Power source, data retrieval method, and attachment type affect success of dorsally mounted tracking tag deployments in 37 species of shorebirds

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Journal of Avian Biology

Supporting Information

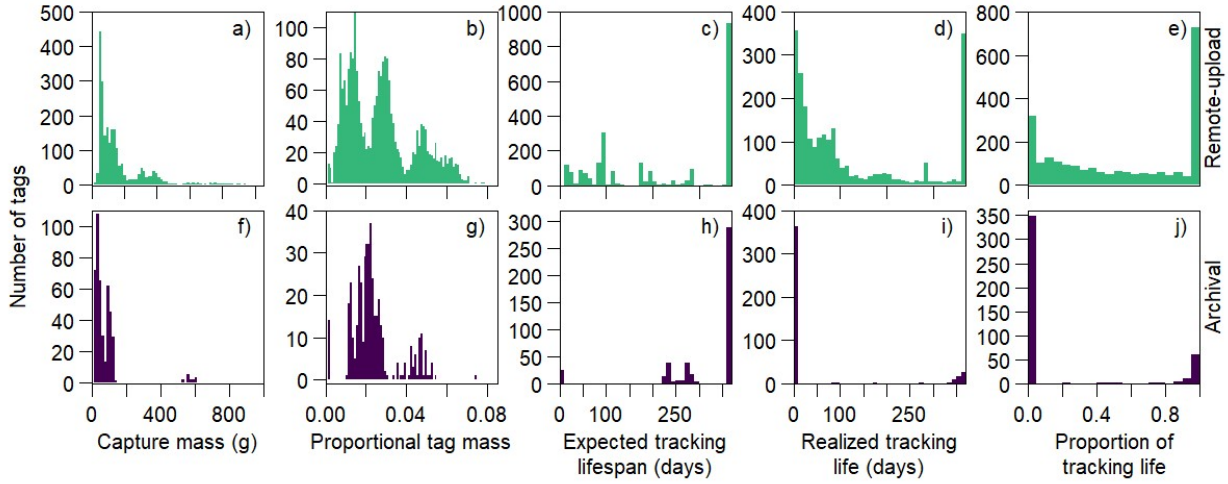

Figure S1. Distributions of covariate values in the compiled dataset for remote-upload (a–e) and archival (f–j) tracking tag deployments on shorebirds.

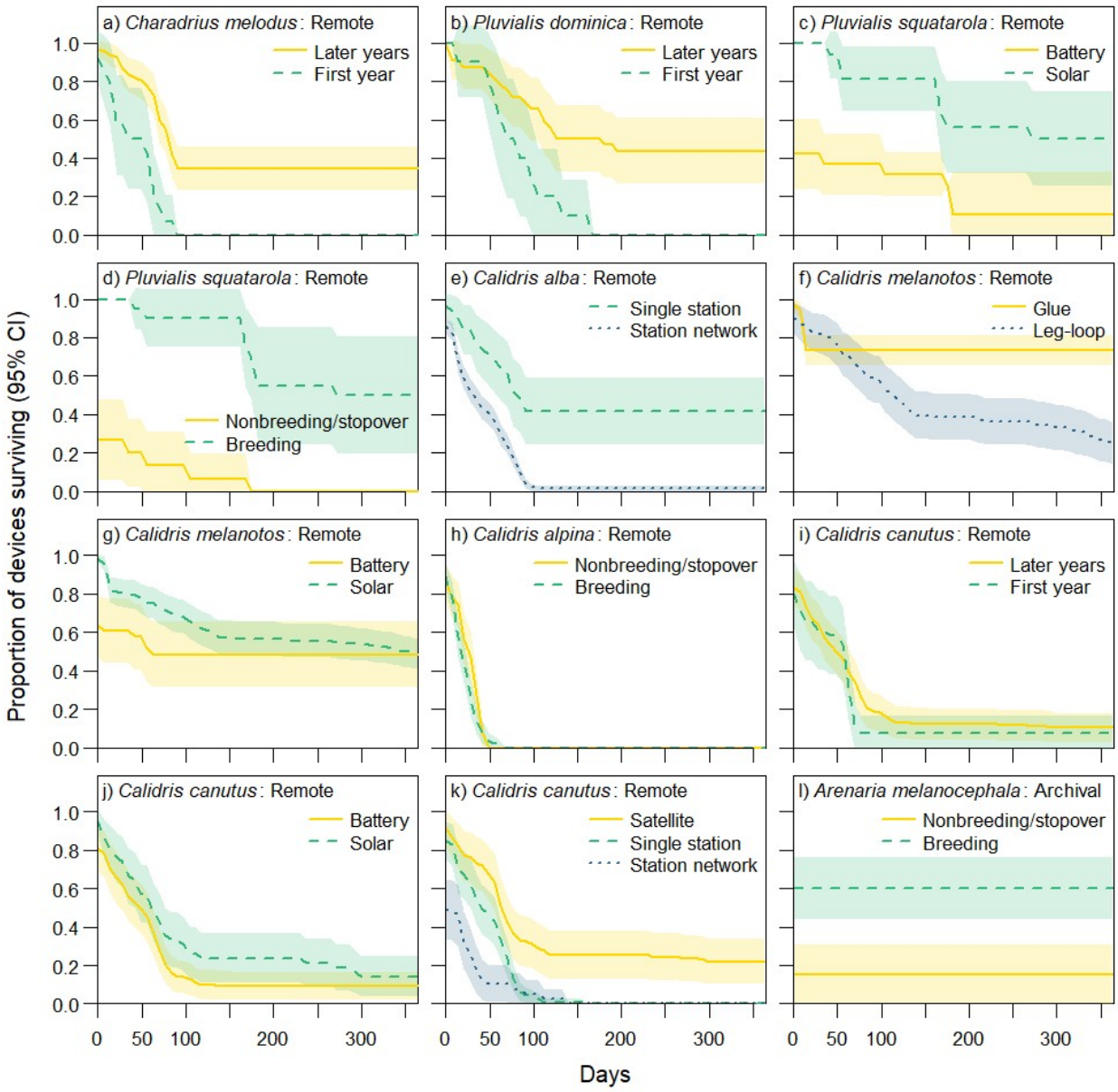

Figure S2. Species-specific modeled conditional survival curves for tracking tag deployments with remote data upload (a–k) or archival data storage (l) for each level of each covariate that was significant in the Cox model (**Table S1**–**S2**). Shorebird species with <20 tag deployments deployed were not tested, and those with no significant covariate effects in the Cox model are not shown here. Shaded bands indicate 95% CIs around the modeled estimates. Survival curves are weighted means across levels of other covariates when those levels co-occur with the indicated covariate, but may be confounded with other covariates when all levels are not represented. Expected tracking durations varied within and across species depending on tracker models and settings, so short tracking duration did not necessarily mean failure if it met the expected duration.

Table S1. Projects included in the analysis of success of dorsally mounted tracking tag deployments in shorebirds, sorted by sample size (number of tag deployments). Sites are locations where trackers were deployed. Author initials correspond to authors of this paper.

Project description	Region	Sites	Tag deployments	References/authors
Saskatchewan shorebird migration	Louisiana & Texas, USA; Saskatchewan, Canada	4	308	Bianchini and Morrissey (2018) , Bianchini et al. (2021, 2023), Howell et al. (2019, 2020)
Arctic shorebird migration	Alaska, USA; Nunavut, Canada	11	217	RBL, STS, CJL, RLM, JFL, SCB, SS, MAG, NL, JB, PAS, WBE
Pectoral Sandpiper movements	Alaska, USA	2	211	BK, MV, JK
Piping Plover and Red Knot habitat use with wind energy development	Texas, USA	2	151	DJN
Buff-breasted Sandpiper migration	Alaska & Texas, USA; Buenos Aires, Argentina; Rio Grande do Sul, Brazil; Rocha, Uruguay	5	128	TLT, JA, JBA, GC, RBL, RLM
Ruff migration	The Netherlands	1	99	BK, MV, TP
Lesser Yellowlegs migratory connectivity	Alaska, USA; Manitoba, Northwest Territories, Ontario, & Quebec, Canada	7	89	McDuffie et al. (2022a, b), Johnson and McDuffie (2024)
Movements of breeding Dunlin	Alaska, USA	1	75	SAH, RBL, SJD
Mountain Plover migration	Colorado, USA	3	72	AKP, MBW
Red Phalarope migration	Alaska, USA	1	72	Saalfeld et al. (2024)
Migratory Connectivity Project	Alaska, Georgia, New Jersey, & Texas, USA	10	69	Scarpignato et al. (2016)
Migration of Great Knots	Northwest Australia	1	68	Chan et al. (2019)
rufa Red Knot migratory connectivity	Washington, USA	1	66	JAJ, LAM
Black-tailed Godwit migration (Iberia)	Extremadura, Spain; Lisboa, Portugal	4	61	Senner et al. (2015, 2019), Loonstra et al. (2019), Nightingale et al. (2024)
Winter waterbird habitat use at Severn Estuary	South Wales, United Kingdom	1	60	NHKB, RMWG, SEF, RCT, NAC, ESS, LJW, SGD
Snowy Plover movements	Sinaloa, Mexico	1	57	Eberhart-Phillips et al. (2020)
Migration of shorebirds breeding at Burntpoint Creek	Ontario, Canada	1	56	GSB
Black Turnstone migration	Alaska, USA; Washington, USA	3	55	Taylor et al. (2022)
Dunlin wintering ecology	Shanghai, China	1	51	Choi et al. (2014)
Kentish Plover use of nonbreeding sites	Setúbal, Portugal	1	50	ADR
Migration of *anadyrensis* Bar-tailed Godwits	Northwest Australia	2	48	Chan et al.(2022)

Project description	Region	Sites	Tag deployments	References/authors
Long-billed Dowitcher migration	Alaska, USA	1	47	BK, MV, EK
Pacific Golden-Plover migration	Alaska & Hawaii, USA; French Polynesia	3	41	Johnson et al. (2020, 2024)
piersmai Red Knot migration	Northwest Australia	2	39	Piersma et al. (2021b)
Migration of Icelandic Whimbrels	South Iceland	2	38	CC, JAA, TGG
Movements of juvenile *baueri* Bar-tailed Godwits	North Island, New Zealand	3	38	JRC, PFB, MV, & BK
Black-tailed Godwit migration (Haanmeer)	Súdwest Fryslân, The Netherlands	1	36	Loonstra et al. (2019), Verhoeven et al. (2021, 2022a, b)
Piping Plover and Sanderling winter habitat use	Texas, USA	1	36	DJN
Piping Plover habitat use	Texas, USA	2	35	DJN
Migration of juvenile Black-tailed Godwits	Súdwest Fryslân & Ameland, The Netherlands	17	29	Verhoeven et al. (2022a), Loonstra et al. (2023)
Long-billed Curlew migration	Montana, Nevada, & Oregon, USA	3	28	Page et al. (2014)
Siberian Bar-tailed Godwit flyways	Mauritania; The Netherlands; Oman	3	26	Bom et al. (2022, 2024)
Wilson's Plover migration routes and wintering areas	Texas, USA	3	26	DJN
Habitat use of shorebirds at Humber Estuary	Yorkshire, United Kingdom	2	25	Mander et al. (2022)
Mountain Plover local movements	Colorado, USA	1	25	TJM, MBW
Partial migration in Iceland Oystercatchers	Iceland	7	24	JAA, VM, BÞ
Migration of adult *baueri* Bar-tailed Godwits	North Island, New Zealand	1	20	JRC, DSM, PFB
Movements of Black Oystercatchers	British Columbia, Canada	3	20	Ware et al. (2023)
Ecological impact of monitoring migratory shorebirds	Queensland, Australia	1	19	(Choi et al. 2017)
Black Oystercatcher movement ecology	Alaska, USA	3	18	BHR, LW, DJG
Red-necked Stint and Red-necked Phalarope migration	Chukotka, Russian Federation	2	18	Mu et al. (2018, 2020)
Spoon-billed Sandpiper migration	Chukotka, Russian Federation; Jiangsu, China	2	16	RE Green, NAC, GQAA
baueri Bar-tailed Godwit migration	Alaska, USA; New Zealand	3	11	Gill et al. (2009)
Bristle-thighed Curlew migration	Hawaii, USA	1	11	TLT, DCD, DRR
Pacific Whimbrel migration	Alaska, USA	1	11	Ruthrauff et al. (2021)
Habitat connectivity of breeding Black-tailed Godwits	Lower Saxony, Germany	1	10	CM, JM, HB
Marbled Godwit migration	Alaska, USA	1	9	Ruthrauff et al. (2019)
Marbled Godwit migration	Alberta, Canada	1	8	McKellar et al. (2025)
Habitat use and migratory ecology of Neotropical shorebirds	Rio Grande do Sul, Brazil	1	7	Faria et al. (2023)
Local- and landscape-scale management for curlews	Norfolk & Suffolk, United Kingdom	3	7	Ewing (2023)
canutus Red Knot migration	The Netherlands	2	3	TLT, TP, YCC, DCD, EMAK
Shorebird wintering ecology	Guangdong, China	1	1	Lyu et al. (2023)

Table S2. Sample sizes and success metrics summarized by tracker make and model for our study investigating deployment of dorsally mounted tracking tags on shorebirds. Success metrics include expected and realized tracking duration in days, and the proportion of tag deployments that survived to the expected tracking duration; when a range is not given, all shared the same value. Expected tracking duration was determined by researchers based on manufacturer specifications and the project-specific data acquisition schedule (thus expectations could vary for a given tracker model).

							Tracking duration (days)		
Data retrieval	Tag manufacturer	Tracker model	Location acquisition	Power source	Mean (range) tracker mass (g)	Tag deployments	Median (range) expected	Median (range) realized	Prop. reaching expected
Satellite	Lotek/Biotrack/Sirtrack	Pinpoint 30	GPS	Battery	4 (3-4)	182	187 (29-365)	53 (0-314)	0.24
		Pinpoint 75	GPS	Battery	4	192	190 (120–290)	145 (0–389)	0.42
		Pinpoint 120	GPS	Battery	5	43	200 (199–220)	118 (1–317)	0.35
	Microwave Telemetry	PTT-100/5/ZE	ARGOS	Solar	2	16	92	94 (19–186)	0.50
		Solar 2g PTT	ARGOS	Solar	2 (2–10)	305	365	115 (0–1573)	0.25
		Solar 5g PTT	ARGOS	Solar	5 (2–7)	380	365 (14–365)	102 (0–1957)	0.51
		Solar 9.5g PTT	ARGOS	Solar	10 (4–18)	298	365	365 (0–4467)	0.51
GSM	Druid	Mini	GPS	Solar	5	1	365	51 (51–51)	0
	Movetech Telemetry	Flyway-18	GPS	Solar	18	24	365	22 (0–614)	0.04
Telemetry station	Druid	NANO	GPS	Solar	3	4	44 (43–45)	26 (6–32)	0
	Ecotone Telemetry	Sterna	GPS	Solar	7	4	365	186 (0–386)	0.50
	Lotek/Biotrack/Sirtrack	NTQB-3-2	detection	Battery	1	421	100 (90–248)	42 (0–125)	0.10
		NTQB-4-2	detection	Battery	1	165	180 (180–200)	29 (0–265)	0.02
		PIP2	detection	Battery	1	51	49	27 (0–48)	0
		PIP41 ag393	detection	Battery	2	19	100	7 (0–79)	0
	Milsar	nanoFix-GEO+RF	GPS	Solar	4	71	59 (40–71)	20 (0–61)	0
	PathTrack	nanoFix-GEO+RF	GPS	Battery	5 (4–5)	25	60 (28–60)	29 (0–69)	0.28
		nanoFix-GEO+RF	GPS	Solar	4 (4–7)	105	28 (28–365)	32 (0–1097)	0.50
Archival	Lotek/Biotrack/Sirtrack	MK12-S	Light levels	Battery	2	15	365	0 (0–354)	0.20
		MK5780	Light levels	Battery	2	40	365	343 (0–726)	0.52
		MK5790	Light levels	Battery	1	23	365	0 (0–405)	0.22
		Pinpoint 10	GPS	Battery	1	130	266 (222-365)	0 (0-354)	0.02
		Pinpoint 50	GPS	Battery	2	98	365 (5–365)	0 (0–385)	0.22
	Migrate Technology	C65-Super	Light levels	Battery	1	14	365	0 (0–400)	0.43
	PathTrack	P65A11-11-SEA	Light levels	Battery	1	68	365 (300–365)	0 (0–709)	0.21
		nanoFix-mini	GPS	Solar	1	51	365	0 (0–176)	0

Table S3. Estimated effects of covariates on failure of dorsally mounted tracking tag deployments in shorebirds, from mixed-effects Cox proportional hazards models. Values are effect sizes for fixed effects and variance for random effects; the species effect accounts for taxonomic relationships. Positive effects indicate an association with a higher risk of failure, negative effects indicate an association with a decreased risk of failure. Cases where subsets of the data were tested but the effect was not significant (harness material and sex for remote-upload tag deployments; harness material and harness fastener for archival tag deployments) are not shown. Only one model was run for data subsets (full = final). Statistically significant effects (95% CIs not overlapping zero) are bolded.

		Model estimates: mean (95% CI)	
Dataset	Covariate	Full model	Final model
Remote-upload: all	Expected tracking duration	0.002 (0.00, 0.004)	-
	Body mass at capture	-0.001 (-0.002, 0.001)	-
	Year	-0.03 (-0.08, 0.03)	-
	Year group: first	**0.67 (0.46, 0.88)**	**0.68 (0.49, 0.88)**
	Relative tracker mass	**0.12 (0.01, 0.23)**	**0.13 (0.03, 0.22)**
	Attachment type: body harness	-0.10 (-0.77, 0.56)	0.28 (-0.27, 0.83)
	Attachment type: leg-loop	**-1.11 (-1.74, -0.47)**	**-0.65 (-1.03, -0.27)**
	Power source: solar	**-1.10 (-1.63, -0.57)**	**-0.81 (-1.23, -0.38)**
	Data retrieval: single station	**1.01 (0.18, 1.85)**	**1.14 (0.34, 1.95)**
	Data retrieval: station network	0.98 (-0.10, 2.06)	**1.21 (0.19, 2.24)**
	Data retrieval: GSM	**2.45 (0.58, 4.32)**	**2.13 (0.30, 3.96)**
	Annual stage: nonbreeding	0.49 (-0.03, 1.02)	**0.42 (0.05, 0.79)**
	Annual stage: breeding	0.15 (-0.43, 0.74)	-
	Annual stage: stopover	0.06 (-0.53, 0.64)	-
	Random effect of species	0.26	0.30
	Random effect of project	0.51	0.44
	Random effect of site	0.18	0.18
Remote-upload: glued	**Year: first**		**0.54 (0.27, 0.81)**
	Relative tracker mass		0.14 (-0.05, 0.33)
	Power source: solar		0.89 (-0.11, 1.89)
	Data retrieval: single station		**1.98 (0.79, 3.17)**
	Data retrieval: station network		**1.94 (0.72, 3.16)**
	Annual stage: nonbreeding		-0.86 (-1.76, 0.04)
	Glue method: trim only		0.14 (-0.57, 0.84)
	Glue method: patch only		-0.52 (-1.25, 0.20)
	Glue method: patch and trim		**-1.44 (-2.21, -0.68)**
	Random effect of species		0.02
	Random effect of project		0.01
	Random effect of site		0.50
Archival: all	Expected tracking duration	0.001 (-0.002, 0.004)	-
	Body mass at capture	-0.001 (-0.004, 0.002)	-
	Relative tracker mass	0.06 (-0.09, 0.20)	-
	Year	0.05 (-0.13, 0.23)	-
	Year group: first	-0.05 (-0.55, 0.44)	-
	Power source: solar	0.55 (-0.29, 1.39)	-
	Annual stage: breeding	-1.21 (-2.60, 0.19)	**-1.00 (-1.61, -0.39)**
	Annual stage: nonbreeding	-0.30 (-1.44, 0.84)	-
	Random effect of species	0.00	0.00
	Random effect of project	0.19	0.39
	Random effect of site	0.00	0.00
Archival: known sex	Breeding		0.51 (-0.67, 1.69)
	Sex: male		**-0.28 (-0.55, -0.02)**
	Random effect of species		0.00
	Random effect of project		0.41
	Random effect of site		0.00

Table S4. Estimated effects of covariates on failure of dorsally mounted tracking tag deployments in shorebirds, from species-specific mixed-effects Cox proportional hazards models. Not all covariates could be tested for all species, as some groups were confounded with other covariates, invariant, or too small (N < 10). Similarly, we did not include random effects because site and project were often confounded with tag deployment traits. Bold = effect significantly different from zero; positive effects indicate an association with a higher risk of failure.

Table S4A: Tag deployments with remote-upload data acquisition.

Species	Covariate	Mean (95% CI)	Tag deployments
Black Oystercatcher	Capture mass	0.01 (-0.01, 0.03)	24
(*Haematopus bachmani*)	Relative tracker mass	-4.69 (-9.55, 0.17)	24
Eurasian Oystercatcher	Year: later	baseline	10
(*Haematopus ostralegus*)	Year: first	1.03 (-0.03, 2.09)	14
	Capture mass	0.03 (-0.17, 0.23)	24
	Relative tracker mass	2.84 (-13.25, 18.93)	24
	Nonbreeding/stopover	baseline	13
	Breeding	0.32 (-0.56, 1.20)	11
Semipalmated Plover	Expected tracking duration	0.02 (-0.08, 0.12)	22
(*Charadrius semipalmatus*)	Capture mass	-0.14 (-1.83, 1.55)	22
	Relative tracker mass	5.12 (-51.48, 61.72)	22
Piping Plover	Year: later	baseline	67
(*Charadrius melodus*)	Year: first	1.33 (0.64, 2.02)	14
	Capture mass	-1.06 (-2.12, 0.00)	81
	Relative tracker mass	-30.18 (-67.56, 7.20)	81
Pacific Golden Plover	Expected tracking duration	-0.00 (-0.02, 0.02)	41
(*Pluvialis fulva*)	Capture mass	0.05 (-0.05, 0.15)	41
	Relative tracker mass	2.23 (-4.04, 8.50)	41
	Power source: battery	baseline	31
	Power source: solar	-1.12 (-5.26, 3.02)	10
	Nonbreeding/stopover	baseline	25
	Breeding	-0.44 (-1.75, 0.87)	16
American Golden Plover	Year: later	baseline	32
(*Pluvialis dominica*)	**Year: first**	**1.28 (0.40, 2.16)**	10
	Expected tracking duration	-0.01 (-0.09, 0.07)	42
	Capture mass	-0.18 (-0.57, 0.21)	42
	Relative tracker mass	-8.48 (-28.04, 11.08)	42
Grey Plover	Year: later	baseline	23
(*Pluvialis squatarola*)	Year: first	-1.12 (-3.32, 1.08)	12
	Expected tracking duration	0.01 (-0.01, 0.03)	35
	Capture mass	0.01 (-0.03, 0.05)	35
	Relative tracker mass	1.16 (-0.84, 3.16)	35
	Power source: battery	baseline	19
	Power source: solar	**-2.80 (-5.45, -0.15)**	16
	Nonbreeding/stopover	baseline	15
	Breeding	**-2.99 (-4.93, -1.05)**	20
Long-billed Curlew	Capture mass	-0.05 (-0.21, 0.11)	39
(*Numenius americanus*)	Relative tracker mass	-7.21 (-34.79, 20.37)	39

Species	Covariate	Mean (95% CI)	Tag deployments
Eurasian Curlew (*Numenius arquata*)	**Expected tracking duration**	**0.07 (0.03, 0.11)**	57
	Capture mass	0.00 (0.00, 0.00)	57
	Power source: battery	baseline	20
	Power source: solar	1.17 (-0.03, 2.37)	37
Whimbrel (*Numenius phaeopus*)	Expected tracking duration	0.00 (0.00, 0.00)	74
	Capture mass	0.00 (0.00, 0.00)	74
	Relative tracker mass	**-1.57 (-2.69, -0.45)**	74
	Attachment type: glue	baseline	24
	Attachment type: body harness	1.88 (-0.14, 3.90)	15
	Attachment type: leg-loop	1.34 (-0.66, 3.34)	35
Bar-tailed Godwit (*Limosa lapponica*)	**Capture mass**	**0.01 (0.01, 0.01)**	143
	Relative tracker mass	**0.74 (0.13, 1.35)**	143
	Tracker model: Solar 2g PTT	baseline	17
	Tracker model: Solar 5g PTT	**-1.86 (-2.88, -0.84)**	65
	Tracker model: Solar 9.5g PTT	**-2.29 (-3.96, -0.62)**	61
Marbled Godwit (*Limosa fedoa*)	Expected tracking duration	-0.01 (-0.03, 0.01)	26
	Capture mass	-0.02 (-0.04, 0.00)	26
	Relative tracker mass	**-2.23 (-4.19, -0.27)**	26
Black-tailed Godwit (*Limosa limosa*)	Year: later	baseline	109
	Year: first	0.12 (-1.39, 1.63)	27
	Capture mass	0.00 (-0.02, 0.02)	136
	Relative tracker mass	-0.00 (-1.31, 1.31)	136
	Nonbreeding/stopover	baseline	60
	Breeding	1.38 (-0.66, 3.42)	76
	Tracker model: Solar 2g PTT	baseline	36
	Tracker model: Solar 5g PTT	0.55 (-1.55, 2.65)	39
	Tracker model: Solar 9.5g PTT	1.69 (-0.72, 4.10)	61
Sanderling (*Calidris alba*)	**Expected tracking duration**	**0.03 (0.01, 0.05)**	299
	Capture mass	-0.03 (-0.09, 0.03)	299
	Relative tracker mass	-1.23 (-3.95, 1.49)	299
	Data retrieval: single station	baseline	31
	Data retrieval: station network	**0.98 (0.41, 1.55)**	268
Buff-breasted Sandpiper (*Tryngites subruficollis*)	Year: later	baseline	90
	Year: first	-0.16 (-0.92, 0.60)	38
	Expected tracking duration	**-0.01 (-0.01, -0.01)**	128
	Capture mass	0.00 (-0.08, 0.08)	128
	Relative tracker mass	-0.28 (-1.28, 0.72)	128
	Attachment type: glue	baseline	10
	Attachment type: body harness	0.87 (-0.84, 2.58)	16
	Attachment type: leg-loop	0.30 (-1.05, 1.65)	102
	Power source: battery	baseline	106
	Power source: solar	-0.75 (-4.08, 2.58)	22
	Nonbreeding/stopover	baseline	103
	Breeding	-0.16 (-1.00, 0.68)	25
Pectoral Sandpiper (*Calidris melanotos*)	Year: later	baseline	169
	Year: first	0.48 (-0.11, 1.07)	75

Species	Covariate	Mean (95% CI)	Tag deployments
	Expected tracking lifespan	**0.32 (0.16, 0.48)**	244
	Capture mass	0.01 (-0.01, 0.03)	244
	Relative tracker mass	**0.30 (0.12, 0.48)**	244
	Attachment type: glue	baseline	120
	Attachment type: leg-loop	**-111.85 (-169.63, -54.07)**	124
	Power source: battery	baseline	33
	Power source: solar	**-97.13 (-146.95, -47.31)**	211
Dunlin	Year: later	baseline	117
(*Calidris alpina*)	Year: first	0.20 (-0.37, 0.77)	19
	Expected tracking lifespan	-0.02 (-0.04, 0.00)	136
	Capture mass	0.04 (-0.02, 0.10)	136
	Relative tracker mass	0.28 (-0.45, 1.01)	136
	Power source: battery	baseline	61
	Power source: solar	-6.01 (-12.26, 0.24)	75
	Nonbreeding/stopover	baseline	51
	Breeding	**5.19 (0.25, 10.13)**	85
Ruff	Capture mass	0.03 (-0.13, 0.19)	99
(*Philomachus pugnax*)	Relative tracker mass	1.66 (-7.61, 10.93)	99
Great Knot	Capture mass	-0.02 (-0.27, 0.23)	68
(*Calidris tenuirostris*)	Relative tracker mass	-1.31 (-14.89, 12.27)	68
Red Knot	Year: later	baseline	231
(*Calidris canutus*)	**Year: first**	**0.63 (0.22, 1.04)**	41
	Expected tracking lifespan	0.00 (0.00, 0.00)	272
	Capture mass	-0.02 (-0.04, 0.00)	272
	Relative tracker mass	**-1.85 (-3.42, -0.28)**	272
	Attachment type: glue	baseline	218
	Attachment type: body harness	0.58 (-0.81, 1.97)	54
	Power source: battery	baseline	230
	Power source: solar	**-3.43 (-5.98, -0.88)**	42
	Data retrieval: satellite	baseline	123
	Data retrieval: single station	**-4.40 (-8.28, -0.52)**	110
	Data retrieval: station network	-3.54 (-7.34, 0.26)	39
Long-billed Dowitcher	Capture mass	-0.09 (-0.54, 0.36)	47
(*Limnodromus scolopaceus*)	Relative tracker mass	-4.45 (-36.14, 27.24)	47
Common Redshank	Year: later	baseline	20
(*Tringa totanus*)	Year: first	-0.45 (-1.70, 0.80)	15
	Capture mass	**-0.23 (-0.43, -0.03)**	35
	Relative tracker mass	-10.01 (-20.20, 0.18)	35
Lesser Yellowlegs	Capture mass	0.03 (-0.36, 0.42)	89
(*Tringa flavipes*)	Relative tracker mass	0.31 (-7.96, 8.58)	89
Red Phalarope	Capture mass	0.02 (-0.22, 0.26)	92
(*Phalaropus fulicarius*)	Relative tracker mass	0.89 (-2.89, 4.67)	92

Table S4B. Archival tag deployments where data retrieval required recapture.

Species	Covariate	Mean (95% CI)	Tag deployments
Wilson's Plover	Year: later	baseline	11
(*Charadrius wilsonia*)	Year: first	0.07 (-0.79, 0.93)	20
	Capture mass	0.01 (-0.09, 0.11)	31
	Relative tracker mass	-0.44 (-1.52, 0.64)	31
Kentish Plover	Year: later	baseline	50
(*Charadrius alexandrinus*)	Year: first	-0.45 (-5.60, 4.70)	52
	Capture mass	0.07 (-0.34, 0.48)	102
	Relative tracker mass	1.46 (-5.52, 8.44)	102
	Tracker model: nanoFix-mini	baseline	46
	Tracker model: P65A11-11-SEA	baseline	50
	Tracker model: Pinpoint 10	-0.51 (-1.41, 0.39)	6
Mountain Plover	Year: later	baseline	81
(*Charadrius montanus*)	Year: first	0.11 (-0.50, 0.72)	14
	Expected tracking duration	0.00 (0.00, 0.00)	95
	Capture mass	0.14 (0.00, 0.28)	95
	Relative tracker mass	**6.29 (0.70, 11.88)**	**95**
Black Turnstone	Relative tracker mass	0.29 (-3.92, 4.50)	55
(*Arenaria melanocephala*)	Nonbreeding/stopover	baseline	20
	Breeding	**-1.25 (-2.21, -0.29)**	**35**
	Tracker model: MK12-S	baseline	15
	Tracker model: MK5780	0.11 (-0.87, 1.09)	40
Semipalmated Sandpiper	Expected tracking duration	0.02 (-0.02, 0.06)	66
(*Calidris pusilla)*	Relative tracker mass	0.01 (-0.34, 0.36)	66
Dunlin	Expected tracking duration	0.01 (-0.05, 0.07)	55
(*Calidris alpina*)	Relative tracker mass	-0.48 (-1.91, 0.95)	55