ReadMe file for submission to Journal of Experimental Biology:

**Surpassing the subitizing threshold: Appetitive-aversive conditioning improves discrimination of numerosities in honeybees**

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This readme file describes the data files accompanying the above publication. For any further queries please contact scarlett.howard@rmit.edu.au

The following files are included:

1) "Training\_phase.csv”

This file contains all choices for each bee during the 50 conditioned choices of the learning phase for both Group 1 and Group 2. The columns are as follows:

Bee: ID of individual bee

Trial: Choice number ranging from 1 – 50 conditioned choices.

Choice: Individual choices of each bee. A score of ‘1’ is a correct choice and a score of ‘0’ is an incorrect choice.

Group: The group ID of each bee. A score of ‘1’ indicates a bee in Group 1 (appetitive differential conditioning). A score of ‘2’ indicates a bee in Group 2 (appetitive-aversive differential conditioning).

2) “Testing\_phase\_Group\_1.csv”

This file contains the individual choices bees made during each test for bees in Group 1. The columns are as follows:

Bee: ID of individual bee

Trial: Choice number ranging from 1 – 10 for each test.

Choice: Individual choices of each bee. A score of ‘1’ is a correct choice and a score of ‘0’ is an incorrect choice.

Test: The 4 vs. 5 test is marked as ‘1’, the 4 vs. 6 test is marked as ‘2’, the 4 vs. 7 test is marked as ‘3’, and the 4 vs. 8 test is marked as ‘4’.

2) “Testing\_phase\_Group\_2.csv”

This file contains the individual choices bees made during each test for bees in Group 2. The columns are as follows:

Bee: ID of individual bee

Trial: Choice number ranging from 1 – 10 for each test.

Choice: Individual choices of each bee. A score of ‘1’ is a correct choice and a score of ‘0’ is an incorrect choice.

Test: The 4 vs. 5 test is marked as ‘1’, the 4 vs. 6 test is marked as ‘2’, the 4 vs. 7 test is marked as ‘3’, and the 4 vs. 8 test is marked as ‘4’.