TABLE S1

Summary of correlation analysis between predictor variables selected to determine their influence on the foraging patterns of Red-billed Tropicbirds on St. Eustatius[a]

Variable	Distance to colony	Chl *a*	Daytime SST	Bathymetry	Scombridae sp. richness	Salinity	Euphotic depth	Net primary productivity	Nighttime SST	Exocoetidae sp. richness	Eddy kinetic energy
Distance to colony	-	-0.04	0.09	**-0.92**	**-0.81**	**-0.57**	0.09	-0.23	0.36	**-0.85**	0.03
Chl *a*	-0.04	-	0.29	0.10	0.09	0.06	**-0.82**	**0.83**	0.30	-0.08	0.10
Daytime SST	0.09	0.29	-	-0.09	-0.07	-0.02	-0.38	**0.65**	**0.74**	-0.12	-0.21
Bathymetry	**-0.92**	0.09	-0.09	-	**0.82**	**0.57**	-0.14	0.08	-0.42	**0.86**	-0.04
Scombridae sp. richness	**-0.81**	0.09	-0.07	**0.83**	-	**0.51**	-0.11	0.25	-0.38	**0.83**	-0.02
Salinity	**-0.57**	0.06	-0.02	**0.57**	**0.51**	-	-0.08	-0.11	-0.26	**0.57**	-0.06
Euphotic depth	0.09	**-0.82**	-0.38	-0.14	-0.12	-0.08	-	**-0.69**	-0.46	0.04	-0.06
Net primary productivity	-0.23	**0.83**	**0.65**	0.08	0.25	-0.11	**-0.69**	-	**0.78**	-0.38	-0.13
Nighttime SST	0.36	0.30	**0.74**	-0.42	-0.38	-0.26	-0.46	**0.78**	-	-0.47	-0.04
Exocoetidae sp. richness	**-0.85**	-0.08	-0.12	**0.86**	**0.83**	**0.56**	0.04	-0.38	-0.47	-	-0.10
Eddy kinetic energy	-0.03	0.10	-0.21	-0.04	-0.02	-0.06	-0.06	-0.13	-0.04	-0.10	-

[a] Bold typeface indicates significant correlation. chl *a* = chlorophyll *a*; SST = sea surface temperature

TABLE S2

Summary of GPS logger deployments on Red-billed Tropicbirds at Pilot Hill, St. Eustatius, between 2016 and 2020

Bird ID	Trip ID	Date attached	Duration (h)	No. of valid locations	Total distance travelled (km)	Maximum distance to colony (km)
80	801	27/3/2016	2.82	70	55.11	17.77
	802		21.28	70	54.28	10.97
	803		2.00	33	40.27	15.53
	804		22.95	133	121.60	40.83
61	611	28/3/2016	5.43	98	71.78	25.49
	612		15.03	124	112.92	37.37
	613		18.50	214	187.62	66.22
76	761	29/3/2016	23.85	51	16.47	7.71
88	881	29/3/2016	48.77	360	407.74	130.10
80	801	29/3/2016	2.00	33	40.27	15.53
	802		22.95	133	121.60	40.83
71	711	30/3/2016	19.62	60	64.03	23.33
	712		2.77	66	62.03	22.77
	713		3.30	101	88.21	34.82
	714	16/1/2018	1.56	54	65.26	25.17
	715		42.07	292	347.82	117.49
91	911	3/4/2016	1.98	46	35.91	13.67
	912		3.62	75	57.84	15.23
	913		19.87	125	129.68	29.99
852	8521	15/1/2018	2.08	29	33.47	15.07
	8522		124.87	701	886.40	334.30

878	8781	16/1/2018	0.48	15	18.54	8.38
79	791	15/1/2018	2.85	36	32.52	11.74
	792		1.27	36	32.52	11.74
62	621	13/2/2018	3.47	92	100.45	42.79
	622		1.58	40	43.32	14.05
855	8551	13/2/2018	26.82	53	56.00	16.24
812	8121	13/2/2018	1.35	32	43.78	22.78
	8122		2.77	73	71.88	27.79
99	991	12/3/2018	2.47	65	92.86	37.10
	992		1.28	41	40.08	18.89
90	901	13/3/2018	1.41	38	43.15	7.19
	902		2.48	66	81.39	17.16
	903		21.30	177	242.15	88.53
72	721	13/3/2018	2.00	53	70.76	12.70
	722		3.27	86	96.11	44.30
908	9081	9/4/2018	31.6	187	229.69	149.78
873	8731	10/4/2018	9.02	36	51.95	12.08
	8732		1.10	31	27.99	9.53
9082	90821	10/4/2018	1.57	42	52.67	14.80
823	8231	14/12/201	1.25	61	51.64	24.74
697	6971	25/1/2019	135.05	579	953.74	527.69
	6972		6.08	98	125.18	15.83
21	211	26/1/2019	61.22	392	525.06	177.91
68	681	28/3/2019	95.62	374	718.57	270.90
684	6841	15/2/2020	73.40	335	566.05	162.37

TABLE S3

Summary of generalised linear mixed models developed to assess the influence of oceanographic variables on foraging patterns of Red-billed Tropicbirds on St. Eustatius[a]

Fixed effects	Model	AICc	ΔAICc	R^2m	R^2c
Bathymetry + SST + Exocoetidae spp. + chl *a* + euphotic depth + salinity	**2**	**3954.4**	**0**	**0.16**	**0.37**
Bathymetry + SST + Exocoetidae spp. + chl *a* + euphotic depth	**8**	**3954.9**	**0.5**	**0.16**	**0.38**
Bathymetry + SST + Exocoetidae spp. + chl *a* + euphotic depth + salinity + Exocoetidae spp.^{2}	**11**	**3955.7**	**1.2**	**0.16**	**0.38**
Bathymetry + SST + Exocoetidae spp. + chl *a* + euphotic depth + salinity + SST^2	**10**	**3956.0**	**1.5**	**0.17**	**0.37**
Bathymetry + SST + Exocoetidae spp. + chl *a* + euphotic depth + salinity + chl a^2	**12**	**3956.0**	**1.6**	**0.16**	**0.37**
Bathymetry + SST + Exocoetidae spp. + chl *a* + euphotic depth + salinity + salinity^2	**14**	**3956.1**	**1.7**	**0.16**	**0.37**
Bathymetry + SST + Exocoetidae spp. + chl *a* + euphotic depth + salinity + euphotic depth^2	**13**	**3956.3**	**1.9**	**0.16**	**0.37**
Bathymetry + SST + Exocoetidae spp. + chl *a* + euphotic depth + salinity + bathymetry^2	**9**	**3956.3**	**1.9**	**0.16**	**0.37**
Bathymetry + SST + Exocoetidae spp. + chl *a* + salinity	7	3973.7	19.2	0.16	0.38
SST + Exocoetidae spp. + chl *a* + euphotic depth + salinity	3	3979.5	25.0	0.10	0.29
Bathymetry + SST + Exocoetidae spp. + chl *a* + euphotic depth + salinity	5	3987.0	32.5	0.12	0.31
Bathymetry + SST + Exocoetidae spp. + euphotic depth + salinity	6	4734.9	780.5	0.12	0.30
Bathymetry + Exocoetidae spp. + chl *a* + euphotic depth + salinity	4	6569.1	2614.7	0.05	0.21
Intercept only	1	7912.4	3957.9	0	0.10

[a] The most parsimonious models were selected by Akaike information criterion for small sample sizes (AICc) (highlighted in bold), with the model fit indicated by R^2, for the main effects only (R^2m) and including a random effect for trip ID (R^2c). SST = sea surface temperature; chl *a* = chlorophyll *a*

TABLE S4

Overview of Red-billed Tropicbird regurgitates collected from Pilot Hill, St. Eustatius, in 2018 and 2019[a]

Date (D/M/Y)	Nest ID	Species	Total fish length (cm)	Lower tail fin length (mm)	Upper tail fin length (mm)	Tail spine length (mm)	Wing length (cm)	Rear wing length (cm)	Comment
11-1-2018	77	Flying fish sp.	-	-	41.5	23.8	-	-	Dried tail end
17-1-2018	77	Fourwing flying fish (*Hirundichthys affinis*)	21.2	52.3	42.0	-	10.2	5.2	Semi-fresh, almost complete
24-1-2018	77	Flying fish sp.	>23	57.8	45.0	21.4	-	6.2	Semi-fresh, tail end
1-2-2018	71	Flying fish sp.	-	62.8	50.2	-	-	-	Semi-fresh, tail end
19-1-2018	77	UnID fish sp.	-	-	-	-	-	-	Dried tail end
4-1-2018	58	Flying fish sp.	-	52.5	42.2	-	-	-	Semi-fresh, tail end
19-1-2018	852	Flying fish sp.	-	53.0	30.4	-	-	-	Dried tail end
13-2-2018	62	Flying fish sp.	-	47.7	33.9	-	-	-	Semi-dry tail end
13-2-2018	71	Flying fish sp.	-	42.5	42.5	-	-	-	Dried tail end
13-2-2018	823	Flying fish sp.	-	63.0	45.3	-	-	-	Semi-dry tail end
20-1-2018	852	Flying fish sp.	-	-	-	-	10.2	-	Dried fish head
14-2-2018	852	Flying fish sp.	-	-	-	-	10.0	-	Dried wing
15-1-2018	79	Flying fish sp.	>18	42.2	38.2	-	-	-	Semi-fresh, tail end
15-1-2018	79	Flying fish sp.	>12	30.0	24.4	-	6.1	-	Semi-fresh, tail end
15-1-2018	79	Flying fish sp.	>10	31.1	24.5	-	-	-	Semi-fresh, tail end

15-1-2018	79	Flying fish sp.	>7	26.5	22.2	-	-	-	Semi-fresh, tail end
14-2-2018	843	Flying fish sp.	-	54.5	39.1	-	-	-	Dried tail end
14-2-2018	836	Flying fish sp.	-	49.0	42.5	-	-	-	Dried tail end
14-2-2018	836	UnID fish sp.	-	-	-	-	-	-	Dried tail end
14-2-2018	830	Flying fish sp.	-	-	-	-	-	-	Vertebrae
14-2-2018	-	UnID fish sp.	-	-	-	-	-	-	Dried tail end
14-2-2018	814	Flying fish sp.	-	44.3	41.3	-	9.4	-	Dried tail end
26-11-2018	877	Flying fish sp.	>13.2	-	-	50.1	-	-	Dried tail end
12-10-2018	877	Flying fish sp.	13.2	-	-	46.4	8.7	-	Fresh, almost complete
1-2-2019	697	Needlefish sp.	>25	-	-	-	-	-	Half-digested, incomplete
1-2-2019	697	UnID fish sp.	4.2	-	-	-	-	-	Head only
1-2-2019	697	Poss. flying fish sp.	12.1	31.0	29.0	-	-	-	Semi-dried full fish
6-2-2019	890	UnID fish sp.	11.3	58.0	41.0	-	-	-	Tail only, incomplete
21-2-2019	71	Needlefish sp.	-	-	-	-	-	-	Dried head only
20-2-2019	687	UnID fish sp.	11.9	51.0	38.0	-	-	-	Dried tail end
20-2-2019	687	Needlefish sp.	3.3	-	-	-	-	-	Dried tail end
20-2-2019	687	Flying fish sp.	9.3	22.0	16.0	-	-	-	Dry, missing head
1-3-2019	890	UnID fish sp.	11.2	28.0	21.0	-	-	-	Dried tail end

1-3-2019	890	Flying fish sp.	17.7	43.0	34.0	-	-	-	Dried, missing head
1-3-2019	890	Needlefish sp.	18.0	61.0	49.0	-	-	-	Dried tail end
1-3-2019	890	UnID fish sp.	4.3	-	-	-	-	-	Dried head only
1-3-2019	890	UnID fish sp.	5.2	-	-	-	-	-	Dried vertebrae
1-3-2019	890	UnID fish sp.	3.7	-	-	-	-	-	Dried wing only
5-3-2019	522	Flying fish sp.	14.3	47.0	38.0	-	-	44/42	Dried tail end
20-2-2019	687	Needlefish sp.	15.0	51.0	33.0	-	-	-	Dried tail end
9-3-2019	71	Flying fish sp.	21.0	-	47.0	-	11.7	-	Semi-fresh
14-3-2019	71	UnID fish sp.	8.6	-	-	-	-	-	Half-digested
11-4-2019	806	Flying fish sp.	15.1	-	-	-	5.7	-	Half-digested, head end
11-4-2019	806	Flying fish sp.	-	-	-	-	-	-	Mostly digested
5-4-2019	New 2	Needlefish sp.	17.5	43.0	34.0	-	-	-	Fresh, head missing
5-4-2019	New 2	Needlefish sp.	18.1	46.0	37.0	-	-	-	Fresh, tail end
5-4-2019	New 2	UnID fish sp.	15.3	56.0	42.0	-	-	-	Half-digested tail end

[a] UnID = unidentified

TABLE S5

Summary of Exocoetidae species oceanographic preferences (10th, 90th) based on foraging parameters of Red-billed Tropicbirds from St. Eustatius[a]

Species	Depth (m; min)	Depth (m; max)	SST (C; min)	SST (C; max)	Salinity (psu; min)	Salinity (psu; max)	Primary productivity (mg/m^3 day^{-1}; min)	Primary productivity (mg/m^3 day^{-1}; max)	Dist. from land (km; min)	Dist. from land (km; max)
Cheilopogon cyanopterus (Margined flying fish)	2	11	24.15	28.40	32.43	36.26	0.49	21.02	17	355
Cheilopogon melanurus (Atlantic flying fish)	2	11	23.09	28.07	33.73	36.37	0.30	14.92	19	376
Exocoetus obtusirostris (Oceanic two-wing flying fish)	2	11	21.70	28.09	34.41	36.53	0.27	11.40	23	841
Exocoetus volitans (Tropical two-wing flying fish)	2	11	23.82	28.33	33.43	36.26	0.65	14.52	23	1334
Hirundichthys affinis (Fourwing flying fish)	10	50	24.84	28.13	33.45	36.22	0.33	16.63	22	411
Hirundichthys speculiger (Mirrorwing flying fish)	2	11	25.34	28.50	32.94	35.57	0.77	14.61	26	1179
Parexocoetus brachypterus (Sailfin flying fish)	2	11	24.36	28.51	32.14	36.19	0.51	22.94	17	271

Cheilopogon exsiliens (Bandwing flying fish)	5	26	23.39	27.99	34.32	36.55	0.23	12.14	21	615
Cheilopogon furcatus (Spotfin flying fish)	2	11	21.52	28.31	33.20	36.44	0.30	14.71	20	653
Cypselurus comatus (Clearwing flying fish)	5	26	25.99	28.05	34.38	36.44	0.15	8.58	20	347
Hirundichthys rondeletii (Black wing flying fish)	22	95	19.15	27.68	33.42	36.79	0.31	16.05	19	590
Hirundichthys volador (Atlantic blackwing flying fish)	2	11	23.37	28.22	34.34	36.55	0.29	18.98	15	245
Parexocoetus hillianus (Flying fish)	22	95	24.03	28.11	33.98	36.19	0.38	12.22	24	354

[a] Data downloaded from www.aquamaps.org (Kaschner *et al*. 2019). SST = sea surface temperature.

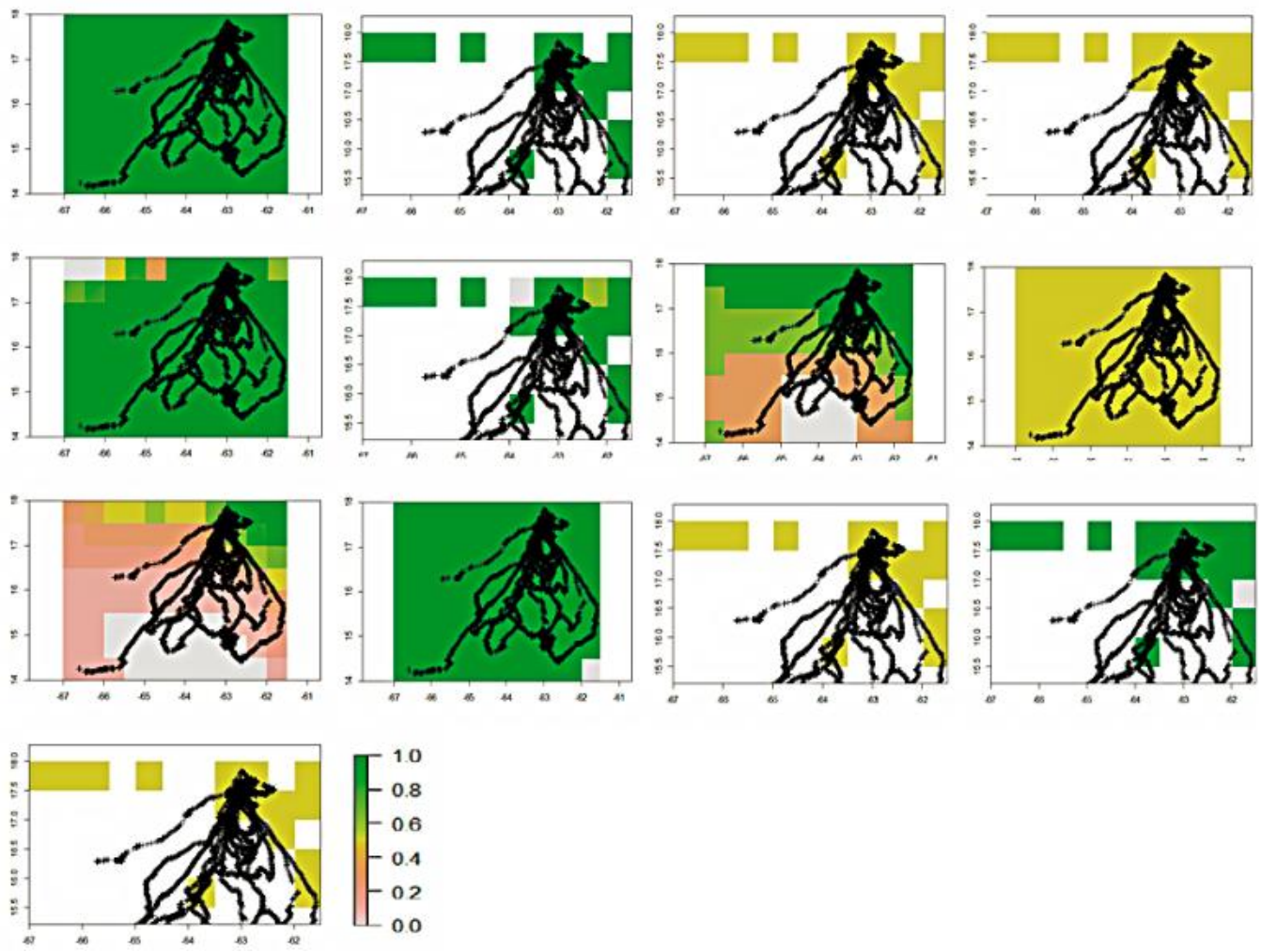

Fig. S1. Distribution and density of Exocoetidae species in relation to Red-billed Tropicbird foraging activity (black lines). x axis = longitude; y axis = latitude. Units = probability of occurrence. Row 1: Margined flying fish *Cheilopogon cyanopterus*, Atlantic flying fish *Cheilopogon melanurus*, two-wing flying fish *Exocoetus volitans*; Row 2: Fourwing flying fish *Hirundichthys affinis*, Mirrorwing flying fish *Hirundichthys speculiger*, Clearwing flying fish *Cypselurus comatus*; Row 3: Bandwing flying fish *Cheilopogon exsiliens*, Spotfin flying fish *Cheilopogon furcatus*, Black wing flying fish *Hirundichthys rondeletii*; Row 4: Atlantic Blackwing flying fish *Hirundichthys volador*, Sailfin flying fish *Parexocoetus brachypterus*, 'flying fish' *Parexocoetus hillianus*; Row 5: Oceanic two-wing flying fish *Exocoetus obtusirostris*.

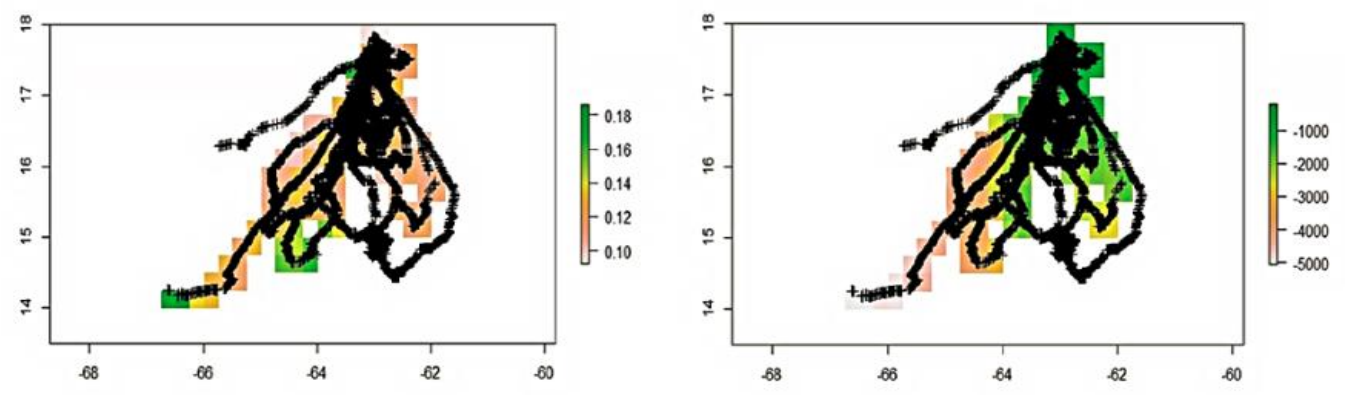

Fig. S2. Maps showing significant oceanographic variables in relation to Red-billed Tropicbird foraging activity (black lines). x axis = longitude; y axis = latitude. Left: chlorophyll *a* (mg m^{-3}); right: bathymetry (m).