The following supplement accompanies the article

From trophic ecology to fish condition: contrasting pathways for European hake in the western Mediterranean

Lucía Rueda*, María Valls, Manuel Hidalgo, Beatriz Guijarro, Antonio Esteban, Enric Massutí

*Corresponding author: lucia.rueda@ieo.es

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Supplementary Material

Table S1. Results of the Post-hoc analysis (Tukey Honest Significant Differences) of the ANOVA comparing the trophic level of recruit and juvenile hakes among areas and ontogenetic stage and within areas. Size (R: recruits; J: juveniles)

	diff	lwr	upr	p adj
Area				
Delta-Ba-I	-0.16	-0.20	-0.12	0.00
North-Ba-I	-0.37	-0.43	-0.31	0.00
North-Delta	-0.21	-0.27	-0.15	0.00
Size				
R-J	-0.18	-0.22	-0.15	0.00
Area*Size				
Delta:J-Ba-I:J	-0.35	-0.45	-0.26	0.00
North:J-Ba-I:J	-0.52	-0.63	-0.41	0.00
Ba-I:R-Ba-I:J	-0.31	-0.38	-0.24	0.00
Delta:R-Ba-I:J	-0.39	-0.47	-0.31	0.00
North:R-Ba-I:J	-0.64	-0.75	-0.54	0.00
North:J-Delta:J	-0.17	-0.29	-0.05	0.00
Ba-I:R-Delta:J	0.04	-0.04	0.12	0.69
Delta:R-Delta:J	-0.04	-0.13	0.05	0.76
North:R-Delta:J	-0.29	-0.40	-0.18	0.00
Ba-I:R-North:J	0.21	0.11	0.31	0.00
Delta:R-North:J	0.13	0.02	0.23	0.01
North:R-North:J	-0.12	-0.25	0.00	0.06
Delta:R-Ba-I:R	-0.08	-0.14	-0.02	0.00
North:R-Ba-I:R	-0.33	-0.42	-0.24	0.00
North:R-Delta:R	-0.25	-0.35	-0.16	0.00

Table S2. Boosted Regression Trees of body condition performed for recruits and juveniles in the three study areas. Bold characters indicate the best model selected for each area and ontogenetic stage. n: number of individuals; model: model notation; tc: tree complexity; lr: learning rate; bag: bag fraction; num_var: number of variables; num_trees: numer of trees; mean_total_dev: mean total deviance; mean_resid_dev: mean residual deviance; estimated_cv_dev: estimated coefficient of variation of the deviance; se: standard error; %deviance: percentage of deviance explained.

		n	model	tc	lr	bag	num_var	num_trees	mean_total_dev	mean_resid_dev	estimated cv dev	se	% deviance
Hake Recruits	Delta	104	model4r	3	0.005	0.50	4	400	44.023	23.03	32.302	4.845	47.69
		104	model5r	3	0.005	0.50	2	400	44.023	23.58	29.835	4.682	46.44
		104	model6r	3	0.001	0.50	2	2650	44.023	22.69	30.539	3.138	48.46
		104	**model7r**	**2**	**0.001**	**0.50**	**2**	**3100**	**44.023**	**23.156**	**30.269**	**3.642**	**47.40**
		104	model8r	2	0.005	0.50	2	500	44.023	23.176	28.687	3.722	47.35
		104	model9r	3	0.001	0.50	4	2050	44.023	23.019	32.026	4.543	47.71
	North	43	model10r	3	0.005	0.75	4	200	24.813	19.177	24.721	5.419	22.71
		43	**model11r**	**3**	**0.005**	**0.75**	**2**	**2950**	**24.813**	**8.836**	**21.344**	**4.079**	**64.39**
		43	model12r	2	0.005	0.75	2	2050	24.813	10.219	22.247	6.589	58.82
		43	model13r	3	0.001	0.75	2	10000	24.813	10.259	18.722	4.06	58.65
	Ba-I	171	**model1r**	**3**	**0.005**	**0.50**	**4**	**1200**	**51.364**	**26.698**	**45.671**	**5.394**	**48.022**
		171	model2r	2	0.005	0.50	4	1950	51.364	26.986	47.611	5.857	47.46
		171	model3r	3	0.001	0.50	4	3700	51.364	31.292	48.519	6.752	39.08
Hake Juveniles	Delta	52	model6j	2	0.005	0.50	4	1400	35.845	24.068	34.606	6.801	32.85
		52	model7j	3	0.001	0.50	4	500	35.845	32.936	36.354	7.098	8.11
		52	model8j	2	0.001	0.50	4	550	35.845	32.809	36.632	5.859	8.47
		52	model9j	2	0.005	0.50	2	1100	35.845	25.505	34.509	7.25	28.85
		52	**model10j**	**1**	**0.005**	**0.50**	**2**	**4350**	**35.845**	**18.885**	**32.088**	**6.095**	**47.31**
	North	33	model11j	2	0.005	0.75	4	350	31.822	24.819	33.38	11.24	22.01
		33	model12j	2	0.005	0.75	3	550	31.822	23.224	34.747	12.54	27.02
		33	model13j	1	0.005	0.75	3	350	31.822	24.716	31.253	13.65	22.3304632

		33	**model14j**	**2**	**0.001**	**0.75**	**3**	**4000**	**31.822**	**22.21**	**27.252**	**10.01**	**30.2055182**
		33	model15j	1	0.001	0.75	3	2350	31.822	23.817	30.782	10.78	25.1555528
		33	model16j	2	0.001	0.75	2	2950	31.822	23.74	32.635	11.58	25.3975237
	Ba-I	75	model1j	3	0.005	0.50	4	250	33.783	26.576	33.12	3.908	21.3332149
		75	model2j	3	0.001	0.50	4	900	33.783	27.649	32.459	4.368	18.1570612
		75	model3j	3	0.001	0.50	2	1000	33.783	27.742	32.905	3.346	17.8817749
		75	**model4j**	**2**	**0.001**	**0.50**	**2**	**1500**	**33.783**	**26.662**	**31.16**	**4.389**	**21.078649**
		75	model5j	2	0.005	0.50	2	250	33.783	27.169	33.281	5.271	19.5778942

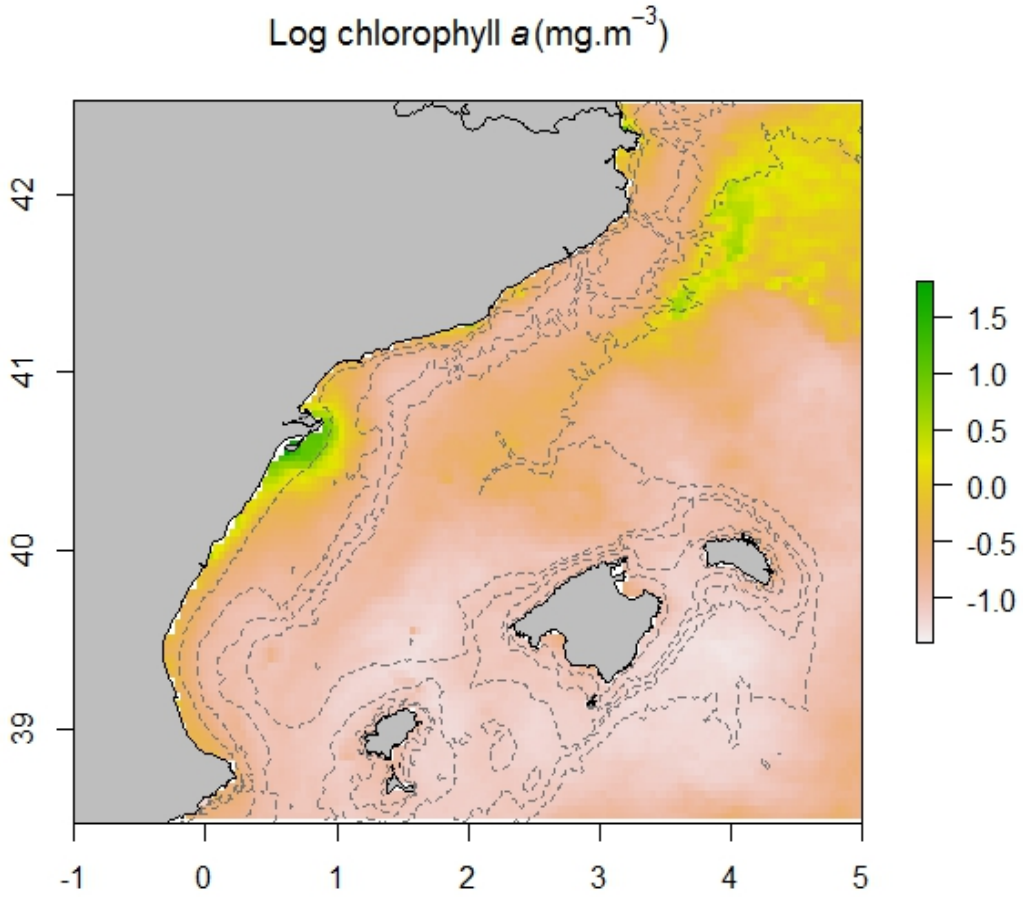
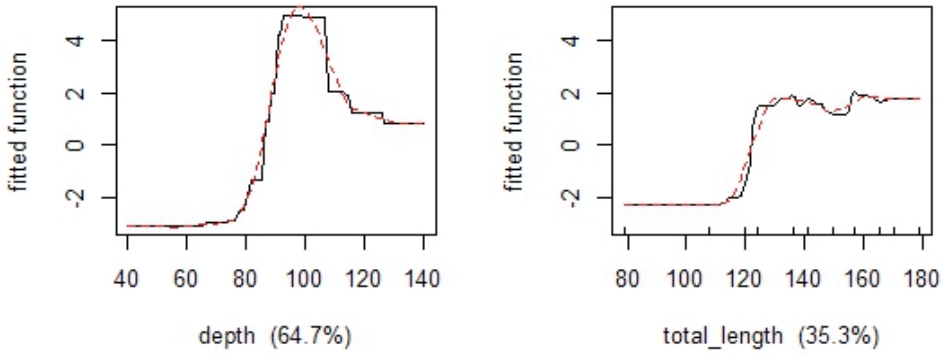
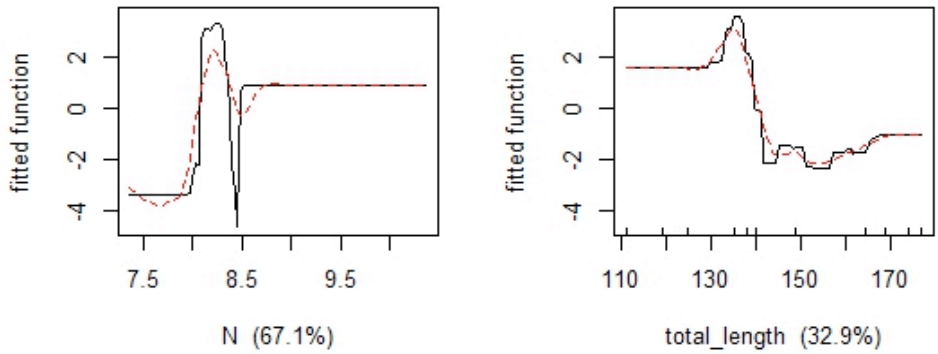


Figure S1. Mean sea surface chlorophyll a concentration (mg m^{-3}) in the study area from January to April (both inclusive) 2014. Isobaths show the 50, 100, 500, 1000, 2000 and 3000 m depth.

A: Delta



B: North



C: Ba-I

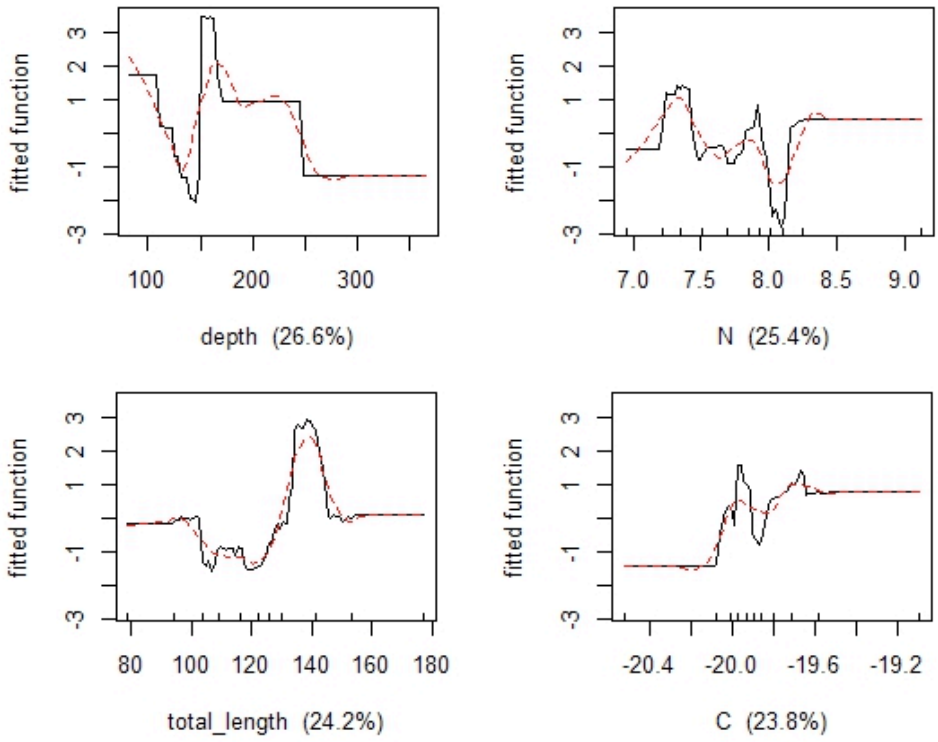


Figure S2. Significant partial effects of the variables under analysis on body condition of recruits. Delta: Ebro River Delta; North: north-eastern coast of Iberian Peninsula; Ba-I: Balearic Islands. N: $\delta^{15}N$; C: $\delta^{13}C$.

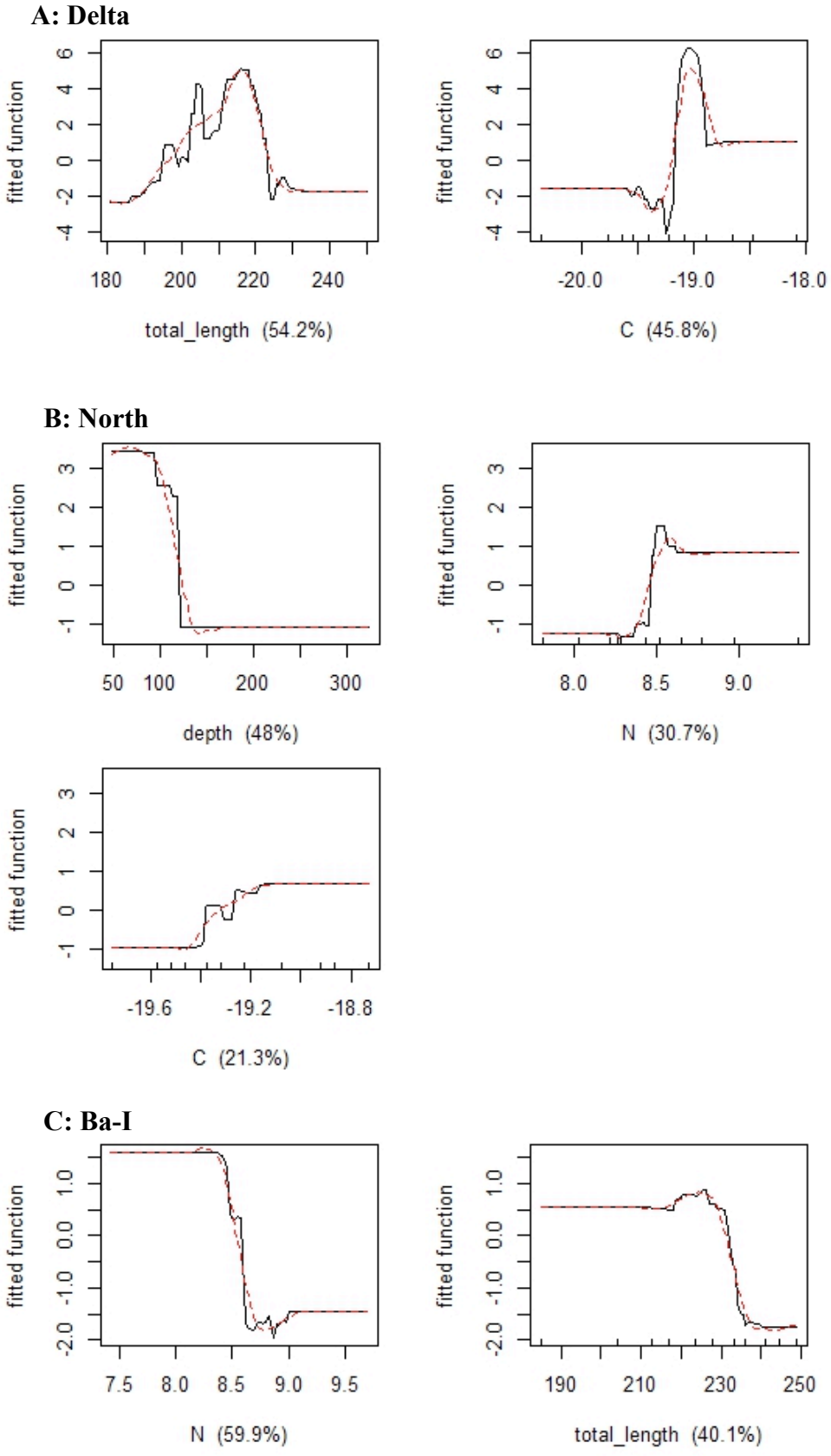


Figure S3. Significant partial effects of the variables under analysis on body condition of juveniles. Delta: Ebro River Delta; North: north-eastern coast of Iberian Peninsula; Ba-I: Balearic Islands. N: $\delta^{15}N$; C: $\delta^{13}C$.