

An annotated list of bird species observed by the Ecosystem Health Team in Wakhan and Big Pamir in July–August 2006

*Dr Stéphane Ostrowski
Wildlife Conservation Society
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Introduction

The present report provides an annotated list of the bird species observed by the Ecosystem Health Team (Dr Khadr Abdulkhadr, Dr Ali Madad Rajabi, Dr Hafizullah Ziauddin, and myself) during their mission in Wakhan and Big Pamir in July and August 2006. Since the main purpose of the mission was not to thoroughly examine the avifauna of the region, this list does not ambition to be exhaustive. We recorded bird species opportunistically, often during our spare time. Nevertheless I asked the other team members to report to me any ornithological observations they made, a duty they completed with dedication and enthusiasm (Plate 1).



Plate 1 — Dr Khadr spotting marshy flats for the presence of migrating waders, Tila Bai Valley, 30 July 2006.

Three reports of previous expeditions in the region already included bird lists: Petocz (1978); Fitzherbert and Mishra (2003); and Schaller (2004). Our list continues to improve our knowledge of the avifauna of Wakhan and Big Pamir, mostly in three ways:

- It is the first document since the seminal work of Petocz (1978) to record bird species occurring in the region in July and August.
- It provides fledging dates for the shore lark (*Eremophila alpestris*) and the citrine wagtail (*Motacilla citreola*), and a hatching date for the lesser-sand plover (*Charadrius mongolus*), in Big Pamir.
- It documents 13 bird species not previously recorded in the region: the short-toed eagle (*Circaetus gallicus*), the greater sand plover (*Charadrius leschenaultii*), the green sandpiper (*Tringa ochropus*), the European bee-eater (*Merops apiaster*), the golden oriole (*Oriolus oriolus*), the Himalayan woodpecker (*Dendrocopos himalayensis*), the scaly-bellied woodpecker (*Picus squamatus*), the short-toed lark (*Calandrella brachydactyla*), the tree pipit (*Anthus trivialis*), the brooks's leaf warbler (*Phylloscopus subviridis*), the plain-leaf warbler (*Phylloscopus neglectus*), the Asian paradise flycatcher (*Terpsiphone paradisi*), and the red-headed bunting (*Emberiza bruniceps*).

List of recorded bird species

Table 1 — Taxonomic list of bird species observed by the Ecosystem Health Team during a survey in Wakhan and Big Pamir in July and August 2006, with mention of those recorded in previous reports: Petocz (1978); Fitzherbert and Mishra (2003); and Schaller (2004). New records are in grey.

Common name	Genus	Species	Petocz (1978)	Fitzherbert and Mishra (2003)	Schaller (2004)
Great crested grebe	<i>Podiceps</i>	<i>cristatus</i>		×	
Ruddy shelduck	<i>Tadorna</i>	<i>ferruginea</i>	×		×
Teal	<i>Anas</i>	<i>crecca</i>	×	×	×
Lammergeier	<i>Gypaetus</i>	<i>barbatus</i>	×	×	×
Egyptian vulture	<i>Neophron</i>	<i>percnopterus</i>	×		
Himalayan griffon	<i>Gyps</i>	<i>himalayensis</i>		×	×
Golden eagle	<i>Aquila</i>	<i>chrysaetos</i>	×	×	×
Short-toed eagle	<i>Circaetus</i>	<i>gallicus</i>			
Kestrel	<i>Falco</i>	<i>tinnunculus</i>	×	×	×
Chukar	<i>Alectoris</i>	<i>chukar</i>	×	×	
Lesser sand plover	<i>Charadrius</i>	<i>mongolus</i>	×		
Greater sand plover	<i>Charadrius</i>	<i>leschenaultii</i>			
Greenshank	<i>Tringa</i>	<i>nebularia</i>	×		
Green sandpiper	<i>Tringa</i>	<i>ochropus</i>			
Common sandpiper	<i>Actitis</i>	<i>hypoleucos</i>	×	×	
Pallas's sandgrouse	<i>Syrhaptes</i>	<i>paradoxus</i>	×		
Rock dove	<i>Columba</i>	<i>livia</i>	×	×	

Hill pigeon	<i>Columba</i>	<i>rupestris</i>		×	×
Common cuckoo	<i>Cuculus</i>	<i>canorus</i>	×		×
Common swift	<i>Apus</i>	<i>apus</i>	×		
European bee-eater	<i>Merops</i>	<i>apiaster</i>			
European roller	<i>Coracias</i>	<i>garrulus</i>	×		
Hoopoe	<i>Upupa</i>	<i>epops</i>	×	×	×
Himalayan woodpecker	<i>Dendrocopos</i>	<i>himalayensis</i>			
Scaly-bellied woodpecker	<i>Picus</i>	<i>squamatus</i>			
Short-toed lark	<i>Calandrella</i>	<i>brachydactyla</i>			
Shore lark	<i>Eremophila</i>	<i>alpestris</i>	×	×	×
Crag martin	<i>Ptyonoprogne</i>	<i>rupestris</i>	×	×	
House martin	<i>Delichon</i>	<i>urbica</i>	×		
Barn swallow	<i>Hirundo</i>	<i>rustica</i>	×		
Tree pipit	<i>Anthus</i>	<i>trivialis</i>			
Citrine wagtail	<i>Motacilla</i>	<i>cinerea</i>	×		
White wagtail	<i>Motacilla</i>	<i>alba</i>	×	×	×
Grey wagtail	<i>Motacilla</i>	<i>cinerea</i>	×	×	
Black redstart	<i>Phoenicurus</i>	<i>ochruros</i>	×	×	
Güldenstädt's redstart	<i>Phoenicurus</i>	<i>erythrogaster</i>	×	×	×
Stonechat	<i>Saxicola</i>	<i>torquata</i>	×	×	
Isabelline wheatear	<i>Oenanthe</i>	<i>isabellina</i>	×		×
Desert wheatear	<i>Oenanthe</i>	<i>deserti</i>	×		
Red-tailed wheatear	<i>Oenanthe</i>	<i>xanthopyrma</i>	×	×	
Dipper	<i>Cinclus</i>	<i>cinclus</i>	×	×	
Whitethroat	<i>Sylvia</i>	<i>communis</i>		×	
Greenish warbler	<i>Phylloscopus</i>	<i>trochiloides</i>	×		
Brooks's leaf warbler	<i>Phylloscopus</i>	<i>subviridis</i>			
Plain leaf warbler	<i>Phylloscopus</i>	<i>neglectus</i>			
Asian paradise flycatcher	<i>Terpsiphone</i>	<i>paradise</i>			
Eastern rock nuthatch	<i>Sitta</i>	<i>tephronota</i>	×	×	
Golden oriole	<i>Oriolus</i>	<i>oriolus</i>			
Long-tailed shrike	<i>Lanius</i>	<i>schach</i>	×		
Magpie	<i>Pica</i>	<i>pica</i>	×	×	
Chough	<i>Pyrrhocorax</i>	<i>pyrrhocorax</i>	×	×	×
Eastern carrion crow	<i>Corvus</i>	<i>corone orientalis</i>	×	×	
Raven	<i>Corvus</i>	<i>corax</i>	×	×	×
Rose-colored starling	<i>Sturnus</i>	<i>roseus</i>	×		
Tree sparrow	<i>Passer</i>	<i>montanus</i>	×	×	
Brandt's mountain finch	<i>Leucosticte</i>	<i>brandti</i>	×		×
Red-fronted serin	<i>Serinus</i>	<i>pusillus</i>	×		
Twite	<i>Carduelis</i>	<i>flavirostris</i>	×		×
Crimson-winged finch	<i>Rodopechys</i>	<i>sanguinea</i>	×		
Common rosefinch	<i>Carpodacus</i>	<i>erythrurus</i>	×		
Great rosefinch	<i>Carpodacus</i>	<i>rubicilla</i>	×		
Red-headed bunting	<i>Emberiza</i>	<i>bruniceps</i>			

Annotations

^bproven breeder either observed at nest, or with chick(s), or with recently fledged juvenile(s); ^(b)probable breeder but needs to be confirmed.

Great crested grebe (*Podiceps cristatus*) — Two birds flying north over Pamir River (Gormatek area) on 29 July.

^bRuddy shelduck (*Tadorna ferruginea*) — Single adult observed flying north-west in Tila Bai Valley on 30 July. Observed breeding in marshy flats of upper Tila Bai Valley (D. Bedunah, pers. obs.).

Teal (*Anas crecca*) — Two birds flying north at the confluence of the Wakhan and Pamir rivers on 13 August.

Lammergeier (*Gypaetus barbatus*) — Single individuals of this magnificent species observed daily over Wakhi livestock pastures of the Big Pamir, between Jermasirt and upper Shikargah Valley.

Egyptian vulture (*Neophron percnopterus*) — Single immature and adult individuals observed in lower Wakhan as far east as Qila-e Panja.

Himalayan griffon (*Gyps himalayensis*) — We observed one individual showing typical morphological features of the *himalayensis* species together with an adult lammergeier in Jabar Khan, Jermasirt, on 1 August.

Golden eagle (*Aquila chrysaetos*) — One adult specimen observed hunting marmots near Nakchirshitk, Wakhi settlement, on 5 and 6 August. We also found the carcass of a subadult (3–4 year-old), presumably male specimen in the poplar tree plantation of Mr Wali Jon at Goz Khun on 13 August. This individual was shot by the elder son of Mr Wali Jon at the beginning of spring 2006, after it successfully preyed a chukar partridge (*Alectoris chukar*).

Short-toed eagle (*Circus gallicus*) — A single individual flying west against a very strong wind in Goz Khun on 13 August.

^(b)Kestrel (*Falco tinnunculus*) — Two specimens observed near the settlement of Nakchirshitk, Manjolak, on 5 and 6 August, at an elevation of 4000–4200 m. At the same location, we observed two juveniles unsuccessfully preying on shore lark chicks. The species is probably breeding in the area.

^bChukar partridge (*Alectoris chukar*) — A common species in Wakhan and at lower elevations in rocky slopes of Big Pamir. Often heard and encountered in coveys exceeding 10 birds.

^bLesser sand plover (*Charadrius mongolus*) — A common species observed in marshy flats and oxbow lakes of upland rivers but also at higher elevation, up to 4400 m, in *Artemisia*

steppes of Big Pamir. We observed a female with two recently hatched chicks in Tila Bai Valley on 30 July (Plate 2).

^(b)Greater sand plover (*Charadrius leschenaultii*) — We observed an adult male in breeding plumage displaying territorial behavior in an oxbow lake along the Pamir River, near Gormatek, on 29 July. Probably a breeding species.

Green sandpiper (*Tringa ochropus*) — Single birds observed in inundated grasslands at the confluence of the Wakhan and Pamir rivers in Goz Khun, on 13 August, and along Panj River in Lower Wakhan. Most probably migrating specimens.

Greenshank (*Tringa nebularia*) — One specimen observed near Qazideh, Lower Wakhan, in floodwater flash along Panj River, on 17 August. Migrating specimen.

Common sandpiper (*Actitis hypoleucos*) — Single specimens observed regularly in marshy flats along upland rivers and mountain streams.

Pallas's sandgrouse (*Syrhaptes paradoxus*) — Four specimens drinking in Pamir River at Gormatek (3700 m) on 29 July. One individual flying over Jabar Khan, Jermasirt (4300 m) on 3 August.



Plate 2 — A recently hatched lesser sand plover (*Charadrius mongolus*) in Tila Bai Valley, 30 July 2006.

^bRock dove (*Columba livia*) — A common species in rocky and cliff areas of Wakhan. Rarer at higher altitudes where it is replaced by the Hill pigeon (*Columba rupestris*). One specimen on nest in Goz Khun cliffs on 25 July.

Hill pigeon (*Columba rupestris*) — A common and gregarious species in Big Pamir, often present near human settlements. We observed this species up to an altitude of 4500 m.

^bCommon cuckoo (*Cuculus canorus*) — A very common species in Wakhan. Frequently encountered in riparian vegetation along the Pamir River. One juvenile bird observed resting and a bit disoriented at a high pass (4600 m) in Big Pamir. A newly fledged bird observed in Qila-e Panja on 16 August in a garden plot.

Common swift (*Apus apus*) — Present in small numbers in Wakhan.

European bee-eaters (*Merops apiaster*) — A flock observed migrating at great height over the upper portion of the Shikargah Valley on 9 August. Another flock heard passing over Qila-e Panja on 15 August.

European roller (*Coracias garrulus*) — Individuals were observed throughout lower Wakhan. The species also occurs in upper Wakhan as far as Sarhad area (J. Mock and K. O'Neil, pers. obs.).

^bHoopoe (*Upupa epops*) — A common species in Wakhan, as well as in riparian vegetation along upland rivers. Also recorded in steppe areas vegetated with *Artemisia* sp. up to an altitude of 4100 m in north-western slopes of Big Pamir. One adult feeding young at nest in Khandud, Wakhan, on 23 July.

Himalayan woodpecker (*Dendrocopos himalayensis*) — One adult male observed feeding in a poplar plantation at Qila-e Panja on 15 August.

Scaly-bellied woodpecker (*Picus squamatus*) — One adult specimen in willow trees along Istimoch river, lower Shikargah Valley, on 12 August. Also one specimen attributed to this species was seen flying in Qila-e Panja between garden plots on 16 August.

Short-toed lark (*Calandrella brachydactyla*) — A gregarious species commonly seen in small flocks feeding in cultivated plots in Wakhan but also observed at higher elevation in Big Pamir steppes.

^bShore lark (*Eremophila alpestris*) — A common breeding species in alpine uplands of Big Pamir. We found a nest with one chick at an altitude of 4200 m near the Wakhi settlement of Nakchirshitk, Manjulak, on 6 August (Plate 3).

^(b)Crag martin (*Ptyonoprogne rupestris*) — Commonly reported in rocky and cliff areas in Wakhan and Big Pamir up to an altitude of 4000 m. Most probably a breeding species in the area.



Plate 3 — A nest of shore lark (*Eremophila alpestris*) with one chick at an altitude of 4200 m near the Wakhi settlement of Nakchirshitk in Big Pamir, 6 August 2006.

^(b)House martin (*Delichon urbica*) — A common species in Wakhan. It was very abundant at the confluence of the Wakhan and Pamir rivers on 13 and 14 August. We also recorded it along Pamir River up to an elevation of 3400 m. Possibly a breeding species in Wakhan.

Barn swallow (*Hirundo rustica*) — Less than 10 specimens recorded in Goz Khun on 13 and 14 August.

Tree pipit (*Anthus trivialis*) — Three individuals including a first-year bird seen in a cultivated plot at Qila-e Panja on 16 August.

^bCitrine wagtail (*Motacilla citreola*) — A very common breeding species in cultivated lands in Wakhan as well as in marshy flats, oxbow lakes and floodwater flashes along upland rivers. We observed the species up to an altitude of 4500 m. We found a chick “about-to-fly” in Tila Bai Valley (3900 m) on 30 July (Plate 4), probably a late fledging date, even at this altitude, since we observed many flying juvenile birds in the area.

^bWhite wagtail (*Motacilla alba personata*) — A common breeding species in cultivated lands in Wakhan, as well as along the Pamir River. Recently fledged individuals observed in lower part of Shikargah Valley on 11 August. We observed the species up to an altitude of 4200 m.



Plate 4 — A newly fledged citrine wagtail (*Motacilla citreola*) in Tila Bai Valley, 30 July 2006. In the foreground one can note a typical nesting habitat for this species.

Grey wagtail (*Motacilla cinerea*) — One individual observed in a poplar tree (*Populus* sp.) plantation at Qila-e Panja on 17 August.

^(b)Black redstart (*Phoenicurus ochruros*) — A very common species encountered throughout the mission in Wakhan and in lower to mid elevation rocky slopes in Big Pamir. Juveniles observed, probable breeder.

^(b)Güldenstädt's redstart (*Phoenicurus erythrogaster*) — A common species that we observed at higher elevations in Big Pamir. Two adult males still in breeding plumage observed in Shikargah Valley by a stream at an elevation of c. 4000 m on 10 August. All other males, observed in Jermasirt and Manjulak areas (4000–4400 m) between 1 and 7 August, were already in winter plumage, with black upperparts, throat and upper chest molted to ashy color plumage. The species is most probably breeding in Big Pamir.

Stonechat (*Saxicola torquata*) — Individuals found in riparian thickets and scrubs in Wakhan.

Isabelline wheatear (*Oenanthe isabellina*) — A species commonly encountered at all elevations in Big Pamir, up to 4600 m. It is a typical inhabitant of altitude steppes and rocky areas.

Desert wheatear (*Oenanthe deserti*) — Single individuals reported in cliff area of Goz Khun, and in rocky gullies and gorges along lower portion of the Pamir River.

Red-tailed wheatear (*Oenanthe xanthopyrma*) — Single birds seen at lower and mid elevation rocky slopes and torrent valleys in Big Pamir.

Dipper (*Cinclus cinclus leucogaster*) — Single individuals observed foraging or sun-bathing along upper course of Istimoch river (Shikargah Valley) on 9 and 10 August. All specimens belonged to *leucogaster* subspecies with under-parts entirely white.

Whitethroat (*Sylvia communis*) — Single individuals observed in tamarisk (*Tamarix* sp.) and buckthorn (*Hippophae* sp.) thickets by Pamir River and at the confluence of Pamir and Wakhan rivers in Goz Khun.

Greenish warbler (*Phylloscopus trochiloides*) — Very common in gardens and tree plantations in Wakhan. Very abundant in riparian vegetation along the Pamir River.

Brooks's leaf warbler (*Phylloscopus subviridis*) — One adult specimen in bright autumn plumage observed in a house garden at Qila-e Panja, on 16 August.

Plain leaf warbler (*Phylloscopus neglectus*) — Common in riverine buckthorn thickets and scrubs at the confluence of the Wakhan and Pamir rivers, Goz Khun, on 13 and 14 August.

Asian paradise flycatcher (*Terpsiphone paradisi*) — One specimen, presumably an adult female, in the riverine vegetation along the Wakhan River, near Wuzed, on 15 August.

Eastern rock nuthatch (*Sitta tephronata*) — Two specimens observed in cliffs near Goz Khun on 15 August.

Golden oriole (*Oriolus oriolus*) — Isolated birds and small flocks of 3–5 birds observed in poplar tree plantations in Qila-e Panja on 16 August and Ishkashim on 17 August.

^(b)Long-tailed shrike (*Lanius schach*) — Very common species in cultivated areas and garden plots in Wakhan. Less common in riverine areas. We observed this species up to an altitude of 3100 m. It is most probably a breeding species in Wakhan.

^bMagpie (*Pica pica*) — Common in Wakhan and in Big Pamir up to an altitude of 4300 m. A breeding pair feeding two recently fledged young was observed in Qila-e Panja on 16 August. The species is usually associated with human settlements.

^bChough (*Pyrrhocorax pyrrhocorax*) — Common in pairs and family flocks of 3–5 birds in Wakhan and Big Pamir. We observed this species up to an altitude of 4500 m.

¹Eastern carrion crow (*Corvus corone orientalis*) — A ubiquitous species in Wakhan and at lower altitudes in Big Pamir. Mostly observed in pairs at this period of the year, or in small flocks, presumably family flocks (< 5 individuals).

¹ The eastern carrion crow can hardly be distinguished in the field from the jungle crow (*Corvus macrorhynchos*), a Himalayan forest bird that occurs in the Chitral and Gilgit regions of Pakistan (Roberts, 1992). We cannot rule out that its distribution range also includes Wakhan and that we have in fact

Raven (*Corvus corax*) — Single birds observed daily in Big Pamir, predominantly at higher altitudes.

Rose-coloured starling (*Sturnus roseus*) — One flock of 10–15 birds in winter plumage observed feeding in buckthorn thickets around garden plots in Qila-e Panja on 16 August.

^bTree sparrow (*Passer montanus*) — Ubiquitous among human settlements at lower and higher altitudes both in Wakhan and Big Pamir. We observed adults feeding fledged birds in July.

Brandt's mountain finch (*Leucosticte brandti*) — Consistently occurring in small flocks of 2–7 birds in the northwestern slopes of Big Pamir near Wakhi pastures, usually above 4000 m.

Red-fronted serin (*Serinus pusillus*) — Observed in small flocks in cultivated lands and rocky slopes surrounding Goz Khun on 13 and 14 August.

Twite (*Carduelis flavirostris*) — Two birds in marshy flats along the Pamir River on 28 July, and two more in similar habitat in upper Shikargah Valley (4100 m) on 9 August.

Crimson-winged finch (*Rodopechys sanguinea*) — Four specimens feeding in cultivated plots at Qila-e Panja on 16 August.

^bCommon rosefinch (*Carpodacus erythrinus*) — A common species in riverine thickets and cultivated plots at the confluence of the Wakhan and Pamir rivers in Goz Khun. We observed an adult feeding a recently fledged bird on 25 July.

Great rosefinch (*Carpodacus rubicilla*) — The presence of this species needs to be confirmed as it is based on one very brief observation of a flying male specimen in Goz Khun on 25 July.

^(b)Red-headed bunting (*Emberiza bruniceps*) — Three specimens observed in cultivated plots in Goz Khun on 14 August. The presence of a “begging” juvenile suggests that the species may breed in this area.

Status of species newly recorded in the area

We recorded 13 species new to the region.

The single short-toed eagle was in mediocre plumage condition with extensive molt of primary and secondary feathers and could have been an accidental visitor to the area a day of very strong western wind.

misidentified it as the eastern carrion crow. An attempt to capture some specimens should be made in the future to clarify this issue, since in the hand these two species can be identified with certainty.

Although the greater sand plover was probably breeding in the area, we saw only one specimen, suggesting that the species may be uncommon in Big Pamir.

The green sandpiper is a common migrating species in western Asia at this period of the year. This species may have been overlooked in the past and perhaps sometimes confused with the wood sandpiper (*Tringa glareola*).

The European bee-eater is also an early migratory species in Western Asia. One should be attentive to its flying call since it is the only way to know about its presence when it migrates at great height.

The status of the golden oriole in Wakhan is unclear. The subspecies *Oriolus oriolus kundoo* breeds in northern Pakistan and may occur in Wakhan, whereas the nominate subspecies *Oriolus oriolus oriolus* is mainly a passage migrant through Western Asia (Roberts, 1992). Since we were unable to assess the subspecies of the adult birds we observed, we have no indications whether they were early migrants or possible breeders.

The Himalayan woodpecker is a species extending westwards into extreme north-eastern border regions of Afghanistan and across Himalayas as far as western Nepal (Roberts, 1992). The species may have been overlooked in the past in Wakhan. It is probably breeding there and may even be a resident.

According to Roberts (1992) the scaly-bellied woodpecker occurs from southern Turkmenistan through north-eastern Iran, north-western Afghanistan across the Himalayas to central Nepal. Similarly to the Himalayan woodpecker, the species may reside in Wakhan.

The status of the short-toed lark in the region is poorly known. It is an abundant winter visitor to the plain regions of central Pakistan and a common passage visitor to Chitral and Gilgit (Roberts, 1992). However during autumn migration it is not known to occur in these areas before October.

In Pakistan the tree pipit breeds in alpine zones of northern regions and migratory specimens are rarely observed before September (Roberts, 1992). The species may breed in Wakhan. In northern Pakistan it is sympatric with the rosy pipit (*Anthus roseatus*), a species not yet recorded in Wakhan, but possibly overlooked.

Although in Afghanistan the brooks's leaf warbler is known from the extreme east of the country (Baker, 1997) it has never been recorded in Wakhan, where it might have been in the past confused with the yellow-browed warbler (*Phylloscopus inornatus*) a migrant species that may occur in Wakhan later in the season.

The plain-leaf warbler can be confused with the mountain chiffchaff (*Phylloscopus sindianus*), yet the small size and more rounded appearance of the birds we observed plead in favor of the first species (Baker, 1997). It would be worthwhile capturing in the future some specimens of this common species to confirm the identification.

The status of the Asian paradise flycatcher in Wakhan is unclear. Although we visited some very typical habitats for the species, we observed only one, seemingly isolated, individual. We cannot exclude that it was an accidental visitor to Wakhan.

Finally the red-headed bunting is probably breeding in the area.

Discussion

Schaller's (2004) and Fitzherbert and Mishra's (2003) expeditions to Wakhan and Pamir were carried out later in the season, and were therefore unlikely to record non resident breeders. In addition Schaller (2004) reported only the species he observed at higher altitudes. Petocz (1978), Fitzherbert and Mishra (2003), and Schaller (2004) reported respectively 66, 21, and 13 bird species that we did not observe. Overall, the bird list for Wakhan/Pamir region now amounts to 142 different bird species (see Appendix). There is no doubt that the bird survey mission currently conducted by Mr Bilal Habib in Wakhan and Pamir will significantly inflate this total, and perhaps bring some clarifications about the occurrence of several species relatively difficult to identify.

Literature cited

- Baker, K. (1997). Warblers of Europe, Asia and North Africa. London: Christopher Helm. 400 pp.
- Fitzherbert, A., and Mishra, C. (2003). Afghanistan Wakhan mission technical report. Unpublished report, UNEP, FAO, Geneva. 104 pp.
- Petocz, R. (1978). Report of Afghan Pamir. Part 1. Ecological reconnaissance. Unpublished report, UNDP, FAO, Department of Forests and Range and Ministry of Agriculture, Kabul. 32 pp.
- Roberts, T. J. (1992). The Birds of Pakistan. Oxford: Oxford University Press. 1291 pp.
- Schaller, G. B. (2004). The status of Marco Polo sheep in the Pamir Mountains of Afghanistan. Unpublished report, WCS, New York. 30 pp.

Appendix

Table 2 Taxonomic list of bird species observed in the Wakhan district as per 17 August 2006. Information was compiled from ¹Petocz (1978), ²Fitzherbert and Mishra (2003), ³Schaller (2004), and ⁴present mission.

Common name	Genus	Species	References
Great crested grebe	<i>Podiceps</i>	<i>cristatus</i>	2, 4
Grey heron	<i>Ardea</i>	<i>cinerea</i>	1, 2
Bar-headed goose	<i>Anser</i>	<i>indicus</i>	1
Ruddy shelduck	<i>Tadorna</i>	<i>ferruginea</i>	3, 4
Mallard	<i>Anas</i>	<i>platyrhynchos</i>	2, 3
Shoveler	<i>Anas</i>	<i>clypeata</i>	1
Pintail	<i>Anas</i>	<i>acuta</i>	1
Wigeon	<i>Anas</i>	<i>penelope</i>	1
Teal	<i>Anas</i>	<i>crecca</i>	2, 3, 4
Goosander	<i>Mergus</i>	<i>mergamser</i>	1
Lammergeier	<i>Gypaetus</i>	<i>barbatus</i>	1, 2, 3, 4
Egyptian vulture	<i>Neophron</i>	<i>percnopterus</i>	1, 4
Himalayan griffon	<i>Gyps</i>	<i>himalayensis</i>	2, 3, 4
Griffon vulture	<i>Gyps</i>	<i>fulvus</i>	1
Goshawk	<i>Accipiter</i>	<i>gentilis</i>	2
Marsh harrier	<i>Circus</i>	<i>aeruginosus</i>	3
Common buzzard	<i>Buteo</i>	<i>buteo</i>	2, 3
Long-legged buzzard	<i>Buteo</i>	<i>rufinus</i>	1, 2
Steppe eagle	<i>Aquila</i>	<i>nipalensis</i>	1
Golden eagle	<i>Aquila</i>	<i>chrysaetos</i>	2, 3, 4
Bonelli's eagle	<i>Hieraaetus</i>	<i>fasciatus</i>	2
Short-toed eagle	<i>Circaetus</i>	<i>gallicus</i>	4
Gyr Falcon	<i>Falco</i>	<i>rusticolus</i>	1
Merlin	<i>Falco</i>	<i>columbarius</i>	1, 2, 3
Lesser kestrel	<i>Falco</i>	<i>naumanni</i>	1
Kestrel	<i>Falco</i>	<i>tinnunculus</i>	1, 2, 3, 4
Laggar falcon	<i>Falco</i>	<i>juggar</i>	1
Saker falcon	<i>Falco</i>	<i>cherrug</i>	1, 3
Himalayan snowcock	<i>Tetraogallus</i>	<i>himalayensis</i>	1, 2, 3
Chukar	<i>Alectoris</i>	<i>chukar</i>	1, 2, 4
Common crane	<i>Grus</i>	<i>grus</i>	1
Coot	<i>Fulica</i>	<i>atra</i>	1, 2
Little ringed plover*	<i>Charadrius</i>	<i>dubius</i>	1
Lesser sand plover	<i>Charadrius</i>	<i>mongolus</i>	1, 4
Greater sand plover	<i>Charadrius</i>	<i>leschenaultii</i>	4
Common snipe	<i>Gallinago</i>	<i>gallinago</i>	1
Red-necked phalarope	<i>Phalaropus</i>	<i>lobatus</i>	1
Lapwing	<i>Vanellus</i>	<i>vanellus</i>	1
Little stint	<i>Calidris</i>	<i>minuta</i>	1
Greenshank	<i>Tringa</i>	<i>nebularia</i>	1, 4

Wood sandpiper	<i>Tringa</i>	<i>glareola</i>	1
Green sandpiper	<i>Tringa</i>	<i>ochropus</i>	4
Redshank	<i>Tringa</i>	<i>totanus</i>	1, 3
Common sandpiper	<i>Actitis</i>	<i>hypoleucos</i>	1, 2, 4
Black-winged stilt	<i>Himantopus</i>	<i>himantopus</i>	1, 3
River tern	<i>Sterna</i>	<i>aurantia</i>	3
Common tern	<i>Sterna</i>	<i>hirundo</i>	1
Great black-headed gull	<i>Larus</i>	<i>ichthyaetus</i>	1
Brown-headed gull	<i>Larus</i>	<i>brunnicephalus</i>	3
Pallas's sandgrouse	<i>Syrhaptes</i>	<i>paradoxus</i>	1, 4
Rock dove	<i>Columba</i>	<i>livia</i>	1, 2, 4
Hill pigeon	<i>Columba</i>	<i>rupestris</i>	2, 3, 4
Snow pigeon	<i>Columba</i>	<i>leuconota</i>	1, 2
Eastern stock dove	<i>Columba</i>	<i>eversmanni</i>	1
Turtle dove	<i>Streptopelia</i>	<i>turtur</i>	1
Rufous turtle dove	<i>Streptopelia</i>	<i>orientalis</i>	1, 2
Laughing dove	<i>Streptopelia</i>	<i>senegalensis</i>	2
Eagle owl	<i>Bubo</i>	<i>bubo</i>	1
Bruce's scops owl	<i>Otus</i>	<i>brucei</i>	1
Little owl	<i>Athene</i>	<i>noctua</i>	1
Common cuckoo	<i>Cuculus</i>	<i>canorus</i>	1, 3, 4
European nighthawk	<i>Caprimulgus</i>	<i>europaeus</i>	1
Common swift	<i>Apus</i>	<i>apus</i>	1, 4
Alpine swift	<i>Apus</i>	<i>melba</i>	1
European bee-eater	<i>Merops</i>	<i>apiaster</i>	4
European roller	<i>Coracias</i>	<i>garrulus</i>	1, 4
Hoopoe	<i>Upupa</i>	<i>epops</i>	1, 2, 3, 4
Wryneck	<i>Jynx</i>	<i>torquilla</i>	1
Himalayan woodpecker	<i>Dendrocopos</i>	<i>himalayensis</i>	4
Scaly-bellied woodpecker	<i>Picus</i>	<i>squamatus</i>	4
Short-toed lark	<i>Calandrella</i>	<i>brachydactyla</i>	4
Shore lark	<i>Eremophila</i>	<i>alpestris</i>	1, 2, 3, 4
Small skylark	<i>Alauda</i>	<i>gulgula</i>	1
Crested lark	<i>Galerida</i>	<i>cristata</i>	1
Crag martin	<i>Ptyonoprogne</i>	<i>rupestris</i>	1, 2, 4
House martin	<i>Delichon</i>	<i>urbica</i>	1, 4
Barn swallow	<i>Hirundo</i>	<i>rustica</i>	1, 4
Meadow pipit	<i>Anthus</i>	<i>pratensis</i>	1
Water pipit	<i>Anthus</i>	<i>spinoletta</i>	1, 2
Olive-backed pipit	<i>Anthus</i>	<i>hodgsoni</i>	1
Tree pipit	<i>Anthus</i>	<i>trivialis</i>	4
Yellow wagtail	<i>Motacilla</i>	<i>flava</i>	1
Citrine wagtail	<i>Motacilla</i>	<i>citreola</i>	1, 4
White wagtail	<i>Motacilla</i>	<i>alba</i>	1, 2, 3, 4
Grey wagtail	<i>Motacilla</i>	<i>cinerea</i>	1, 2, 4

Black redstart	<i>Phoenicurus</i>	<i>ochruros</i>	1, 2, 4
Common redstart	<i>Phoenicurus</i>	<i>phoenicurus</i>	1
Güldenstädt's redstart	<i>Phoenicurus</i>	<i>erythrogaster</i>	1, 2, 3, 4
White-capped redstart	<i>Chaimarrornis</i>	<i>leucocephalus</i>	1, 2, 3
Eversmann's redstart	<i>Phoenicurus</i>	<i>erythronotus</i>	1
Bluethroat	<i>Luscinia</i>	<i>svecica</i>	1
Black-throated thrush	<i>Turdus</i>	<i>ruficollis</i>	1
Stonechat	<i>Saxicola</i>	<i>torquata</i>	1, 2, 4
Northern wheatear	<i>Oenanthe</i>	<i>oenanthe</i>	1, 2
Isabelline wheatear	<i>Oenanthe</i>	<i>isabellina</i>	1, 3, 4
Desert wheatear	<i>Oenanthe</i>	<i>deserti</i>	1, 4
Red-tailed wheatear	<i>Oenanthe</i>	<i>xanthopyrna</i>	2, 4
Wallcreeper	<i>Tichodroma</i>	<i>muraria</i>	1, 2, 3
Dipper	<i>Cinclus</i>	<i>cinclus</i>	1, 2, 4
Brown dipper	<i>Cinclus</i>	<i>pallasii</i>	1
Whitethroat	<i>Sylvia</i>	<i>communis</i>	2, 4
Barred warbler	<i>Sylvia</i>	<i>nisoria</i>	1
Greenish warbler	<i>Phylloscopus</i>	<i>trochiloides</i>	1, 4
Yellow-browed warbler	<i>Phylloscopus</i>	<i>inornatus</i>	1
Chiffchaff	<i>Phylloscopus</i>	<i>collybita</i>	1
Brooks's leaf warbler	<i>Phylloscopus</i>	<i>subviridis</i>	4
Plain leaf warbler	<i>Phylloscopus</i>	<i>neglectus</i>	4
Asian paradise flycatcher	<i>Terpsiphone</i>	<i>paradise</i>	4
Eastern rock nuthatch	<i>Sitta</i>	<i>tephronota</i>	1, 2, 4
Golden oriole	<i>Oriolus</i>	<i>oriolus</i>	4
Great grey shrike	<i>Lanius</i>	<i>excubitor</i>	1
Lesser grey shrike	<i>Lanius</i>	<i>minor</i>	1
Bay-backed shrike	<i>Lanius</i>	<i>vittatus</i>	3
Red-backed shrike	<i>Lanius</i>	<i>collurio</i>	2
Long-tailed shrike	<i>Lanius</i>	<i>schach</i>	1, 4
Altai accentor	<i>Prunella</i>	<i>himalayana</i>	1
Brown accentor	<i>Prunella</i>	<i>fulvescens</i>	1
Magpie	<i>Pica</i>	<i>pica</i>	2, 4
Chough	<i>Pyrrhocorax</i>	<i>pyrrhocorax</i>	2, 3, 4
Alpine chough	<i>Pyrrhocorax</i>	<i>graculus</i>	2
Carion crow	<i>Corvus</i>	<i>corone orientalis</i>	2, 4
Raven	<i>Corvus</i>	<i>corax</i>	2, 3, 4
Rose-colored starling	<i>Sturnus</i>	<i>roseus</i>	1, 4
Starling	<i>Sturnus</i>	<i>vulgaris</i>	1
Common mynah	<i>Acridotheres</i>	<i>tristis</i>	2
Tit**	<i>Parus</i>	<i>sp.</i>	2
Willow tit	<i>Parus</i>	<i>montanus</i>	1
House sparrow	<i>Passer</i>	<i>domesticus</i>	1, 2
Tree sparrow	<i>Passer</i>	<i>montanus</i>	1, 2, 4
Brandt's mountain finch	<i>Leucosticte</i>	<i>brandti</i>	1, 3, 4

Red-fronted serin	<i>Serinus</i>	<i>pusillus</i>	1, 4
Twite	<i>Carduelis</i>	<i>flavirostris</i>	1, 3, 4
Crimson-winged finch	<i>Rodopechys</i>	<i>sanguinea</i>	1, 4
Common rosefinch	<i>Carpodacus</i>	<i>erythrinus</i>	1, 4
Great rosefinch	<i>Carpodacus</i>	<i>rubicilla</i>	1, 4
Hodgson's rosefinch	<i>Leucosticte</i>	<i>nemoricola</i>	1
Snowfinch	<i>Montifringilla</i>	<i>nivalis</i>	1
Corn bunting	<i>Miliaria</i>	<i>calandra</i>	1
Rock bunting	<i>Emberiza</i>	<i>cia</i>	1
Snow bunting	<i>Plectrophenax</i>	<i>nivalis</i>	1
Grey-necked bunting	<i>Emberiza</i>	<i>buchanani</i>	2
Red-headed bunting	<i>Emberiza</i>	<i>bruniceps</i>	4

*Petocz (1978) mentions that the little ringed plover occurs in the area, however the scientific name he provides, *Charadrius hiaticula*, corresponds to the ringed plover, a different species. **Seemingly not a willow tit (*Parus montanus*).