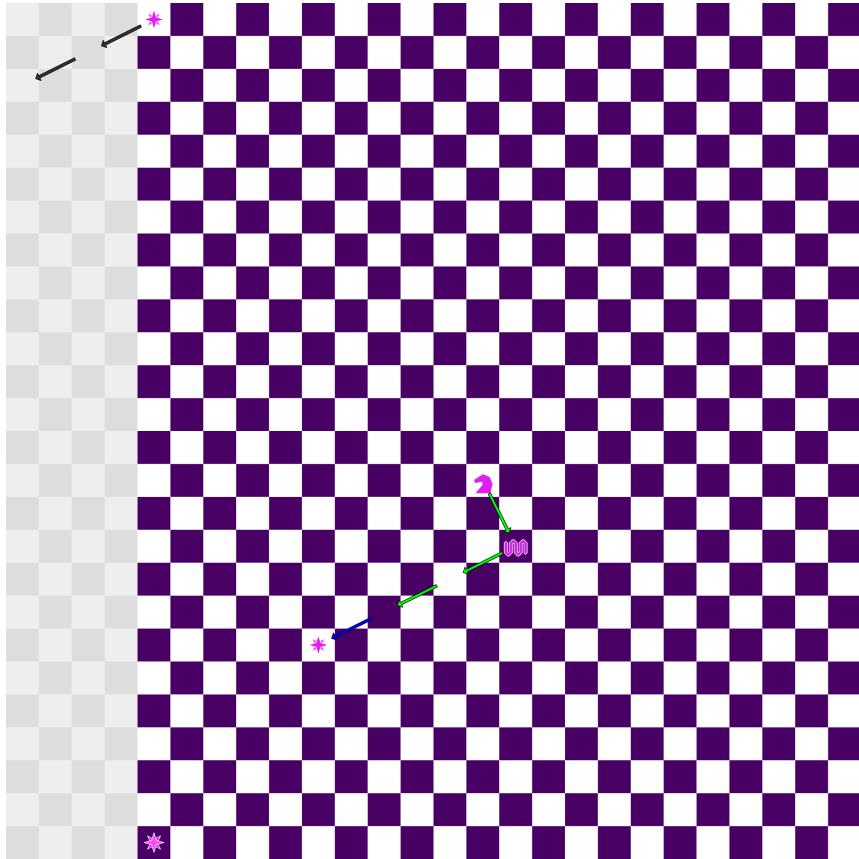


Figure 293: Wave teleported off-board

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

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

## Steps after teleportation

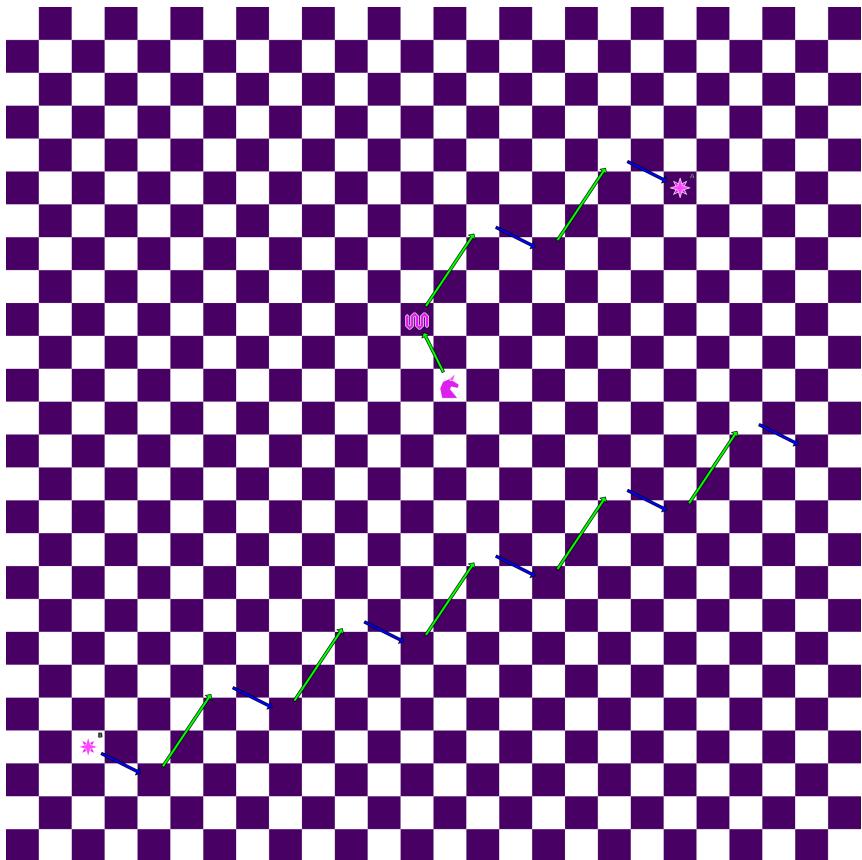


Figure 294: Steps after teleportation

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

## Trance-journey

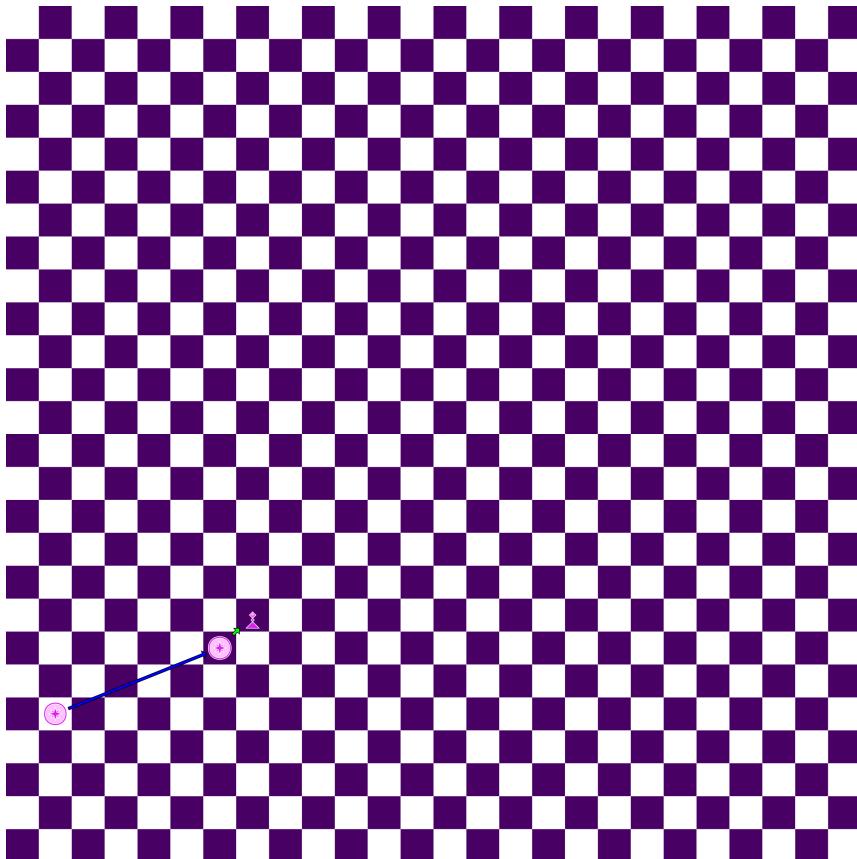


Figure 295: Light Starchild initiating

Trance-journey can be initiated by Starchild activating another Starchild; colors of Starchilds do not need to match. If the same, activation can be done on step-fields (here), otherwise only on miracle-fields (next example). Initiating Starchild must activate entrancing Starchild directly, there must be no pieces between the two.

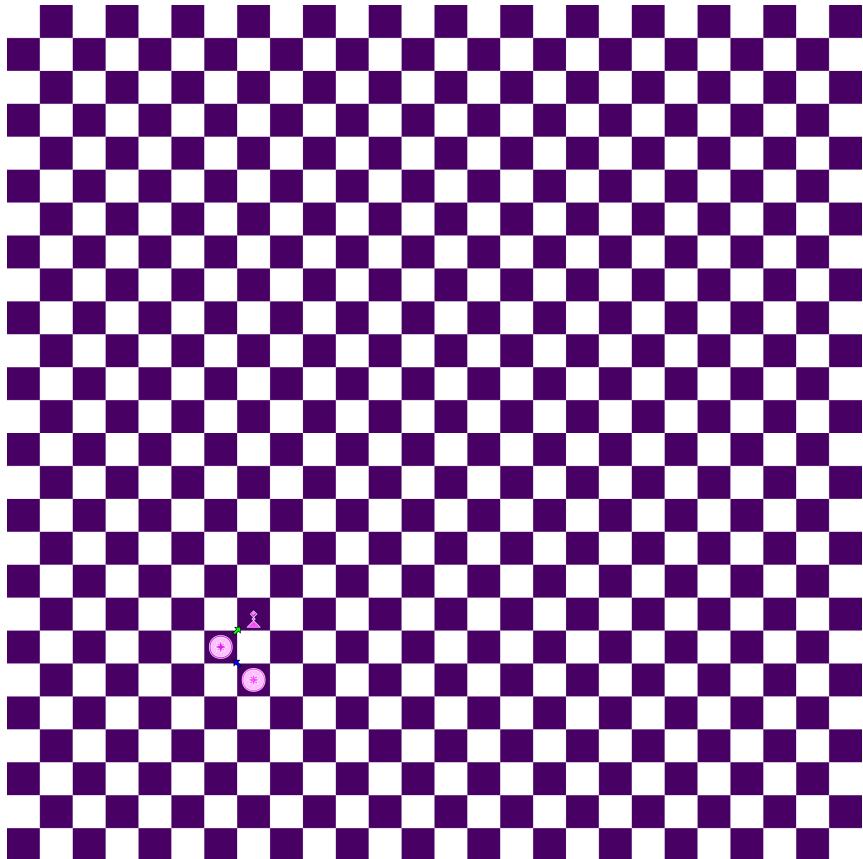


Figure 296: Dark Starchild initiating

Entrancing Starchild can activate any piece in the same color (except Kings, Waves, Starchilds, Stars and Monoliths), on its miracle-fields. Entranced piece can then optionally take on trance-journey, or take an ordinary step with one momentum. If entrancing Starchild is light, piece can take trance-journey in one chosen direction from **light Shaman's pattern**, otherwise from **dark Shaman's pattern**.

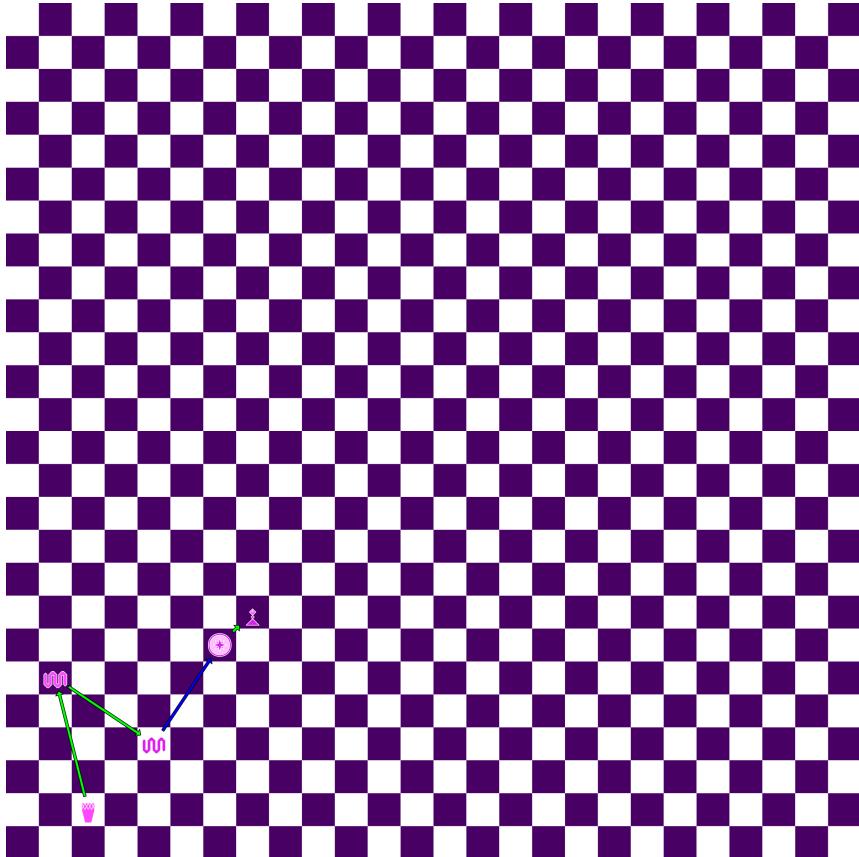


Figure 297: Shaman initiating

Alternatively, a Shaman can activate entrancing Starchild, not necessarily in the same colors. If initiated by Shaman, only Waves are permitted between it and Starchild. Initiating piece, regardless if Starchild or Shaman, can be activated by other pieces, including opponent's.

Entranced piece can take on trance-journey even if it received no momentum; length of trance-journey does not depend on received momentum.

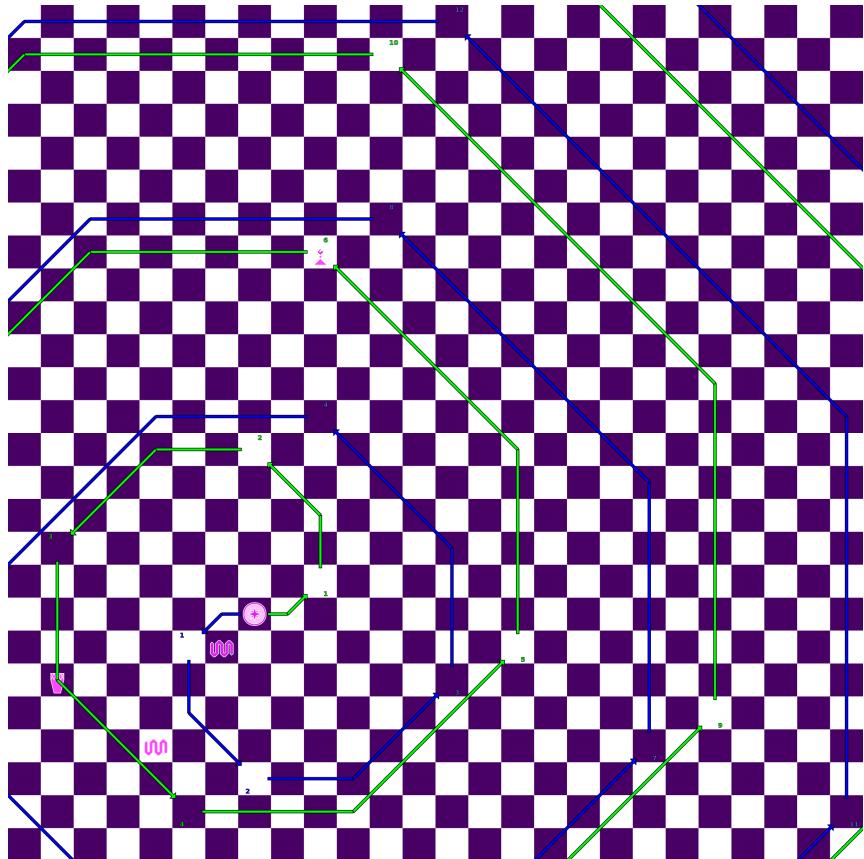


Figure 298: Light-pattern trance-journey

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

## Push-pull entrancement

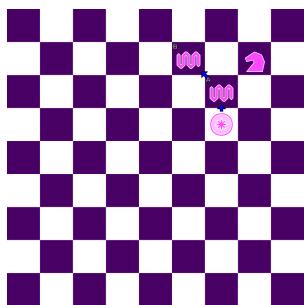


Figure 299: Initiating  
trance-journey

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](#).

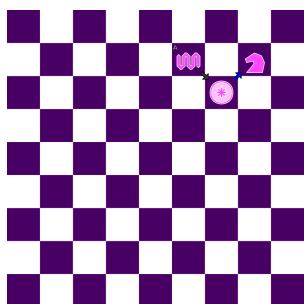


Figure 300: Push-pull  
entrancing

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.

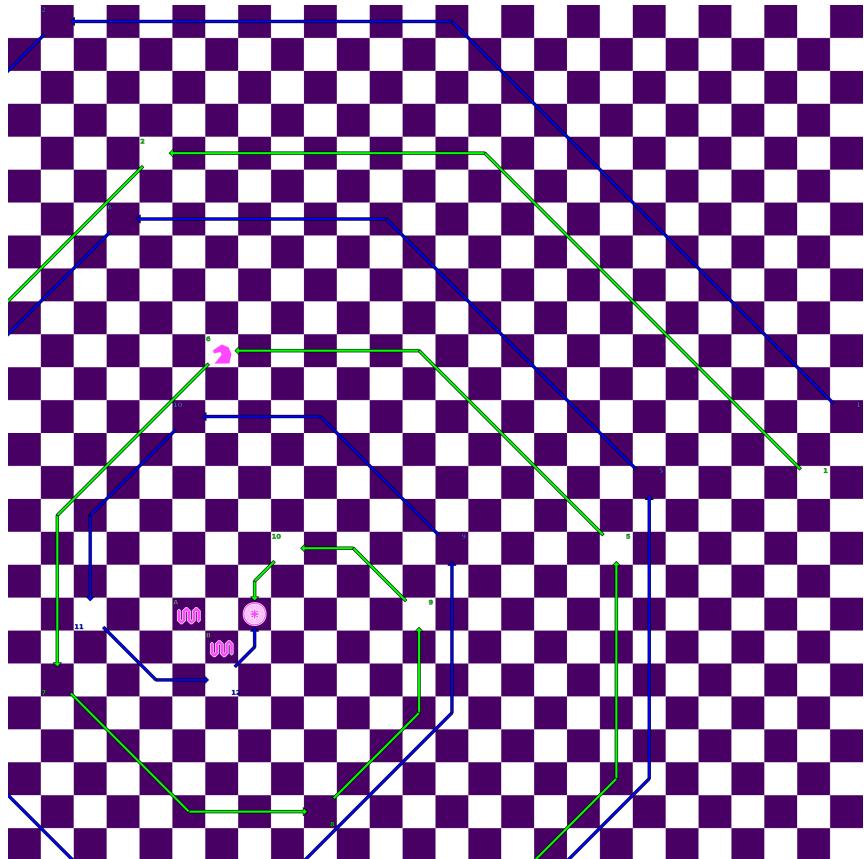


Figure 301: Dark-pattern trance-journey

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

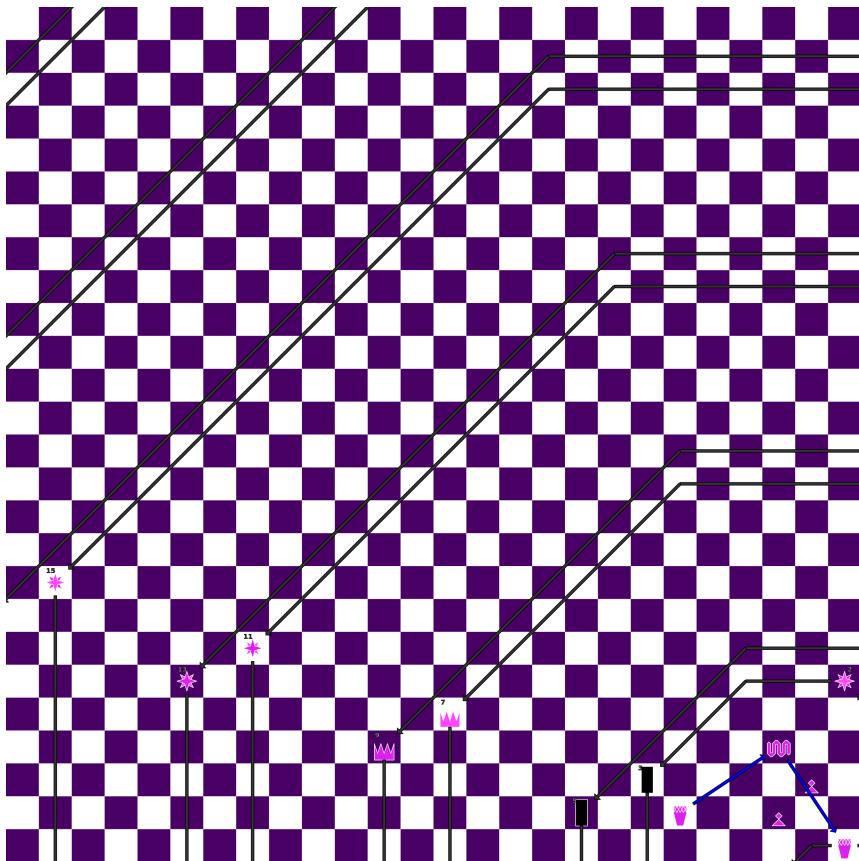


Figure 302: Failed trance-journey

If all step-fields in a **regular 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.

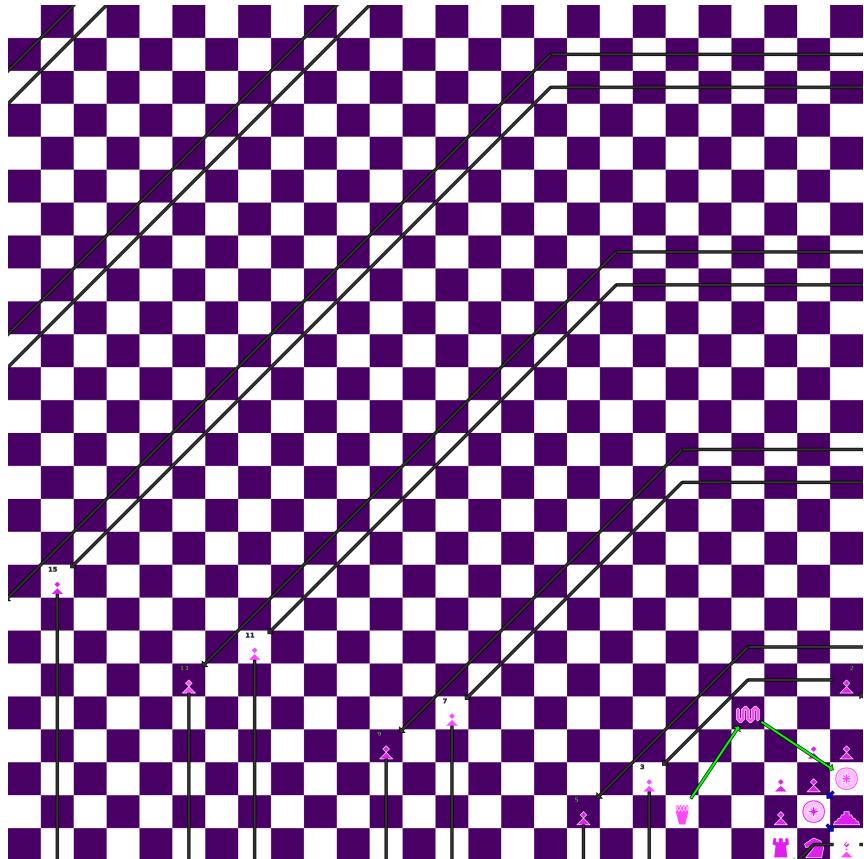


Figure 303: Failed new trance-journey

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

In contrast to [failed Shaman's trance-journey](#), Starchild-induced trance-journey is blocked by any piece on its step-fields; here, own and opponent's Pawns.

## Syzygy

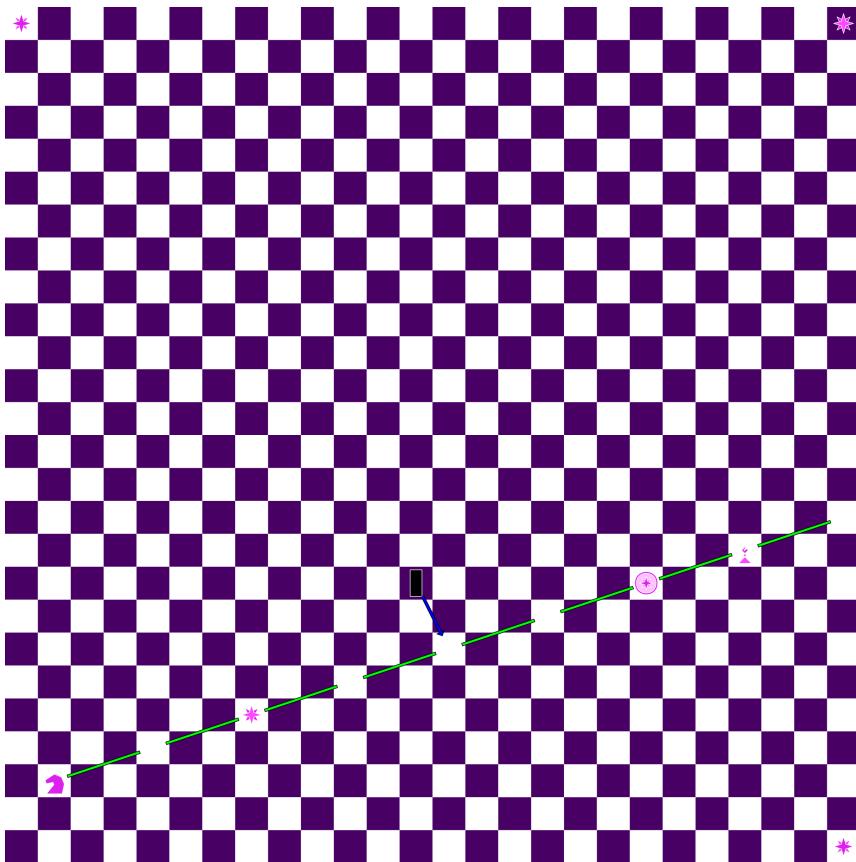


Figure 304: Demoting-to-Pawn syzygy

Starchild is celestial piece, it can participate in **demoting-to-Pawn syzygy** in place of Stars and Monoliths. Starchilds are also eligible to demotion.

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

## Resurrection syzygy

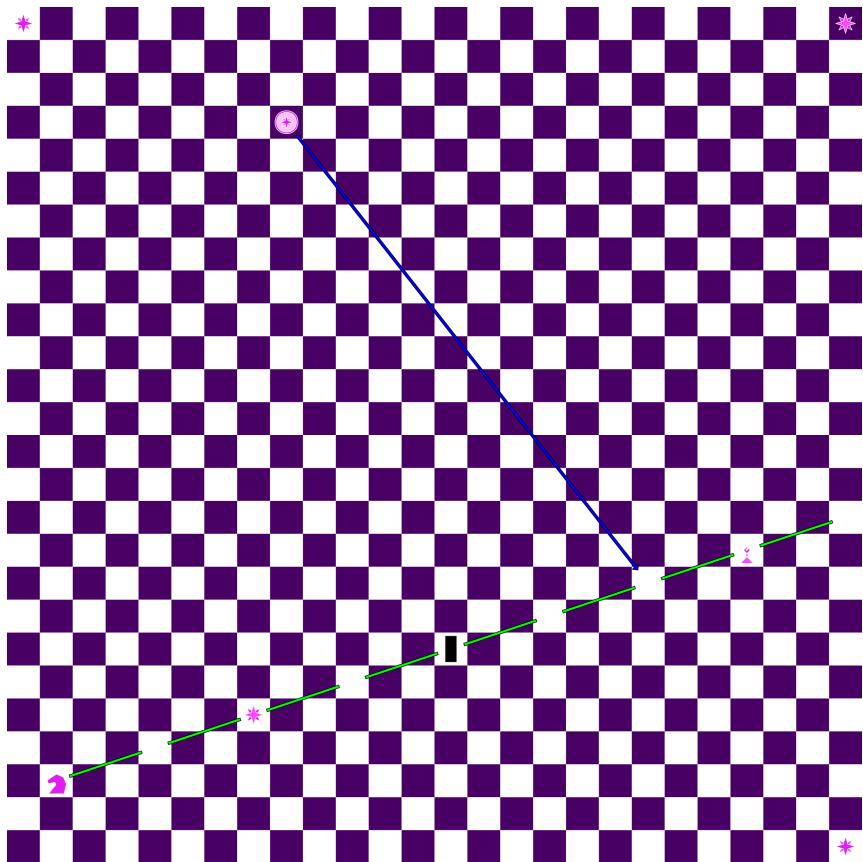


Figure 305: Resurrection syzygy start

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

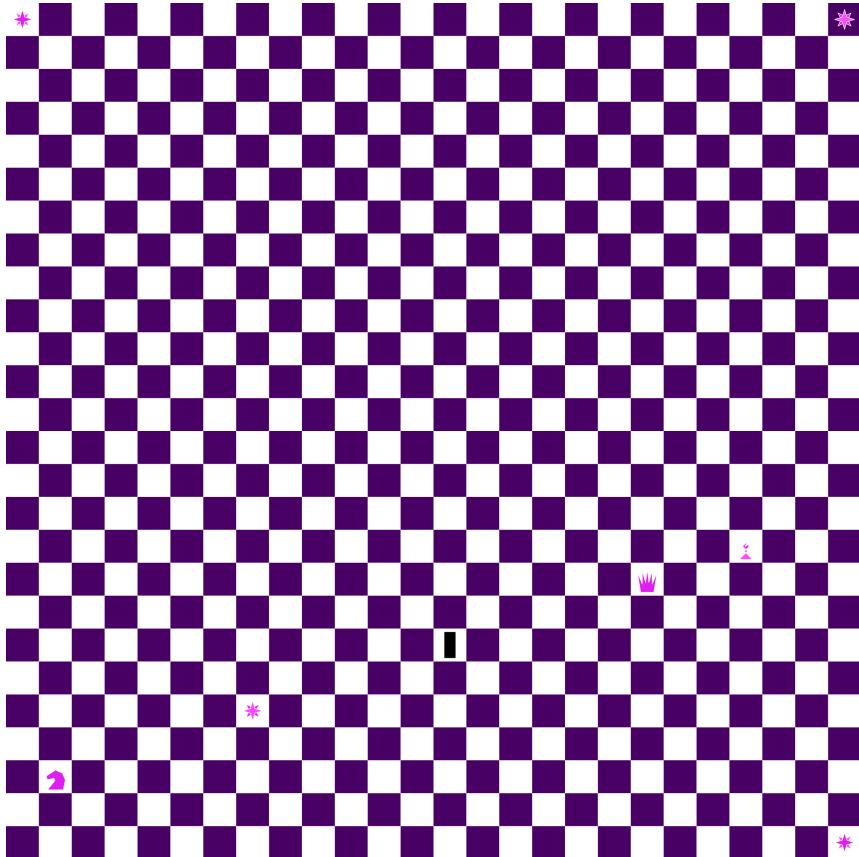


Figure 306: Queen resurrected

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

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

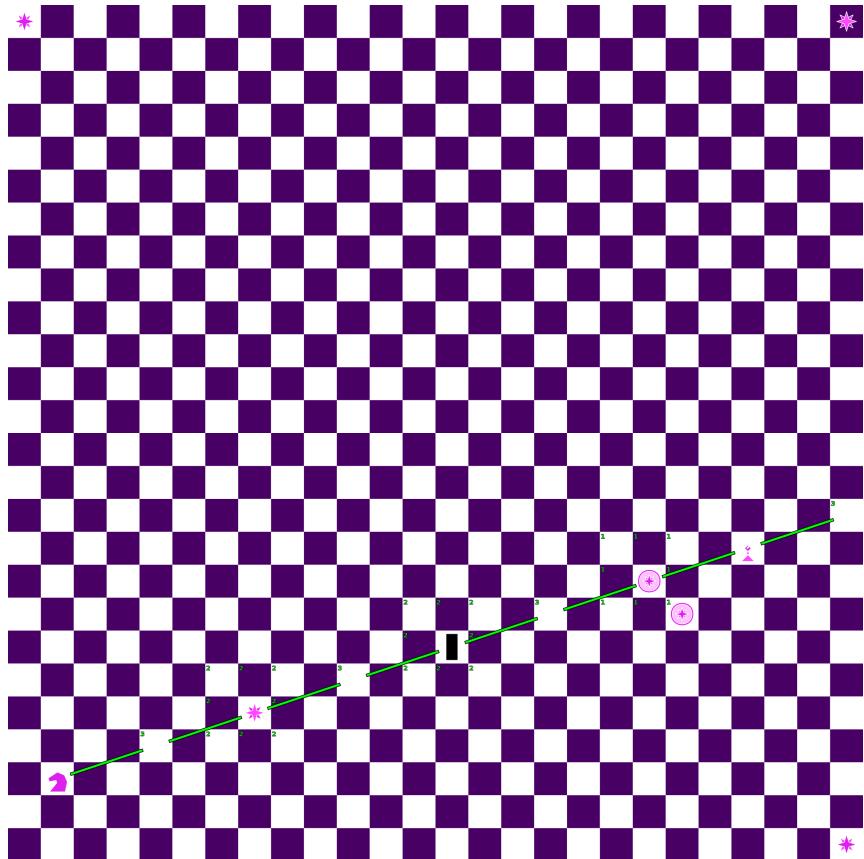


Figure 307: Starchild resurrected

Captured Waves and Starchilds can be resurrected, without initiating Starchild being oblationed. Chosen piece can emerge on any empty miracle-field around Starchilds in syzygy (here, fields marked 1). If miracle-fields are all occupied, piece emerges on any empty portal-field around Stars, Monoliths in syzygy (fields 2). If all portal-fields are occupied, piece emerges on any empty syzygy-field (3). If all are occupied, resurrection is not performed.

## Reentering syzygy

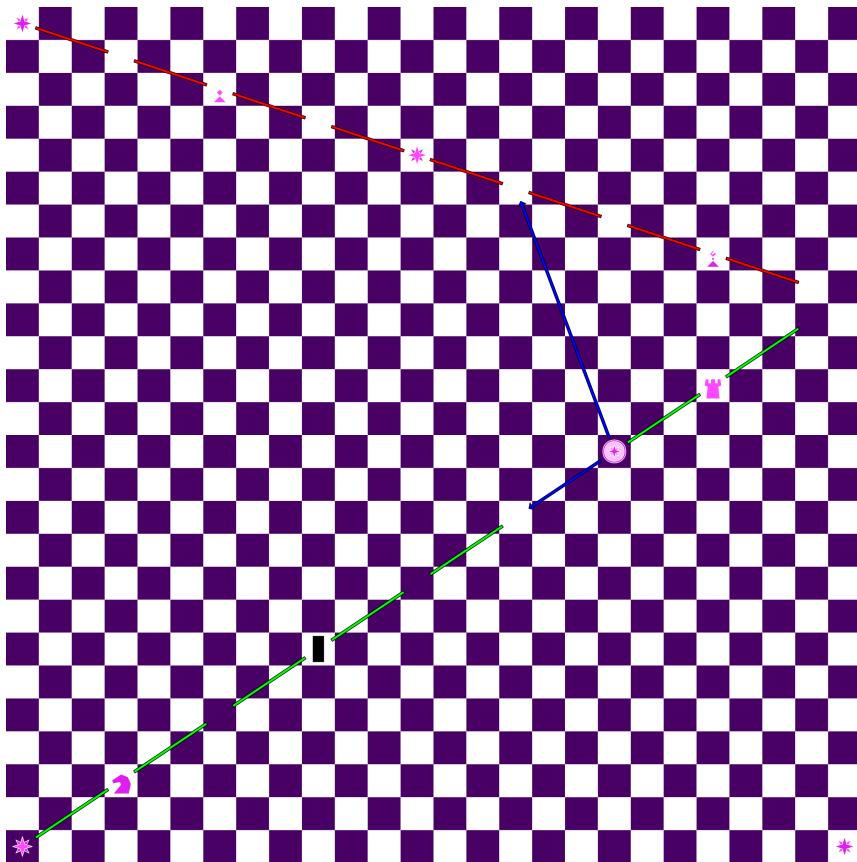


Figure 308: Reentering syzygy

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

## Cascading syzygy

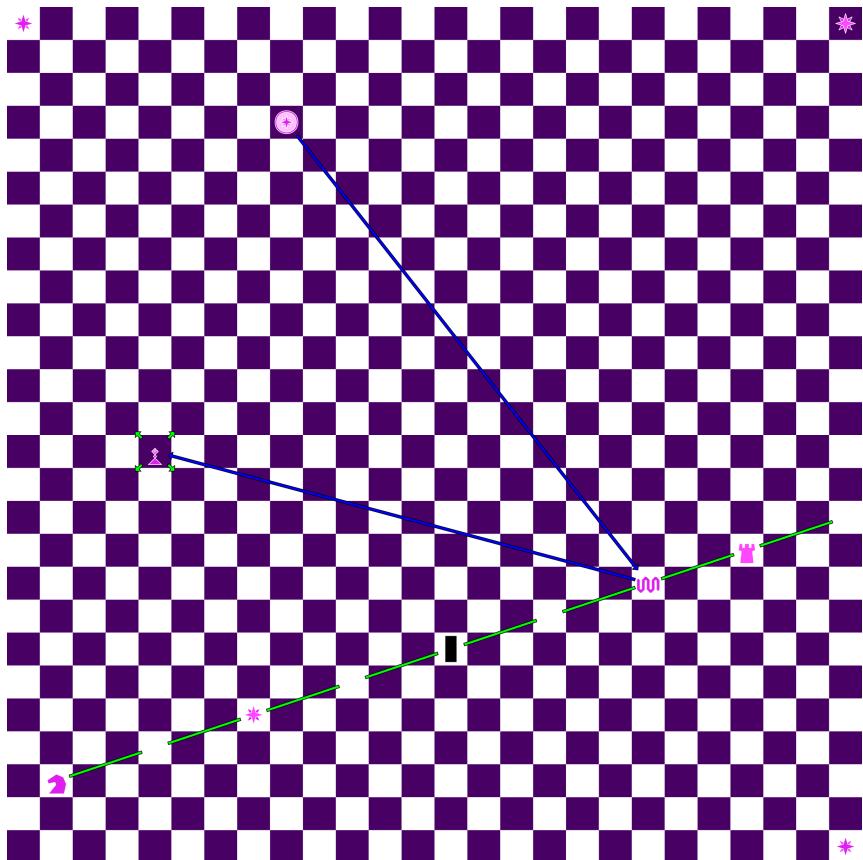


Figure 309: Starchild cascading

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

## Double syzygy

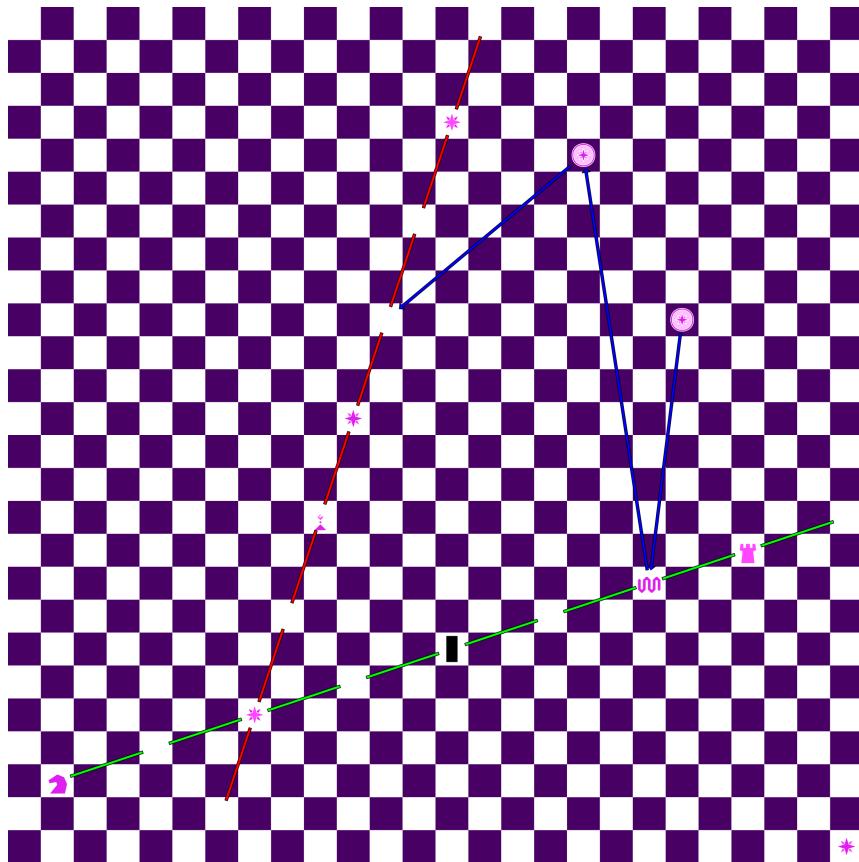


Figure 310: Shared celestial piece

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

## Opponent's Starchild

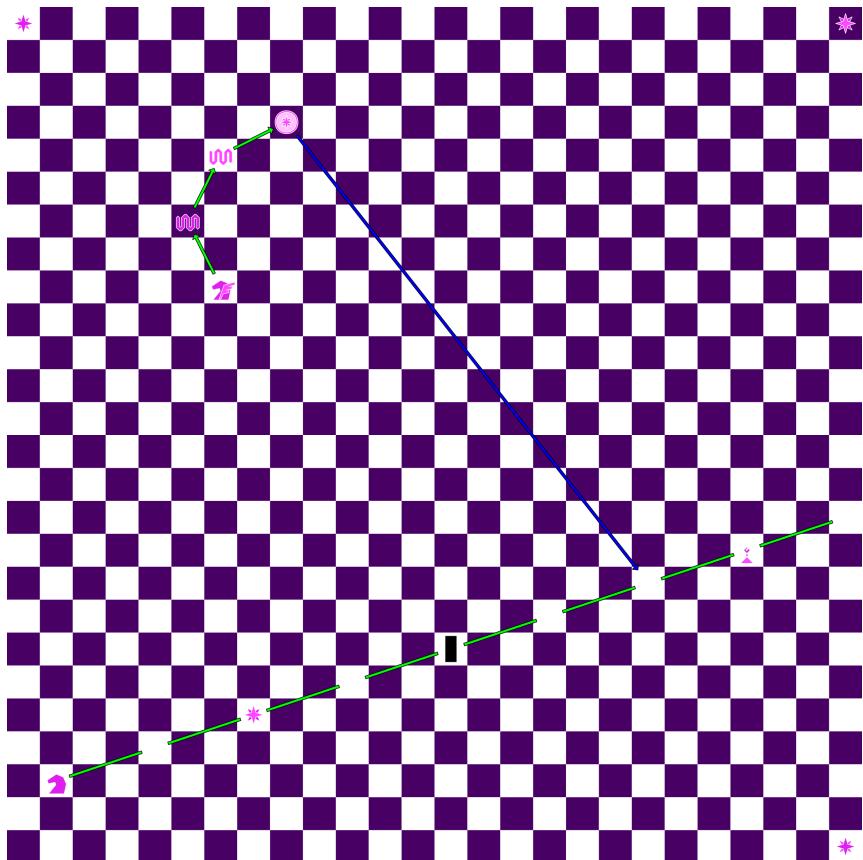


Figure 311: Opponent's Starchild in syzygy

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

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

## Star-initiated syzygy

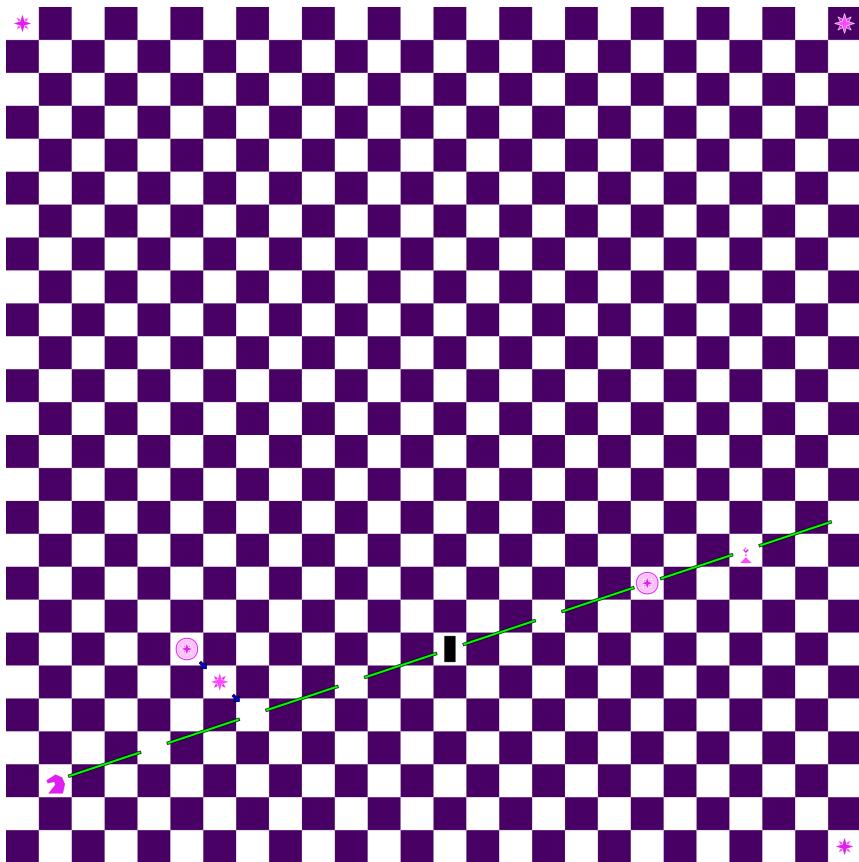


Figure 312: Star-initiated syzygy

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

## Divergence

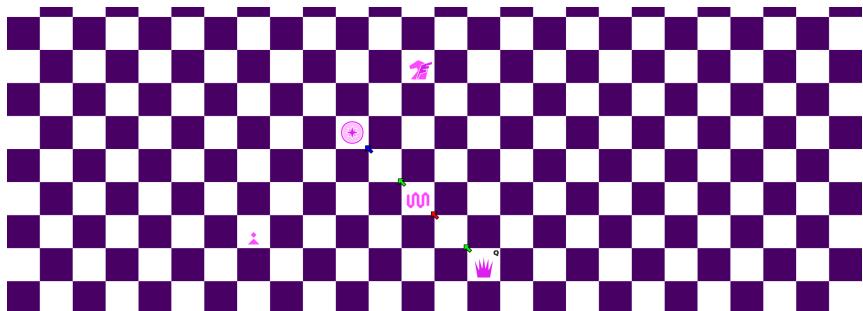


Figure 313: Own Starchild is divergent

When a piece encounters own Starchild, it can change direction of movement, and is limited by momentum it had before diversion. Starchild can divert pieces, **just like Wave can do it**. As before, first piece in a move cannot return to its starting position.

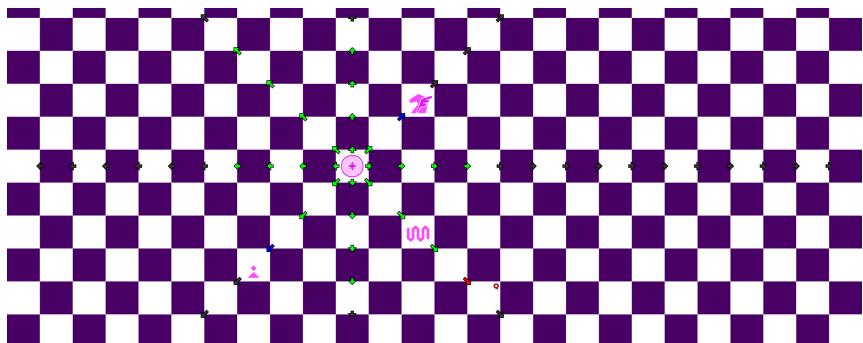


Figure 314: Diverging Queen

Here, light Queen (now "in the air") has reached own Starchild, and can choose any shown direction as a new one. Light Queen is limited by 4 momentum, and cannot return to its starting position, i.e. field Q.

## Starchild is not transparent

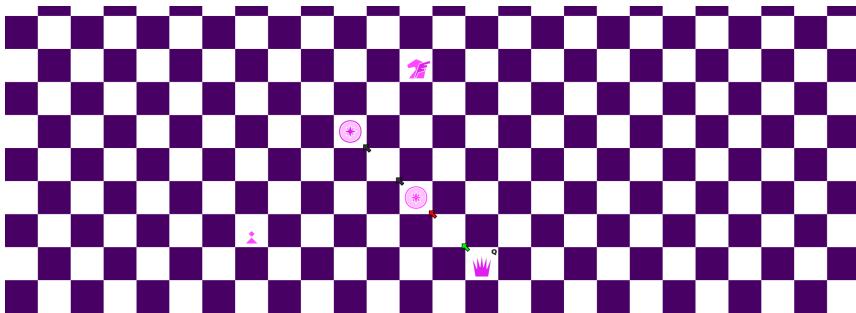


Figure 315: Starchild is not transparent

Unlike Wave, Starchild is not transparent. For instance, if dark Wave in previous example is replaced by dark Starchild, it would block light Queen from moving any further, and so from diverging.

## Starchild cannot diverge

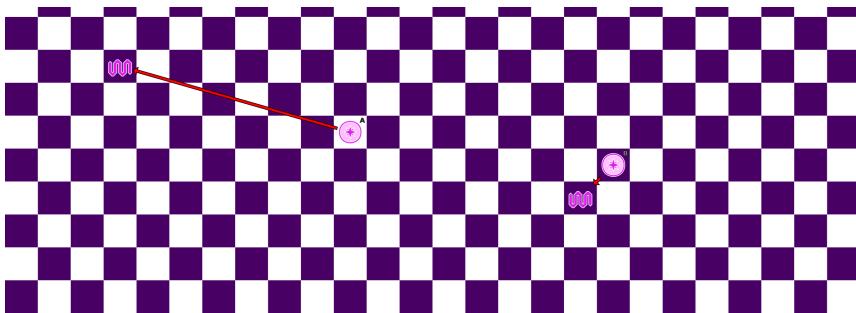


Figure 316: Starchild cannot diverge

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

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

# Rush, en passant

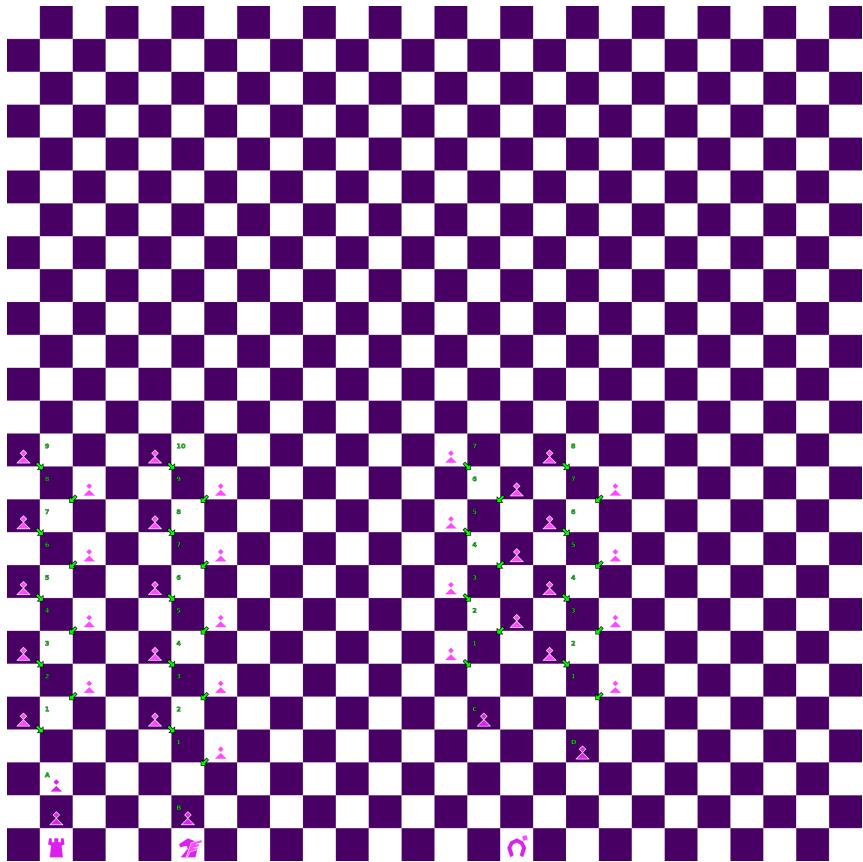


Figure 317: En passant

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.

## 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.

[Similarly to previous variant, Nineteen](#), if own Queen is present on a chessboard, opponent's Queen cannot be converted, and has to be captured instead.

# Castling

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



Figure 318: Castling

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



Figure 319: Castling short right

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

## Initial setup

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

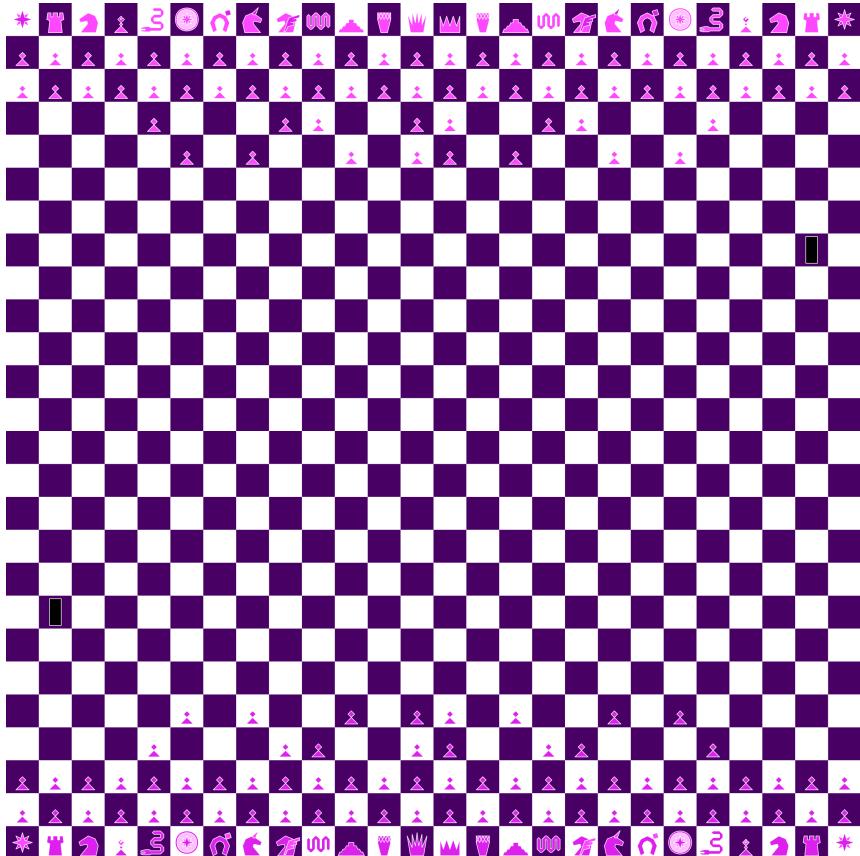


Figure 320: One board



# Terms

This chapter defines some terms as used in this book.

## Turn

Turn denotes player who hasn't finished his (or her) move, i.e. the one who "has the move", the one who "is on the move", see FIDE 1.3.

## Chip

Chip is any item on a chessboard not movable by any player, used to denote various states of a game. For instance, it could be used to denote King's ability to castle, which Pawn is tagged for promotion, or which player's turn is ongoing.

## **Piece**

Piece is any item on a chessboard movable by one, or both players, i.e. piece is any item except chips.

In later variants, not every piece is owned by a player. Pieces without owner are Stars, and Monoliths.

## **Material**

Material is any piece, except Wave.

## **Materiel**

Materiel is any own piece which can capture opponent's pieces.

Materiel is any piece except Wave, Starchild (those cannot capture), and Star, Monolith (those are not owned, and cannot capture).

## **Figure**

Figure is any piece, except Pawn.

## **Move**

Move is completed movement of chosen and all affected pieces, performed sequentialy, by one player, in one turn.

## **Cycle**

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

## **Game score**

Game score is a numbered list of cycles, in order in which they were played during a game.

## **Momentum**

Momentum is count of fields traveled over by a piece.

## **Cascade**

Cascade is a move where at least 2 pieces have moved.

# **Ply**

Ply is completed movement of a piece, from its starting position to its destination field.

# **Oblation**

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

# **Activation**

Activation is act of capturing field at which piece stands, without capturing that piece itself. Activating piece transfers all of its momentum to activated piece. Activated piece then has to move to some other field, or it's oblationed.

# **Passive piece**

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

## **Push-pull activation**

Activation of a piece which in the same move started a cascade.

## **Step-fields**

Step-fields are all fields where a piece can end its movement.

## **Capture-fields**

Capture-fields are all fields where a piece can capture opponent's piece. Usually, these are the same as step-fields, except for Pawn and Shaman.

Some pieces cannot capture opponent's pieces, so they have only step-fields but no capture-fields; these are Wave, Star, Monolith, and Starchild.

## **Neighboring-fields**

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

## **Portal-fields**

Portal-fields are neighboring-fields around a Star, or a Monolith. Empty portal-fields can be used as a destination after a material (i.e. non-Wave) piece teleported.

## **Miracle-fields**

Miracle-fields are neighboring-fields around a Starchild, where any own piece can be activated (except King), opponent's Starchild, or any Star.

Empty miracle-fields can also be used as a destination, in case of resurrecting a Wave, or a Starchild.

## **Activator**

Activator is any material piece in a cascade.

Wave inherits its (step-, capture-, or miracle-) fields from activating piece; activating piece itself can be Wave with inherited fields; inheriting chain starts with an activator.

Usually, activator refers to last material piece in a cascade preceding Wave, from which that Wave ultimately inherited (step-, capture-, or miracle-) fields.

## **Step**

Step is a movement of a piece from one step-, or capture-field to the next of the same kind; or from a starting field to a destination (step-, capture-, or miracle-) field.

## **Rush**

Rush is 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.

## 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.

## 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

Symbol	Description
AN	algebraic notation, in general
CAN	classic AN, as described by FIDE handbook and Wikipedia, can be long, short or minimal
LAN	classic AN, long form
SAN	classic AN, short form
MAN	classic AN, minimal form
NAN	new, extended AN, can be long or short
EAN	new, extended AN, short form
XAN	new, extended AN, long form
FIDE	FIDE handbook
FIDE point	point in FIDE handbook

Table 1: Abbreviations

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

Point in FIDE handbook refers to a code under which definition can be found on above website, e.g. FIDE C . 9 . 3.

Here, CAN is used to indicate compatibility with Classical Chess notation, even if examples are written on chessboards for other variants. CAN almost always means short notation, and only occasionally long, if appropriate.

## Variants

Variant	Contains
	Pawn
	Knight
	Bishop
	Rook
	Queen
	King
Classical chess	
Croatian Ties	Pegasus
Mayan Ascendancy	Pyramid
Age of Aquarius	Unicorn
Miranda's Veil	Wave
Nineteen	Star
Hemera's Dawn	Centaur
Tamoanchan Revisited	Serpent
Conquest of Tlalocan	Shaman
Discovery	Monolith
One	Starchild

Table 2: Variants

Each new variant contains all previously introduced pieces. For instance, Age of Aquarius beside Unicorn also contains Pyramid and Pegasus, on top of all classical pieces.

## Chessboards

Variant	Files		Ranks	
	<i>min</i>	<i>max</i>	<i>min</i>	<i>max/size</i>
Classical chess	a	h	1	8
Croatian Ties	a	j	1	10
Mayan Ascendancy	a	l	1	12
Age of Aquarius	a	n	1	14
Miranda's Veil	a	p	1	16
Nineteen	a	r	1	18
Hemera's Dawn	a	t	1	20
Tamoanchan Revisited	a	v	1	22
Conquest of Tlalocan	a	x	1	24
Discovery	a	x	1	24
One	a	z	1	26

Table 3: Chessboards

Positions on a chessboard are written the same as in base algebraic notation, file + rank, e.g. **m2** is initial position of light Pawn in Nineteen variant.

Maximum rank on a chessboard also represents the size of that board; all chessboards in all variants are squares. For instance, Hemera's Dawn variant is played on a chessboard with maximum rank of 20, so board size for that variant is  $20 \times 20$ .

## Pieces

Piece	Symbol	Introduced in
Pawn	P	
Knight	N	
Bishop	B	
Rook	R	Classical chess
Queen	Q	
King	K	
Pegasus	G	Croatian Ties
Pyramid	A	Mayan Ascendancy
Unicorn	U	Age of Aquarius
Wave	W	Miranda's Veil
Star	T	Nineteen
Centaur	C	Hemera's Dawn
Serpent	S	Tamoanchan Revisited
Shaman	H	Conquest of Tlalocan
Monolith	M	Discovery
Starchild	I	One

Table 4: Pieces

Each piece is present in variant in which it is introduced, and all subsequent ones. For example, Shaman is introduced in Conquest of Tlalocan variant, so it's also present in succeeding variants, Discovery and One.

# Notation

Simple movement is denoted the same way as in CAN, piece (always written as upper case) + destination field, which consists of rank (always written in lower case) + file (a number).

In this example of **Pegasus moving to destination field 3**, movement of the piece would be written as **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. Disambiguation is used in a ply, to distinguish starting position of a piece from others of the same kind that can end their movement on the same destination field, or can share portion of a path.

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

## Castling

Castling is noted with & (ampersand), after King's symbol and destination file. This **castling example** would be written as **Kd&**, and this **castling example** as **Kr&**. File at which castling Rook ended can be written after &, the same examples would now be written as **Kd&e** and **Kr&q**.

Only for Classical Chess **o-o** and **o-o** for King's side, **o-o-o** and **o-o-o** for Queen's side are accepted as castling notation.

## Ply

**Ply** is a movement of a single piece in a cascading move. Two plies are separated by ~ (tilde). In the example starting with **Queen activating a Pyramid**, which then activates another Pyramid; example is comprised of series of 4 images, each corresponding to one ply, while last image depicts ending state. This can be written as **Qf7~Ai7~Ai9**.

In XAN, the same would be written as **Qk2-f7~Af7-i7~Ai7-i9**. A pair of [ , ] (square brackets) can be used to gather each ply, like so:  
[**Qk2-f7**] ~ [**Af7-i7**] ~ [**Ai7-i9**].

## Pawn promotion

Pawn promotion is also written the same way as in CAN, as described in detail:

[https://en.wikipedia.org/wiki/Algebraic\\_notation\\_\(chess\)](https://en.wikipedia.org/wiki/Algebraic_notation_(chess))

#**Pawn\_promotion**, with Pawn's destination field + piece to which it was promoted to, like so: **e8Q**. Inserting = (equal sign) between field and promoted-to piece is also supported, e.g. **e8=Q**. If **promotion is being delayed**, usage of = is mandatory, as there is no immediate piece to promote to, e.g. **114=**.

If Pawn has been promoted, after being tagged for promotion, it is promoted on the same field at which it has been tagged. Notation in such a case is similar to normal promotion, only field written is the one already occupied by Pawn being promoted. For instance, Pawn tagged for promotion in previous example would have its actual promotion written as e.g. **114Q**, or as **114=Q**.

Similarly, **Pawn promoted by own Pyramid** just writes chosen piece to promote to, after writing movement of a Pyramid, like so **Gd8~Ah8Q**, or in XAN as **[G14-d8] ~ [Ad8-h8=Q]**.

Pawn capturing opponent's piece can also be promoted, if capture happen on opponent's figure row. For instance, if in first, Classic Chess example light Pawn captured dark Rook before promotion, it would be written as **e8\*RQ**, or better yet **e8\*R=Q** to avoid possible confusion. In CAN, promotion after capture would be written as **xe8Q**, or as **xe8=Q**.

## En passant

En passant is denoted with : (colon), after destination field. In this **en passant example** dark Pawn on the right might capture light Pawn if rushed, which is written as **h3:**. Rank of captured Pawn can be written after :, so our example might now be **h3:5**, if captured Pawn has been rushed to field 2.

If disambiguation is needed, it is written as previously described. Usually, it's enough to add starting file before destination field. If previous example had additional dark Pawn located at **g4**, en passant would be written as **ih3:**, or **ih3:5**.

In CAN, both en passant and its disambiguation form are written as **ixh3 e.p.**, where **e.p.** stands for en passant; see FIDE C.9.3.

## Conversion

Conversion is noted with % (percentage) after destination field. Example starting with **Bishop activating Pyramid**, which then converts opponent's Rook is covered by 3 images, 2 corresponding to 2 plies, and last one is for ending state. This is written as **Bd5~Ah5%**. Optionally, converted piece can be written after % symbol, so it would be **Bd5~Ah5%R**. In XAN, it would be **Bh9-d5~Ad5-h5%**. With both plies gathered and converted piece noted it would be **[Bh9-d5]~[Ad5-h5%R]**.

Starchild is immune to conversion, Pyramid attempting such a thing is **obliterated**. Failed conversion is noted with %% (double percentage) after destination field. This example of **conversion immunity** would be written as **B123~Ah23%%**. In XAN, with ply gathering, it would be **[Bs16-123]~[A123-h23%%]**.

## Complex movement

Individual steps are separated by . (single dot), multiple steps are separated by .. (two dots). In this example, **Centaur has to choose 2 different steps**, which it will then follow for the rest of ply. Lets say that destination field is 6, writing it as just **Cp15** is not good enough since at least 2 different paths lead to the same destination field.

The best way to write it is with both initial steps, i.e. **C.c5.g6..p15**, because this is exactly definition of such a movement, and will contain no ambiguity. Sometimes, it might be enough if only first step is written, i.e. **C.c5..p15**. The one of other paths leading to the same **p15** field would

be **C.f2.g6..p15**. Note also . separating piece and the first step, without it first step would be taken as an initial field.

Not recommended, but still possible is to write *some* step along the way, e.g. **C..i11..p15**. Care must be taken to write step which really differentiate paths, otherwise noted path might inadvertently also denote another. For instance, in addition to original path, **C.j9..p15** might also denote **C.b4.f5..p15**, which happens to cross **j9** as well.

## Capturing-ply

Shaman can capture multiple pieces in one capturing-ply. In this example capture-ply just above horizontal line would be written as **H.h10\*..111\*..p12~Wn8**, if activated Wave is moved down, to the right. In XAN (with starting field, captured pieces and plies gathered), it would be **[Hd9.h10\*P..111\*P..p12]~[Wp12-n8]**.

## Transparency

Passing "through" (or "over") a piece is noted by using ^ (caret), optionally followed by a piece which has been "passed-over".

For instance, in this example light Queen could capture dark Pegasus, which would be written as  
**Q..m4^..j7^..g10\***, or in XAN as  
**Qo2..m4^W..j7^W..g10\*G**.

## Divergence

Diverging a piece is noted by using / (slash), optionally followed by divergent piece.

For instance, in [this example](#) light Queen could capture dark Pegasus, after "passing-through" dark Wave, and then diverging from light Wave. This could be written as

`Q..m4^..j7/..m10*`, or in XAN as

`Qo2..m4^W..j7/W..m10*G.`

## 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, like so **Hb14~We12@He12,w18..q16\*..k14\*..c18.** If initial position is omitted, separator (i.e. comma) is still written, like so **Hb14~We12@H,w18..q16\*..k14\*..c18.** 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), optionally followed by disambiguating position, i.e. one of rank, file or rank + file, in that order. Optional disambiguation can be preceded by piece which was demoted, and demotion-field can be written instead of just a disambiguation. If writing just demoted piece is enough to identify which one is it, and where, demoting position does not need to be written.

In this **syzygy example**, if Monolith was moved by light player, then either light Wave or light Bishop could be demoted to Pawn. To be able to distinguish which one is it, either demoting position or piece has to be written. If Bishop was chosen, that would be written as **Mm12>p**. Since there is only one light Bishop in demoting-to-Pawn syzygy, the same move could be also written as **Mm12>B**. In XAN, with piece and demotion-field noted it would be **Mn14-m12>Bp8**. There is no plies gathering, since only Monolith moved, so there is only one ply.

## Syzygy, resurrection

Resurrection is written by appending \$ (dollar sign) after the move, followed by piece which was resurrected. If Wave or Starchild has been resurrected on an empty field, position is appended after piece. If resurrecting opponent's piece, \$\$ (double dollar) sign is appended after the move, followed by a piece to resurrect.

If there was no suitable empty field at which Wave or Starchild could be resurrected, resurrection is not performed, which could be written by appending \$\$\$ (triple dollar) after the ply. Since there are no actual side-effects to failed resurrection, \$\$\$ is optional.

If resurrection by light player ended by resurrecting own, light Queen, it would be written as **It9\$Q**, and in XAN it would be **Ii23-t9\$Q**.

If, in the same example light player resurrected opponent's, dark Queen instead, it would be written as **It9\$\$Q**, and in XAN it would be **Ii23-t9\$\$\$Q**.

If previous example ended by resurrecting Starchild, it would be written as **It9\$Iu8**. In XAN, it would be **Ii23-t9\$Iu8**.

If all fields suitable for resurrection are occupied, it is written as **It9\$\$\$**, in XAN it would be **Ii23-t9\$\$\$**. Writing it as **It9**, or **Ii23-t9** is fine, it just doesn't note failed intention.

## Teleportation

Teleportation is noted by separating plies with | (vertical bar) instead of usual ~ (tilde), followed by field at which piece 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|Wl4~Al6**. In XAN, with plies gathering, it would be

**[Gi11-g15]~[Wg15-a18]| [Wr1-14]~[Al4-16]**.

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 semicolon) 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 shorthand 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.

## Losing tags

Losing tag is a side-effect of a tagged piece being moved, captured, etc. As such, losing tag can also **accompany some other side-effects**. So, losing tag is denoted immediately after piece symbol, but before any positional, or movement notation, depending on what is available. Writing lost tag is completely

optional, it's meant to remind readers what happened and when.

Losing ability to castle is denoted with **&&** (double ampersand). **Using previous castling examples**, if Rooks moved to their destination fields without castling, it would be written as **R&&e1**, and **R&&q1**, and in XAN it would be **R&&a1-e1**, and **R&&y1-q1**. If, in the first example, there were opponent's Bishop on light Rook's neighboring-field capturing it, it would be written as **Ba1★R&&**, or as **Bb2-a1★R&&** in XAN.

If **Pawn tagged for promotion** moves before actual promotion, it losses its tag, which is denoted with **==** (double equal sign), like so **==e12**. In XAN the same move would be noted as **P==e11-e12**.

If the same example contained e.g. dark Bishop at **f12**, Pawn tagged for promotion could capture it, which would be written as **==f12★B**, and in XAN as **P==e11-f12★B**.

If, in the same situation, light Pawn instead of moving was captured by dark Unicorn on a field where it was tagged for promotion, it would be written as **Ue11★P==**, and in XAN it would be **Ud7-e11★P==**.

Losing ability to rush is denoted with **::** (double colon). For instance, in this **teleporting example**, after dark Rook's failed teleportation, light Bishop could capture dark Pawn on its initial position, which would be denoted as **Br17★P::**, and in XAN it would be **Bq18-r17★P::**.

In this **activating Pawns example**, light Pawn on the left is being activated, and can capture dark Knight. This would be written as **Re2~Wc2~P::b3★N**, and in XAN it would be **[Re6-e2]~[We2-c2]~[P::c2-b3★N]**.

## Default pathing

In Classical Chess, all pieces have exactly one path from starting field to destination, so to specify unique path only destination is needed when writing movement of a piece. This is no longer so for newly added pieces. For instance, Serpent can have multiple paths leading to the same destination, those can overlap, and even have different lengths.

In a [finished Serpent movement example](#), assuming that starting position is **c3**, and destination **g3**, depicted complete path is **Sc3.d4.c5.d6.e5.f6.g5.f4.g3**. Even with as few steps as possible, to have unique path it would still need to be written as **S..d6..f6..g3**.

However, one of the shortest paths (here, e.g. **Sc3.d4.e3.f4.g3**) would result in exactly the same outcome, namely Serpent moved from **c3** onto **g3**, with no additional interactions taking place. Even with additional side-effects, most of the time it does not matter if a piece made long or short path to e.g. capture opponent's piece.

The only time when length of a path is important is in a cascade, when momentum is build-up by first piece, and spent by others. For instance, in a [Serpent activating Pyramid example](#), depending on a path taken by Serpent, Pyramid might get 4 or 8 momentum when activated.

Even so, exact path taken by a piece is not important, only amount of a momentum gathered, and spent. To correctly support movement of pieces in a cascade, momentum built by first piece has to be maximized, and momentum spent by activated pieces minimized. So, all movement can be written with just destination field; path is assumed to be the shortest

possible for all pieces, except for the first piece in a cascade, which is assumed to be taking the longest path available.

First example here can then be written as **Sg3**, this would be taken as if **Sc3.d4.e3.f4.g3** is written, i.e. light Serpent would be taking the shortest path available. Next example would be written as **Sc7~Ad7**, if Pyramid moved 1 field to the right; movement is assumed to be **[Sc3.d4.c5.d6.e5.d4.c5.d6.c7] ~ [Ac7-d7]**, that is, light Serpent would take the longest path available, since it's the first piece in a cascade.

## Move symbols, annotations

Placeholder for a move is . . . (three dots), usually used to resume game score after commentary, see

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

Checks are noted with + (plus sign), checkmates are noted with # (hashtag), these are optional in CAN, see FIDE C.13. Self-checkmates are written as stand-alone # (hashtag) on an opponent's turn as a complete move, which ends a game, like so:

92. . . . # *Light player checkmated self.*

Note, self-checkmate is a claim that opponent checkmated self, it has to be validated by e.g. arbiters. If it's not valid, self-checkmate is rejected as if player tried to perform an invalid move, and game continues with a player putting forward such a claim still "on turn".

Resigns are written with **##** (double hashtag) as a complete move, which also ends a game, like so:

92. . . . **##** *Dark player resigns.*

Draw offer is noted with **(=)** (equal sign in brackets), see FIDE C.12; it's written immediately following a completed move notation (which might include check), like so:

71. **Nb3+ (=)** . . . *Light player offers draw.*

Draw offer can be accepted, as long as draw offered by the opponent is valid, i.e. not canceled, by writing **(==)** (two equal signs in brackets) as a complete move, which ends a game, like so:

82. . . . **(==)** *Dark player accepts draw offer.*

Draw offer can be canceled by writing **(-)** (minus sign in brackets), after a complete move, like so:

79. **Bc7+ (-)** . . . *Light player cancels draw offer.*

Forced draw, i.e. draw by rules, is written with **(==)** (three equal signs in brackets) as a complete move, this also ends a game, like so:

82. . . . **(==)** *Draw forced, by the rules.*

In NAN checks are optional; checkmates, self-checkmates, resigns, accepted and forced draws are all mandatory, to set game score end. Draw offers, cancelations are mandatory to set limits within which draw offer is valid, and can be accepted by the opponent.

Annotations are written at the end of a complete move,

draw offer, e.g. **ef8\*!**, **Nb3 (=) =**. It is recommended to use \_ (underscore) to separate AN and annotations, like so **ef8\*\_!**, **Nb3 (=)\_ =**. Usage of underscore is mandatory when annotation can be confused for a regular chess AN.

For instance, **e8=** might be Pawn tagged for promotion, or both players have equal chances of winning, see

[https://en.wikipedia.org/wiki/Algebraic\\_notation\\_\(chess\)](https://en.wikipedia.org/wiki/Algebraic_notation_(chess))

#Annotation\_symbols. In such a case, regular chess AN is assumed, i.e. it is Pawn tagged for promotion. If annotation is meant instead, it has to be written as **e8\_=**.

# Summary

Now that all symbols have been introduced, they're gathered here according to their purpose.

## Side-effects

Symbol	Side-effect	Mandatory?
*	capturing	-
<	trance-journey displacement	+
==	lost promotion tag	-
::	lost rushing tag	-
&&	lost castling tag	-
:	en passant	-
&	castling	-
=	promotion	+
=	tag for promotion	-
%	conversion	+
%%	failed conversion, oblation	+
^	transparency	-
/	divergence	-
>	syzygy, demoting to Pawn	+
\$	syzygy, resurrection	+
\$\$	syzygy, resurrecting opponent's piece	+
\$\$\$	failed resurrection	-

Table 5: Side-effects

Every side-effect is result of a single step. Most side-effects can occur only on a last step of a ply, these are called ply

side-effects. Capturing, displacement and losing (promotion, rushing, or castling) tags are both step and ply side-effects, others are purely ply side-effects.

In Classical Chess capturing opponent's piece is the most prevalent side-effect, since there aren't all that many, and those can be done once per Pawn (en passant, promotion), or once per whole game (castling). So, in CAN capturing is optional, see FIDE C. 9; this is so in NAN as well.

Most mandatory side-effects are marked as such, because otherwise AN would lack information to describe what happened. Trance-journey displacement has to have a destination field where a piece has been displaced. Promotion needs a promoted-to piece written, otherwise it's assumed that a Pawn has been tagged for promotion. Demoting to Pawn syzygy has to have, at very least, a disambiguation (or piece, if unique) written to be able to find which piece has been demoted, and on which field. Resurrection syzygy must have a piece which has been resurrected, if initiating Starchild was not oblationed then destination field as well.

Other mandatory side-effects are designated as such, because otherwise it could be assumed that targeted piece has been captured. Conversion, and failed conversion are such side-effects.

It is recommended to also write optional side-effects and their data, for not much more effort reader is presented with much easier to understand notation. Compare minimalistic notation with slightly more verbose version:

**Re2~Wc2~b3** vs.

**Re2~Wc2~b3\*** vs.

**Re2~Wc2~P : :b3\*N,**

Hb14~We12@H..q16..k14..c18 vs.

Hb14~We12@H..q16\*..k14\*..c18 vs.

Hb14~We12@H,w18..q16\*p..k14\*N..c18,

Hb14~We12@@ vs.

Hb14~We12@@P,B,R,R,N,B,N vs.

Hb14~We12@@Pq16,Bp14,Rd20,Rg6,Nk14,Bj12,Nd10.

## Accompanying losing tags

Sym.	Side-effect	Accompanying losing tags		
		castling	promoting	rushing
*	capture	+	+	+
<	trance-journey displacement	+	+	+
:	en passant	-	-	-
&	castle	*	-	-
=	promotion	-	*	-
=	tag for promotion	-	-	-
%	conversion	-	+	-
%%	failed conversion, oblation	-	-	-
^	transparency	-	-	-
/	divergence	-	-	-
>	syzygy, demoting to Pawn	+	-	-
\$	syzygy, resurrection	-	-	-
\$\$	syzygy, resurrecting opponent's piece	-	-	-
\$\$\$	failed resurrection	-	-	-

Table 6: Accompanying losing tags

Table above lists most side-effects in rows. Some of those side-effects could also cause targeted piece to lose its promoting, rushing, or castling tag. Losing tags (accompanying those side-effects) are listed as columns. For instance, Rook still holding its castling tag can be captured, which is indicated by + (plus sign), under column *castling*, and row *capture*.

Some combinations are not possible, which is noted by - (minus sign). For example, Pawn holding promoting tag cannot be captured by en passant move, as indicated by - at *promoting* column and *en passant* row. This is so because Pawn can get promoting tag only on opponent's side of chessboard, while it can be subjected to en passant only on own side of chessboard.

Two combinations are actually using a tag, those are indicated by \* (asterisk). Using a tag implicitly loses it, since no tag can be repeatedly applied (e.g. Pawn after promotion cannot be promoted again), so using a tag is not written as tag loss in AN. For instance, a Rook having castling tag can castle, as found under *castling* column, and *castle* row. Another instance is a Pawn holding promoting tag which it can use, found in *promoting* column and *promotion* row.

## Side-effects on pieces

Piece	Disposable?	Promote-to?
Pawn	+	-
Knight	+	+
Bishop	+	+
Rook	+	+
Queen	+	+
King	-	-
Pegasus	+	+
Pyramid	+	+
Unicorn	+	+
Wave	+	+
Star	-	-
Centaur	+	+
Serpent	+	+
Shaman	+	+
Monolith	-	-
Starchild	+	+

Table 7: Side-effects on pieces

Disposable pieces are all that can be captured, that is all but Kings, Stars and Monoliths. Disposable pieces can be also displaced, teleported, converted, oblationed, or resurrected. Pawn can be promoted to any other disposable piece.

Non-disposable pieces (Kings, Stars and Monoliths) cannot be captured, displaced, teleported, converted, oblationed, or resurrected. Pawn cannot be promoted to any non-disposable piece.

## Path separators

Symbol	Separates
.	single steps
..	multiple steps
-	starting and destination field
~	plies
	teleportation
	failed teleportation, oblation
@	trance-journey
@@	dual trance-journey, oblation
@@@	failed trance-journey, oblation
;;	Pawn-sacrifice
,	items in a list
[, ]	ply gathering

Table 8: Path separators

First 3 symbols (., .., and -) separates steps within a single ply. Other symbols (~, |, @, and ;;) are separators between plies; or ply and, by extension, move terminators (||, @@, and @@@).

Items separator (,) is used where multiple items needs to be listed for a single step (or a ply), e.g. pieces captured in a dark Shaman's dual trance-journey.

Ply gathering symbols ([, ]) are just wrappers around plies to visually enhance them, making them easier to tell apart, but otherwise does not contribute any new information.

## Move symbols

Symbol	Status
+	check
#	checkmate
#	self-checkmate
##	resign
(=)	draw offered
(-)	draw offer withdrawn
(==)	draw accepted
(==)	draw by rules
_	annotations separator
...	placeholder for a move

Table 9: Move symbols

Check notation is optional in NAN, just like in CAN, see FIDE C.9. Checkmate, self-checkmate and resign notations are mandatory, to note end of a game score (list of moves by both players).

All of draw notations are mandatory in NAN; offering draw and canceling offer because they give an opportunity window within which draw offer can be accepted by the opponent. Accepted draw and draw by rules notations are mandatory, since they also note end of a game score.

Draw offer does not expire, and can be issued multiple times. If a draw offer is not valid anymore it has to be canceled; a single **(-)** cancels draw offer, regardless how many times it was offered prior to cancelation.

## Initial setups

Variant	No. of Pawn rows
	Figure row
Classical chess	1
	<b>RNBQKBNR</b>
Croatian Ties	1
	<b>RGNBQKBNGR</b>
Mayan Ascendancy	1
	<b>RGANBQKBNAGR</b>
Age of Aquarius	1
	<b>RGAUNBQKBNUAGR</b>
Miranda's Veil	1
	<b>RGAUWNBQKBNWUAGR</b>
Nineteen	2
	<b>TRNBWGUQAQKAUGWBNRt</b>
Hemera's Dawn	2
	<b>TRNBCWGUAQKAUGWCBNRt</b>
Tamoanchan Revisited	2
	<b>TRNBSWUGCAQKACGUWSBNRt</b>
Conquest of Tlalocan	2
	<b>TRNBSCUWGAHQKHAGWUCSBNRt</b>
Discovery	2
	<b>TRNBSCUWGAHQKHAGWUCSBNRt</b>
One	2
	<b>TRNBSICUGWAHQKHAWGUCISBNRt</b>

Table 10: Initial setups of light figures

Initial setups table contains complete row of figures for light player, at the beginning of a match. In this table, lower case letters are used to denote dark pieces. In later variants, dark Star is positioned in bottom right corner of a chessboard, which is indicated with **t**.

Dark player's setup is mirrored, with all figures switched to opposite of light player's setup. So, for Nineteen variant **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 Pawns

In addition to 2 rows of Pawns, most of later variants also feature scout Pawns.

Variant	Light scout Pawn setup
Hemera's Dawn	c4, g4, n4, r4 d5, f5, o5, q5
Tamoanchan Revisited	g4, k4, l4, p4 h5, j5, m5, o5
Conquest of Tlalocan	d4, h4, i4, 14 m4, p4, q4, u4 e5, g5, j5, 15 m5, o5, r5, t5
Discovery	d4, h4, i4, 14 m4, p4, q4, u4 e5, g5, j5, 15 m5, o5, r5, t5
One	e4, i4, j4, m4 n4, q4, r4, v4 f5, h5, k5, m5 n5, p5, s5, u5

Table 11: Light scout Pawn setups

Table above contains initial positions of scout Pawns for light player.

Variant	Dark scout Pawn setup
Hemera's Dawn	<b>c17, g17, n17, r17</b> <b>d16, f16, o16, q16</b>
Tamoanchan Revisited	<b>g19, k19, l19, p19</b> <b>h18, j18, m18, o18</b>
Conquest of Tlalocan	<b>d21, h21, i21, l21</b> <b>m21, p21, q21, u21</b> <b>e20, g20, j20, l20</b> <b>m20, o20, r20, t20</b>
Discovery	<b>d21, h21, i21, l21</b> <b>m21, p21, q21, u21</b> <b>e20, g20, j20, l20</b> <b>m20, o20, r20, t20</b>
One	<b>e23, i23, j23, m23</b> <b>n23, q23, r23, v23</b> <b>f22, h22, k22, m22</b> <b>n22, p22, s22, u22</b>

Table 12: Dark scout Pawn setups

Table above contains initial positions of scout Pawns for dark player.

## Monolith initial positions

Variant	Side	
	light	dark
Discovery	<b>b7</b>	<b>w18</b>
One	<b>b8</b>	<b>y19</b>

Table 13: Monolith initial positions

Table above contains initial positions of both Monoliths, one located on light side of chessboard, the other on dark side.

## Movement limits

Variant	Serpent	Monolith
Tamoanchan Revisited	8	—
Conquest of Tlalocan	8	—
Discovery	8	3
One	9	3

Table 14: 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

Activated by	Moves like
Pawn	Pawn, single direction, multiple steps
Knight	Pegasus
Bishop	Bishop
Rook	Rook
Queen	Queen
King	Queen
Pegasus	Pegasus
Pyramid	Rook
Unicorn	Centaur, unrestricted step choices
Wave	activating Wave
Star	—
Centaur	Centaur
Serpent	Serpent, 2 alternating directions, multiple steps
Shaman	Shaman
Monolith	—
Starchild	Starchild

Table 15: Movement of Wave

Wave generally moves the same way as activating piece in the moment of activation, with ability to make multiple steps in chosen direction (until end of a chessboard is reached), even if activating piece can make only a single step. For instance, Wave activated by Knight moves like a Pegasus. **Wave activated by Serpent** is an exception, it moves by alternating between 2 diagonal steps, which, once chosen, can't be changed for the remainder of Wave's ply.

Wave moves over the same kind of fields (step- or capture-fields) as activating piece in the moment of activation, and has the same choice of directions over those fields regardless of any previous choice. An example, Wave activated by Shaman on a capturing-field moves over that Shaman's capturing-fields, even if it can't capture any piece.

Wave activated by Pawn moves toward opponent's figure row, either in a straight line (if activated on a step-field), or diagonally (if activated on a capture-field); once direction is chosen, it can't be changed for the remainder of Pawn's ply. In later variants (Nineteen, and onwards) **Pawn can move laterally by one step-field**; Wave activated on a step-field can now move either straight forward as before, or sideways.

Wave activated by Unicorn moves similar to Centaur, it has to keep alternating between two initially chosen steps, but it's not restricted in choosing second step based on a choice of the first one. Wave can choose any two steps Unicorn could make from its starting field and first step-field.

Wave cannot be activated by a Star or a Monolith. Wave can teleport, if activated by any piece, but Starchild. Wave activated by Starchild cannot neither teleport, nor activate a Star.

All other properties of Wave movement remains the same, regardless which piece activated it, and on which (step- or capture-) field: ability to "pass-through" pieces on a chessboard as if they're not there (except Monoliths), inability to capture any piece, ability to activate any own piece (except King, Pyramid can't be activated on step-fields), ability to activate opponent's Wave, ability to move over the edge of a board as long as Wave's ply ends on it, and ability to transfer all of received momentum to activated piece.

## Piece activations

	<b>Activating</b>	<b>Activated</b>
<i>Piece</i>	<i>At field</i>	
any	capture, or miracle	own Pyramid
any	any	own Wave
Wave	any	any own, except King, Pyramid
Wave <sup>1</sup>	capture, or miracle	any own, except King
Wave	any	opponent's Wave
Starchild	any	own Starchild
Starchild	miracle	any own, except King
Starchild	miracle	opponent's Starchild
Starchild	miracle	any Star

Table 16: Piece activations

Here, activated own piece means it's in the same (dark, or light) color as activating piece, activated opponent's piece means it's in the opposite color to activating piece.

Wave does not have any of step-, capture-, or miracle-fields on its own; fields are inherited from an activating piece, in the moment of activation. Activating piece itself can be a Wave,

---

<sup>1</sup>If activated on capture-fields, or Starchild's miracle-fields.

which inherited fields from a piece preceding it in a cascade. Every inheritance chain starts with a material (i.e. non-Wave) piece, such a piece is called activator.

Wave inherits (step-, capture-, or miracle-) fields from an activator as a whole set of fields over which to move. Distinction is important when those sets of fields are different from each other, as they are for Pawns, Shamans, and Starchilds.

For instance, Wave activated by Pawn on its step-field has to move only over that Pawn's step-fields (from activating field straight forward, towards opponent), and cannot move over Pawn's capture-fields (diagonally, towards opponent). Later, a sideways step-fields are added to Pawn's repertoire; from then on, activated Wave can also choose to move laterally, regardless if Wave was activated on a forward, or a side step-field.

With inherited fields, Wave does not inherit what interactions it can do on those fields. For instance, Wave cannot capture opponent's pieces, even if activated on a capture-field.

Wave can also activate the same pieces as activating piece could activate, in the moment of activating that Wave; with addition of activating opponent's Wave.

So, when saying that Wave can activate own Pyramid on a capture-fields, it does not mean that Wave can now capture opponent's pieces; it just means that Wave is moving over its activator's capture-fields; and with capture-fields Wave also got an option to activate own Pyramid.

# Grammar

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

Table 17: Grammar

Here, notational grammar is described in more formal, concise way. Annotations are not covered, as they are shorthand for non-standardized commentary.

Verbatim values (e.g. **x**) are as they appear in AN, compatibility values (e.g. **x**) are used exclusively for CAN. Empty value **?** is 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 and groups 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>

<piece-transparent-to-wave> =  
  <disposable-piece> | **K** | **T**

<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-no-side-effects> =
  [<disambiguation>]<field>
  | [<disambiguation>]{<step>}
  | <field>-<field>

<transparency-side-effect> = ^ [w]

<divergence-side-effect> = / [w | I]

<stepping> =
  <stepping-no-side-effects>
  | [<disambiguation>]
    (<step>[<transparency-side-effect>
           | <divergence-side-effect>])
  <step>

<wave-transparency-side-effect> =
  ^ [<piece-transparent-to-wave>]
```

```

<wave-stepping> =
  <stepping>
| [<disambiguation>]
  (<step> [<wave-transparency-side-effect>
            | <divergence-side-effect>])
<step>

<pawn-losing-promotion-tag> = P==
                                | <pawn>

<pawn-losing-tag> = P::
| <pawn-losing-promotion-tag>

<rook-losing-tag> = R[&&]

<disposable-figure-losing-tag> =
  <disposable-figure>
| <rook-losing-tag>

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

<capturing-side-effect> =
  ★ [<disposable-piece-losing-tag>]

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

<demoting-side-effect> =
  > [<disposable-figure-losing-tag>]
    <disambiguation>
| ><disposable-figure-losing-tag>
  [<disambiguation>]

```

```
<resurrecting-side-effect> =
  $[$]<disposable-piece>
  | $[$]W<field>
  | $[$]I<field>
  | $$$

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

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

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

<converting-side-effect> =
  %[<disposable-piece-losing-tag>]
  | %%

<capturing-step> =
  <step>[<capturing-side-effect>]

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

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

```
<starchild-resurrecting-ply> =
I<stepping><resurrecting-side-effect>

<king-castling-move> =
K<stepping> [<castling-side-effect>]

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

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

<pyramid-promotion-ply> =
A<stepping><promoting-side-effect>
| A<stepping>
  [<tagging-delayed-promotion-side-effect>]

<pyramid-converting-ply> =
A<stepping><converting-side-effect>

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

```

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

<terminal-ply> =
  <capturing-active-piece><stepping>
    [<capturing-side-effect>]
| <rook-losing-tag><stepping>
  [<capturing-side-effect>]
| <pawn-losing-tag><stepping>
  [<capturing-side-effect>]
| <pawn-losing-promotion-tag><stepping>
  [<en-passant-side-effect>]
| <pawn-losing-promotion-tag><stepping>
  [<capturing-side-effect>]
  <promoting-side-effect>
| <shaman-capturing-terminal-ply>

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

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

```

```

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

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

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

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

<cascading> =
  {<cascading-plies>} [~<terminating-ply>]
| [{<cascading-plies>} ~]<terminating-ply>

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

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

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

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

```

```

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

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

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

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

```

```

<pawn-sacrifice> =
S<stepping>~A<stepping>
  [* [<pawn-losing-tag>]];;;

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

<pawn-sacrifice-captures> =
S[<disambiguation>]
  {<step>[* [<pawn-losing-tag>]]}
  [<pawn-sacrifice-end>]
| S<stepping> [<pawn-sacrifice-end>]

<move-star> =
I<stepping> [<resurrecting-side-effect>]
  ~T<stepping-no-side-effects>

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

```

```

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

<status> = ?
  | [+]
  | [+] (=)
  | [+] (-)
  | #
  | ++
  | (=)
  | (-)

<compatibility-capture> =
  <classic-piece>[<disambiguation>] [x]
    <field>[<status>]
| <pawn>[<disambiguation>] [x]<field>
  <promoting-side-effect>[<status>]
| <file>[x]<field>[<status>] [_e.p.]

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

<move-monolith> =
  M<stepping-no-side-effects>
  [<demoting-side-effect>]

```

```
<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.



# Remarks

This chapter contains some suggestions to improve gameplay, chessboard designs.

## Well-defined game

Well-defined game is one where all information related to game is plainly visible on a board. Chess in its origin is very close to that goal, with the exceptions being ability of pieces to castle, rush, and notation for turn; later, tag for promotion is added to the mix. Pawn-sacrifice tag does not belong to this list, because it has to be used in the very same move in which it's obtained.

## Chips

Chip is device, similar in appearance to poker chip, which can be put underneath a piece to denote its status. For instance, yellow chip can be put under Pawn to denote its inherited ability to rush. When that Pawn is moved (or captured) its

chip is removed from chessboard.

Similarly, if Pawn is tagged for promotion, e.g. red chip is placed underneath it, which is removed from chessboard when that Pawn gets promoted, moved, captured, or converted.

For castling, nominally 3 chips has to be used, 2 for Rooks and 1 for King. It's enough if just Rooks have their chips, if King ever moves, both Rooks would lose their chips.

Chip for denoting turn is different, it is placed on an empty field in the same color to the player which turn is ongoing. This is meant more for readers to have indicated which player is to play, on a chessboard positions printed in books, magazines, etc.

In casual games coins or small paper clips could be used instead of chips.

## Chessboard

Small markings can be placed onto initial positions of 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, to speed-up finding positions.

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*No FPS and racing sim [is a real challenge]. That is for dummies. This will make players of the game into new super-geniuses. Challenge to the max[imum] ... how much combinations there are in that [last variant] with teleportation, unicorn, pyramid, winged horse [Pegasus] and wave. How much more challenging it is compared to classic [chess]. Just Croatian [Ties] doubled number of possible combinations ...*

**Slavko Štefanić** [via e-mail]