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Supplementary material

Appendix 1. List of the migratory soaring bird species that regularly use the Red Sea Flyway and their conservation status (BirdLife International 2018).

	English Name	Latin Name	Conservation Status
1	Black Kite	Milvus migrans	LC
2	Black Stork	Ciconia negra	LC
3	Booted Eagle	Aquila pennata	LC
4	Common Buzzard	Buteo buteo	LC
5	Common Kestrel	Falco tinnunculus	LC
6	Eastern Imperial Eagle	Aquila heliaca	VU
7	Egyptian Vulture	Neophron percnopterus	EN
8	Eleonora's Falcon	Falco eleonorae	LC
9	Eurasian Crane	Grus grus	LC
10	Eurasian Hobby	Falco subbuteo	LC
11	Eurasian Sparrowhawk	Accipiter nisus	LC
12	European Honey-buzzard	Pernis apivorus	LC
13	Great White Pelican	Pelecanus onocrotalus	LC
14	Greater Spotted Eagle	Clanga clanga	VU
15	Griffon Vulture	Gyps fulvus	LC
16	Lesser Kestrel	Falco naumanni	LC
17	Lesser Spotted Eagle	Clanga pomarina	LC
18	Levant Sparrowhawk	Accipiter brevipes	LC
19	Long-legged Buzzard	Buteo rufinus	LC
20	Montagu's Harrier	Circus pygargus	LC
21	Northern Goshawk	Accipiter gentilis	LC
22	Osprey	Pandion haliaetus	LC
23	Pallid Harrier	Circus macrourus	NT
24	Peregrine Falcon	Falco peregrinus	LC
25	Red Kite	Milvus milvus	NT
26	Red-footed Falcon	Falco vespertinus	NT
27	Saker Falcon	Falco cherrug	EN
28	Short-toed Snake-eagle	Circaetus gallicus	LC
29	Sociable Lapwing	Vanellus gregarius	CR
30	Sooty Falcon	Falco concolor	NT
31	Steppe Buzzard	Buteo buteo vulpinus	LC
32	Steppe Eagle	Aquila nipalensis	EN
33	Western Marsh Harrier	Circus aeruginosus	LC
34	White Stork	Ciconia ciconia	LC
35	White-tailed Sea-eagle	Haliaeetus albicilla	LC

Appendix 2. Top 25 protected areas (PAs) and Important Bird Areas (IBAs) as identified by: a) relative time spent by all Egyptian Vultures within each site (utilization), and b) proportion of all migration paths that crossed each site (paths). “Rel-Imp” is the relative importance of each site in relation to the top site. “%” (in b) indicates the percentage of all migration paths that intersected each IBA and PA.

a) Utilization					
Country	Name	Type	Status	Rel-Imp	Rank
Chad	Ouadi Rime - Ouadi Achim	IBA	confirmed	1.00	1
Chad	Ouadi Rime - Ouadi Achim	PA	Designated	1.00	1
Egypt	St Katherine Protectorate	IBA	confirmed	0.55	3
Egypt	St. Catherine	PA	Designated	0.55	3
Ethiopia	Mille-Sardo	PA	Designated	0.54	5
Yemen	Mafraq al-Mukha	IBA	confirmed	0.46	6
Egypt	Elba	PA	Designated	0.45	7
Yemen	Bab al-Mandab - Mawza	IBA	confirmed	0.34	8
Ethiopia	Yangudi-Rassa National Park	IBA	confirmed	0.26	9
Chad	Ennedi Massif: Natural and Cultural Landscape	PA	Inscribed	0.25	10
Egypt	El-Gelf El-Keber	PA	Designated	0.23	11
Syria	Tadmur desert and mountains	IBA	confirmed	0.23	12
Egypt	Shaieb El-Banat	PA	Proposed	0.22	13
Ethiopia	Yangudi Rassa	PA	Designated	0.20	14
Chad	Lac Fitri	PA	Designated	0.20	15
Niger	Termit-Tintoumma	PA	Designated	0.19	16
Ethiopia	Eastern Hararghe (Harar-Wabi Shebelle)	PA	Designated	0.18	17
Egypt	El-Galala El-Qebalya	PA	Proposed	0.17	18
Bulgaria	Rodopi - Iztochni	PA	Designated	0.17	19
Yemen	Hiswat al-Hugayma	IBA	confirmed	0.14	20
Saudi Arabia	Al-Habrow al-Arabi	IBA	confirmed	0.13	21
Ethiopia	Awash West	PA	Designated	0.13	22
Egypt	El Qa plain	IBA	confirmed	0.13	23
Turkey	Amanos Mountains	IBA	confirmed	0.12	24
Egypt	Wadi El-Gemal - Hamata	PA	Designated	0.12	25

b) Paths						
Country	Name	Type	Status	%	Rel-Imp	Rank
Saudi Arabia	Al-Habrow al-Arabi	IBA	confirmed	29%	1.00	1
Egypt	Suez	IBA	confirmed	27%	0.93	2
Yemen	Bab al-Mandab - Mawza	IBA	confirmed	26%	0.89	3
Yemen	Wadi Mawr - Al-Zuhrah	IBA	confirmed	25%	0.85	4
Yemen	Mafraq al-Mukha	IBA	confirmed	24%	0.81	5
Yemen	Al-Kadan area	IBA	confirmed	24%	0.81	5
Saudi Arabia	Khawr Wahlan	IBA	confirmed	24%	0.81	5
Turkey	Amanos Mountains	IBA	confirmed	23%	0.78	8
Egypt	Ain Sukhna	IBA	confirmed	23%	0.78	8
Yemen	Al-Mukha - Al-Khawkhah	IBA	confirmed	23%	0.78	8
Yemen	Al-Fazzah	IBA	confirmed	18%	0.63	11
Djibouti	Kadda Guni - Doumira	IBA	confirmed	17%	0.59	12
Saudi Arabia	Malaki dam	IBA	confirmed	17%	0.59	12
Egypt	Shaieb El-Banat	PA	Proposed	16%	0.56	14
Saudi Arabia	Wadi Jawwah	IBA	confirmed	16%	0.56	14
Yemen	Al-'Urj	IBA	confirmed	16%	0.56	14
Yemen	Hiswat al-Hugayma	IBA	confirmed	15%	0.52	15
Egypt	Wadi El-Gemal - Hamata	PA	Designated	15%	0.52	15
Jordan	Rajel	PA	Proposed	15%	0.52	15
Djibouti	Sept Freres Islands, Ras Syan, Khor Angar, and Godoria Forest	PA	Proposed	15%	0.52	15
Yemen	Al-Murah	IBA	confirmed	15%	0.52	15
Saudi Arabia	Taif escarpment	IBA	confirmed	15%	0.52	15
Jordan	Azraq	IBA	confirmed	15%	0.52	15
Jordan	Qa' Khanna	IBA	confirmed	15%	0.52	15
Djibouti	Les Sept Freres	IBA	confirmed	15%	0.52	15

Appendix 3. Mean and range of dates that Egyptian Vultures passed through each of five major migratory bottlenecks in spring and autumn, and the number of migration paths (n) passing through by site and season. To identify the timing of migrations, we reviewed telemetry locations for each complete individual migration trajectory and identified the date of the first location in each trajectory that crossed the bottleneck.

Bottleneck	Passage Date	
	Spring (n = 26)	Autumn (n = 49)
Bosporus & Dardanelles Straights (Turkey)	22-Apr (07-Apr - 08-May) (n = 6)	08-Sep (31-Aug - 15-Sep) (n = 20)
Gulf of Iskenderun (Turkey)	27-Apr (10-Apr - 17-May) (n = 9)	06-Sep (04-Sep - 25-Sep) (n = 20)
Gulf of Suez (Egypt)	28-Apr (07-Apr - 22-May) (n = 21)	21-Sep (11-Sep - 02-Oct) (n = 15)
Southeastern Red Sea coast (Saudi Arabia, Yemen)	23-Mar (08-Mar - 29-Mar) (n = 5)	24-Sep (16-Sep - 01-Oct) (n = 31)
Bab-el-Mandeb Strait (Yemen, Djibouti)	21-Mar (07-Mar - 27-Mar) (n = 5)	29-Sep (24-Sep - 04-Oct) (n = 24)