

## **Methods** – Description of binomial model used to calculate *Lobophora* removal in tank experiment

The null hypothesis stated that the probability of a *Lobophora* recruit surviving during the experiment in a treatment was the same as the probability of one surviving within the control treatment. We did not pool all recruits exposed to fish species  $k$ , but rather used the probability of a *Lobophora* recruit being removed on a tile level within a treatment (exposed to fish species  $k$ ). These probabilities were then used to calculate a mean probability of finding the observed number of *Lobophora* recruits removed on the control tiles (Eq. S1).

$$P(n_j) = \frac{1}{a} \sum_{i=1}^a B(n_j|N_j, p_k) \quad (S1)$$

where  $n_j$  is the number of *Lobophora* recruits removed on a control tile  $j$ ,  $a$  is the number of tiles used in the treatment (number of tiles presented to fish species  $k$ ),  $N_j$  is the overall number of recruits that was present on the control tile  $j$ , and  $p_k$  is the probability of a *Lobophora* recruit being removed on a tile exposed to species  $k$ . The total probability of recording the observed number of recruits removed on the control tiles was the product of the five probabilities ( $P(n_j)$ ) calculated for the each of the control tiles (see Eq. S2) described below. The null hypothesis was rejected if the total probability of finding the observed number of recruits removed on the five control tiles was  $< 0.05$ .

The individual probability of finding the number of *Lobophora* recruits removed from a treatment tile (exposed to fish species  $k$ ) on a control tile was calculated with the following binomial equation (Eq. S2).

$$P(X) = \frac{n!}{(n-X)! \times X!} \times p^X \times (1-p)^{n-X} \quad (S2)$$

where  $n$  is the number of recruits on a control tile,  $X$  is the number of recruits removed from this control tile,  $p$  is the probability of a recruit being removed from a treatment tile presented to species  $k$ . Since there were five control tiles, the five individual probabilities calculated were multiplied to achieve the overall probability, which was used to accept or reject the null hypothesis.