

# **Ant chess**

Ant chess is a novel chess variant. Like many other chess variants, two armies are confronted on the squares of a game board, and there is a master piece. In the ant chess game, the armies are composed of ants and various small mercenary creatures, the squares are hexagonal, and the master piece is the ant queen.

#### e Goal

There are two ways to win the game: either checkmate the queen of the opponent, or put one's own queen unthreatened on the board's central hexagon, where she will found her anthill.

#### e Game board

As is suitable for insects, ant chess is played on an hexagonal board with hexagonal squares. Thus, there are three axes and six possible directions, by contrast with two axes and four (or eight counting diagonals) directions for a squared board. This peculiar geometry allows new types of moves. It makes also three-player games possible.

#### e Game start

The black ants are engaged in a merciless war against the red ants. At the beginning of the game, each army comprises one queen, nine warrior ants, one beetle, two ladybirds, two grasshoppers, and two worms. The queens take initially each an opposite corner of the game board, surrounded by their armies as illustrated in Figure 1.

The black ants do the first move, and the players play in turn. There is a possibility to pass the turn if moving a piece is not possible or not wished.

Except for the worm which will be described later, when a piece moves to the same hexagon as an adversary piece, the latter one is dismantled, which means that it is permanently removed from the game.

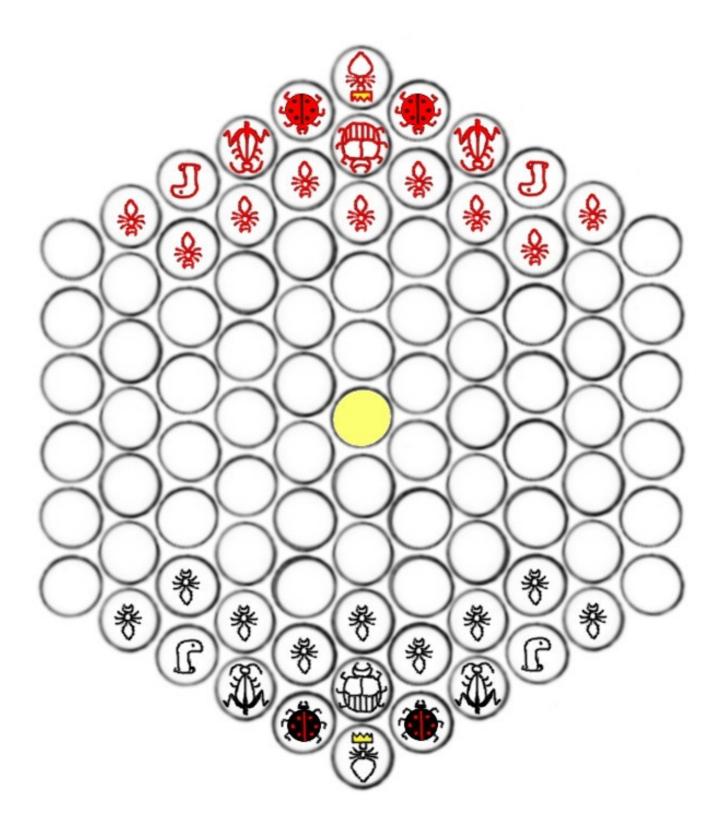


Figure 1: Initial disposition of the ant armies.

### e The queen

The ant queen is the master piece of the game which must be protected at any price and possibly will be brought safe to the central hexagon before the enemy's queen. She moves one hexagon at a time in any direction. If one threatens to dismantle the other's queen, one announces « check ». If there are other choices, the queen cannot move to or stay on an hexagon where she is in check. If a player is unable to get the queen out of check, checkmate results and the game is over.

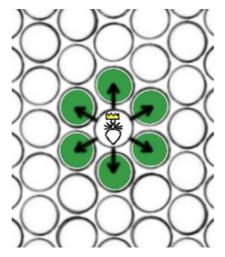


Figure 2: Movement of the queen.

### e The warrior

The ant warrior moves one hexagon at a time to one of the three hexagons in front of it. If a warrior reaches the opposite side of the game board, it tastes royal jelly and metamorphoses into a superant! The superant moves one or two hexagons in any direction. It cannot jump over another piece.

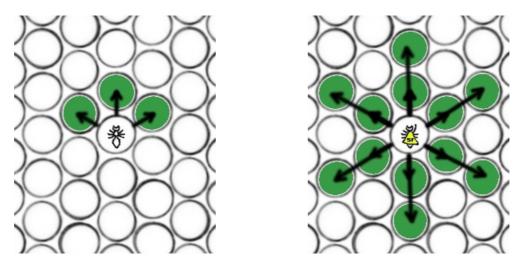


Figure 3 : Movement of the warrior and movement of the superant.

### e The beetle

Probably thanks to its armoured shell and its strong mandibles, the beetle is a formidable fighter. It moves in a straight line, of as many hexagons as it wants and in any direction, as long as the way is free.

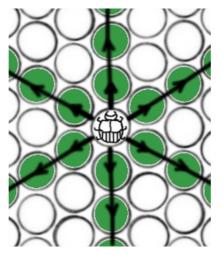


Figure 4 : Movement of the beetle.

## e The grasshopper

The grasshopper moves always by leaps, reaching one of the twelve hexagons which are not immediately adjacent to its starting hexagon. It can jump over other pieces.

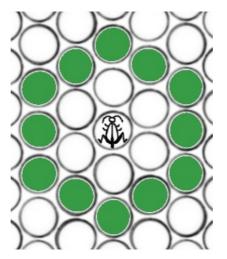
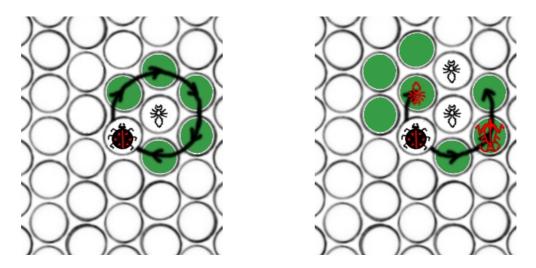


Figure 5 : Movement of the grasshopper.

#### e The ladybird

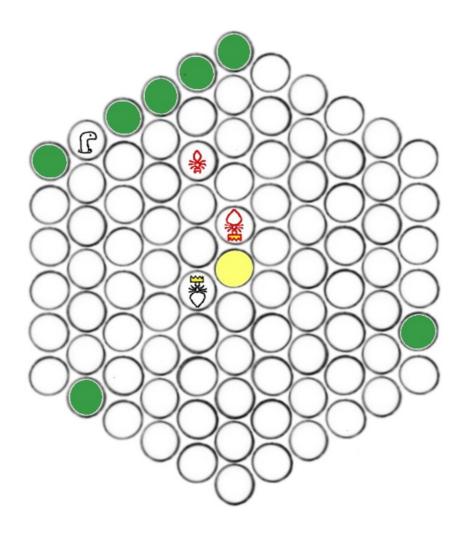
The ladybird moves by small arc of a circle, using another piece (friend or enemy) as a pivot axis. Thus, it depends on the vicinity of others in order to be able to move. Within the same move, the ladybird can only turn in one direction. It stops where it wants in the arc of a circle, but another friendly piece standing on its way blocks it. All enemies standing on its way, however, are savagely dismantled.



**Figure 6 :** Movement of the ladybird. On the right, a black warrior blocks the ladybird in its trajectory: it must chose a direction and thus cannot dismantle at once the red warrior and the red grasshopper. If the way was free, the ladybird could dismantle both in the same move and, as on the left, stop anywhere in the circle.

#### e The worm

The worm is without doubt the funniest piece of the ant chess game. It moves underground and, fearing open terrain, can only emerge on the sides of the board. Thus, it can move from one side to the other or along the same side, always in a straight line. If a piece, friend or enemy, already stands on the targeted hexagon, the worm cannot perform the move. It can pass under as many friendly pieces as it wants, but two or more enemy pieces standing on its trajectory block its move. However, if only one enemy piece stands in the trajectory, it will be savagely dismantled ! Be wary of the worm, who often launches an attack where one would least expect it, especially at the end of the game when its movements are made easier.



**Figure 7 :** Movement of the worm. In this particular case, the red queen is in check since she stands on one of the worm's possible trajectories. To get out of danger, the queen could step back, but then the game is over since the black queen reaches the central hexagon on the next turn. A better strategy is to put the red warrior on the worm's trajectory: then, two red pieces stand on the way, which prevents the worm from doing that move.

### e Three players

In three-player game mode, the rules are the same and the initial disposition is similar: each queen takes one corner of the game board, as illustrated in Figure 8. The players play in turn in the order black, red, green. The winner is the first one to put the queen unthreatened on the central hexagon, or the one remaining while the other queens have been dismantled. The first player who loses the queen cannot win anymore, but can play the remaining pieces to make the life of the other players more difficult.

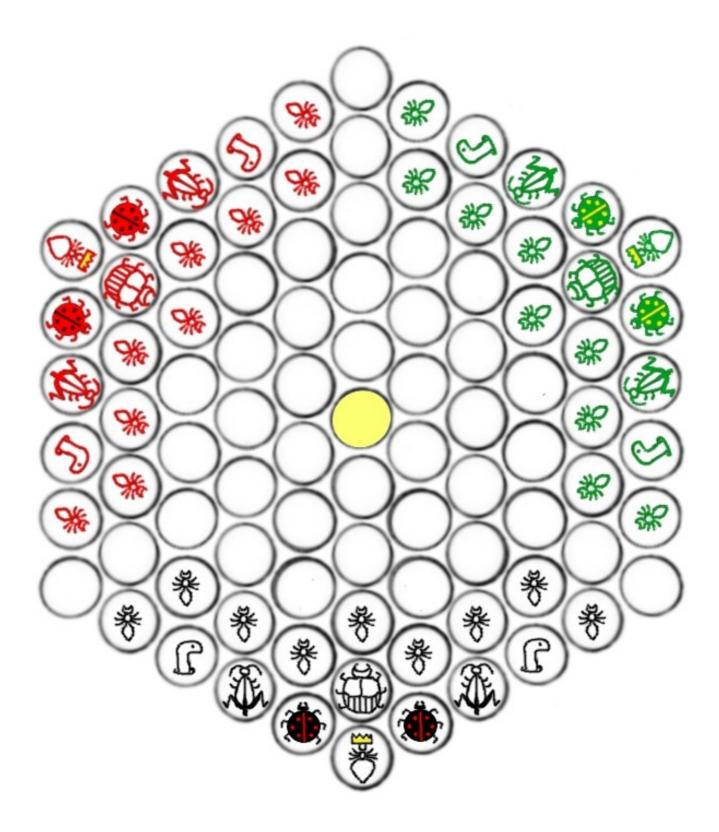


Figure 8 : Initial disposition of the ant armies in three-player game mode.