<u>Supplemental Appendix A:</u>

Randomisation test for consistent individual differences in outing

Groups of fish of 8 fish were observed over 15 outings. During each outing individuals were assigned a score from 8 to 0, based on order of outing and whether they emerged. If there were consistent individual differences among fish, then individuals would tend to receive consistent, or similar scores; consistently early emerging fish would receive consistently high scores, and late and non-emerging fish would receive consistently low scores. Thus the average scores for the eight fish would tend to show a lot of spread, resulting in a high standard deviation of average outing scores. On the other hand, if fish did not display consistent individual differences, then all fish would be likely to receive both high and low outing scores. In this case the average outing scores of the eight fish would show little spread, and a low standard deviation. To test for consistent individual differences, we used a bootstrapping randomisation procedure to generate an empirical null distribution of standard deviation of average outing scores, assuming no consistent individual differences in outing. We then report the proportion of 1000 bootstrapped standard deviations that are larger than the empirical standard deviation. This proportion is tantamount to a *p-value*.

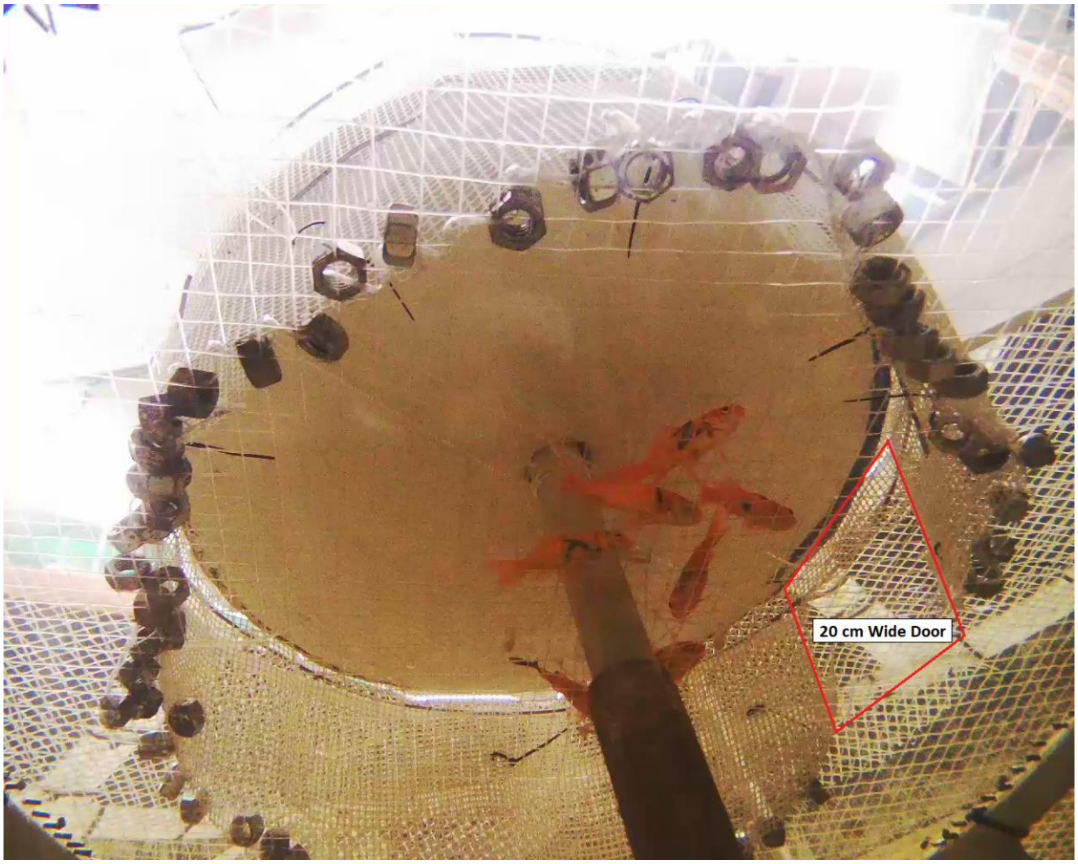
To perform the bootstrap randomisation, we randomly rearranged the observed outing scores among individuals for each outing in a sequence of outings. Then we calculated the average bootstrapped outing score for each fish, and then calculated the standard deviation of the bootstrapped averages. For each group we obtained 1000 bootstrapped values for the standard deviation to build the null distribution. For those groups in which no fish were killed over the 15 outings, the empirical and bootstrap average scores were calculated over all 15 outings. For groups in which one or more prey were killed, we calculated the empirical and bootstrap scores only over the initial outings that included all eight fish, and at least three outings (to permit the possibility of consistent behavior across outings). One exception to this procedure is the analysis of fish in group 9, where one fish was killed in the first outing, and the remaining seven fish survived the remaining 14 outings; in this case we simply bootstrapped behaviors of the seven survivors for 14 periods.) The bootstrap procedure was performed using R.

Sixteen of the nineteen groups provided between 3 and 15 outings of 8 or 7 fish (group 9). For 15 of these 16 groups, the proportion of bootstrapped replicates larger than the empirical standard deviation was less than 0.014, and typically less than or equal to 0.001. Only group 12 (p = 0.053) had a proportion slightly above 0.05. **We therefore find that there were highly significant differences among individuals in outing behavior and reject the null hypothesis that the fish show no consistent individual differences in outing behavior. That is to say, differences in average outing behavior showed more variation that would be expected by random differences if individuals showed no consistency in outing behaviour.**

Table A1.

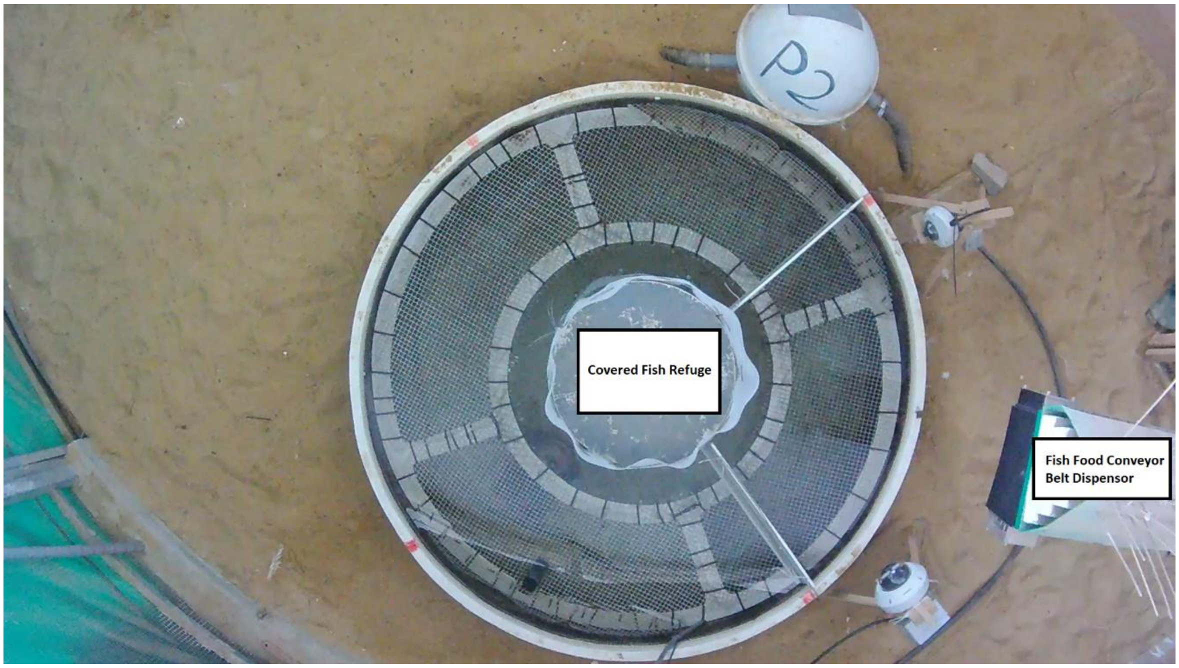
Group	Mean Fish SD	Mean Bootstrapped	*p*
1	1.943817	1.129591	0.003
2	2.015811	1.095897	0.001
3	2.184487	0.8281702	<0.001
4	1.731868	0.7407662	<0.001
5	1.945317	0.7379195	<0.001
6	2.428403	1.42651	0.002
7	N/A	N/A	N/A
8	N/A	N/A	N/A
9	2.018801	0.7783755	<0.001
10	1.527976	0.7697447	<0.001
11	2.110484	1.035812	<0.001
12	2.355338	1.8413	0.053
13	N/A	N/A	N/A
14	1.627711	0.6454082	<0.001
15	2.047065	0.7810049	<0.001
16	1.486714	0.7935756	0.005
17	1.059163	0.6636441	0.014
18	2.243791	1.385718	0.001
19	1.791613	0.948439	<0.001

Supplemental Figures



Supplementary Figure 1. View from underwater camera placed under circular refuge. Metal washers were used to sink white plastic mesh “veil” to clear plastic mesh pool floor. The white plastic mesh “veil” surrounding the refuge cover stopped food pellets from entering under refuge, and restricted access in and out of the refuge to the 20 cm wide door (labelled using red lines and bold black text). Note examples of black ink fish markings used for individual identification.

Supplementary Figure 2. Panoramic view of experimental aviary and connected egret holding cage (located in top-right corner of figure).



Supplementary Figure 3. Overhead view of focal experimental pool and food pellet feeder (labelled in bold black text). Note central fish refuge (labelled in bold black text), two cameras placed near the right edge of the pool, and the two thin white plastic barriers placed 2 cm below the water surface used to keep food pellets within view of our camera array.