

Xats: Annotated Sample Game

This short note shows an annotated two-player game of Xats, to demonstrate some of the basic tactics and strategies involved. The rules of Xats are described in the article ‘Eco-Friendly Game Design’ [1]. White moves first.

It is usually a good strategy to keep at least one piece of each cardinality in hand – in order to maximise movement options – and to prevent the opponent from doing so. Pieces with more spikes allow players to ‘catch up’ in a single move and pieces with fewer spikes allow players to ‘fine tune’ their spike sum.

White opens the game with the mid-strength 4-spike piece **b** to create the first stack 1 (shown as 1 in the figure). Blue adds piece **h** to this stack, which is the only 3-spike piece that matches **b**.

1. j1 2. h1

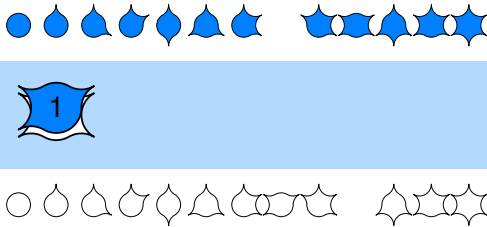


Figure 1. Position after move 2.

White closes stack 1 with 0-spike piece **a**, then Blue mimics White’s opening to start a new stack 2 with piece **j**.

3. a1 4. j2

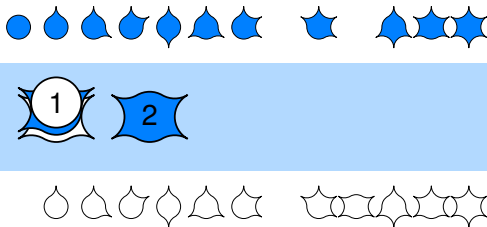


Figure 2. Position after move 4.

White plays **e2** to get rid of their weak **e** piece, which has few placement options (see

the dependency graph in Figure ??). Blue can only place **a** or **b** now, and chooses piece **a** to close stack 2.

5. e2 6. a2

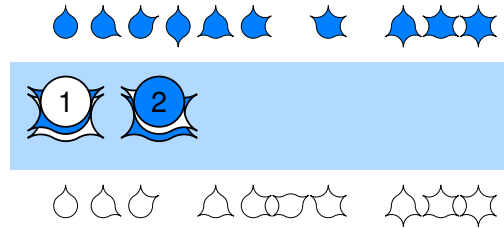


Figure 3. Position after move 6.

White starts stack 3, and Blue replies...

7. f3 8. c3

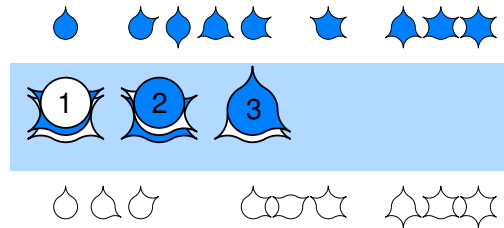


Figure 4. Position after move 8.

White’s only placement is **b3**, leaving Blue free to start stack 4 with piece **i**.

9. b3 10. i4

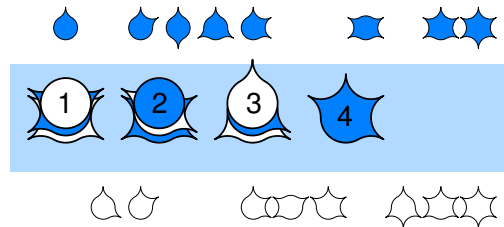


Figure 5. Position after move 10.

White plays **d4** to give Blue only one possible placement at **b4**. However, this would let White win next turn with **l5**! Blue must therefore destroy a stack, and chooses to burn piece **g** to destroy stack 3. The stack pieces are returned to their owners.

11. d4 12. gX3

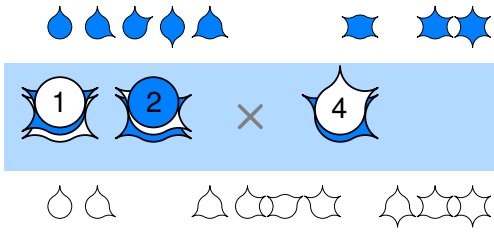


Figure 6. Position after move 12.

White's only placement is b4, threatens m5 next turn to win the game. Blue starts a new stack with f5 to keep the game alive.

13. b4 14. f5

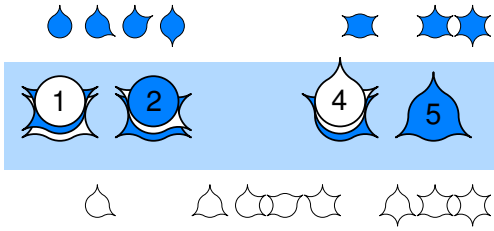


Figure 7. Position after move 14.

White then plays c5 to set up a win next

turn and Blue resigns. From this position, Blue can only move b5 or destroy stack 5 (all other stacks are height 3 and Blue has no remaining 3-spike pieces). However, none of these moves would stop White from starting a new stack with their 5-spike piece l to win the game next turn. Blue cannot avoid defeat and hence resigns.

15. c5 16. Resign

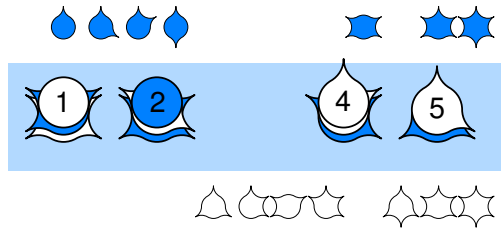


Figure 8. Position after move 16.

References

[1] Romeral Andrés, N. and Browne, C., 'Eco-Friendly Game Design', *Game & Puzzle Design*, vol. 2, no. 1, 2016, pp. 17–23.