

Avifauna observations May–August 2014

Sarychat-Ertash state reserve, Kyrgyzstan

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This report summarizes observations made in 2014 between 29 May and 13 August in the Sarychat-Ertash state reserve and surroundings, Issyk Kul region, Kyrgyzstan. Additional avifaunal information was gathered from contacts on the spot. Observations were made while accompanying the Objectif Sciences Internationales Panthera expeditions, targeting Snow Leopard *Panthera uncia* conservation, and thus the itinerary followed more or less closely the transects chosen for that organisation's work. A complete list of bird observations can be obtained from the author. Currently, most work on the avifauna of Kyrgyzstan is either only available in Russian or comes from fragmentary observations from trip reports, while most data remains unpublished. Given the country shows a huge variety of ecosystems, the bird fauna is also diverse. Localized studies such as the effect of habitats on birds in the walnut fruit forest in western Kyrgyzstan, where birds were used as a proxy for evaluating biodiversity (Jalilova *et al* 2013), are important contributions for building a stronger and more precise knowledge of the avifauna of the country. Ayé *et al* (2012) contains the most extensive information in English on bird species distribution within Kyrgyzstan.

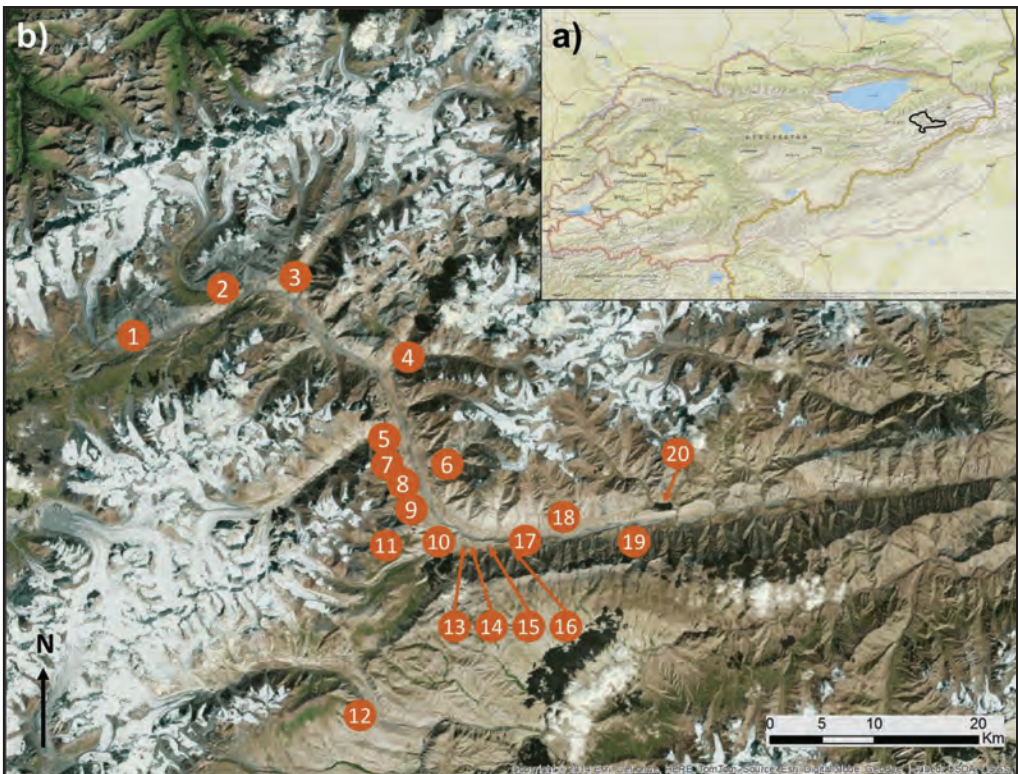


Figure 1. a) Location of the Sarychat-Ertash state reserve in Kyrgyzstan (black outline) and b) map of the Sarychat-Ertash state reserve. The main river (along which most of the points are found) is the Ertash. The orange discs indicate transects and/or camp sites 1: Atcha, 2: Boroko, 3: Bordu, 4: Koylu, 5: Sari-etchki, 6: Jaman-su, 7: Uch-baital, 8: Equibaital, 9: Bir-baital, 10: Eshkart, 11: Kachkator, 12: Koyondu, 13: Sirdibai I, 14: Sirdibai 2, 15: Sirdibai 3, 16: Solomo, 17: below Solomo, 18: Jili-su, 19: Kochotok, 20: Bach kul.



Plate 1. View of the Sarychat-Ertash state reserve, Kyrgyzstan, and the Ertash river (in the background) from Kachkator. © Aline Knoblauch



Plate 2. Ruddy Shelduck *Tadorna ferruginea* chicks near Atcha, Sarychat-Ertash state reserve, Kyrgyzstan. © Aline Knoblauch



Plate 3. Lower part of the Koylu valley, Sarychat-Ertash state reserve, Kyrgyzstan. © Aline Knoblauch



Plate 4. Landscape near Atcha, Sarychat-Ertash state reserve, Kyrgyzstan. © Aline Knoblauch

SITE

The Sarychat-Ertash state reserve, established in Kyrgyzstan in 1995, is a specially protected natural area and no economic activity, including hunting and pastoralism, is allowed within its borders. The access to the reserve is limited to scientific organisations studying and working for the preservation of natural habitats. However, since 2006, the reserve's authorities allow ecotourism groups with a conservation purpose into the reserve accompanied by local rangers as an alternative source of income. Since 1996, cars usually don't go into the reserve and most of the travelling is made by horse or foot. Sarychat-Ertash is located in the central Tian-Shan mountain range, in southeastern Kyrgyzstan (Figure 1a). The Sarychat-Ertash state reserve was created to compensate for establishment of the Kumtor gold mine to the west. Ranging between 2000 m and 5500 m asl, the reserve has a 78 080 hectares core zone and 62 060 hectares buffer zone, making it the country's largest protected area. It is divided, southwest to northeast, by the Ertash river, one of the main rivers of the Tian Shan (Figure 1b).

The climate is harsh with an annual average temperature of -7.5°C , a monthly average of -21.5°C in January and of $+4.2^{\circ}\text{C}$ in June (SER 2007). The vegetation is small, bushes are mainly found along river valley bottoms and there are only few trees, mainly willows, along the Ertash between Jaman-suu and Eshekart, below Solomo, Kochotok, and further south. The main valley in which the Ertash river flows is almost one km wide and rich with short grasses. The mountainsides and ridgelines however quickly become barren as they rise from the valley. For a more detailed description of the reserve, see SER (2007).

Table 1. Bird species recorded in the Sarychat-Ertash state reserve May–August 2014 and the distribution of observations. Sequence and nomenclature is based on Ayé *et al* (2012). + = species observed at the given site; ? = unreliable observation; ✓ = breeding was confirmed for the species; * = indications of possible breeding.

	Atcha	Boroko	Bordu	Koylu	Sari-etchki	Jaman-suu	Uch-baital	Equi-baital	Bir-baital	Eshkart	Kachkator	Koyundu	Sirdibai 1	Sirdibai 2	Sirdibai 3	Solomo	Bel.-solomo	Jili-suu	Kochotok	Bach Kul	Eshkart pass	Breeding
<i>Tetraogallus himalayensis</i>	+			+				+	+		+					+						✓
<i>Alectoris chukar</i>						+				+			+				+	+				✓
<i>Tadorna ferruginea</i>	+					+																✓
<i>Falco cherrug</i>								+														*
<i>Falco tinnunculus</i>		+						+	+					+		+			+		+	✓
<i>Falco subbuteo</i>						+				+												
<i>Gypaetus barbatus</i>	+	+	+	+	+	+		+	+	+	+	+			+	+				+	+	✓
<i>Gyps himalayensis</i>	+			+	+	+		+	+	+	+	+	+	+	+	+		+	+		+	✓
<i>Aegypius monachus</i>				+				+														*
<i>Gyps fulvus</i>								+														
<i>Milvus migrans</i>																						
<i>Accipiter nisus</i>										?									+			✓
<i>Accipiter gentilis</i>										?												
<i>Buteo rufinus</i>												+										
<i>Aquila chrysaetos</i>	+	+	+	+					+	+	+	+	+	+		+						✓
<i>Tringa ochropus</i>	+									+											+	
<i>Actitis hypoleucos</i>						+				+							+					✓
<i>Larus minutus</i>						+																
<i>Columba rupestris</i>	+			+	+										+				+			✓
<i>Cuculus canorus</i>						+			+													*
<i>Athene noctua</i>									?	+												✓
<i>Bubo bubo</i>				+	+	+									+	+	+		+	+		✓
<i>Apus apus</i>						+														+		*
<i>Upupa epops</i>						+			+							+	+				+	✓
<i>Lanius phoenicuroides</i>																	+					✓
<i>Pica pica bactriana</i>						+				+										+	+	✓
<i>Pyrrhocorax pyrrhocorax</i>	+	+	+	+		+		+	+			+	+	+	+	+	+		+		+	✓
<i>Pyrrhocorax graculus</i>	+	+	+	+		+		+	+			+	+	+	+	+	+		+		+	✓
<i>Corvus corax</i>								+	+			+				+						✓
<i>Ptyonoprogne rupestris</i>	+			+	+					+	+				+							✓
<i>Hirundo rustica</i>										+												*
<i>Delichon urbicum</i>	+			+	+			+	+		+			+	+	+		+				✓
<i>Eremophila alpestris</i>			+	+	+			+		+	+											✓
<i>Phylloscopus griseolus</i>			+	+															+			✓
<i>Tichodroma muraria</i>	+			+	+	+		+								+						✓

tioned camp sites: Kachkateur, Sirdibai 1, Uch Kul river bed.

- 10.07.2014–23.07.2014 Sirdibai 3, Kochotok, Solomo, Solomo to Eshekart along the Ertash river, Jaman-suu. Camping sites: Eshekart, bottom of the Solomo valley ('below Solomo'), Jaman-suu.
- 31.07.2014–13.08.2014 Equibaital, Kochotok, Solomo, below Solomo, Birbaital, Jaman-suu. Camp sites: Eshekart, Kochotok, Jaman-suu.

RESULTS AND DISCUSSION

Being geographically isolated, the Sarychat-Ertash state reserve is an important haven for wild animal species, and despite its arid aspect, a total of 109 bird species – amongst which about half are breeders – have been recorded within its boundaries. During our expedition, we observed a total of 58 species, of which the most abundant were passerines (34 species) and birds of prey (13 raptor species + 2 owls). A full species list as well as the distribution in the reserve of the observations is in Table 1. Of the observed species, 22 are considered to be resident, and 43 are known to breed in the reserve. Following is a list of species being either on the IUCN Red List of endangered species, on the Red List of Kyrgyzstan (Ministry of Justice of the Kyrgyz Republic 2009), or their breeding range being outside the range indicated in Ayé *et al* (2012).

Table 2. Coordinates and names of sites corresponding to numbers on Figure 1.

	Valley / camp name	Latitude °N	Longitude °E
1	Atcha	42.020802	78.311914
2	Boroko	42.046174	78.382664
3	Bordu	42.051448	78.431569
4	Koylu	41.997438	78.512586
5	Sari-etchki	41.955410	78.537576
6	Jaman-suu	41.938809	78.546344
7	Uch-baital	41.946236	78.537508
8	Equi-baital	41.935882	78.542089
9	Bir-baital	41.914585	78.553694
10	Eshekart	41.894216	78.567693
11	Kachkator	41.889839	78.527661
12	Koyondu	41.789719	78.506314
13	Sirdibai 1	41.885736	78.574874
14	Sirdibai 2	41.886138	78.585979
15	Sirdibai 3	41.885634	78.607156
16	Solomo	41.88662	78.630145
17	below Solomo	41.894800	78.644541
18	Jili-suu	41.898441	78.670195
19	Kochotok	41.898826	78.715640
20	Bach Kul	41.913430	78.765455

Saker Falcon *Falco cherrug* (Endangered (IUCN) & Red List of Kyrgyzstan)

One individual was observed flying between Sarietchki and Ekibaital 3 June. In Kyrgyzstan the species is a victim of smuggling for the falconry trade.

Lammergeier *Gypaetus barbatus* (Red List of Kyrgyzstan)

The species is breeding in the reserve and was observed regularly during the whole summer and throughout the reserve. In total, 58 observations were made and on 4 August two adults were observed gripping each other's claws several times in flight. The species is known to be nesting in Tchong Bordu and near Ak-Shirak.

Himalayan Griffon *Gyps himalayensis* (Red List of Kyrgyzstan)

This species breeds and is widespread in the reserve. It was regularly observed during the whole period. A total of 55 observations were made and nests are known in Jaman-suu, Koylu, Uch Kul, Bach Kul.

Table 3. Observations of particular interest, shared by Prof Alexander Vereshagin.

		Status	Comment
Tundra Swan	<i>Cygnus colombianus</i>	Outside of described range	Highlands between Karasay and Koyondu
Garganey	<i>Anas querquedula</i>	Outside of described range	Breeding
Goosander	<i>Mergus merganser</i>	Outside of described range	
Black Stork	<i>Ciconia nigra</i>	Red List of Kyrgyzstan	Highlands between Kumtor and Koyondu (A Knoblauch, July 2013)
Great Bittern	<i>Botaurus sellaris</i>	Outside of described range	Highlands between Kumtor and Karasay
Barbary Falcon	<i>Falco pelegrinoides</i>	Red List of Kyrgyzstan	
European Honey-buzzard	<i>Pernis apivorus</i>	Outside of described range	
Upland Buzzard	<i>Buteo hemilasius</i>	Outside of described range / lack of data	
Ibisbill	<i>Ibidorhyncha struthersii</i>	Red List of Kyrgyzstan	Between Koyondu and Bordu
Lesser Sand Plover	<i>Charadrius mongolus</i>	Outside of described range	
Wood Sandpiper	<i>Tringa glareola</i>	No distribution map Ayé et al 2012	
Common Kingfisher	<i>Alcedo atthis</i>	Outside of described range	
Oriental Skylark	<i>Alauda gulgula</i>	Outside of described range	
Asian Paradise Flycatcher	<i>Terpsiphone paradisi</i>	Red List of Kyrgyzstan	Erratic. Observed once near Koyondu
Eurasian Nuthatch	<i>Sitta europea</i>	Outside of described range	
Common Redpoll	<i>Carduelis flammea</i>	Outside of described range	
Yellowhammer	<i>Emberiza citrinella</i>	Outside of described range	
Grey-necked Bunting	<i>Emberiza buchanani</i>	Outside of described range	

Cinereous Vulture *Aegypius monachus* (Red List of Kyrgyzstan)

Two individuals were observed flying together opposite the waterfall situated in Tchong-Koylu 25 June and one individual was observed flying above Equibaital on 3 August. Additionally, one individual was observed in Eshekart in 2013 and in Bordu and Boroko in 2009 (B Chaix).

Eurasian Griffon *Gyps fulvus* (Red List of Kyrgyzstan)

One individual observed flying Equibaital 3 August.

Golden Eagle *Aquila chrysaetos* (Red List of Kyrgyzstan)

The species breeds in the reserve. A total of 33 sightings were made and territorial conflicts were observed between three adults on 29 June (between Jili-Bulak and Uch Kul) and 2 August (above Eshekart). Two young (~35 days old) observed 25 June in an aerie opposite an abandoned wagon used as a camp site in Koylu.

Pairs of Golden Eagles have been detected in Koyondu, Sirdibai, Koylu, Kitchi Bordu, Boroko, between Birbaital and Sari-etchki and in Atcha and a density of 1.2 pairs per 100 km² (five known nests + three couples with probable breeding) was calculated (Chaix 2010).

Eurasian Eagle-Owl *Bubo bubo* (Red List of Kyrgyzstan)

Nine observations made and two nests discovered. In Koylu (25 June), one dead chick (c40 days old) was found on the ground under the aerie and one living chick of c45 days

old was observed in the aerie. The other nest was discovered 19 July, downstream of the Jaman-suu camp (located downstream of the junction between the Jaman-suu and the Ertash rivers, on the right shore) and contained at least one chick. Adults were observed flying over our camp at Jaman-suu both during the night and early morning.

Together with observations from other years and other observers, nests of Eurasian Eagle-Owl are known in Koylu, Jaman-suu, Solomo, Bach Kul, Uch Kul and there should be five others downstream of Solomo.

Great Spotted Rosefinch *Carpodacus severtzovi* (breeding)

The species can regularly be observed in groups around the Eshekart hut and one pair was seen in Jaman-suu. The first observation took place 31 May and breeding has been confirmed in the reserve. The last observation took place 13 July (group in Eshekart).

With the Kumtor open-pit gold mine lying just west of the reserve, the economic pressure blocks all potential westward expansion of the reserve. It is one of the largest gold mines in the world and its GDI represented c8 percent of Kyrgyzstan's total GDP in 2016 (Kumtor gold mine 2016). Furthermore, trophy hunting concessions block further expansion of the territory in other directions, given their camps possess designated territories neighbouring the reserve's area (Farrington 2005). The presence of the emblematic Snow Leopard plays an important part in both the establishment of the site and the preservation of the Sarychat-Ertash state reserve, involving several international organizations such as the Snow Leopard Trust, the WWF and OSI-Panthera. Nonetheless, the presence of the red-listed bird species within the boundaries of the reserve, and more importantly breeding records regarding these species, add to the importance of this high altitude ecosystem reserve.

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