Cage setup

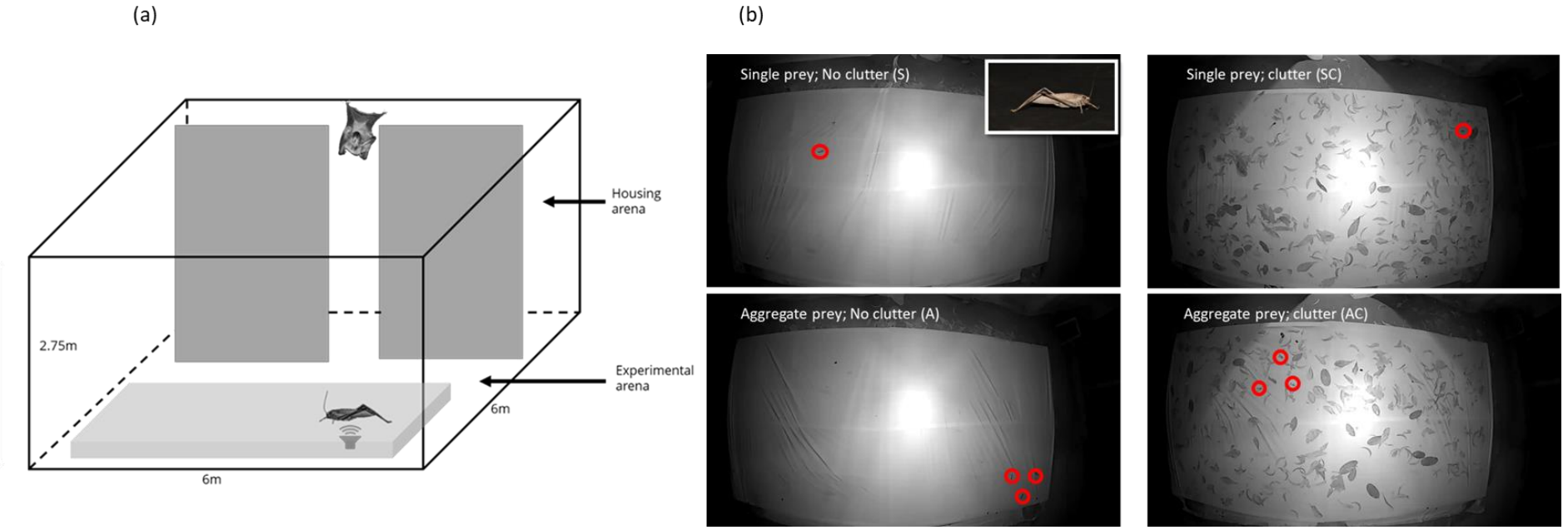


Fig S1. (a) Schematic of the flight cage. (b) Platform setup (top view) in the experimental area of different treatments. Red circles indicate prey positions (locations were changed randomly between tasks). Inset is the image of immobile prey, *Mecopoda*.

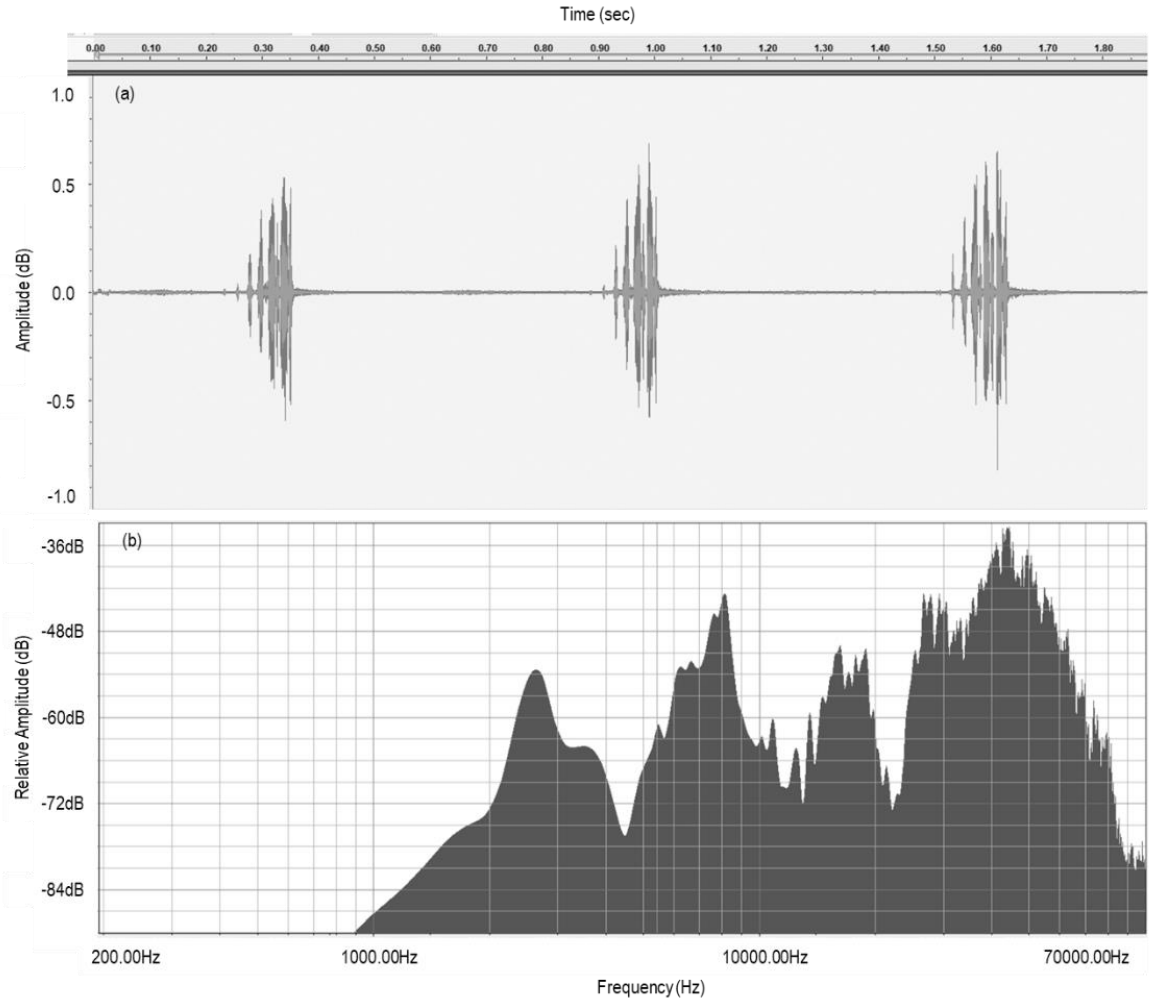


Fig S2. (a) Oscillogram and (b) power spectrum of 'Chirper' song type of the katydid *Mecopoda*. Chirp duration = 109 milliseconds; Chirp period = 483 milliseconds.

Fixed effect estimates of the Generalised linear mixed effect models (GLMM) for time to capture prey and number of passes before prey capture

Table S1. Fixed effect estimates from GLMM, their standard error, z-value and p-value for time taken to prey capture. The baseline predictor (intercept) against which other predictors were compared against was, single prey in a no clutter environment, referred as prey_single. prey_aggregate refers to the effect of prey aggregation, and clutter_clutter refers to the effect of clutter on the response. Finally, prey_aggregate:clutter_clutter refers to the interaction between both the predictors (prey type and clutter type) and how it affects the responses. The predicted values and their 95% confidence intervals were extracted from estimate outputs of the models.

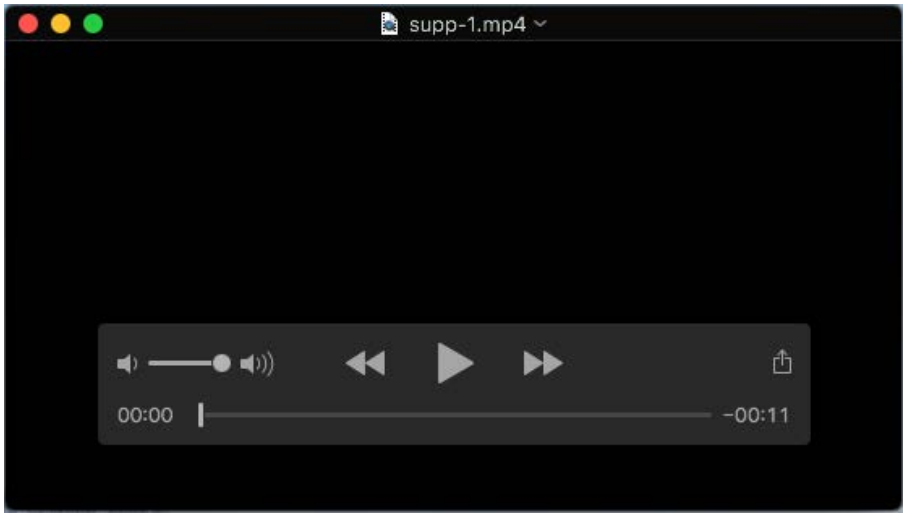
	Estimate	Std.Err	z-value	p-value
prey_single (Intercept)	8.096	0.274	29.570	< 0.0001
prey_aggregate	1.968	0.362	5.433	< 0.0001
clutter_clutter	1.163	0.369	3.152	0.0016
prey_aggregate:clutter_clutter	-1.208	0.518	-2.332	0.0197

Table S2. Fixed effect estimates from GLMM, their standard error, z-value and p-value for number of passes before prey capture.

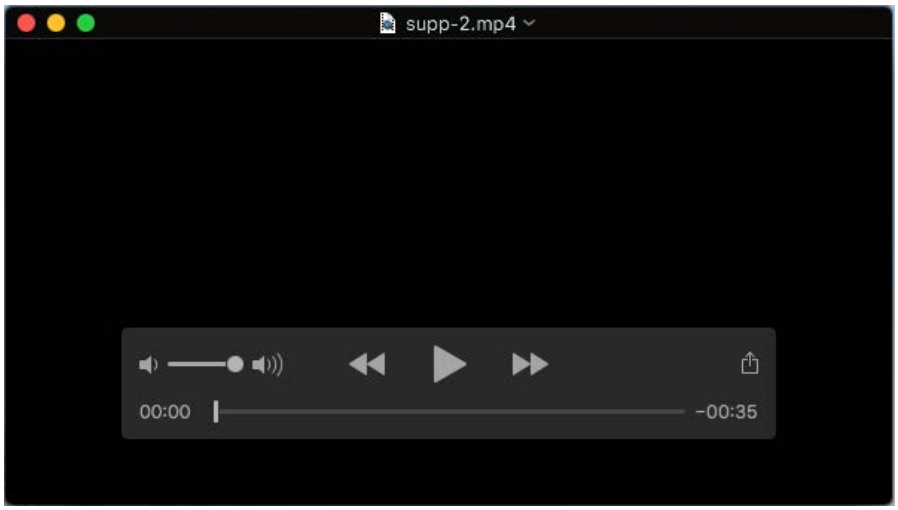
	Estimate	Std.Err	z-value	p-value
prey_single (Intercept)	-1.273	0.557	-2.286	0.0222
prey_aggregate	2.502	0.570	4.388	< 0.0001
clutter_clutter	1.192	0.602	1.979	0.0478
prey_aggregate:clutter_clutter	-1.3	0.704	-1.848	0.0646

Table S3. Factor increase comparison between tasks from predicted average values of GLMM. For example, capture time increases by a factor of 7.12 for A (aggregated prey + no clutter) in comparison to S (single prey + no clutter) and the number of passes increases by a factor of 12.3. SC (single prey + clutter), AC (Aggregate prey + clutter).

Pairwise comparison of tasks	Factor increase in time taken	Factor increase in number of passes
S-A	7.15	12.2
S-SC	3.2	3.29
S-AC	6.84	10.96
SC-A	2.24	3.71
SC-AC	2.14	3.33
AC-A	1.05	1.11



Movie 1. Single vs. Aggregation. Example of predator approach in choice experiment. Single speaker (Left) vs. aggregated speakers (Right)



Movie 2. Prey capture tasks. Example of prey capture in two different treatments. Treatment 1. Single prey + no clutter (S) and Treatment 2. Aggregate prey + clutter (A)