

Predation strategies of larval clownfish capturing evasive copepod prey

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Table S1: Kinematic measurements of larval *A. ocellaris* in feeding attempts of three developmental stages of copepod prey, *B. similis*, resulting in prey escape. In the approach phase, position of the fish relative to the prey before the strike (t_0), and the strike phase, mean \pm standard deviation is reported for each larval age class: early (1–5 days post-hatch; dph), mid (6–9 dph), and late (11–14 dph) larval phase. NA indicates combinations not tested.

	Prey type	Average	Age class of <i>A. ocellaris</i>		
			Early	Mid	Late
Approach					
Duration (s)	Nauplii	0.59 \pm 0.38	0.74 \pm 0.38	0.94 \pm 0.75	NA
	Copepodites	0.63 \pm 0.45	0.82 \pm 0.56	0.43 \pm 0.15	0.52 \pm 0.04
	Adults	0.52 \pm 0.43	NA	0.57 \pm 0.46	0.39 \pm 0.27
T₀					
Strike distance (mm)	Nauplii	0.75 \pm 0.35	0.87 \pm 0.49	0.89 \pm 0.30	NA
	Copepodites	0.99 \pm 0.26	0.98 \pm 0.27	1.1 \pm 0.28	2.0 \pm 1.8
	Adults	1.1 \pm 0.33	NA	1.1 \pm 0.41	1.1 \pm 0.51
Offset distance (mm)	Nauplii	0.10 \pm 0.01	0.12 \pm 0.04	0.19 \pm 0.11	NA
	Copepodites	0.16 \pm 0.16	0.12 \pm 0.09	0.19 \pm 0.22	1.1 \pm 1.3
	Adults	0.19 \pm 0.17	NA	0.18 \pm 0.12	0.22 \pm 0.24
Offset angle (deg)	Nauplii	10 \pm 6.7	10 \pm 7.1	13 \pm 5.4	NA
	Copepodites	10 \pm 9.8	8.3 \pm 6.2	11 \pm 13	25 \pm 16
	Adults	10 \pm 8.5	NA	9.0 \pm 5.4	12 \pm 12
Strike					
Peak acceleration (mm s ⁻²)	Nauplii	2.9 \pm 0.35x10 ⁴	2.8 \pm 0.44x10 ⁴	3.0 \pm 0.40x10 ⁴	NA
	Copepodites	3.4 \pm 0.57x10 ⁴	3.2 \pm 0.39x10 ⁴	3.5 \pm 0.64x10 ⁴	4.0 \pm 0.55x10 ⁴
	Adults	4.5 \pm 1.1x10 ⁴	NA	4.2 \pm 0.97x10 ⁴	5.1 \pm 1.0x10 ⁴
Peak speed (mm s ⁻¹)	Nauplii	156 \pm 19	151 \pm 19	151 \pm 20	NA
	Copepodites	179 \pm 25	174 \pm 21	176 \pm 28	210 \pm 19
	Adults	227 \pm 46	NA	215 \pm 41	255 \pm 45
Body lengths s ⁻¹	Nauplii	2.7 \pm 0.46	2.8 \pm 0.31	2.3 \pm 0.42	NA
	Copepodites	3.0 \pm 0.43	3.1 \pm 0.51	2.9 \pm 0.29	3.0 \pm 0.08
	Adults	3.2 \pm 0.39	NA	3.2 \pm 0.35	3.1 \pm 0.44
Lunge displacement (mm)	Nauplii	0.06 \pm 0.01	0.06 \pm 0.01	0.05 \pm 0.02	NA
	Copepodites	0.06 \pm 0.02	0.06 \pm 0.02	0.06 \pm 0.02	0.05 \pm 0.00
	Adults	0.07 \pm 0.02	NA	0.07 \pm 0.03	0.07 \pm 0.02

Table S2: Logistic regression model selection table from the full candidate model set for all models with AICc values less than 4. Values shown for each parameter are glm estimates (+ signs indicate categorical variables are included in that model). Parameters included in the full candidate model set were: Model Intercept (Int), Fish age class (Fish Age), distance lunged at peak speed (Dist Speed), final-approach duration (Appr Dur), copepod developmental stage (Prey Stage), peak strike speed (Speed), strike distance (Strike Dist), and the interaction between strike distance and strike speed (Speed:Strike Dist). We also provide the number of parameters in each model (k), the difference between the AICc for each model and the model with the lowest AICc (delta AICc) and the estimated weight given to that model based on the AICc value.

Model	Int	Fish Age	Dist Speed	Dur	Prey Stage	Speed	Strike Dist	Speed: Strike Dist	k	AICc	delta AICc	weight
1	0.526				+	0.965	-1.386	0.524	5	126.785	0.000	0.166
2	0.751				+	1.022	-1.214		4	127.581	0.796	0.112
3	-0.092					0.670	-1.482	0.597	4	127.751	0.966	0.102
4	0.460			0.224	+	0.974	-1.458	0.559	6	128.254	1.468	0.080
5	-0.088			0.309		0.724	-1.555	0.626	5	128.444	1.658	0.072
6	0.526		-0.001		+	0.965	-1.386	0.524	6	129.026	2.241	0.054
7	0.701			0.166	+	1.036	-1.273		5	129.303	2.518	0.047
8	0.092					0.690	-1.308		3	129.526	2.741	0.042
9	0.747		0.036		+	1.003	-1.222		5	129.762	2.976	0.038
10	-0.092		0.036			0.651	-1.487	0.595	5	129.931	3.146	0.034
11	0.094			0.261		0.749	-1.383		4	130.439	3.654	0.027
12	0.461		-0.036	0.228	+	0.994	-1.454	0.560	7	130.523	3.738	0.026
13	-0.088		-0.012	0.310		0.731	-1.554	0.627	6	130.683	3.897	0.024

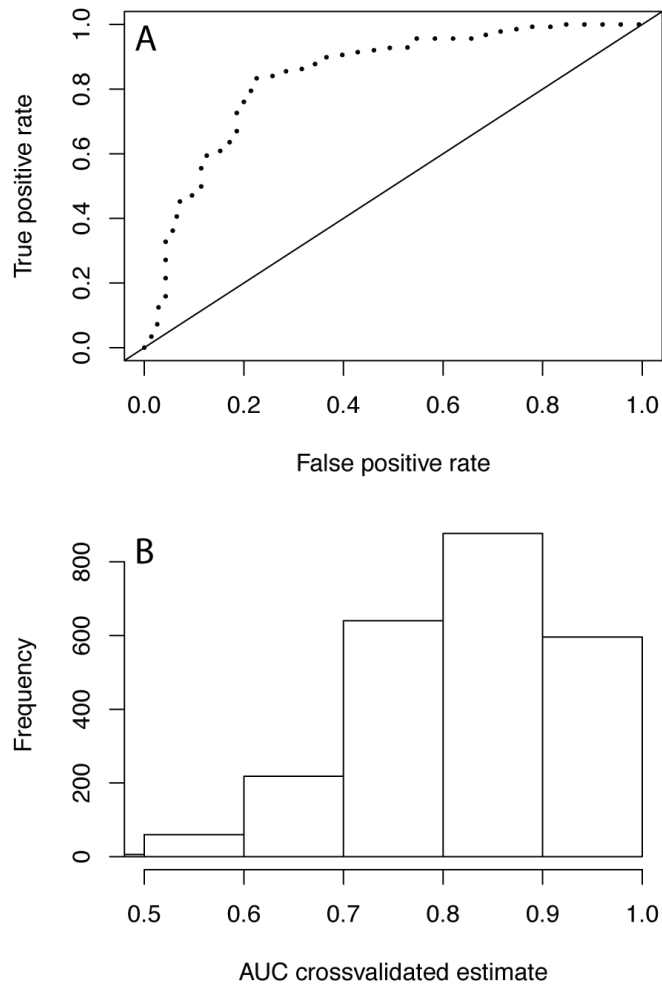


Fig. S1: Tests for goodness of fit of the logistic regression model. A) Area under the receiver operating characteristic curve (AUC; dotted line) of the model. B) Estimate of the range of AUC values by a 10-fold cross-validation repeated 1000 times. AUC was 0.83 indicating the final model was able to separate captures and escapes; values closer to 1 suggest the model perfectly separates positive and negative observations.