

## Chapter 22

### Boards based on hexagons

[In this chapter, every board cell away from the edge has a side in common with each of six neighbours. There are hence six natural directions of rook movement, and the hexagons are most often arranged so that these are straight forwards and backwards and 30 degrees either side of left and right. The hexagons can also be placed so as to give rook movement directly to left and right and 30 degrees either side of forwards and backwards, but games with the hexagons so aligned have a different character and they are given a section to themselves.

Chess on a board composed of hexagons is a relatively recent phenomenon. The first approaches to such games were possibly Croughton's Hexagonal Chess of 1853 and Jaques's Hexagonia of 1860, but in neither of these was the object checkmate. It was not until a half-century later that Ayres's chess-like game Mars appeared, followed by Wellisch's attempt to transfer orthochess - albeit without bishops - to a hex board as a three-handed game. Since then a number of hex games have been created, with Glinski's the best known and probably the most widely played. The hex board is now a popular medium for strategy games, particularly wargames, since it offers six instead of four directions of movement, thereby increasing piece mobility. Three cell colours are necessary in order to ensure that no two adjacent hexes be coloured the same, and it follows that any colour-restricted piece which is provided as an analogue to the orthochess bishop needs to be present in sets of three if the game is not to be unbalanced. Not every inventor appears to have realised this.

As will be seen, while all the boards in this chapter have been built up from hexagonal cells, there has been very little agreement between inventors concerning their overall shape and size. The smallest boards in this chapter have 43 cells, the largest 169, and there are seventeen other sizes in between. But the 91-cell board of Glinski's game has been used more often than any other, and Glinski's was the first game to command significant attention. The rules of Glinski's game are therefore given in full, those of other variants by reference to Glinski at least as regards the moves of the men (Glinski's treatment of stalemate has not been followed elsewhere).]

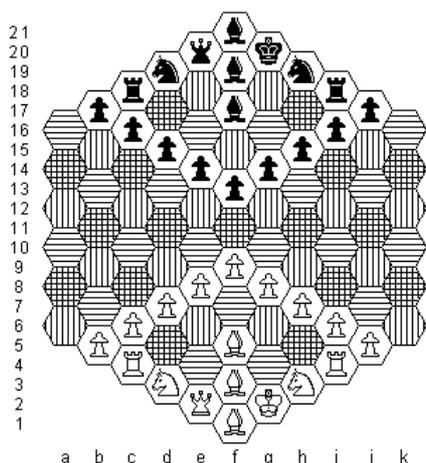
#### 22.1 Hexagonally symmetric boards with a forward rook move

[There have been almost as many notations for hex-based boards as there have been inventors, and in this book we shall adopt a standard 'count in twos' system irrespective of any notation that may be in use elsewhere. For boards with a forward rook move, we shall label the files a, b, c etc in the usual way, but the cells in a file will be numbered in steps of 2 so that cells with the same number are always at the same horizontal level.]

**Glinski's Hexagonal Chess** (Wladyslaw Glinski, 1936). Probably the most widely played of the hexagonal chess games, in part due to the inventor's life-long enthusiasm and promotional efforts. First launched in Britain (1949), the game enjoyed remarkable popularity in Eastern Europe where there were once reportedly over half-a-million players, mostly in Glinski's native Poland where 130,000 sets were once sold in the space of a few months, but also in Czechoslovakia, Hungary and Russia. The first British Cham-

pionship was held in 1976. Subsequently, a European Championship was inaugurated (the first title holder was Marek Mackowiak of Poland) and World Championship candidates tournaments were held in London, Moscow and Subotica (1987-8). At its height here was an International Hexagonal Chess Federation as well as several national organisations. The game appeared to go into decline on the death of its inventor.

The game is played on an hexagonal board of 91 cells as shown overleaf :



The usual men are employed, but there are an extra B and P on each side. For clarity, occupied squares are shown uncoloured, but on an actual board the cell colouring extends throughout.

The rook moves on the files and at 30 degrees to the horizontal (if the board were empty, Rc4 could move to c6/c8/.../c18 on the file, b5/a6 and d3/e2/f1 along its second line, d5/e6/.../k12 along its third). The bishop moves horizontally and at 30 degrees to the vertical (Bf5 to d5/b5 and h5/j5 horizontally, e8/d11/.../b17 and g2 in its second direction, g8/h11/.../j17 and e2 in its third); each bishop is restricted to cells of one colour, and the three between them cover the whole board. The queen moves as R+B, the king one step as Q (thus a midboard K has 12 possible moves and even a K in a corner has 5). The knight leaps the equivalent of one B-step then one R-step at 30 degrees, so Nd3 has 6 possible moves (to b7, c8, e8, f7, g4, or g2) and a midboard N has 12. The pawn advances one cell straight forward, captures obliquely forward (Wp9 moves to f11, captures to e10 or g10). Pawns promote on the opponent's back line. Opening pawn-two permitted, and if a pawn in its initial position makes a capture is made towards the centre it retains the two-step option since in effect it has not advanced. No castling.

The array has some interesting features. All the pieces can move initially so that development is rapid and tactical clashes early in the game are common. The Bf3 has two open lines, the Q one. Every pawn is

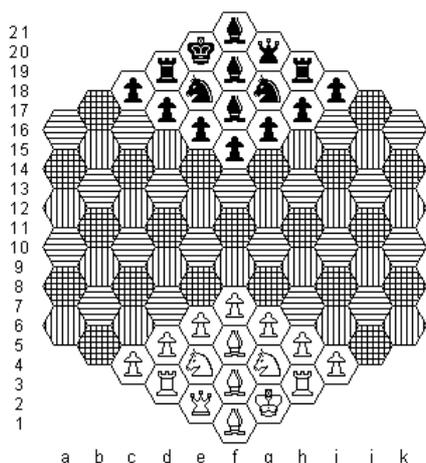
theoretically five steps from promotion and the first move can result in a pawn clash on the e- or g-files. There are a number of recognized openings. Knights are on the whole stronger than bishops. Fool's mate: 1 Qc8 Qc14 2 b7 b15 3 Bb5 e12 4 Qxf17.

In match play, stalemate earns three-quarters of a point for the player delivering it, quarter of a point for the player stalemated. In the unlikely ending K v K, a false step can lead to a stalemate in a board corner. The opposition in end-play is as important as in orthochess. In most endings K+P v K the stronger side wins; however the win is impossible in some positions. Suppose White Kf13, Pf15, Black Kf17; White to move can only draw: 1 Ke12 Kg14 2 Kd15 Kf17 etc. With a wing pawn, the same position wins. Suppose White Ka6, Pa8, Black Ka10; now 1 Kb5 Kb13 2 Kb7 Kb11 3 a10+ Ka14 4 Kc8 Ka12 5 Kc10 Kb15 6 Kb11 Ka16 7 Ka12 (Kc14 is stalemate!) Kc16 8 Ka14 etc. K + R wins easily but K + two minor pieces can only force a win in certain positions. John Jackson contends in *A Player's Guide to Table Games* that the game would be improved if the central pawns (three or five) were set back one cell in the starting position. Glinski's booklet *First Theories of Hexagonal Chess* provides a convenient introduction. [Text revised]

**Honeycomb Chess**, also known as **Hexabrain** and **Six-Way Brain Game** (Proprietary game, Douglas Reid, 1972). 91-cell hexagonal board as Glinski. Each side has 22 men: 1 x king; 2 x queen, castle; 6 x hopper; 11 x pawn. King moves to any adjacent hex; queen as Glinski's R; castle vertically as Glinski's R, laterally as Glinski's B (so can only move to alternate files); hopper one step as Glinski's B; pawn as Glinski. Promotion normal, object checkmate. Baseline (a6-f1-k6/a16-f21-k16) CHHHQKQHHC fronted by 11xP. As in many hex games, the pawns live in an unequal world; wing pawns can promote in three moves, the central pawn takes eight. (Author's rules leaflet, also manuscript notes presumably deriving from personal communication) [Text revised]

**McCooley and Honeycutt's Hexagonal Chess** (David McCooley and Richard Honeycutt, 1979). 91-cell hexagonal board as

Glinski; extra B but only 7 x P:



K, Q, R, B, N move as in Glinski. P moves one step forward as R, captures one step obliquely forward as B; pawns other than the centre pawn have a two-step option (e.p. permitted). The aim was to create a hex game as close to orthochess as possible. (Chess Variant Pages) [Text slightly revised]

**Hexchad** (Christiaan Freeling, 1980). The hexagonal version of Chad (see chapter 21). 127-cell hexagonal board, a7/a9/.../a19 out to g1/g3/.../g25 and back to m7/m9/.../m19; kings on g7/g19, eight rooks on e7-g9-i7-g5-e7 and e19-g21 etc, walls on d8-g11-j8-j6-g3-d6-d8 and d20-g23 etc. Rules are identical to those of Chad with one addition: kings may not face each other on the same file if the hexes between them are unoccupied. This has considerable implications for the attacker who can use his king to protect a queen in the opponent's castle or cut off flight hexes. The fundamental difference between Hexchad and Chad is that in Hexchad the forces face each other directly down files so that practically the whole front is restricted to forward movement. Because of the tightness of the position, any mistake is likely to be grievous. There are a number of opening traps. Stalemate is unknown. (Manuscript notes presumably deriving from personal communication)

**King's Colour** (Freeling, 1976) is a Chad system but without promotion to queen. Rooks and bishops are discs showing R on one side and B on the other. Pieces on the same colour

cell as the friendly K are Bs, otherwise Rs (so in the initial array, the men on e7/i7 and e19/i19 show B, the remaining men show R). Pieces are reversed as necessary as part of a move; a K moving to escape check for example can cause the attacker to be attacked through piece reversal. The K is confined to the castle but, as in Chad, may also move like a N. The Ks may not face each other uninterrupted on B or R lines. (Personal communication)

**Sjakti [Hex]** (Christiaan Freeling, 1982) is the hex version of Sjakti (see chapter 21). 61-cell hexagonal board, a5/a7/.../a13 out to e1/e3/.../e17 and back to i5/i7/.../i13; pieces initially set at e5/e13 (kings) and c5/c13, f5/f13 (men).

**Loonybird Chess [Hex]** (Christiaan Freeling, 1983), played on a 61-cell hexagonal board, is a hex version of Loonybird or Dragon Chess (chapter 14). Baseline as before on b4-e1-h4, 9xP on a5-c7-e5-g7-i5. **Caissa [Hex]** (Freeling, 1982) is a hex version of Caissa (chapter 21). [A note in the Addenda to the first edition gives an illustration of 'the' array in the latter case, but this would seem to conflict with the statement that the first player arranges the initial position and the second player chooses sides. There are also references to hex versions of **Bird Chess** (chapter 13) and **Dragonfly** (chapter 17) as being played on a regular 61-cell board with two extra pawns a side, but there is no further detail in David's Encyclopedia files.]

**Rose Chess** (Peter Krystufek, 1986). Played on the points of a 61-cell hexagonal lattice. Usual men, array (a5-e1-i5/a13-e17-i13 and inwards, centred) PRBQNKBRP, PPPNPPP, d4/f4/d14/f14 are Rose points. Pawns on rose points have two-step option (e.p. possible); other pawns one step only. Pawns promote to previously captured pieces. Rooks and queens have identical moves (any of six directions) but rooks cannot alight on rose points and cannot check if on point immediately in front of or behind rose point. The K and Q 'castle' at any time by exchanging places, even if K in check, but not if K on rose point. Claimed to be an improvement on 'the Arabic game'. (*100 mal Kniffel Schach*)

**Troy** (members of the Fanaat games club, Netherlands, 1988). A game developed for a special occasion: the marriage of Anneke Treep and Lukas Schoonhoven, prominent members of Fanaat. A set, designed and made by the members, was presented to the newlyweds. The game is based on the Trojan war and is played on a regular hexagon of 91 cells. One side are the Trojans, the other the Greeks. Each side has 19 pieces made up of Ares/Pallas Athene (moves as K), 2 Heroes (move as Q), Hector/Achilles (moves as Q but cannot be taken by a Greek/Trojan), 3 Amazons/Spartans (two cells in any direction, leaping adjacent cell whether occupied or not), and 12 Trojans/Greeks (move one cell straight ahead or two cells diagonally ahead; capture one cell diagonally ahead). Aim is to checkmate Ares/Athene. Capture by displacement. Trojans/Greeks promote at end of board to any piece already lost. Ares and Athene on f3 and f19, Hector and Achilles on f5 and f17, Heroes on e4/g4 and e18/g18, Amazons and Spartans on e6/f7/g6 and e16/f15/g16, Trojans and Greeks on the 12 surrounding cells. (Inventor's leaflet)

**New Chess [Radovic]** (Goran Radovic, 2002). Regular 91-cell hex board; 22 pieces a side: 1 x king, queen; 3 x knight, spy; 2 x rook, bishop; 10 x pawn. Asymmetrical layout with pawns initially doubled on the c- and h-files. Spies move one hex in any of up to 12 directions (to adjacent hex or through hex corner to cell of same colour). There are only two bishops on each side, and they stand on like-hexes and so only cover a third of the board. Subject of an ill-informed article in *The Scotsman* (1 October 2002). [The array shown in the article is as Glinski but with spies on f1/f9/e6 facing f21/f13/g16, extra knights on g6 and e16, extra pawns on d5/h5 and d17/h17, bishops on e4/g4 and e18/g18, and f3/5/7/15/17/19 empty, but it seems odd to have the spies and knights mirrored across the centre while the K and Q are mirrored on the file and the possibility of error cannot be excluded. The spies appear to be represented by men holding daggers, which is picturesque but curious; the last thing a spy normally wants to do is to draw attention to himself by committing gratuitous murders.]

**Asteryx Chess** (David Jagger, 2003). 43-cell board, regular 37-cell hexagon with a one-cell extension at each corner, thus a5/a13, b6/.../b12, c5/.../c13, d4/.../d14, e1/.../e17, f4/.../f14, and so on to i5/i13. Usual men. Array for White, Ke1, Qe3, Bd4/f4, Nc5/g5, Ra5/i5, 8xP on rest of ranks 5-7. K one step in any direction; R, N as Glinski; P one or two steps directly or obliquely forward, may change direction in mid-move; B 'snakes' along path of two colours, say d4-d6-e7-e9-f10-f12-g13 or d4-e5-e7-f8-f10-g11-g13; Q as R+B. Pawns promote on opponent's three extension points (for White, a13/e17/i13). Custodian capture: occupy two cells of the same colour bracketing the target man, unless no cell on the far side exists in which case occupying one cell is sufficient. Multiple captures allowed by agreement. Win by capturing or baring the K, or by stalemate. (Chess Variant Pages) [Text largely editorial]

**Walnut Chess** (John Beasley, 2003). 43-cell hexagonal board (a7, b4/.../b10, c1/.../c13, d2/.../d12, e1/.../e13, and back to i7). Each player has king, 1 x light cavalry, 2 x heavy cavalry, 2 x gun, 12 x infantry. Setup at will; all men apart from K are initially covered. K, covered men, and empty covers move one cell in any direction. When uncovered, light cavalryman can move up to three cells in a straight line, heavy cavalryman one or two cells changing direction if wished, infantryman and gun one cell only, but up to three infantrymen (covered or not) can occupy the same cell and be moved together. Up to six moves per turn, and a player can then make up to six 'attacks': he indicates a target cell and one or more uncovered attacking men on adjacent cells, demands that any defender occupying the cell uncover also, and the man or men of the weaker side are removed (K=L=I=1, H=2, G=0). If equality, both sides stay. He may also fire either or both his guns at units not more than three cells away in any direction (straight or oblique), but a player using a gun to knock out a covered man is not told what he has hit. A gun may not move and fire in the same turn. There is a preliminary 'you cut, I'll choose' handicap stage: one player specifies a handicap to be suffered by the player moving first, the other decides whether to take first move in the face of it.

(*Variants Chess* 47, also author's leaflets 'Walnut Chess' giving the rules and a specimen game)

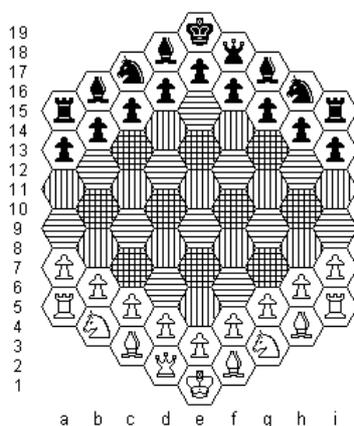
[In *Variants Chess* 48, David briefly compared this game with 19th century war games, and pointed out various similarities. Since he went on to say that he had explored 'dozens' of these games when researching the original *Encyclopedia* and had rejected them all as too remote from chess, I was a little surprised to find an embryonic entry for the game in his text for the new edition. But it was there, and I have expanded it in the same way that I have expanded similarly embryonic entries for other games. The idea behind the

name was that players could use matchsticks or counters for the men, and cover them with walnut shells. A probable improvement would be to limit the guns to six shots each.]

**Hexofen** (Valery Trubitsyn, 2004). Regular 91-cell hex board, 21 men a side: White Kf1, Qg2, Rd3/h3, Be2/f3/i4, Nc4/e4/g4, 11xP on ranks 5/6, Black mirrors diametrically (Qe20). Pieces as Glinski; pawns promote on reaching any rank beyond the opponent's initial pawn line (nothing said about the difficulty this creates for the side pawns). A curiously designed game. (Inventor's rules document) [Text revised]

## 22.2 Other hexagonal boards with a forward rook move

**Shafran's Hexagonal Chess** (I. G. Shafran, 1953). 70-cell hexagonal board with nine files, their lengths running from 6 to 10 :



Extra B and P on each side. To compensate for the varying distance pawns must travel to promotion, initially the d, e, f pawns can move up to three spaces (e.p. possible), the b, c, g, h pawns up to two spaces, and the a and i pawns one space only. Pawns capture by one-step B move, not as Glinski. Castling permitted: K moves three hexes towards R, thus after 0-0, White position is Kh4/Rg3, and after 0-0-0, Kb4/Rc3. Other moves as Glinski. A brief game: 1 Nc9 Nf12 2 Qe5 Nd12?? 3 Nd14 mate. Notice that the queens do not face each other and that all the bishops can move in the initial position. (*Nauka i Zhizn*, March 1979)

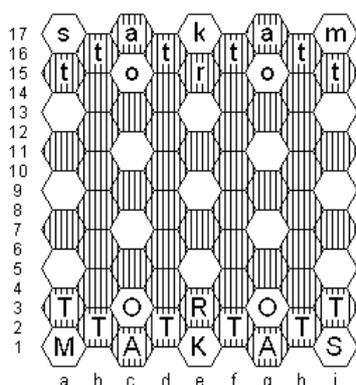
**Chex [Knizia]** (Reiner Knizia, 1994). 44-cell hex board on seven files, a4/.../a12 out to d1/.../d15 and back to g4/.../g12; each side has 1 x K, 2 x R, B, N, 7 x P; baseline BRNKNRB. K to an adjacent cell only; R as Glinski; B as R but not vertically; N to any cell not more than two away in any direction direct or oblique, may leap (thus, if centrally placed, attacking a total of 18 cells); P as Glinski but no e.p. permitted. No castling. (Author's rules pamphlet)

**Boar Chess** (Ivan Derzhanski, 2000). 70-cell board as for Shafran's game; men are 1 x Boar (royal piece), 2 x Bull, 3 x Horse, Ram, 4 x Dog, 5 x Cock. Complicated rules governing movement. The game is won when the opposing boar is captured, stalemated, or pushed out of its sty (a 7-cell hexagon), or when a cock moves to the hex originally occupied by the opposing boar. (Chess Variant Pages) [Text editorial]

**Hexes** (Proprietary game, Mike Layfield, 2002). 54-cell board in the form of a hexagon with sides 8/4/3, thus a3/.../a17, b2/.../b18, c1/.../c19, then d2/.../d20 and back to f4/.../f18; array (c1/d20, b2-d2/e19-c19 and inwards) B, BK, RBQ, NNR, PPP, PPP. Pieces as Glinski. Pawns move one R-step forward or one B-step obliquely forward; capture one R-step obliquely forward; two-step option straight forward for unmoved P, e.p. permitted. (Chess Variant Pages)

### 22.3 Rectangular and diamond-shaped boards with a forward rook move

**Mars** (Proprietary game, F. H. Ayres Ltd; M. van Leeuwen, 1910). Russian edition, Moscow 1911. Inspired by scientific talk of the possibility of intelligent life on Mars, the inventor decided to create a game of skill in which Earth and Mars are seeking to make a 'full observation' of each other. 77-cell rectangular board with 9 files. White is Earth, Black is Mars. Each side has 14 men made up of 1 king piece (Earth or Mars, shown as 'K' and 'k' in the diagram below), 1 Sun, 1 Moon, 2 Astronomers, 2 Observatories, 1 Radium Tower, and 6 Telescopes.



Alternate cells on files a, c etc are light, remaining 54 cells are dark. Earth and Mars move to any adjacent cell, regardless of colour; Moon any direction over any distance, regardless of colour (the move to be adopted later by Glinski's R); Sun as Moon but on light cells only; Astronomer ditto but on dark cells only; Radium Tower as Astronomer, but obliquely only; Observatory on light cells only, one step only but in any direction and may leap; Telescope one cell (either colour) straight forward or obliquely forward only. Telescope promotes on last cell of files a, c, g and j to the piece on that file in the starting position providing one has previously been captured. If not, it must wait until one is available.

White starts. Capture is by displacement. Object is to place opponent's king piece (Earth/Mars) under 'complete observation' (checkmate) and then capture it next move. A king piece under attack is said to be 'in observation', and the player giving check must

say 'Take care'. (Notes based on Bodleian Library 38491.f.15(12), also photocopy of pages 4-7 of Saltikov-Shchedrin Library 18.294.5.123)

**Baskerville's Hexagonal Chess** (H. D. Baskerville, 1929). This game was born in the period when Capablanca's call for reform was being widely heeded. In his booklet *Hexagonal Chess*, the inventor remarks controversially that '(ortho)chess interests a far smaller circle to-day than it did even one generation ago', adding '...so far it does not seem to have occurred to anyone that a more radical reformation can be effected by constructing a new board composed of geometrical figures other than squares'. 83-cell rectangular board with 11 files, a1/.../a15, b2/.../b14, c1/.../c15 across to k1/.../k15; normal men; White RBQKBR on rank 1, NP-PN on rank 2 (cell f2 empty), 6xP on rank 3, Black similarly except Ke15 and Qg15. A tinge of patriotism is detected in the cell colours: red, white and blue. All men move as in Glinski's game except that the K is limited to adjacent cells (one space as a R) and there is no e.p. The game is flawed through Baskerville's determination to keep the game as close to ortho)chess as possible: bishops on each side stand on contrasting colour complexes so can never attack one another whilst the third set of cells (coloured red and including the centre) is immune from penetration by a B of either side.

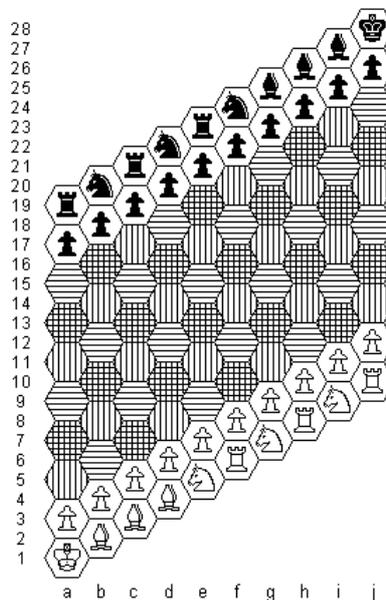
**Galachess** (Proprietary game, Mathew B. Harrer Co; Mathew Harrer, 1980). A maverick amongst hexagonal chess games occasioned by the inventor's geometrical perception of the (un)coloured board, described as a 'galaxy with space corridors'. 67-cell rectangular board with 9 files, a2/.../a14, b1/.../b15, across to i2/.../i14; NQQN on rank 1, RBKBR rank 2, 9xP ranks 3/4, Black similarly. R moves vertically as Glinski R, laterally as Glinski B; B moves obliquely (but not vertically) along cell lines. This means that the rooks are confined to alternate files, whereas the bishops can reach any cell. Q moves as R+B, K to adjacent hexes only. In castling, the K moves to a B hex and the nearer R to a hex on the

same side. This gives a castled R access to the other set of files from which it cannot then escape, so, for example, a player who castles can never double rooks. The knight's leap is no less remarkable: the N moves to any of the five cells in its orbit. Since however the cell it occupies can be part of up to six orbits, the N can normally move up to two hexes in any direction, and being unimpeded is probably more powerful than the queen. The P alone is orthodox Glinski. (Information presumably taken from a set in David's game collection)

**Impact** (Proprietary game, Anton Obermaier, 1993). 100-cell square board with 10 files. Each side has 20 men (chess equivalents in parentheses) 1 x Commander (K), General (Q); 2 x Chief (augmented B), Colonel (N), Major (B), Lieutenant (R); 10x Pioneer (P). Promotion to captured piece; no P-2 or castling. (*Fairplay* 26)

**Schach 2000** (Proprietary game, Schachverlag Hoppe; Bodo Hoppe, 1994). 64-cell square board with 8 files. Orthochess array except Black K and Q reversed; moves of men as Glinski. The QBs are on hexes of the same colour, the KBs on the other two colours, hence an imbalance in the deployment. (Information presumably taken from a set in David's game collection)

**Hornyak's Hexagonal Chess** (Anthony Hornyak, 1990s). 100-cell diamond-shaped board with 10 files; 1 x K, 3 x R, B, N, 10 x P, no queens initially but promotion can include Q.

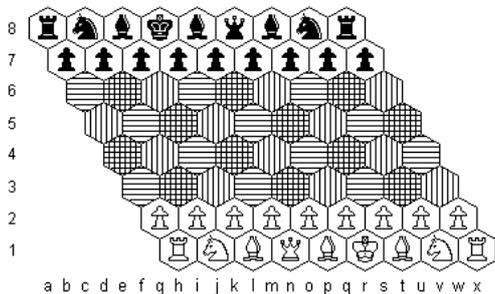


R, B, N, Q as Glinski, K to adjacent hexes only. Ps up to 3 cells initially, and if moving only one preserve a 2-step option at their next turn; e.p. permitted. No castling. (Personal communication) [Text slightly revised]

**22.4 Boards with a lateral rook move**

[With these boards, it is the ranks along which we step in twos, a1, c1, e1 etc. The underlying geometry is the same and the pieces can continue to be described with reference to Glinski, but the pawns behave quite differently.]

**De Vasa's Hexagonal Chess** (Helge E. de Vasa, 1953). 72-cell diamond-shaped board, extra B and P each side:

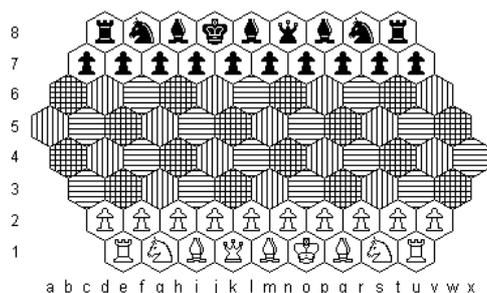


An attempt to retain as near as possible the orthochess array. All pieces move as in the Glinski game. Pawns advance one cell at a time as a R (two alternatives in the array, except for WPw2 and BPb7) with initial two-step option. Pawns capture ahead as a bishop (normally three alternatives), greatly enhancing their value vis-a-vis the pieces.

A revised form of the game, probably in response to criticism of the dominant pawns, has the board extended by an extra nine-cell rank with the array pawns on the 3rd and 7th ranks respectively. The pawn capture is limited to the two hexes on either side a

bishop's step in advance. Castling permitted: K moves three (0-0-0) or two (0-0) hexes towards the R, the R moving adjacent to K on inside. (*Nouveaux Jeux d'Echecs Non-orthodoxes*, also a note in French annotated 'ex Martin Gardner' but not otherwise provenanced)

**Brusky's Hexagonal Chess** (Yakov Brusky, 1966). 84-cell board in the form of a hexagon with sides 9/5/4, extra B+2P:

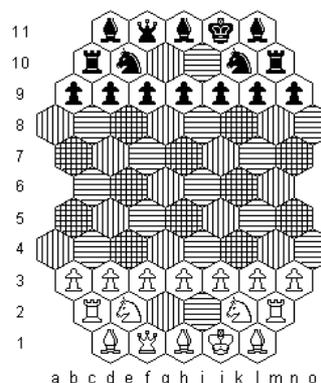


Pieces move as Glinski. Pawns advance one cell at a time as a R with initial two-step option (e.p. possible), but a pawn blocked by an opposing man on one of its two lines of advance cannot move on the other either (so an enemy man on e3 would prevent not just d2-e3 but d2-c3 as well). Pawns capture obliquely as bishops, one step only; unmoved pawns can capture straight ahead also (WPF2 can capture to e3/i3/f5, WPG3 to d4/j4 only). When castling, WK goes to s1 or i1.

The originator gives some notes on elementary endings, which of course are also valid for other games in which the pieces have Glinski's moves. K+R win easily against bare K, as do two knights. K+B+N v K is more difficult and can only be achieved by driving the K to a corner hex. The colour of the corner hex, or that of the two hexes on either side of it, must be of the same colour as that on which the B stands. Mate with two bishops can only be achieved if the pieces are on the same two colours as those of the corner hex and the two hexes adjacent to it on either side. (Personal communication) [Text slightly revised. It would appear that the conditions for mate with K+B+N and K+2B can always be met on Brusky's board, since the six corners embrace all possible colour combinations, but I have not verified that there is a guaranteed driving

procedure. The same is not true of Glinski's board, nor of any hexagonal board where two adjacent sides have the same length.]

**Hyperchess [Groman]** (Proprietary game, Hypergames Co; William Groman, early 1970s). 72-cell board on 11 ranks, extra B but only 7xP:

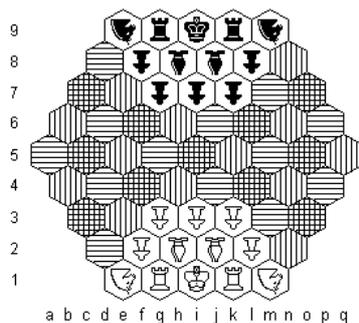


Pieces as Glinski. Pawns are unusually strong: they move straight forward one cell (i.e., to a cell of the colour on which they stand), they also move or capture one cell diagonally forwards, and in addition can capture (but not move) one cell sideways; thus in the array pawns defend one another. Promotion is on the furthest row. No e.p. or castling. Jackson describes a pawn line in Hyperchess as the Great Wall of China - a formidable barrier. (Sackson, *A Gamut of Games*, also Jackson, *A Player's Guide to Table Games*)

A variant, **Hyperchess 'A'**, was suggested by Ernest Groman (the originator's son) and Daniel Jacobson in 1975. The only difference from the parent game is in the move of the pawn, modified possibly in response to player criticism, and in the inclusion of the e.p. move. The pawns remain a formidable force. A pawn moves one cell at a time forward along a file to the left or right with a two-cell option on the first move. It can capture one hex straight ahead or diagonally forward to the left or right (i.e., to a cell of the same colour as that on which it stands). There are two e.p. positions, one familiar (the pawn crosses a cell under attack from an opposing pawn) and the other remarkable. This latter occurs when an unmoved pawn faces an opponent's pawn that has advanced to the 7th rank, the two pawns

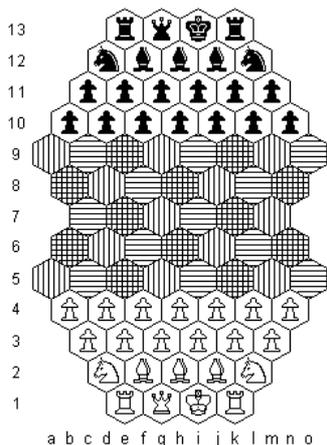
thus under mutual attack. If now the unmoved pawn advances one hex there is no capture, but if it exercises its option of moving two it can be taken 'e.p.' even though it does not cross an attacked hex. More remarkable still, it is captured on the cell that it vacated. (Personal communication)

**Ludus Chessunculus** (John Cleaveland, 1973). 61-cell hexagonal board; men are King, 2 x Axial (R), 1-Hopper (inverted B), 2-Hopper (inverted N), 5 x Block (inverted P):



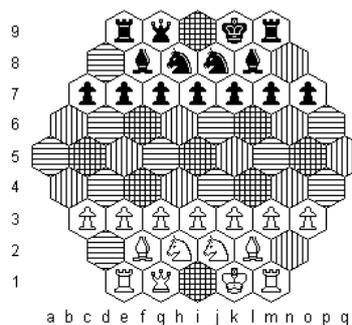
King moves one cell in any direction. Axial as Glinski R. 1-hopper moves one step as Glinski B. 2-hopper moves twice as 1-hopper; may change direction but not to return to starting point; intervening cell must be vacant. Blocks move one hex to right, left, or diagonally ahead; can only capture ahead; no promotion. Aim checkmate. (*Ye Faerie Chessman*)

**Hexachess [Moesser]** (David Moeser, 1970s). 80-cell board on 13 ranks, usual pieces with 3xB and 13xP:



Pieces as Glinski. Pawns can move or capture one R-step obliquely forward, move one B-step directly forward (WPb4 can move to a5/c5/b6 and capture on a5/c5). Promotion on the opponent's first rank, an unlikely achievement. No castling. (Author's rules pamphlet) [Text slightly revised]

**Hexchess [Paletta]** (Tony Paletta, 1980). 61-cell hexagonal board, normal men but 7xP only:



K to an adjacent hex only; N as Glinski; B as Glinski's K; R as Glinski but not to an adjacent cell; Q as R+B; P one step obliquely forward (WPI3 to h4 or j4), capturing with its normal move. Promotion normal. No P-2 or castling. (*Chess Spectrum Newsletter*) [Text slightly revised]

**Chessnik** (Proprietary game, Drift Inc, 1985). 76-cell laterally symmetric board on 9 ranks of 8 and 9 hexes alternately; array (b1-p1/p9-b9 and inwards) NB-QK-BN, R-PP-PP-R, PP-PP-PP. Little information on moves of pieces. (Advertisement in *Chess Life*, January 1986)

**Credo Chess**, also known as **Round Chess [St Alban's]** (Proprietary game, Friends of St. Alban's Abbey). Developed (1976-86) as part of the celebration of 500 years of printing in the Abbeys of Westminster, St Albans and Oxford which began with Caxton's *Game and Playe of the Chesse* (1474). The game is one of many adapted to the Credo board, the board itself having undergone change from 163 cells (1976) through 109 to 91 (1986). King one cell in any direction, other pieces as Glinski. P moves one step as B, captures on the square laterally adjacent to that to which it could have moved; can move two steps at any time

provided that it could not have been captured on the intervening square; promotes when further forward movement is impossible. Array (f1-p1/f11-p11 and inwards, centred) BRQKRB, N-B-N, 6xP, P. Championships have been held and booklets on the game published. (Proprietor's rules booklet)

**Cr-Isis** (Michael Taylor, 1980). 163-cell Credo board (169-cell hexagon less the six corner cells). Each side has 18 men (chess equivalents in brackets): 1 x King, Commander (Q), Negotiator, Rocket, 2 x Aircraft, Submarine (N), 3 x battleship (B), 7 x Marine (P). A negotiator can move to any empty square. It cannot capture or be captured, and can move only six times in a game. A rocket can be fired once to any square other than that occupied by a king, removing the occupant (either colour) and itself from the board. Aircraft must have an empty adjacent square to 'take off'. They move and capture as rooks, but once airborne can land on any square on the rank or file. Marines, in addition to behaving as pawns, may commit hari-kiri, together with the occupant, on the cell immediately ahead. Array (i1-s1 and inwards, centred) apparently BACKAB, SRBNS, 7xM, M, but while the kings are shown on o1/m15, the rockets are on l2/l14. (Proprietor's rules booklet)

**Polka Chess** (Proprietary game, Friends of St Alban's Abbey, 1989). Board 9x11, circular cells in a regular three-colour pattern, central

cell marked with a rosette. Ranks are staggered alternately to right and left. The board design is said to symbolise, inter alia, roses and crowns of the martyrs and reconciliation. The array is unusual: White K11, Qj1, Rh1/n1, Bf1/k2/p1, Ng2/o2, 8xP on d3-r3, Black opposite as usual. Play as for Credo Chess. (Proprietor's rules booklet) [Text revised throughout]

**Hexanova** (George Jelliss, 1995). 127-cell hexagonal board; usual pieces with 3xB and 15xP; array (g1-s1/g13-s13 and inwards) NBQBKBN, RPPPPPPR, 9xP, but Black K and Q can be interchanged if desired. Pieces as Glinski. Pawn moves one step forward as B (initial two-step permitted), captures one step obliquely forward as R. Various options for promotion: on last rank only (in which case the pawns which start on the second rank must make at least one capture in order to promote), or on any cell from which no move directly forward is possible, or to any piece on the last rank but only to R/B/N on any other cell from which no forward move is possible. Castling, if desired, by moving the K two cells towards the rook and placing the rook on the cell jumped over; alternatively, in place of castling, the K may be allowed a three-cell 'escape' move along the back rank but not out of or through check. This may be done even if the king has previously moved. (*Variant Chess* 18)

## 22.5 Other boards based on hexagons

**Strozewski's Hexagonal Chess** (Casimir Strozewski, 1976). 81-cell board in which the hexes are elongated and tilted so that the directions of rook movement are N-S, E-W, and NE-SW. The result has some of the properties of a 9x9 square board and some of the properties of a hex board. Array as in de Vasa's game, with Ks and Qs facing each other. K and N move as if the hexes were squares and the game was orthochess, eight directions of movement in each case; B, R, Q as Glinski; moves of P not recorded. (Copy of U. S. Patent 4,045,030 of 30 August 1977, possibly incomplete) [Text slightly revised. I don't why P cannot be treated like K and N

and given its ordinary square-board moves.]

