

## Vertical distribution of Atlantic bluefin tuna *Thunnus thynnus* and bonito *Sarda sarda* larvae is related to temperature preference

**P. Reglero\*, E. Blanco, F. Alemany, C. Ferrá, D. Alvarez-Berastegui, A. Ortega, F. de la Gándara, A. Aparicio-González, A. Folkvord**

\*Corresponding author: patricia.reglero@ieo.es

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Table S1. Model results of the relationship between the larvae of Atlantic bluefin tuna and albacore captured during ichthyoplankton surveys conducted in 2011 and 2012 with respect to temperature, salinity and chlorophyll. For each variable we included the probability (p), the estimated degrees of freedom (indicative of departure from linearity), the % of deviance explained and the unbiased risk estimator (UBRE score) of a model that contains the described variable in addition to all those preceding it in the table. The n.s. means no significant effect of the model variable in the tuna distribution.

Year	Species	Model variable	df	p	Dev explained	
					cumulative	UBRE score
2011	Bluefin tuna	Factor(day:night)		n.s.		
		Temperature	2	<0.001	41.2	10.2
		Salinity	2	<0.001	45.8	9.4
		Chlorophyll		n.s.		
	Albacore	Factor(day:night)		n.s.		
		Temperature	1	0.007	41.6	-0.3
		Salinity		n.s.		
		Chlorophyll		n.s.		
2012	Bluefin tuna	Factor(day:night)		<0.001		
		Temperature	1	<0.001	71.1	37.7
		Salinity	2	<0.001	91.9	10
		Chlorophyll		n.s.		
	Albacore	Factor(day:night)		n.s.		
		Temperature	1	0.003	51.2	-0.5
		Salinity	1	0.003	78	-0.7
		Chlorophyll		n.s.		

Table S2. Generalized additive model results testing the effect of the thermocline and light:darkness treatments on the vertical distribution of bluefin tuna and bonito larvae in the experimental columns. For replicates description see material and methods. We applied a Bonferroni correction to adjust probability values for replicated trials and avoid type I error (p-adj, defined as probability divided by the number of test).

Species	Effect	Treatment	Replicate	probability	p-adj	
Bluefin tuna	Thermocline effect	Light	I2 <sub>bft</sub>	0.4	0.1	
			T1 <sub>bft</sub>	<0.001	<0.001	
			T2 <sub>bft</sub>	<0.001	<0.001	
		Darkness	I3 <sub>bft</sub>	0.2	0.05	
			T3 <sub>bft</sub>	0.002	0.0005	
			T4 <sub>bft</sub>	0.004	0.001	
	day:night	Thermocline	T2 <sub>bft</sub>	0.3	0.075	
			T3 <sub>bft</sub>	0.5	0.125	
			T4 <sub>bft</sub>	0.4	0.1	
		Isocline	I2 <sub>bft</sub>	0.4	0.1	
			I3 <sub>bft</sub>	0.02	0.005	
			I4 <sub>bft</sub>	0.3	0.075	
					0	
	Bonito	Thermocline effect	Light	I2 <sub>bon</sub>	0.2	0.05
T1 <sub>bon</sub>				0.005	0.00125	
T2 <sub>bon</sub>				0.07	0.0175	
Darkness			I3 <sub>bon</sub>	0.5	0.125	
			T3 <sub>bon</sub>	<0.001	<0.001	
			T4 <sub>bon</sub>	<0.001	<0.001	
day:night		Thermocline	T2 <sub>bon</sub>	0.3	0.075	
			T3 <sub>bon</sub>	0.2	0.05	
			T4 <sub>bon</sub>	0.1	0.025	
		Isocline	I2 <sub>bon</sub>	0.2	0.05	
			I3 <sub>bon</sub>	0.002	0.0005	
			I4 <sub>bon</sub>	<0.001	<0.001	