



Supplementary Material

Avian Diversity, Abundance and Habitat Suitability Index for Threatened Species in Selected Areas of Northern Pakistan

Rida Ahmad^{1,2*}, Zulfiqar Ali^{2*}, Farkhanda Manzoor¹, Usman Ahmad³, Safdar Sidra⁴, Irfan Zainab², Muhammad Furqan², Aliza Batool^{1,2} and Zaidi Zona²

¹Department of Zoology, Lahore College for Women University, Lahore, Pakistan

²Environmental Health and Wildlife Laboratory, Institute of Zoology, University of the Punjab, Lahore, Pakistan

³College of Earth and Environmental Sciences, University of the Punjab, Lahore, Pakistan

⁴Department of Wildlife and Ecology, University of Veterinary and Animal Sciences, Lahore, Pakistan

* Corresponding author: ridaahmad411@gmail.com, zali.

zool@pu.edu.pk

0030-9923/2023/0005-2001 \$ 9.00/0



Copyright 2023 by the authors. Licensee Zoological Society of Pakistan.

This article is an open access  article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Supplementary Table SI. Description of habitat types.

Sr. #	Habitat type	Description
1	Alpine pastures	Alpine Pastures are located in Northern areas of Pakistan such as, Hazara and Malakand division, Diamer district, GB. These comprised of alpine meadows at around '1542.27' to '4632.75' masl with vegetation of one to three meter and dense cover. Alpine Pastures were found above the tree line and these are grazing lands of various mammals specifically Markhor.
2	Dry temperate forests	Dry Temperate Forests contained bare soil (except of availability of extra moisture). Xerophytic vegetation is found in the area with grayish foliage having aromatic shrubs and small leaves. The dominating vegetation was <i>Artemisia</i> and the root system of the vegetation found in this habitat was quite extensive. Mostly small grasses and forbs were part of this habitat along with some climbers.
3	Moist temperate forest	Moist temperate forest was found in Palas valley and some other valleys with '1,500' to '3,000' m elevation. It contains gentle slopes and deep soil in the Northern aspect.
4	Sub-tropical chir pine	Sub-tropical Chir Pine were often without shrub layer and found between 800 and '1,700' m elevation in Western Himalayas. Thakot Bridge, Allai Khwar, Khan Khwar and Chakki harbor this type of habitat.
5	Sub-tropical broad-leaved	Sub-tropical Broad-Leaved forest types were found in Thakot, Nandihar Khwar and Allai Khwar.
6	Agriculture land	Agriculture Land was the one used for crop cultivation.
7	Shrubs and bushes	Shrubs and Bushes were the woody plant habitat with low height (less than 3 m tall). They are recognized by various stems arising from the same stem.
8	Rangelands	Rangelands contained natural/native vegetation of herbs and grasses mainly utilized for grazing by livestock and wild animals.
9	Snow and glaciers	Snow and Glaciers are found at the higher altitudes of Western Himalayas and 70-80% of water is coming from the aforementioned habitat to Indus Delta.
10	Settlements	Settlements are assemblages of dwellings making a community or where a communal society is residing.
11	Water bodies	Water bodies included nullahs, lakes or river in the area.

Supplementary Table SII. Distribution of species in various habitats.

S. #	Species Common name (Scientific name)	Feeding Habit*	IUCN Status**	Occurrence***	Total no. of Individuals	No. of Common Habitats	Habitats													
							Agriculture Land	Pasture	Alpine	Dry Temper- ate	Temperate Moist	Rangeland	Settlements	Bushes and Shrubs	Glaciers and Snow	Broad-leaved Sub-Tropical	Chir Pine Sub-Tropical	Water Bodies		
1	Alpine accentor (<i>Prunella collaris</i>)	G	LC	WM	9	3	3				2		4							
2	Alpine swift (<i>Tachymarptis melba</i>)	I	LC	SB	290	7	47	127	29	5	39	21	22							
3	Ashy drongo (<i>Dicrurus leucophaeus</i>)	I	LC	SB	10	2	7						3							
4	Asian house martin (<i>Delichon dasypus</i>)	I	LC	SB	44	4		26			7	10	1							
5	Asian-barred Owlet (<i>Glaucidium cuculoides</i>)	I	LC	YRR	5	3	1						1							3
6	Baillon's crake (<i>Porzana pusilla</i>)	I	LC	WM	6	2			2											4
7	Bank myna (<i>Acridotheres ginginianus</i>)	O	LC	YRR	47	5	12		27	4		3	1							

Table continue on next page.....

S. #	Species Common name (Scientific name)	Feeding Habit*	IUCN Status**	Occurrence***	Total no. of Individuals	No. of Common Habitats	Habitats										
							Agriculture Land	Pasture Alpine	Dry Temper- ate	Moist Temperate	Rangeland	Settlements	Bushes and Shrubs	Snow and Glaciers	Sub-Tropical Broad-leaved	Sub-Tropical Chir Pine	Water Bodies
9	Bar-tailed Treecreeper (<i>Certhia himalayana</i>)	I	LC	WM	103	3			25		67	11					
10	Black crested tit (<i>Periparus melanolophus</i>)	I	LC	YRR	66	5	7		12	1	3			43			
11	Black drongo (<i>Dicrurus macrocercus</i>)	I	LC	SB	155	7	89		10	11	3	18	23				1
12	Black kite (<i>Milvus migrans</i>)	C	LC	YRR	63	7	31		3	6	5	12	5				1
13	Black redstart (<i>Phoenicurus ochruros</i>)	I	LC	WM	91	7	12	4	43	6	9	13		4			
14	Black stork (<i>Ciconia nigra</i>)	C	LC	PM	4	1											4
15	Black winged cuckooshrike (<i>Coracina melaschistos</i>)	I	LC	SB	1	1							1				
16	Black-crowned night heron (<i>Nycticorax nycticorax</i>)	C	LC	SB	16	2						4		12			
17	Black-shouldered kite (<i>Elanus caeruleus</i>)	C	LC	SB	1	1			1								
18	Black-throated tit (<i>Aegithalos concinnus</i>)	I	LC	SB	35	3			1	9	25						
19	Blue capped rockthrush (<i>Monticola cinclorhynchus</i>)	I	LC	SB	180	6	12	7	14	12	13	122					
20	Blue rock thrush (<i>Monticola solitarius</i>)	I	LC	SB	24	2			7			17					
21	Blue whistling thrush (<i>Myophonus caeruleus</i>)	I	LC	SB	535	8	75	10	67	24	195	187					7
22	Blunt-winged warbler (<i>Acrocephalus concinens</i>)	I	LC	SB	8	2	1					7					
23	Blyth's reed warbler (<i>Acrocephalus dumetorum</i>)	I	LC	PM	13	2	12		1								
24	Booted eagle (<i>Hieraetus pennatus</i>)	C	LC	YRR	10	2	9		1								
25	Brahminy starling (<i>Sturnia pagodarum</i>)	I	LC	YRR	283	6	1		143	11	16	68	14				
26	Brook's leaf warbler (<i>Phylloscopus subviridis</i>)	I	LC	SB	41	6	5		6	24	1	2	3				
27	Brown dipper (<i>Cinclus pallasii</i>)	I	LC	YRR	354	7	67		111	67	17	78	1				13
28	Brown rock chat (<i>Cercomela fusca</i>)	I	LC	SB	32	4		5	7		11	9					
29	Brown-fronted woodpecker (<i>Dendrocopos auriceps</i>)	O	LC	SB	5	1						5					

Table continue on next page.....

S. #	Species Common name (Scientific name)	Feeding Habit*	IUCN Status**	Occurrence***	Total no. of Individuals	No. of Common Habitats	Habitats												
							Land	Agriculture	Pasture	Alpine	Dry/Temp- ate	Moist Temperate	Rangeland	Settlements	Bushes	Shrubs and Glaciers	Snow and Broad-leaved	Sub-Tropical	Chir Pine
31	Caspian tern (<i>Sterna capsica</i>)	C	LC	PM	38	3	2			34									2
32	Chestnut thrush (<i>Turdus rubrocanus</i>)	I	LC	YRR	56	6	15	8	13	7	12	1							
33	Chukar (<i>Alectoris chukar</i>)	I	LC	YRR	100	5	27		17	36	8	12							
34	Cinereous vulture (<i>Aegypius monachus</i>)	C	NT	WM	2	1								2					
35	Citerine wagtail (<i>Motacilla citreola</i>)	I	LC	SB	38	7		2	7	21	4	1							3
36	Collared owlet (<i>Glaucidium brodiei</i>)	C	LC	SB	5	2				4		1							
37	Common buzzard (<i>Buteo buteo</i>)	C	LC	WM	11	4	3			1		3	4						
38	Common chiffchaff (<i>Phylloscopus collybita</i>)	I	LC	WM	71	7	12	1	22	14	13	9							
39	Common hoopoe (<i>Upupa epops</i>)	I	LC	SB	44	6			20	10	9	1	4						
40	Common house-martin (<i>Delichon urbicum</i>)	I	LC	SB	20	2					3								17
41	Common kestrel (<i>Falco tinnunculus</i>)	C	LC	WM	7	4				3	1	2	1						
42	Common myna (<i>Acridotheres tristis</i>)	O	LC	YRR	2309	10	813	678	201	92	131	323	54		1				16
43	Common ringed plover (<i>Charadrius hiaticula</i>)	O	LC	WM	3	1						3							
44	Common rosefinch (<i>Carpodacus erythrinus</i>)	O	LC	SB	8	1						8							
45	Common sandpiper (<i>Actitis hypoleucos</i>)	I	LC	WM	231	7	73	39		30		13			43				33
46	Common starling (<i>Sturnus vulgaris</i>)	O	LC	WM	125	5			13	35	32	45							
47	Common stonechat (<i>Saxicola torquata</i>)	I	LC	SB	26	3		3	12		11								
48	Common swift (<i>Apus apus</i>)	I	LC	SB	30	2					4	26							
49	Common tailor bird (<i>Orthotomus sutorius</i>)	I	LC	SB	9	4			1	3	4	1							
50	Crested bunting (<i>Melophus lathami</i>)	G	LC	SB	10	2	4						6						
51	Crested lark (<i>Galerida cristata</i>)	O	LC	YRR	675	9	64	89	7	209	267	12	8						19

Table continue on next page.....

S. #	Species Common name (Scientific name)	Feeding Habit*	IUCN Status**	Occurrence***	Total no. of Individuals	No. of Common Habitats	Habitats													
							Agriculture Land	Pasture	Alpine	Dry Temper- ate	Temperate	Moist	Rangeland	Settlements	Bushes and Shrubs	Snow and Glaciers	Sub-Tropical Broad-leaved	Sub-Tropical Chir Pine	Water Bodies	
53	Eurasian blackbird (<i>Turdus merula</i>)	G	LC	YRR	2	1				2										
54	Eurasian collared dove (<i>Streptopelia decaocto</i>)	G	LC	SB	44	4	16				4	9	15							
55	Eurasian coot (<i>Fulica atra</i>)	O	LC	WM	22	2					12									10
56	Eurasian crag martin (<i>Ptyonoprogne rupestris</i>)	I	LC	SB	5	2						4	1							
57	Eurasian curlew (<i>Numenius arquata</i>)	O	NT	SB	7	1							7							
58	Eurasian golden oriole (<i>Oriolus oriolus</i>)	G	LC	SB	3	1	3													
59	Eurasian hobby (<i>Falco subbuteo</i>)	I	LC	SB	30	5	13				11	2	4							
60	Eurasian magpie (<i>Pica pica</i>)	O	LC	SB	36	4	11				8		17							
61	Eurasian nightjar (<i>Caprimulgus europaeus</i>)	I	LC	SB	4	1					4									
62	Eurasian skylark (<i>Alauda arvensis</i>)	G	LC	WM	61	6	11	1	9	1	13	26								
63	Eurasian sparrowhawk (<i>Accipiter nisus</i>)	C	LC	SB	75	3	3				29		43							
64	Eurasian tree sparrow (<i>Passer montanus</i>)	G	LC	YRR	390	7	29	5	54	1	87	198	16							
65	Eurasian treecreeper (<i>Certhia familiaris</i>)	I	LC	YRR	5	1						5								
66	European Bee-eater (<i>Merops apiaster</i>)	I	LC	SB	29	4		3	5	17		4								
67	European goldfinch (<i>Carduelis carduelis</i>)	G	LC	WM	83	6	3	54	9	4	6	7								
68	European roller (<i>Coracias garrulus</i>)	I	LC	PM	45	6	9	11	2	10		13								
69	Golden eagle (<i>Aquila chrysaetos</i>)	C	LC	YRR	28	6	17	1	3	1	4	2								
70	Great crested flycatcher (<i>Myiarchus crinitus</i>)	I	LC	Un- known	13	2	2				11									
71	Great crested grebe (<i>Podiceps cristatus</i>)	C	LC	WM	6	2					4	2								
72	Great rosefinch (<i>Carpodacus rubicilla</i>)	G	LC	WM	3	1							3							
73	Great tit (<i>Parus major</i>)	I	LC	WM	79	8	27	21	14	10	1	3								3

Table continue on next page.....

S. #	Species Common name (Scientific name)	Feeding Habit*	IUCN Status**	Occurrence***	Total no. of Individuals	No. of Common Habitats	Habitats													
							Agriculture Land	Pasture	Alpine	Dry/Temp- ate	Moist Temperate	Rangeland	Settlements	Bushes and Shrubs	Snow and Glaciers	Sub-Tropical Broad-leaved	Sub-Tropical Chir Pine	Water Bodies		
75	Greater Short-toed lark (<i>Calandrella brachydactyla</i>)	G	LC	PM	24	3					5	14	5							
76	Green bee-eater (<i>Merops orientalis</i>)	I	LC	SB	19	2				11	8									
77	Green sand piper (<i>Tringa ochropus</i>)	I	LC	WM	6	2	3													3
78	Green shank (<i>Tringa nebularia</i>)	C	LC	WM	9	1														9
79	Green shrike-babbler (<i>Pteruthius xanathochlorus</i>)	G	LC	SB	1	1						1								
80	Greenish warbler (<i>Phylloscopus trochiloides</i>)	I	LC	WM	53	6		23	4	2	18	4	2							
81	Grey breasted prinia (<i>Prinia hodgsonii</i>)	I	LC	YRR	10	2					7	3								
82	Grey bushchat (<i>Saxicola ferreus</i>)	G	LC	SB	31	4			3	6		13	9							
83	Grey wagtail (<i>Motacilla cinerea</i>)	I	LC	SB	1005	10	132	98	67	186	265	126	91		26					14
84	Hen harrier (<i>Circus cyaneus</i>)	C	LC	WM	40	6	3		1	22	11		2		1					
85	Himalayan bulbul (<i>Pycnonotus leucogenys</i>)	G	LC	YRR	1711	8	198	176	131	164	556	381	105							
86	Himalayan griffon (<i>Gyps himalayensis</i>)	C	NT	YRR	59	7	7	14	10		10	8	9							1
87	Himalayan woodpecker (<i>Dendrocopos himalayensis</i>)	I	LC	YRR	43	3	15		1				27							
88	House crow (<i>Corvus splendens</i>)	O	LC	YRR	981	9	402	16	25	75	98	208	117		40					
89	House sparrow (<i>Passer domesticus</i>)	G	LC	SB	556	8	111	15	115	5	57	145	101							7
90	Hume's lark (<i>Calandrella acutirostris</i>)	G	LC	SB	19	1	19													
91	Hume's warbler (<i>Phylloscopus humei</i>)	I	LC	SB	14	2	8					6								
92	Hume's wheatear (<i>Oenanthe albonigra</i>)	I	LC	YRR	260	7	28	98	115	9	7	3								
93	Indian Paradise-flycatcher (<i>Terpsiphone paradisi</i>)	I	LC	SB	50	5	9				11	5	12	13						
94	Indian robin (<i>Saxicoloides fulicata</i>)	I	LC	YRR	5	4	1		1	2		1								
95	Indian roller (<i>Coracias benghalensis</i>)	I	LC	SB	101	6	34				19	8	13	21	6					

Table continue on next page.....

S. #	Species Common name (Scientific name)	Feeding Habit**	IUCN Status**	Occurrence***	Total no. of Individuals	No. of Common Habitats	Habitats													
							Agriculture Land	Pasture	Alpine	Dry Temper- ate	Moist Temperate	Rangeland	Settlements	Bushes and Shrubs	Snow and Glaciers	Broad-leaved	Sub-Tropical	Sub-Tropical Chir- Pine	Water Bodies	
97	Koklas pheasant (<i>Pucrasia macrolopha</i>)	G	LC	YRR	1	1					1									
98	Large billed crow (<i>Corvus macrorhynchos</i>)	O	LC	YRR	1839	9	357	11	418	124	432	373	6							118
99	Laughing dove (<i>Streptopelia senegalensis</i>)	G	LC	SB	186	8	54	16	25	41	24	11	15							
100	Lesser sand-plover (<i>Charadrius mongolus</i>)	I	LC	SB	10	2	9						1							
101	Lesser whitethroat (<i>Sylvia curruca</i>)	I	LC	SB	166	5		65	81	5	8	7								
102	Little crane (<i>Porzana parva</i>)	G	LC	WM	7	3	1		5											1
103	Little Forktail (<i>Enicurus scouler</i>)	I	LC	YRR	253	7	41	17	46	7	28	97								17
104	Little ringed plover (<i>Charadrius dubius</i>)	I	LC	WM	1	1	1													
105	Little stint (<i>Calidris minuta</i>)	I	LC	PM	26	4	6						3	9						8
106	Little swift (<i>Apus affinis</i>)	I	LC	SB	29	2			21	8										
107	Long billed pipit (<i>Anthus similis</i>)	G	LC	YRR	15	6	1		3	1	1	7								2
108	Long-legged Buzard (<i>Buteo rufinus</i>)	C	LC	WM	1	1					1									
109	Long-tiled minivet (<i>Pericrocotus ethologus</i>)	I	LC	SB	6	1	6													
110	Long-tailed shrike (<i>Lanius schach</i>)	I	LC	SB	116	6	31		21	5	25	3	31							
111	Marsh sandpiper (<i>Tringa stagnatilis</i>)	I	LC	WM	37	2	8													29
112	Monal pheasant (<i>Lophophorus impejanus</i>)	G	LC	YRR	1	1				1										
113	Mountain chiffchaff (<i>Phylloscopus sindianus</i>)	I	LC	SB	17	4	3			4	5	5								
114	Northern goshawk (<i>Accipiter gentilis</i>)	C	LC	PM	1	1			1											
115	Oriental Magpie-robin (<i>Copsychus saularis</i>)	I	LC	SB	1	1	1													
116	Oriental skylark (<i>Alauda gulgula</i>)	G	LC	SB	14	1	14													
117	Oriental white eye (<i>Zosterops palpebrosus</i>)	F	LC	YRR	7	1			7											

Table continue on next page.....

S. #	Species Common name (Scientific name)	Feeding Habit*	IUCN Status**	Occurrence***	Total no. of Individuals	No. of Common Habitats	Habitats										
							Agriculture Land	Pasture Alpine	Dry Temper- ate	Moist Temperate	Rangeland	Settlements	Bushes and Shrubs	Snow and Glaciers	Sub-Tropical Broad-leaved	Sub-Tropical Chir Pine	Water Bodies
119	Pied bushchat (<i>Saxicola caprata</i>)	I	LC	SB	67	6	18	7	28	11		3					
120	Pied wheatear (<i>Oenanthe pleschanka</i>)	F	LC	PM	48	3	15		26								7
121	Plain mountain finch (<i>Leucosticte nemoricola</i>)	G	LC	YRR	12	1					12						
122	Plumbeous water redstart (<i>Phoenicurus fuliginosus</i>)	G	LC	SB	785	11	132	28	175	77	53	207	53	11	21	28	
123	Purple sunbird (<i>Cinnyris asiaticus</i>)	F	LC	SB	1	1					1						
124	Raven (<i>Corvus corax</i>)	O	NT	YRR	120	3	23		11	86							
125	Alpine thrush (<i>Zoothera mollissima</i>)	G	LC	YRR	3	1						3					
126	Red crossbill (<i>Loxia curvirostra</i>)	G	LC	SB	15	4	7	1		1		6					
127	Red fronted serin (<i>Serinus pusillus</i>)	G	LC	YRR	2	1					2						
128	Red shank (<i>Tringa tetanus</i>)	I	LC	PM	10	1											10
129	Red vented bulbul (<i>Pycnonotus cafer</i>)	F	LC	YRR	1695	11	254	4	67	34	66	116	46		544	486	78
130	Red-backed Shrike (<i>Lanius collurio</i>)	C	LC	PM	6	1						6					
131	Red-throated Pipit (<i>Anthus cervinus</i>)	I	LC	PM	55	5	14		9	6		5	21				
132	Red-throated Thrush (<i>Turdus ruficollis</i>)	F	LC	WM	4	1	4										
133	Red-wattled Lapwing (<i>Vanellus indicus</i>)	I	LC	YRR	392	3	15								243		134
134	Rock bunting (<i>Emberiza cia</i>)	F	LC	SB	447	6	19		53	165	176	34					
135	Rock pigeon (<i>Columba livia</i>)	G	LC	YRR	178	8	21	17	43	43	29	21	4				
136	Rook (<i>Corvus frugilegus</i>)	O	LC	WM	12	2			4		8						
137	Rose-ringed Parakeet (<i>Psittacula krameria</i>)	G	LC	YRR	21	2						17	4				
138	Rosy minivet (<i>Pericroco tusroseus</i>)	I	LC	YRR	6	1	6										
139	Rosy pipit (<i>Anthus roseatus</i>)	G	LC	SB	4	2			1	3							

Table continue on next page.....

S. #	Species Common name (Scientific name)	Feeding Habit*	IUCN Status**	Occurrence***	Total no. of Individuals	No. of Common Habitats	Habitats													
							Agriculture Land	Pasture Alpine	Dry Temper- ate	Moist Temperate	Rangeland	Settlements	Bushes and Shrubs	Snow and Glaciers	Sub-Tropical Broad-leaved	Sub-Tropical Chir Pine	Water Bodies			
141	Ruff (<i>Philomachus pugnax</i>)	I	LC	PM	4	1			4											
142	Rufous treepie (<i>Dendrocitta vagabunda</i>)	O	LC	YRR	18	5	1		5		6	5								1
143	Rufous-naped tit (<i>Parus rufonuchalis</i>)	G	LC	YRR	30	4	4		8	7					11					
144	Russet sparrow (<i>Passer rutilans</i>)	G	LC	YRR	6	2					3	3								
145	Shikra (<i>Accipiter badius</i>)	C	LC	SB	13	5	6	2	1	1		3								
146	Spanish sparrow (<i>Passer hispaniolensis</i>)	G	LC	PM	261	7	58	8	41	16	38	73	27							
147	Spotted crake (<i>Porzana porzana</i>)	I	LC	PM	15	3	3		6											6
148	Spotted dove (<i>Streptopelia chinensis</i>)	G	LC	SB	18	2	5			13										
149	Spotted red shank (<i>Tringa erythropus</i>)	I	LC	WM	12	2	5													7
150	Steppe eagle (<i>Aquila nipalensis</i>)	C	EN	WM	65	7	19			4	3	4	1		29					5
151	Streaked laughing thrush (<i>Trochalopteron lineatum</i>)	F	LC	YRR	219	6	37		17	16	145	4								
152	Sulphur-bellied warbler (<i>Phylloscopus griseolus</i>)	I	LC	SB	1	1					1									
153	Tawny pipit (<i>Anthus campestris</i>)	I	LC	WM	11	1					11									
154	Tickell's thrush (<i>Turdus unicolor</i>)	F	LC	SB	3	1						3								
155	Ultramarine flycatcher (<i>Ficedula superciliaris</i>)	I	LC	SB	33	4	17	6	9	1										
156	Variable wheatear (<i>Oenanthe picata</i>)	I	LC	SB	284	7	18	104	14	116	19	13								
157	Wall creeper (<i>Tichodroma muraria</i>)	I	LC	WM	118	7	3	87	9	14	3	2								
158	Water rail (<i>Rallus aquaticus</i>)	O	LC	WM	32	2	5		27											
159	Western tragopan (<i>Tragopan melanocephalus</i>)	G	VU	YRR	1	1				1										
160	Whistler's warbler (<i>Seicercus whistleri</i>)	I	LC	SB	2	1						2								
161	White throated kingfisher (<i>Halcyon smyrnensis</i>)	I	LC	YRR	18	5	3			4	5		2							4

Table continue on next page.....

S. #	Species Common name (Scientific name)	Feeding Habit**	IUCN Status**	Occurrence***	Total no. of Individuals	No. of Common Habitats	Habitats													
							Agriculture Land	Pasture Alpine	Dry Temper- ate	Moist Temperate	Rangeland	Settlements	Bushes and Shrubs	Snow and Glaciers	Broad-leaved	Sub-Tropical Chir-Pine	Water Bodies			
163	White-bellied redstart (<i>Hodgsonius phoenicuroides</i>)	F	LC	YRR	9	3				1	7									1
164	White-browed fantail (<i>Rhipidura aureola</i>)	I	LC	SB	83	2			76				7							
165	White-browed wagtail (<i>Motacilla maderaspatensis</i>)	I	LC	YRR	114	7		27	18	5	21	19			23					1
166	White-capped water redstart (<i>Phoenicurus leucocephalus</i>)	I	LC	SB	703	8	14	117	98	178	156	121								19
167	White-cheeked Tit (<i>Aegithalos leucogenys</i>)	I	LC	YRR	22	1							22							
168	White-throated dipper (<i>Cinclus cinclus</i>)	I	LC	YRR	367	5			233	6	5	123								
169	White-throated tit (<i>Aegithalos niveogularis</i>)	I	LC	YRR	91	7	9	5	19	12	13	24	9							
170	White-winged tern (<i>Chlidonias leucopterus</i>)	C	LC	PM	19	1	19													
171	Winter wren (<i>Troglodytes hiemalis</i>)	I	LC	YRR	2	2				1	1									
172	Wire-tailed swallow (<i>Hirundo smithii</i>)	I	LC	SB	130	8	42	4	43	12	13	15	1							
173	Yellow wagtail (<i>Motacilla flava</i>)	I	LC	PM	323	6		78	76	3		31			131					4
174	Yellow-billed blue magpie (<i>Urocissa flavirostris</i>)	O	LC	YRR	108	10	23	7	39	10	1	12	13		2				1	
175	Yellow-eyed babbler (<i>Chrysomma sinense</i>)	F	LC	SB	1	1								1						
							4,191	2,396	3,394	2,802	4,387	4,357	955	21	1,251	636				543

* G, Granivore; I, Insectivore; C, Carnivore; F, Frugivore; O, Omnivore. ** LC, Least Concern; NT, Near Threatened; VU, Vulnerable; EN, Endangered. *** WM, Winter Migrant; SB, Summer Breeder; YRR, Year Round Resident; PM, Passage Migrant.