Supplementary material 1

a. Bait sources. The two main bait sources were opportunistically supplemented with great barracuda, *Sphyraena. barracuda* (n = 32 provisioning events), blue runner, *Caranx crysos* (n = 19 provisioning events), white mullet, *Mugil curema* (n = 11 provisioning events) and ballyhoo, *Hemiramphus brasiliensis* (n = 8 provisioning events). From time to time the whole fish bait sources listed above and in the main text were supplemented with fish carcasses that were provided by local fishermen.

b. Length data to calculate daily ration of individual great hammerhead sharks. At least one of three length measurements (pre-caudal length [PCL], fork length [FL], or total length [TL]) was available from capture data or laser photogrammetry measurements (see Guttridge et al., 2017) for all but two sharks (shark-IDs #39 and #40). For sharks without measurements the length was estimated by video and/or photo comparison with conspecifics of known size. To calculate the weight after Romanov & Romanova (2012) the FL was needed. To obtain the FL for sharks were only the PCL or the TL was available, length conversions to FL were calculated according to Cliff (1995) and according to Piercy et al. (2010), respectively.

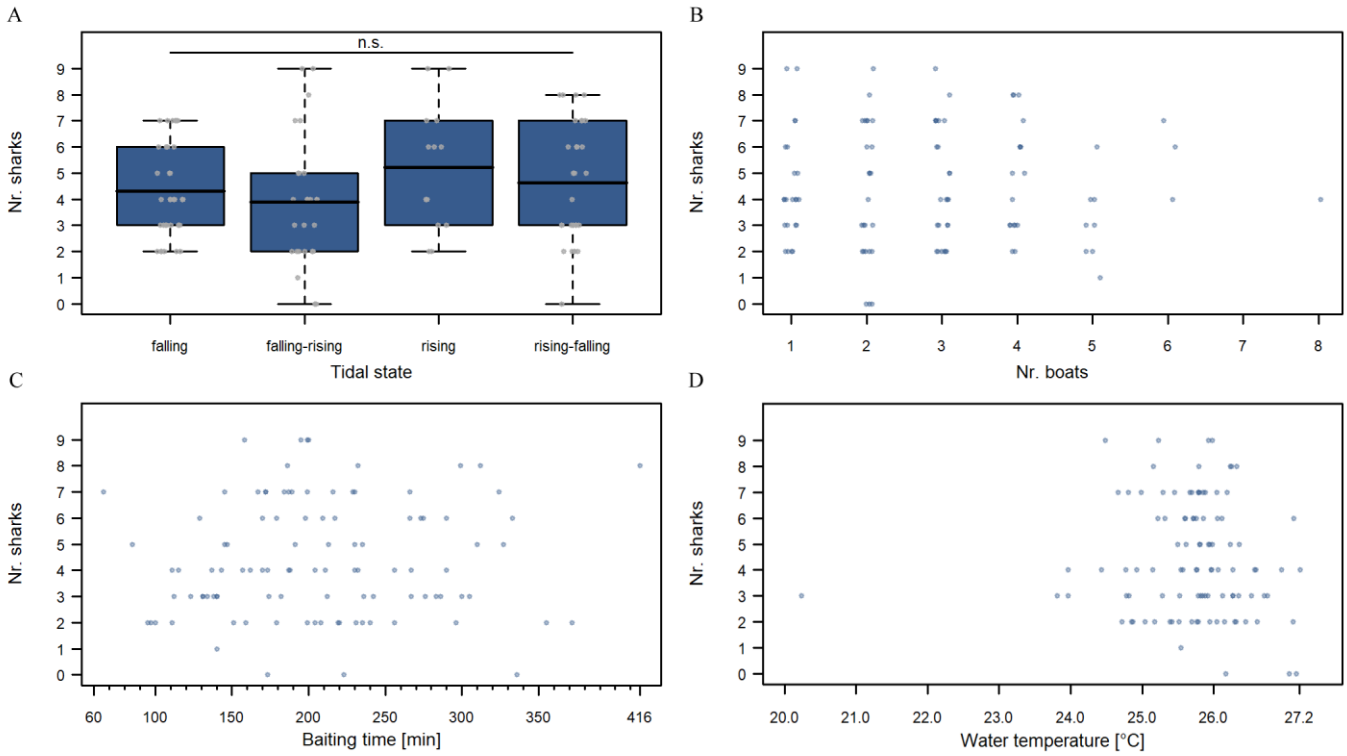
c. Dietary items and their energy content used in the calculation of the bioenergetic model. See Supplementary Table 1 (next page) for a summary.

Supplementary Table 1. Dietary items and corresponding energy content used in the calculation of the bioenergetic model

Dietary items in the natural diet of great hammerhead sharks were identified according to the scientific literature. Caloric content is in kcal per 1 g wet tissue. Published caloric content values in $kJ*g^{-1}$ were converted to $kcal*g^{-1}$ by dividing the values by the conversion factor 4.184. To account for the predation of great hammerhead sharks on batoids and smaller sharks, the tissue energy content of juvenile brown stingrays *(Dasyatis lata)*, juvenile lemon *(Negaprion brevirostris)* and juvenile scalloped hammerhead *(Sphyrna lewini)* were used as an approximation. No peer-reviewed literature was found detailing the energy content of Pacific bonito (*S. chiliensis lineolate)* and the caloric content of Atlantic bonito *(Sarda sarda)* was used instead.

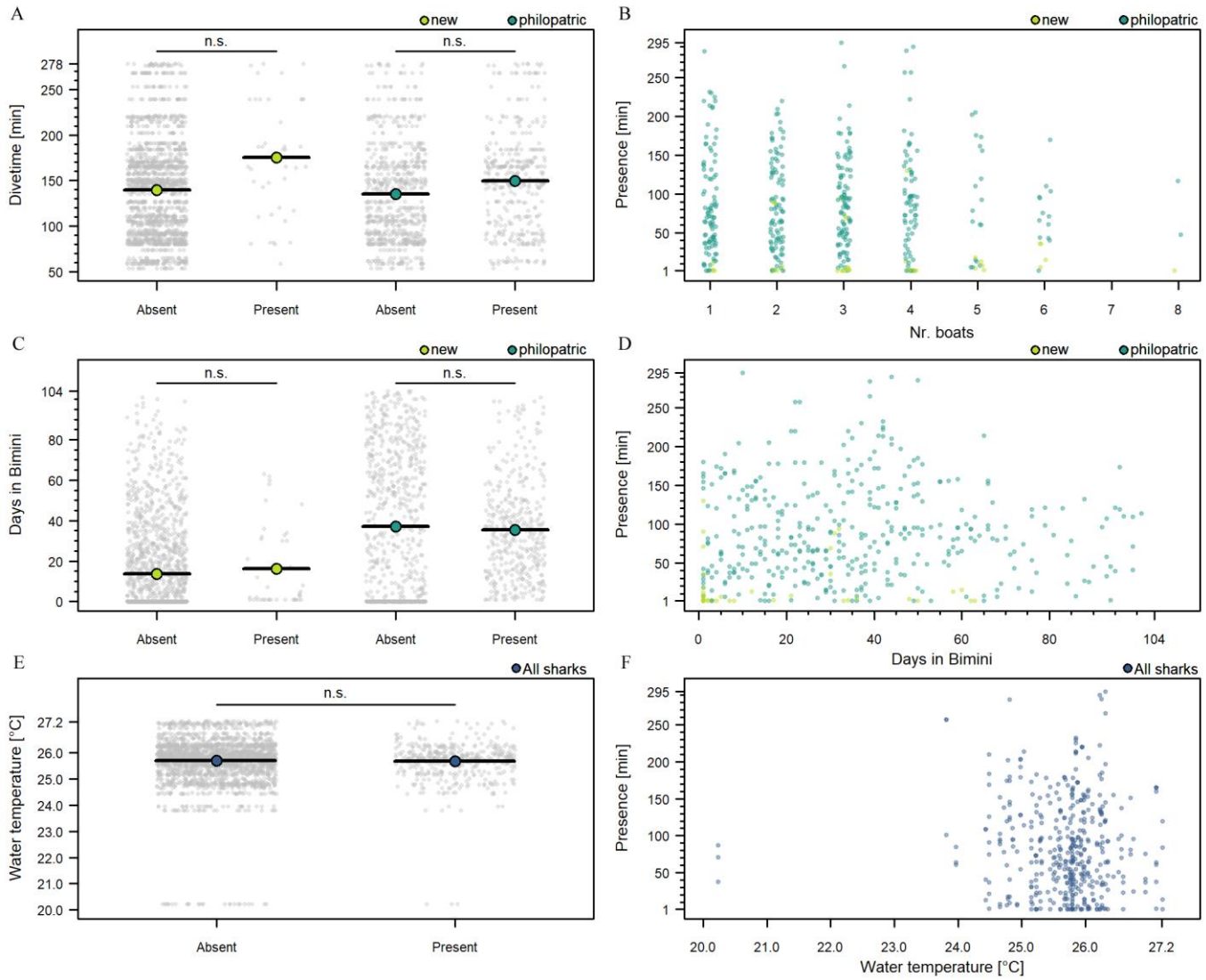
Two diet types for calculation of daily ration					
	Dietary items	**Source**	**Calories [$kcal*g^{-1}$]**	**Approximation**	**Source**
Natural	Teleosts (pelagic)	e.g. Cliff, 1995; Raoult et al., 2019; Smale and Cliff, 1998; Stevens and Lyle, 1989	1.506	n/a	
	Teleosts (demersal)		1.140	n/a	Steimle & Terranova, 1985
	Crustaceans (benthic)		1.291	n/a	
	Batoids	Chapman and Gruber, 2002; Roemer et al., 2016; Strong et al., 1990	1.441	Juvenile brown stingray *(Dasyatis lata)*	Dale, Drazen, & Holland, 2013
	Other shark species	Mourier et al., 2013; Roemer et al., 2016	1.293	Juvenile lemon shark *(Negaprion brevirostris)*	Cortés & Gruber, 1990
			1.451	Juvenile scalloped hammerhead *(Sphyrna lewini)*	Lowe, 2002
Provisioned	Atlantic herring (*Clupea harengus)*	Main bait source used during study	2.533	n/a	Steimle & Terranova, 1985
	Pacfic bonito (*Sarda chiliensis lineolate)*		1.315	Atlantic bonito *(Sarda sarda)*	Roncarati et al., 2012

d. Supplementary results. The following pages contain tables and figures as supplementary results to the main text.



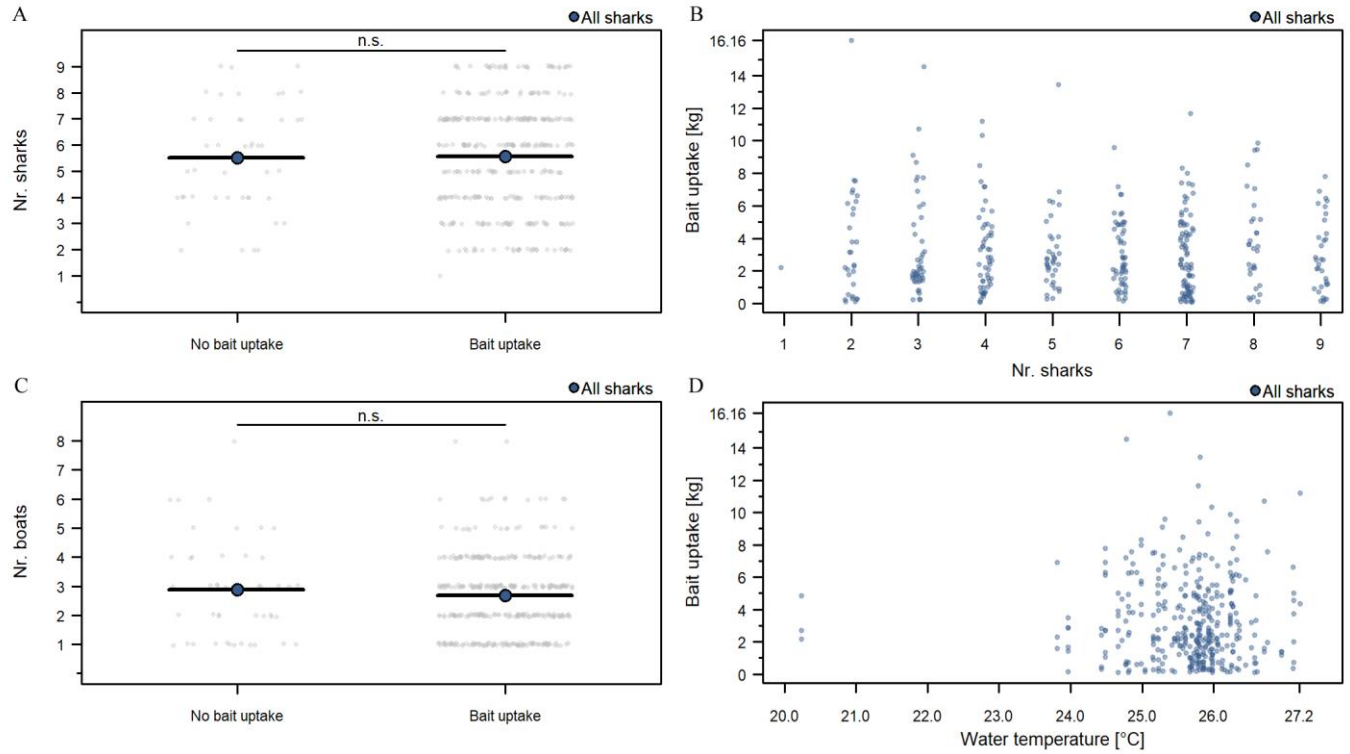
Supplementary Figure 1. Non-significant effects of tidal state (A), number boats (B), baiting time (C) and water temperature (D) on the number of great hammerhead sharks *(Sphyrna mokarran)* attending provisioning events.

The x-axis contains the predictor variables. The y-axis shows the number of individual sharks. Points show the raw data. The black bar in the boxplot represents mean values per level of the categorical variable "tidal state". The non-significant between the levels of the categorical variable is represented by "n.s.". Non-significant regressions in (B), (C) and (D) where not plotted (Table 3).



Supplementary Figure 2. Non-significant effects of dive time (A), the number boats (B), the days since the first appearance of a shark during the study period (C, D) and the water temperature (E) on the presence vs. absence data and the presence time in minutes of new vs. philopatric and all great hammerhead sharks *(S. mokarran)*, respectively.

Plots in the first column are a graphical representation of the zero-inflated Poisson GLMM (model 3) with the absence vs. presence data of individuals on the x-axis and the predictor variables on the y-axis. The mean values are represented by the black bar containing a colored dot. Non-significance of a predictor variable is shown by "n.s." (Table 4). The second column shows the Poisson part of the GLMM (model 3). The x-axis contains the predictor variables, and the y-axis contains the response variable. Original data for each group of sharks are shown in different colors if an interaction was entered. For the ease of representation only presence time values > 0 minutes have been included in these plots. If neither the interaction nor the effect was significant, no regression curves were plotted.



Supplementary Figure 3. Non-significant effects of number sharks (A, B), the number boats (C) and the water temperature (D) on no bait uptake vs. bait uptake and the bait uptake in kg of great hammerhead sharks *(S. mokarran)*.

Plots in the first column are a graphical representation of the zero-inflated Poisson GLMM (model 4) with the no bait uptake vs. bait uptake data of individuals on the x-axis and the predictor variables on the y-axis. The mean values are represented by the black bar containing a colored dot. Non-significance of a predictor variable is shown by "n.s." (Table 5). The second column shows the Poisson part of the GLMM (model 4). The x-axis contains the predictor variables, and the y-axis contains the response variable. The y-axis has been transformed to show the bait uptake in kilograms. For the ease of representation only bait uptake values > 0 kg have been included in these plots. Non-significant regressions extracted from the model (Table 5) were not plotted.

Supplementary Table 2. First confirmed sightings and the number of previous seasons philopatric sharks and new great hammerhead shark (*S. mokarran*) individuals have been documented in Bimini, the Bahamas

Hammerhead seasons in Bimini span the winter months of two adjacent years. The first confirmed sighting was assigned to a corresponding season based on if it happened before or after the 31st of June of a year. The number of previous seasons includes all seasons from the first sighting of an individual up to the last season before the study period, i.e. up to season 2015/2016. An "*" denotes a male shark individual.

Shark-ID #	Status	First confirmed sighting in Bimini	Number of previous seasons in Bimini
12	Philopatric	January 5th, 2014	3
13	Philopatric	January 10th, 2013	4
14	Philopatric	December 10th, 2012	4
16	Philopatric	February 16th, 2014	3
17	Philopatric	March 31st, 2013	4
19	Philopatric	January 8th, 2014	3
20*	Philopatric	January 29th, 2013	4
21*	Philopatric	May 2nd, 2010	7
22*	Philopatric	March 6th, 2015	2
24	Philopatric	March 9th, 2013	4
34	Philopatric	March 31st, 2016	1
36	New	March, 11th 2017	0
37	New	March 18th, 2017	0
38	New	December 15th, 2016	0
39	New	January 18th, 2017	0
40	New	February 14th, 2017	0
41*	New	March 18th, 2017	0
42	New	February 19th, 2017	0
43	New	February 13th, 2017	0
44	New	February 17th, 2017	0
45*	New	March 10th, 2017	0
46	New	April 13th, 2017	0
47*	New	January 25th, 2017	0
48	New	February 4th, 2017	0
49	New	March 7th, 2017	0
50	New	March 19th, 2017	0
51	New	March 19th, 2017	0
52	New	March 19th, 2017	0

Supplementary Table 3. Daily ration estimates for pregnant female great hammerhead sharks *(S. mokarran)* following a wild or provisioned diet

A "wild" daily ration (DR) describes the energy requirements in % bodyweight per day (% BW*day^{-1}) of a pregnant female great hammerhead shark that is following a natural diet , whereas a "provisioned" DR describes the values for a pregnant female shark that only consumes provisioned food. values were rounded to 1 digit after the decimal point. DR values were rounded to 3 digits after the decimal point. A "wild" daily ration (DR) describes the energy requirements in % bodyweight per day (BW*day^{-1}) of a shark that is following a natural diet whereas a "provisioned" DR describes the values of a shark that only consumes provisioned food.

				Energy content diet [kcal*g^{-1}]		Daily ration [DR, % BW*day^{-1}]		
Shark-ID #	TL [cm]	Weight [kg]	Daily energy requirements [kcal*day^{-1}]	Wild	Provisioned	Wild	Provisioned	Provisioned DR met with provisioned diet [% dives]
12	325.0	197.6	3981.93	1.35	1.924	1.49	1.05	32.1
13	339.0	237.0	4714.66			1.47	1.03	38.2
14	348.5	259.1	5126.15			1.46	1.03	57.4
16	294.6	150.2	3093.67			1.52	1.07	77.8
17	329.3	215.7	4318.45			1.48	1.04	70.4
19	314.3	185.4	3751.72			1.50	1.05	48.6
24	330.6	218.4	4369.37			1.48	1.04	00.0
34	306.8	171.3	3489.35			1.50	1.06	23.8
39	329.3	215.7	4318.45			1.48	1.04	00.0
40	294.2	149.6	3082.27			1.52	1.07	00.0

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