



## Supplementary Materials for **Terrestrial animal tracking as an eye on life and planet**

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Published 12 June 2015, *Science* **348**, aaa2478 (2015)  
DOI: [10.1126/science.aaa2478](https://doi.org/10.1126/science.aaa2478)

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**Other Supporting Online Material for this manuscript includes the following:**  
(available at [www.sciencemag.org/content/348/6240/aaa2478/suppl/DC1](http://www.sciencemag.org/content/348/6240/aaa2478/suppl/DC1))

Movie S1

**Table S1.** Data used for figure 3 showing how the resolution of tracking studies has increased over time. Data were collected from study summaries in at Movebank.org in November 2014.

<b>Start Year</b>	<b>Study name in Movebank</b>	<b>Tracking Tech</b>	<b>Animals Tracked</b>	<b>Locations</b>	<b>Locations/Animal</b>
<b>1965</b>	Bill Cochran legacy SWTH migration	VHF	23	294	13
<b>1966</b>	Bill Cochran legacy VEER migration	VHF	8	60	8
<b>1986</b>	Bill Cochran legacy WOTH migration	VHF	8	240	30
<b>1986</b>	Roger Powell bears	VHF	18	2640	147
<b>1995</b>	Limbo Plot Kinkajous	VHF	13	2867	221
<b>1997</b>	MPIO White Stork ARGOS	ARGOS	108	16759	155
<b>1998</b>	MPIO Bar Headed Goose ARGOS	ARGOS	7	2174	311
<b>1998</b>	MPIO Pink Footed Shearwater ARGOS	ARGOS	6	59	10
<b>2000</b>	MPIO White Stork South African Population ARGOS	ARGOS	12	5049	421
<b>2001</b>	Cats in the Albany Pine Bush	VHF	12	813	68
<b>2001</b>	Suburban Coyotes and other carnivores, Kays and Bogan, Albany NY	VHF	39	2258	58
<b>2002</b>	MPIO Lesser Flamingo	ARGOS	53	16975	320
<b>2002</b>	BCI Ocelot	VHF	11	2288	208
<b>2002</b>	Indiana Bat, NYSDEC, New York State	VHF	97	914	9
<b>2004</b>	White-faced capuchin, ARTS Crofoot Barro Colorado Island, Panama	Automated Radio Telemetry System	12	74574	6215
<b>2007</b>	MPIO Lake Constance Ducks ARGOS	ARGOS	26	255	10
<b>2007</b>	MPIO Lake Constance Mallards GPS	GPS	42	78027	1858

<b>2007</b>	Oilbirds	GPS	40	5353	134
<b>2007</b>	Toucan movement and seed dispersal, Gamboa, Panama	GPS	9	2595	288
<b>2007</b>	Orchid Bees ( <i>Exaerete frontalis</i> ) on BCI	VHF	16	111	7
<b>2008</b>	Galapagos Albatrosses	GPS	28	16414	586
<b>2008</b>	MPIO Galapagos Swallow tailed Gull	GPS	190	81259	428
<b>2008</b>	Navigation and migration in European mallards (van Toor et al. 2013)	GPS	79	13797	175
<b>2008</b>	Tamandua mexicana in Panama	GPS	18	22549	1253
<b>2008</b>	Agouti radio Tracking on BCI	VHF	20	1254	63
<b>2009</b>	Eidolon helvu west africa (multiple studies from 2009)	GPS	7	1241	177
<b>2009</b>	Martes pennanti LaPoint New York	GPS	8	47347	5918
<b>2009</b>	MPIO Lesser Flamingo	GPS	51	65099	1276
<b>2009</b>	MPIO_Lesser_Black_Backed_Gull_2009	GPS	127	89899	708
<b>2009</b>	Bats Mexican Free-taileds Uvalde, Texas	VHF	7	564	81
<b>2009</b>	MPIO European Blackbird Bodanruck	VHF	239	6024	25
<b>2010</b>	MPIO_White_Stork_Donana	ARGOS	33	1165	35
<b>2010</b>	Oceanic navigation in Cory's shearwaters	ARGOS	24	3586	149
<b>2010</b>	MPIO_White_Stork_Donana	GPS	33	47288	1433
<b>2010</b>	Oceanic navigation in Cory's shearwaters	GPS	24	173614	7234
<b>2011</b>	Eidolon helvu west africa (multiple studies from 2011)	GPS	16	11099	694
<b>2011</b>	Frigatebirds breeding at Iguana Island, Panama	GPS	9	10341	1149
<b>2012</b>	MPIO PNIC hurricane frigate tracking	ARGOS	9	590	66
<b>2012</b>	Dunn Ranch Bison Tracking	GPS	12	263228	21936

	Project				
<b>2012</b>	Eidolon helvu west africa (multiple studies from 2012)	GPS	9	918	102
<b>2012</b>	MPIO PNIC hurricane frigate tracking	GPS	9	13037	1449
<b>2012</b>	von Der Decken's hornbill Jetz Kenya	GPS	37	357819	9671
<b>2012</b>	Nyctalus noctula Common noctule Konstanz, Germany	VHF	33	622	19
<b>2012</b>	Papio anubis (Olive baboon) Crofoot; Mpala Research Center, Kenya	GPS	26	1936497 4	744807
<b>2013</b>	E-obs GSM Cranes Bhuta	GPS	3	2386	795
<b>2013</b>	Bald Ibis Waldrappteam 2	GPS	63	200174	3177
<b>2013</b>	E-obs GSM Dalmatian pelicans SPP Greece	GPS	10	392810	39281
<b>2013</b>	Eidolon helvu west africa (multiple studies from 2013)	GPS	30	13944	465
<b>2013</b>	Eidolon helvum; Zambia, Kasanka; 2013 [eobs]	GPS	5	1795	359
<b>2013</b>	LifeTrack - Great Egrets	GPS	12	224156	18680
<b>2013</b>	LifeTrack crows	GPS	7	715	102
<b>2013</b>	LifeTrack Geese IG-RAS MPIO ICARUS	GPS	59	3574525	60585
<b>2013</b>	LifeTrack Rough-legged buzzards	GPS	21	33949	1617
<b>2013</b>	LifeTrack White Stork Armenia	GPS	8	134315	16789
<b>2013</b>	LifeTrack White Stork Greece Evros Delta	GPS	10	121063	12106
<b>2013</b>	LifeTrack White Stork Loburg	GPS	32	1471144	45973
<b>2013</b>	LifeTrack White Stork Moscow	GPS	10	329039	32904
<b>2013</b>	LifeTrack White Stork Poland	GPS	5	155558	31112
<b>2013</b>	LifeTrack White Stork Spain Donana	GPS	31	649853	20963
<b>2013</b>	LifeTrack White Stork SWGermany 2013	GPS	55	452880	8234
<b>2013</b>	LifeTrack White Stork Tunisia	GPS	9	141756	15751

<b>2013</b>	LifeTrack White Stork Uzbekistan	GPS	17	97508	5736
<b>2014</b>	Eidolon helvu west africa (multiple studies from 2014)	GPS	23	3674	160
<b>2014</b>	Life Track Great Blue Herons North Carolina	GPS	4	70616	17654
<b>2014</b>	Life Track White Stork Bavaria	GPS	10	443278	44328
<b>2014</b>	Life Track White Stork SWGGermany 2014	GPS	72	9400240	130559
<b>2014</b>	LifeTrack White Stork Poland ECG	GPS	10	301321	30132
<b>2014</b>	Pet Cats	GPS	59	53702	910
<b>2014</b>	White Stork Loburg 2014	GPS	21	1141907	54377

### **Caption for movie S1**

Animation of Galapagos Albatross (*Phoebastria irrorata*) combined with wind (from NCEP Reanalysis 2 data) and net primary productivity (from 8-day MODIS ocean productivity). For details see (79).