

### Supplementary Material

#### **Using literature and expert knowledge to determine changes in the bird community over a century in a Turkish wetland**

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**Table S1.** Bird diversity in Gediz Delta.

	Scientific name	Common name	IUCN status	Historical Records Present status	1980–1999			2000–2019			General habitat	Breeding habitat	Final present status
					Present status	Population status	Breeding status	Present status	Population status	Breeding status			
1	<i>Gavia stellata</i>	Red-throated Diver	LC	-	+	V		-				Vagrant	
2	<i>Gavia arctica</i>	Black-throated Diver	LC	-	-			+	V			Vagrant	
3	<i>Tachybaptus ruficollis</i>	Little Grebe	LC	-	+	W	B	+	W	B	Inland Wetlands	Inland Wetlands Present	
4	<i>Podiceps cristatus</i>	Great Crested Grebe	LC	+	+	W	N	+	W	B	Generalist	Inland Wetlands Present	
5	<i>Podiceps griseigena</i>	Red-necked Grebe	LC	-	+	V		-				Vagrant	
6	<i>Podiceps auritus</i>	Horned Grebe	VU	-	-			+	V			Vagrant	
7	<i>Podiceps nigricollis</i>	Black-necked Grebe	LC	-	+	W	N	+	W	N	Generalist	Inland Wetlands Present	
8	<i>Calonectris diomedea</i>	Cory's Shearwater	LC	-	-			+	S	N	Marine & Coastal	Inland Wetlands Present	
9	<i>Puffinus yelkouan</i>	Yelkouan Shearwater	VU	-	+	R	N	+	R	N	Marine & Coastal	Inland Wetlands Present	
10	<i>Phalacrocorax carbo</i>	Cormorant	LC	-	+	W	N	+	W	N	Generalist	Inland Wetlands Present	
11	<i>Phalacrocorax aristotelis</i>	Shag	LC	-	+	W	N	+	R	N	Marine & Coastal	Inland Wetlands Present	
12	<i>Microcarbo pygmaeus</i>	Pygmy Cormorant	LC	+	+	W	N	+	R	N	Generalist	Inland Wetlands Present	
13	<i>Pelecanus onocrotalus</i>	Great White Pelican	LC	+	+	W	N	+	W	N	Inland Wetlands	Inland Wetlands Present	
14	<i>Pelecanus crispus</i>	Dalmatian Pelican	NT	-	+	R	B	+	R	B	Generalist	Inland Wetlands Present	
15	<i>Botaurus stellaris</i>	Bittern	LC	+	+	W	N	+	W	B	Inland Wetlands	Inland Wetlands Present	
16	<i>Ixobrychus minutus</i>	Little Bittern	LC	-	+	S	N	+	S	B	Inland Wetlands	Inland Wetlands Present	
17	<i>Nycticorax nycticorax</i>	Night Heron	LC	-	+	S	B	+	M	N	Inland Wetlands	Inland Wetlands Present	
18	<i>Ardeola ralloides</i>	Squacco Heron	LC	-	+	S	N	+	S	N	Inland Wetlands	Inland Wetlands Present	
19	<i>Bubulcus ibis</i>	Cattle Egret	LC	-	+	R	N	+	R	N	Agricultural & Grasslands	Inland Wetlands Present	
20	<i>Egretta garzetta</i>	Little Egret	LC	-	+	R	B	+	R	N	Generalist	Inland Wetlands Present	
21	<i>Ardea alba</i>	Great White Egret	LC	+	+	R	N	+	R	N	Generalist	Inland Wetlands Present	
22	<i>Ardea cinerea</i>	Grey Heron	LC	-	+	R	N	+	R	N	Generalist	Inland Wetlands Present	
23	<i>Ardea purpurea</i>	Purple Heron	LC	-	+	S	B	+	S	B	Inland Wetlands	Inland Wetlands Present	
24	<i>Ciconia nigra</i>	Black Stork	LC	-	+	W	N	+	W	N	Inland Wetlands	Inland Wetlands Present	
25	<i>Ciconia ciconia</i>	White Stork	LC	+	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands Present	
26	<i>Plegadis falcinellus</i>	Glossy Ibis	LC	-	+	S	N	+	S	N	Inland Wetlands	Inland Wetlands Present	
27	<i>Platalea leucorodia</i>	Spoonbill	LC	-	+	R	B	+	R	N	Marine & Coastal	Marine & Coastal Present	
28	<i>Phoenicopterus roseus</i>	Greater Flamingo	LC	-	+	R	B	+	R	B	Marine & Coastal	Marine & Coastal Present	
29	<i>Phoeniconaias minor</i>	Lesser Flamingo	NT	-	-			+	W	N	Marine & Coastal	Inland Wetlands Present	
30	<i>Cygnus olor</i>	Mute Swan	LC	+	+	W	N	+	R	B	Generalist	Inland Wetlands Present	
31	<i>Cygnus columbianus</i>	Bewick's Swan	LC	-	-			+	V			Vagrant	
32	<i>Cygnus cygnus</i>	Whooper swan	LC	-	-			+	W	N	Generalist	Inland Wetlands Present	
33	<i>Anser albifrons</i>	White-fronted Goose	LC	-	+	W	N	+	W	N	Generalist	Inland Wetlands Present	
34	<i>Anser anser</i>	Greylag Goose	LC	-	+	W	N	+	V			Vagrant	
35	<i>Branta ruficollis</i>	Red-breasted Goose	VU	-	+	W	N	+	W	N	Agricultural & Grasslands	Inland Wetlands Present	
36	<i>Tadorna ferruginea</i>	Ruddy Shelduck	LC	+	+	R	B	+	R	B	Inland Wetlands	Inland Wetlands Present	
37	<i>Tadorna tadorna</i>	Shelduck	LC	+	+	W	B	+	R	B	Marine & Coastal	Marine & Coastal Present	
38	<i>Mareca penelope</i>	Wigeon	LC	+	+	W	N	+	W	N	Marine & Coastal	Inland Wetlands Present	
39	<i>Mareca strepera</i>	Gadwall	LC	-	+	W	N	+	W	N	Inland Wetlands	Inland Wetlands Present	
40	<i>Anas crecca</i>	Teal	LC	+	+	W	N	+	W	N	Generalist	Inland Wetlands Present	
41	<i>Anas platyrhynchos</i>	Mallard	LC	+	+	R	B	+	R	B	Inland Wetlands	Inland Wetlands Present	
42	<i>Anas acuta</i>	Pintail	LC	-	+	W	N	+	W	N	Generalist	Inland Wetlands Present	

Scientific name	Common name	IUCN status	Historical Records Present status	1980–1999			2000–2019			General habitat	Breeding habitat	Final present status	
				Present status	Population status	Breeding status	Present status	Population status	Breeding status				
43	<i>Spatula querquedula</i>	Garganey	LC	-	+	M	N	+	M	B	Inland Wetlands	Generalist	Present
44	<i>Spatula clypeata</i>	Shoveler	LC	-	+	W	N	+	W	N	Generalist		Present
45	<i>Netta rufina</i>	Red-crested Pochard	LC	-	+	W	N	+	W	N	Inland Wetlands	Present	
46	<i>Aythya ferina</i>	Pochard	VU	-	+	W	N	+	W	N	Inland Wetlands	Present	
47	<i>Aythya nyroca</i>	Ferruginous Duck	NT	+	+	W	N	+	R	N	Inland Wetlands	Present	
48	<i>Aythya fuligula</i>	Tufted Duck	LC	+	+	W	N	+	W	N	Inland Wetlands	Present	
49	<i>Aythya marila</i>	Scaup	LC	-	-	-	-	+	V	-	-	Vagrant	
50	<i>Somateria mollissima</i>	Common eider	NT	-	-	-	-	+	V	-	-	Vagrant	
51	<i>Melanitta nigra</i>	Common Scoter	LC	-	-	-	-	+	V	-	-	Vagrant	
52	<i>Bucephala clangula</i>	Goldeneye	LC	+	+	V	-	+	V	-	-	Vagrant	
53	<i>Mergellus albellus</i>	Smew	LC	+	-	-	-	+	V	-	-	Vagrant	
54	<i>Mergus serrator</i>	Red-breasted Merganser	LC	-	+	W	N	+	W	N	Marine & Coastal Inland Wetlands	Present	
55	<i>Oxyura leucocephala</i>	White-headed Duck	EN	-	+	W	N	+	V	-	-	Vagrant	
56	<i>Pernis apivorus</i>	European Honey Buzzard	LC	-	+	M	N	+	M	N	Forest	Present	
57	<i>Milvus migrans</i>	Black Kite	LC	+	-	-	-	+	V	-	-	Vagrant	
58	<i>Haliaeetus albicilla</i>	White-tailed Eagle	LC	-	-	-	-	+	V	-	-	Vagrant	
59	<i>Neophron percnopterus</i>	Egyptian Vulture	EN	+	-	-	-	-	-	-	-	Vagrant	
60	<i>Gyps fulvus</i>	Griffon Vulture	LC	+	-	-	-	+	-	-	-	Vagrant	
61	<i>Circus gallicus</i>	Short-toed Eagle	LC	+	+	S	N	+	S	N	Mediterranean Habitats	Present	
62	<i>Circus aeruginosus</i>	Marsh Harrier	LC	-	+	R	N	+	W	B	Inland Wetlands	Inland Wetlands	Present
63	<i>Circus cyaneus</i>	Hen Harrier	LC	+	+	W	N	+	W	N	Generalist	Present	
64	<i>Circus macrourus</i>	Pallid Harrier	NT	-	+	M	N	+	M	N	Agricultural & Grasslands	Present	
65	<i>Circus pygargus</i>	Montagu's Harrier	LC	-	+	S	B	+	M	N	Agricultural & Grasslands	Agricultural & Grasslands	Present
66	<i>Accipiter gentilis</i>	Goshawk	LC	+	+	V	-	+	V	-	-	Vagrant	
67	<i>Accipiter nisus</i>	Sparrowhawk	LC	+	+	W	N	+	W	N	Forest	Present	
68	<i>Accipiter brevipes</i>	Levant Sparrowhawk	LC	-	-	-	-	+	V	-	-	Vagrant	
69	<i>Buteo buteo</i>	Common Buzzard	LC	+	+	W	N	+	W	N	Generalist	Present	
70	<i>Buteo rufinus</i>	Long-legged Buzzard	LC	+	+	R	N	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
71	<i>Clanga pomarina</i>	Lesser Spotted Eagle	LC	-	-	-	-	+	V	-	-	Vagrant	
72	<i>Clanga clanga</i>	Greater Spotted Eagle	VU	-	-	-	-	+	W	N	Inland Wetlands	Present	
73	<i>Aquila heliaca</i>	Imperial Eagle	VU	+	-	-	-	+	-	-	-	Vagrant	
74	<i>Aquila chrysaetos</i>	Golden Eagle	LC	-	+	V	-	-	-	-	-	Vagrant	
75	<i>Hieraetus pennatus</i>	Booted Eagle	LC	-	-	-	-	+	V	-	-	Vagrant	
76	<i>Aquila fasciata</i>	Bonelli's Eagle	LC	+	+	R	N	+	R	N	Mediterranean Habitats	Present	
77	<i>Pandion haliaetus</i>	Osprey	LC	-	+	M	N	+	W	N	Generalist	Present	
78	<i>Falco naumanni</i>	Lesser Kestrel	LC	+	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
79	<i>Falco tinnunculus</i>	Kestrel	LC	+	+	R	B	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
80	<i>Falco vespertinus</i>	Red-footed Falcon	VU	-	+	M	N	+	M	N	Agricultural & Grasslands	Present	
81	<i>Falco columbarius</i>	Merlin	LC	+	+	W	N	+	W	N	Agricultural & Grasslands	Present	
82	<i>Falco subbuteo</i>	Hobby	LC	-	+	W	N	+	W	N	Generalist	Present	
83	<i>Falco eleonora</i>	Eleonora's Falcon	LC	-	+	S	N	+	M	N	Generalist	Present	
84	<i>Falco biarmicus</i>	Lanner	LC	-	+	V	-	-	-	-	-	Vagrant	
85	<i>Falco peregrinus</i>	Peregrine Falcon	LC	+	+	W	N	+	R	N	Generalist	Present	
86	<i>Alectoris chukar</i>	Chukar	LC	+	+	R	B	+	R	B	Mediterranean Habitats	Mediterranean habitats	Present

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87	<i>Francolinus francolinus</i>	Black Francolin	LC	+	-			-				Vagrant	
88	<i>Coturnix coturnix</i>	Quail	LC	+	+	S	B	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
89	<i>Rallus aquaticus</i>	Water Rail	LC	+	+	R	B	+	R	B	Inland Wetlands	Inland Wetlands	Present
90	<i>Porzana porzana</i>	Spotted Crake	LC	-	+	M	N	+	M	N	Inland Wetlands	Inland Wetlands	Present
91	<i>Zapornia parva</i>	Little Crake	LC	-	+	M	N	+	M	N	Inland Wetlands	Inland Wetlands	Present
92	<i>Crex crex</i>	Corncrake	LC	+	+	M	N	+	M	N	Agricultural & Grasslands	Inland Wetlands	Present
93	<i>Gallinula chloropus</i>	Moorhen	LC	+	+	R	B	+	W	B	Inland Wetlands	Inland Wetlands	Present
94	<i>Fulica atra</i>	Coot	LC	+	+	R	B	+	W	B	Inland Wetlands	Inland Wetlands	Present
95	<i>Grus grus</i>	Common Crane	LC	-	+	M	N	+	M	N	Generalist	Inland Wetlands	Present
96	<i>Anthropoides virgo</i>	Demoiselle Crane	LC	+	+	V		-					Vagrant
97	<i>Tetrax tetrax</i>	Little Bustard	NT	+	+	V		+	V				Vagrant
98	<i>Otis tarda</i>	Great Bustard	VU	+	-			-					Vagrant
99	<i>Haematopus ostralegus</i>	Oystercatcher	NT	+	+	R	B	+	R	B	Marine & Coastal	Marine & Coastal	Present
100	<i>Himantopus himantopus</i>	Black-winged Stilt	LC	-	+	S	B	+	S	B	Generalist	Inland Wetlands	Present
101	<i>Recurvirostra avosetta</i>	Avocet	LC	+	+	R	B	+	R	B	Marine & Coastal	Marine & Coastal	Present
102	<i>Burhinus oedincnemus</i>	Stone Curlew	LC	-	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
103	<i>Glareola pratincola</i>	Collared Pratincole	LC	+	+	S	B	+	S	B	Generalist	Generalist	Present
104	<i>Charadrius dubius</i>	Little Ringed Plover	LC	-	+	S	N	+	S	N	Inland Wetlands	Inland Wetlands	Present
105	<i>Charadrius hiaticula</i>	Ringed Plover	LC	-	+	W	N	+	W	N	Marine & Coastal	Marine & Coastal	Present
106	<i>Charadrius alexandrinus</i>	Kentish Plover	LC	+	+	R	B	+	R	B	Marine & Coastal	Marine & Coastal	Present
107	<i>Charadrius leschenaultii</i>	Great Sand Plover	LC	-	-			+	V				Vagrant
108	<i>Pluvialis apricaria</i>	Golden Plover	LC	-	+	M	N	+	W	N	Generalist	Generalist	Present
109	<i>Pluvialis squatarola</i>	Grey Plover	LC	-	+	R	N	+	R	N	Marine & Coastal	Marine & Coastal	Present
110	<i>Vanellus spinosus</i>	Spur-winged Plover	LC	-	+	S	B	+	S	B	Generalist	Marine & Coastal	Present
111	<i>Vanellus vanellus</i>	Lapwing	NT	+	+	W	N	+	W	N	Agricultural & Grasslands	Agricultural & Grasslands	Present
112	<i>Calidris canutus</i>	Knot	NT	-	+	W	N	+	W	N	Marine & Coastal	Marine & Coastal	Present
113	<i>Calidris alba</i>	Sanderling	LC	-	+	W	N	+	W	N	Marine & Coastal	Marine & Coastal	Present
114	<i>Calidris minuta</i>	Little Stint	LC	-	+	R	N	+	R	N	Marine & Coastal	Marine & Coastal	Present
115	<i>Calidris temminckii</i>	Temminck's Stint	LC	+	+	W	N	+	W	N	Generalist	Generalist	Present
116	<i>Calidris ferruginea</i>	Curlew Sandpiper	NT	-	+	M	N	+	M	N	Marine & Coastal	Marine & Coastal	Present
117	<i>Calidris alpina</i>	Dunlin	LC	+	+	W	N	+	W	N	Marine & Coastal	Marine & Coastal	Present
118	<i>Calidris falcinellus</i>	Broad-billed Sandpiper	LC	-	-			+	V				Vagrant
119	<i>Calidris pugnax</i>	Ruff	LC	-	+	M	N	+	M	N	Generalist	Generalist	Present
120	<i>Lymnocyptes minimus</i>	Jack Snipe	LC	+	+	W	N	+	W	N	Inland Wetlands	Inland Wetlands	Present
121	<i>Gallinago gallinago</i>	Snipe	LC	+	+	W	N	+	W	N	Inland Wetlands	Inland Wetlands	Present
122	<i>Scolopax rusticola</i>	Woodcock	LC	+	+	V		+	W	N	Generalist	Generalist	Present
123	<i>Limosa limosa</i>	Black-tailed Godwit	NT	-	+	R	N	+	R	N	Inland Wetlands	Inland Wetlands	Present
124	<i>Limosa lapponica</i>	Bar-tailed Godwit	NT	-	-			+	W	N	Marine & Coastal	Marine & Coastal	Present
125	<i>Numenius phaeopus</i>	Whimbrel	LC	+	-			+	V				Vagrant

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126	<i>Numenius arquata</i>	Curlew	NT	+	+	R	N	+	R	N	Marine & Coastal		Present		
127	<i>Tringa erythropus</i>	Spotted Redshank	LC	-	+	W	N	+	W	N	Generalist	Generalist	Present		
128	<i>Tringa totanus</i>	Redshank	LC	+	+	R	B	+	R	B	Marine & Coastal		Present		
129	<i>Tringa stagnatilis</i>	Marsh Sandpiper	LC	-	+	W	N	+	W	N	Inland Wetlands		Present		
130	<i>Tringa nebularia</i>	Greenshank	LC	+	+	R	N	+	R	N	Generalist		Present		
131	<i>Tringa ochropus</i>	Green Sandpiper	LC	+	+	W	N	+	W	N	Inland Wetlands		Present		
132	<i>Tringa glareola</i>	Wood Sandpiper	LC	-	+	M	N	+	M	N	Inland Wetlands		Present		
133	<i>Xenus cinereus</i>	Terek Sandpiper	LC	-	-			+	V				Vagrant		
134	<i>Actitis hypoleucos</i>	Common Sandpiper	LC	-	+	R	N	+	R	N	Generalist		Present		
135	<i>Arenaria interpres</i>	Turnstone	LC	-	+	W	N	+	R	N	Marine & Coastal		Present		
136	<i>Phalaropus lobatus</i>	Red-necked Phalarope	LC	-	+	V		+	M	N	Marine & Coastal		Present		
137	<i>Larus ichthyaetus</i>	Great Black-headed Gull	LC	-	-			+	V				Vagrant		
138	<i>Ichthyaetus melanocephalus</i>	Mediterranean Gull	LC	+	+	S	B	+	S	B	Marine & Coastal	Marine & Coastal	Present		
139	<i>Larus cachinnans</i>	Caspian Gull	LC	-	-			+	V				Vagrant		
140	<i>Hydrocoloeus minutus</i>	Little Gull	LC	-	+	W	N	+	W	N	Marine & Coastal		Present		
141	<i>Chroicocephalus ridibundus</i>	Black-headed Gull	LC	+	+	R	N	+	R	N	Generalist		Present		
142	<i>Chroicocephalus genei</i>	Slender-billed Gull	LC	-	+	R	N	+	R	B	Marine & Coastal	Marine & Coastal	Present		
143	<i>Ichthyaetus audouinii</i>	Audouin's Gull	VU	-	-			+	V				Vagrant		
144	<i>Larus canus</i>	Mew Gull	LC	-	+	W	N	+	W	N	Marine & Coastal		Present		
145	<i>Larus fuscus</i>	Lesser Black-backed Gull	LC	-	+	W	N	+	W	N	Marine & Coastal		Present		
146	<i>Larus armenicus</i>	Armenian Gull	LC	-	+	W	N	+	W	N	Generalist		Present		
147	<i>Larus michahellis</i>	Yellow-legged Gull	LC	+	+	R	B	+	R	B	Generalist	Generalist	Present		
148	<i>Rissa tridactyla</i>	Kittiwake	VU	-	-			+	V				Vagrant		
149	<i>Gelochelidon nilotica</i>	Gull-billed Tern	LC	+	+	S	B	+	S	B	Generalist	Generalist	Present		
150	<i>Hydroprogne caspia</i>	Caspian Tern	LC	-	+	S	B	+	S	B	Marine & Coastal	Marine & Coastal	Present		
151	<i>Thalasseus sandvicensis</i>	Sandwich Tern	LC	-	+	R	B	+	R	B	Marine & Coastal	Marine & Coastal	Present		
152	<i>Sterna hirundo</i>	Common Tern	LC	+	+	S	B	+	S	B	Marine & Coastal	Generalist	Present		
153	<i>Sternula albifrons</i>	Little Tern	LC	+	+	S	B	+	S	B	Marine & Coastal	Marine & Coastal	Present		
154	<i>Chlidonias hybrida</i>	Whiskered Tern	LC	-	+	M	N	+	M	N	Inland Wetlands		Present		
155	<i>Chlidonias niger</i>	Black Tern	LC	-	+	M	N	+	M	N	Generalist		Present		
156	<i>Chlidonias leucopterus</i>	White-winged Tern	LC	-	+	M	N	+	M	N	Generalist		Present		
157	<i>Pterocles orientalis</i>	Black-bellied Sandgrouse	LC	+	-			-					Vagrant		
158	<i>Columba livia</i>	Rock Dove	LC	-	+	R	B	+	R	B	Generalist	Generalist	Present		
159	<i>Columba palumbus</i>	Woodpigeon	LC	+	-			+	V				Vagrant		
160	<i>Streptopelia decaocto</i>	Collared Dove	LC	+	+	R	B	+	R	B	Generalist	Generalist	Present		
161	<i>Streptopelia turtur</i>	Turtle Dove	VU	+	+	S	N	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
162	<i>Psittacula krameri</i>	Ring-necked Parakeet	LC	-	-			+	R	N	Generalist		Present		
163	<i>Clamator glandarius</i>	Great Spotted Cuckoo	LC	-	+	S	B	+	S	B	Mediterranean Habitats	Mediterranean habitats	Present		
164	<i>Cuculus canorus</i>	Cuckoo	LC	+	+	S	B	+	S	B	Generalist	Generalist	Present		

Scientific name		Common name	IUCN status	Historical Records Present status	1980–1999 Present status Population status Breeding status			2000–2019 Present status Population status Breeding status			General habitat	Breeding habitat	Final present status
165	<i>Tyto alba</i>	Barn Owl	LC	-	+	R	B	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
166	<i>Otus scops</i>	Scops Owl	LC	+	-			+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
167	<i>Bubo bubo</i>	Eagle Owl	LC	+	+	R	B	+	V		Forest	Forest	Vagrant
168	<i>Athene noctua</i>	Little Owl	LC	+	+	R	B	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
169	<i>Asio otus</i>	Long-eared Owl	LC	-	+	R	N	+	R	B	Generalist	Generalist	Present
170	<i>Asio flammeus</i>	Short-eared Owl	LC	+	+	W	N	+	W	N	Agricultural & Grasslands		Present
171	<i>Caprimulgus europaeus</i>	Nightjar	LC	-	+	S	B	+	S	B	Generalist	Generalist	Present
172	<i>Apus apus</i>	Swift	LC	-	+	S	B	+	S	B	Generalist	Generalist	Present
173	<i>Apus pallidus</i>	Pallid Swift	LC	-	+	M	B	+	M	N	Mediterranean Habitats	Mediterranean habitats	Present
174	<i>Tachymarptis melba</i>	Alpine Swift	LC	-	+	M	N	+	M	N	Generalist		Present
175	<i>Halcyon smyrnensis</i>	White-throated Kingfisher	LC	+	+	R	N	+	V		Inland Wetlands		Vagrant
176	<i>Alcedo atthis</i>	Common Kingfisher	LC	+	+	W	N	+	W	N	Generalist		Present
177	<i>Ceryle rudis</i>	Pied Kingfisher	LC	+	+	V		-					Vagrant
178	<i>Merops apiaster</i>	European Bee-eater	LC	+	+	S	B	+	S	B	Agricultural & Grasslands	Generalist	Present
179	<i>Coracias garrulus</i>	European Roller	LC	+	+	M	B	+	M	N	Agricultural & Grasslands	Agricultural & Grasslands	Present
180	<i>Upupa epops</i>	Hoopoe	LC	-	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
181	<i>Jynx torquilla</i>	Wrayneck	LC	+	+	M	N	+	M	N	Generalist		Present
182	<i>Picus viridis</i>	Green Woodpecker	LC	-	-			+	V				Vagrant
183	<i>Dendrocopos major</i>	Great-Spotted Woodpecker	LC	+	-			+	V				Vagrant
184	<i>Dendrocopos syriacus</i>	Syrian Woodpecker	LC	-	+	R	B	+	R	B	Generalist	Generalist	Present
185	<i>Melanocorypha calandra</i>	Calandra Lark	LC	+	+	R	B	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
186	<i>Calandrella brachydactyla</i>	Short-toed Lark	LC	-	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
187	<i>Galerida cristata</i>	Crested Lark	LC	+	+	R	B	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
188	<i>Lullula arborea</i>	Woodlark	LC	+	+	W	N	+	W	N	Generalist		Present
189	<i>Alauda arvensis</i>	Skylark	LC	+	+	W	B	+	W	N	Agricultural & Grasslands	Agricultural & Grasslands	Present
190	<i>Riparia riparia</i>	Sand Martin	LC	-	+	S	B	+	S	N	Generalist	Inland Wetlands	Present
191	<i>Ptyonoprogne rupestris</i>	Crag Martin	LC	-	+	V		+	V				Vagrant
192	<i>Hirundo rustica</i>	Swallow	LC	+	+	S	B	+	S	B	Generalist	Agricultural & Grasslands	Present
193	<i>Cecropis daurica</i>	Red-rumped Swallow	LC	-	+	S	B	+	S	B	Generalist	Mediterranean habitats	Present
194	<i>Delichon urbicum</i>	House Martin	LC	-	+	S	B	+	S	B	Generalist	Generalist	Present
195	<i>Anthus campestris</i>	Tawny Pipit	LC	-	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
196	<i>Anthus trivialis</i>	Tree Pipet	LC	-	+	M	N	+	M	N	Generalist		Present
197	<i>Anthus pratensis</i>	Meadow Pipit	LC	+	+	W	N	+	W	N	Agricultural & Grasslands		Present
198	<i>Anthus cervinus</i>	Red-throated Pipit	LC	-	+	M	N	+	M	N	Generalist		Present
199	<i>Anthus spinoletta</i>	Water Pipit	LC	-	+	W	N	+	W	N	Generalist		Present
200	<i>Motacilla flava</i>	Yellow Wagtail	LC	+	+	R	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
201	<i>Motacilla citreola</i>	Citrine Wagtail	LC	-	-			+	M	N	Inland Wetlands		Present
202	<i>Motacilla cinerea</i>	Grey Wagtail	LC	+	+	W	N	+	W	N	Inland Wetlands		Present

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203	<i>Motacilla alba</i>	Pied Wagtail	LC	+	+	R	B	+	R	B	Generalist	Generalist	Present		
204	<i>Troglodytes troglodytes</i>	Wren	LC	+	+	W	N	+	W	N	Generalist		Present		
205	<i>Prunella modularis</i>	Dunnock	LC	+	-			+	V				Vagrant		
206	<i>Cercotrichas galactotes</i>	Rufous Bush-chat	LC	+	+	S	B	+	S	B	Mediterranean Habitats	Mediterranean habitats	Present		
207	<i>Erithacus rubecula</i>	European Robin	LC	-	+	W	N	+	W	N	Generalist		Present		
208	<i>Luscinia luscinia</i>	Thrush Nightingale	LC	-	+	M	N	+	M	N	Generalist		Present		
209	<i>Luscinia megarhynchos</i>	Common Nightingale	LC	-	+	S	B	+	S	B	Generalist	Generalist	Present		
210	<i>Luscinia svecica</i>	Bluethroat	LC	-	-			+	V				Vagrant		
211	<i>Irania gutturalis</i>	White-throated Robin	LC	-	-			+	V				Vagrant		
212	<i>Phoenicurus ochruros</i>	Black Redstart	LC	-	+	W	N	+	W	N	Generalist		Present		
213	<i>Phoenicurus phoenicurus</i>	Common Redstart	LC	-	+	M	N	+	M	N	Generalist		Present		
214	<i>Saxicola rubetra</i>	Whinchat	LC	+	+	M	N	+	M	N	Agricultural & Grasslands		Present		
215	<i>Saxicola torquata</i>	Stonechat	LC	-	+	W	B	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
216	<i>Monticola saxatilis</i>	Common Rock Thrush	LC	-	-			+	V				Vagrant		
217	<i>Oenanthe isabellina</i>	Isabelline Wheatear	LC	-	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
218	<i>Oenanthe oenanthe</i>	Wheatear	LC	-	+	S	B	+	S	B	Generalist	Generalist	Present		
219	<i>Oenanthe hispanica</i>	Black-eared Wheatear	LC	+	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
220	<i>Oenanthe finschii</i>	Finsch's Wheatear	LC	-	-			+	V				Vagrant		
221	<i>Monticola solitarius</i>	Blue Rock Thrush	LC	+	+	R	B	+	R	B	Mediterranean Habitats	Mediterranean habitats	Present		
222	<i>Turdus merula</i>	Blackbird	LC	+	+	R	B	+	R	B	Generalist	Generalist	Present		
223	<i>Turdus pilaris</i>	Fieldfare	LC	+	+	W	N	+	W	N	Generalist		Present		
224	<i>Turdus philomelos</i>	Song Thrush	LC	+	+	W	N	+	W	N	Generalist		Present		
225	<i>Turdus iliacus</i>	Redwing	NT	+	+	V		+	V				Vagrant		
226	<i>Turdus viscivorus</i>	Mistle Thrush	LC	+	-			+	V				Vagrant		
227	<i>Cettia cetti</i>	Cetti's Warbler	LC	-	+	R	B	+	R	B	Inland Wetlands	Inland Wetlands	Present		
228	<i>Cisticola juncidis</i>	Fan-tailed Warbler	LC	+	+	R	B	+	R	B	Inland Wetlands	Inland Wetlands	Present		
229	<i>Locustella fluviatilis</i>	River Warbler	LC	+	-			+	V				Vagrant		
230	<i>Locustella luscinioides</i>	Savi's Warbler	LC	+	-			+	V				Vagrant		
231	<i>Acrocephalus melanopogon</i>	Moustached Warbler	LC	-	+	W	N	+	W	B	Inland Wetlands	Inland Wetlands	Present		
232	<i>Acrocephalus schoenobaenus</i>	Sedge Warbler	LC	-	+	M	N	+	M	N	Inland Wetlands		Present		
233	<i>Acrocephalus palustris</i>	Marsh Warbler	LC	-	+	S	B	+	S	B	Generalist	Generalist	Present		
234	<i>Acrocephalus scirpaceus</i>	Reed Warbler	LC	-	+	S	B	+	S	B	Inland Wetlands	Inland Wetlands	Present		
235	<i>Acrocephalus arundinaceus</i>	Great Reed Warbler	LC	-	+	S	B	+	S	B	Inland Wetlands	Inland Wetlands	Present		
236	<i>Iduna pallida</i>	Olivaceous Warbler	LC	-	+	S	B	+	S	B	Generalist	Generalist	Present		
237	<i>Hippolais olivetorum</i>	Olive-tree Warbler	LC	+	-			+	V				Vagrant		
238	<i>Hippolais icterina</i>	Icterine Warbler	LC	-	+	V		+	V				Vagrant		
239	<i>Sylvia cantillans</i>	Subalpine Warbler	LC	-	-			+	V				Vagrant		
240	<i>Sylvia melanocephala</i>	Sardinian Warbler	LC	+	+	R	B	+	R	B	Mediterranean Habitats	Mediterranean habitats	Present		
241	<i>Sylvia rueppelli</i>	Rüppell's Warbler	LC	-	-			+	V				Vagrant		
242	<i>Sylvia crassirostris</i>	Eastern Orphean Warbler	LC	+	+	S	B	+	M	N	Mediterranean Habitats	Mediterranean habitats	Present		
243	<i>Sylvia nisoria</i>	Barred Warbler	LC	+	+	M	N	+	M	N	Generalist		Present		
244	<i>Sylvia curruca</i>	Lesser Whitethroat	LC	+	+	S	B	+	S	B	Generalist	Generalist	Present		
245	<i>Sylvia communis</i>	Whitethroat	LC	+	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
246	<i>Sylvia borin</i>	Garden Warbler	LC	-	+	M	N	+	M	N	Generalist		Present		
247	<i>Sylvia atricapilla</i>	Blackcap	LC	+	+	W	N	+	W	N	Generalist		Present		
248	<i>Phylloscopus bonelli</i>	Eastern Bonelli's Warbler	LC	-	+	M	N	+	M	N	Forest		Present		

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249	<i>Phylloscopus sibilatrix</i>	Wood Warbler	LC	-	+	M	N	+	M	N	Forest		Present		
250	<i>Phylloscopus collybita</i>	Chiffchaff	LC	+	+	M	N	+	M	B	Generalist	Forest	Present		
251	<i>Phylloscopus trochilus</i>	Willow Warbler	LC	+	+	M	N	+	M	N	Generalist		Present		
252	<i>Regulus regulus</i>	Goldcrest	LC	-	+	W	N	+	W	N	Forest		Present		
253	<i>Regulus ignicapilla</i>	Firecrest	LC	+	-			+	V				Vagrant		
254	<i>Muscicapa striata</i>	Spotted Flycatcher	LC	-	+	M	N	+	M	N	Generalist		Present		
255	<i>Ficedula parva</i>	Red-breasted Flycatcher	LC	-	-			+	V				Vagrant		
256	<i>Ficedula semitorquata</i>	Semi-collared Flycatcher	LC	-	-			+	V				Vagrant		
257	<i>Ficedula albicollis</i>	Collared Flycatcher	LC	-	+	M	N	+	M	N	Forest		Present		
258	<i>Ficedula hypoleuca</i>	Pied Flycatcher	LC	-	+	M	N	+	M	N	Forest		Present		
259	<i>Panurus biarmicus</i>	Bearded Tit	LC	+	+	R	B	+	R	B	Inland Wetlands	Inland Wetlands	Present		
260	<i>Aegithalos caudatus</i>	Long-tailed Tit	LC	-	-			+	V				Vagrant		
261	<i>Poecile lugubris</i>	Sombre Tit	LC	-	+	R	N	+	R	N	Mediterranean Habitats		Present		
262	<i>Cyanistes caeruleus</i>	Blue Tit	LC	+	+	R	N	+	R	B	Generalist	Generalist	Present		
263	<i>Parus major</i>	Great Tit	LC	+	+	R	B	+	R	B	Generalist	Generalist	Present		
264	<i>Sitta neumayer</i>	Rock Nuthatch	LC	+	+	R	B	+	R	B	Mediterranean Habitats	Mediterranean habitats	Present		
265	<i>Remiz pendulinus</i>	Penduline Tit	LC	-	+	R	B	+	R	B	Inland Wetlands	Inland Wetlands	Present		
266	<i>Lanius phoenicuroides</i>	Isabelline Shrike	LC	-	-			+	V				Vagrant		
267	<i>Lanius collurio</i>	Red-backed Shrike	LC	+	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
268	<i>Lanius minor</i>	Lesser Grey Shrike	LC	+	+	S	B	+	S	N	Agricultural & Grasslands	Agricultural & Grasslands	Present		
269	<i>Lanius senator</i>	Woodchat Shrike	LC	+	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
270	<i>Lanius nubicus</i>	Masked Shrike	LC	+	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
271	<i>Garrulus glandarius</i>	Jay	LC	+	+	R	N	+	R	N	Forest		Present		
272	<i>Pica pica</i>	Magpie	LC	+	+	R	B	+	R	B	Generalist	Generalist	Present		
273	<i>Corvus monedula</i>	Eurasian Jackdaw	LC	+	+	R	B	+	R	B	Generalist	Generalist	Present		
274	<i>Corvus frugilegus</i>	Rook	LC	-	-			+	W	N	Agricultural & Grasslands		Present		
275	<i>Corvus corone</i>	Carrion Crow	LC	-	+	R	B	+	R	B	Generalist	Generalist	Present		
276	<i>Corvus corax</i>	Common Raven	LC	+	+	R	N	+	R	B	Generalist	Generalist	Present		
277	<i>Oriolus oriolus</i>	Golden Oriole	LC	+	+	S	N	+	S	B	Generalist	Generalist	Present		
278	<i>Sturnus vulgaris</i>	Common Starling	LC	+	+	R	N	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
279	<i>Pastor roseus</i>	Rosy Starling	LC	-	+	M	N	+	M	N	Agricultural & Grasslands		Present		
280	<i>Passer hispaniolensis</i>	Spanish Sparrow	LC	+	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
281	<i>Passer montanus</i>	Tree Sparrow	LC	-	+	R	N	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present		
282	<i>Passer domesticus</i>	House Sparrow	LC	+	+	R	B	+	R	B	Generalist	Generalist	Present		
283	<i>Fringilla coelebs</i>	Chaffinch	LC	+	+	R	N	+	R	B	Generalist	Generalist	Present		
284	<i>Fringilla montifringilla</i>	Brambling	LC	+	+	V		+	V				Vagrant		
285	<i>Serinus serinus</i>	European Serin	LC	+	+	W	N	+	W	N	Agricultural & Grasslands		Present		
286	<i>Carduelis chloris</i>	Greenfinch	LC	-	+	R	N	+	R	B	Generalist	Generalist	Present		
287	<i>Carduelis carduelis</i>	Goldfinch	LC	+	+	R	B	+	R	B	Generalist	Generalist	Present		
288	<i>Carduelis spinus</i>	Siskin	LC	-	+	W	N	+	W	N	Forest		Present		
289	<i>Linaria cannabina</i>	Linnet	LC	-	+	W	N	+	W	N	Agricultural & Grasslands		Present		
290	<i>Coccothraustes coccothraustes</i>	Hawfinch	LC	-	+	V		+	V				Vagrant		



Scientific name	Common name	IUCN status	Historical Records Present status	1980–1999			2000–2019			General habitat	Breeding habitat	Final present status
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291	<i>Emberiza citrinella</i>	LC	-	+	V		+	V				Vagrant
292	<i>Emberiza cirlus</i>	LC	+	+	R	B	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
293	<i>Emberiza cia</i>	LC	+	+	W	N	-	V		Generalist		Vagrant
294	<i>Emberiza cineracea</i>	NT	+	-			+	V				Vagrant
295	<i>Emberiza hortulana</i>	LC	+	+	M	N	+	M	N	Agricultural & Grasslands		Present
296	<i>Emberiza caesia</i>	LC	+	+	S	B	+	S	B	Mediterranean Habitats	Mediterranean habitats	Present
297	<i>Emberiza schoeniclus</i>	LC	+	+	W	N	+	W	N	Inland Wetlands		Present
298	<i>Emberiza melanocephala</i>	LC	+	+	S	B	+	S	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
299	<i>Emberiza calandra</i>	LC	+	+	R	B	+	R	B	Agricultural & Grasslands	Agricultural & Grasslands	Present
COUNT				139	244	0	95	288	0	104		

The list contains for each species: 1) IUCN threat categories (LC, Least Concern; VU, Vulnerable; NT, Near Threatened; EN, Endangered); 2) population status (V, vagrant; M, migratory; W, wintering; S, summering; R, residential); 3) breeding status (B, breeding; N, non-breeding); 4) general habitat preference and breeding habitat preference (generalist, agricultural & grasslands, forest, mediterranean habitats, inland wetlands, marine & coastal); final status (vagrant, and present).