

# The birds of Palas, North-West Frontier Province, Pakistan

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The findings of seven ornithological surveys conducted in Palas, District Kohistan, NWFP, Pakistan, between May 1987 and December 1996 are documented. These surveys primarily concentrated on locating pheasants, principally the globally threatened Western Tragopan *Tragopan melanocephalus*, for which Palas is believed to support the largest single population in the world. A total of 157 species has been recorded in the area, eight of which have restricted-ranges (Stattersfield *et al.* 1998). An annotated checklist of all these species is presented, together with a summary of status, abundance and breeding biology, if known. Further notes on the ornithologically more interesting and significant records are also detailed.

## LOCATION AND ORNITHOLOGICAL IMPORTANCE

Palas is situated immediately to the east of the River Indus, adjacent to the town of Pattan in District Kohistan, North-West Frontier Province, between 34°52'E to 35°16'E and 72°52'N to 73°35'N (Figure 1), and covers an area of 1,413 km<sup>2</sup> (Rafiq 1994). Lying at the western extremity of the Himalayas, it forms part of the convergence zone of the Palearctic and Oriental zoogeographic regions, and is encompassed within the Western Himalayas Endemic Bird Area identified by ICBP (1992) in their study of priority areas for the conservation of global biodiversity. Palas supports eight of the ten restricted-range bird species which occur in this Endemic Bird Area (Stattersfield *et al.* 1998): Western Tragopan *Tragopan melanocephalus*, Brooks's Leaf Warbler *Phylloscopus subviridis*, Tytler's Leaf Warbler *P. tytleri*, White-cheeked Tit *Aegithalos leucogenys*, White-throated Tit *A. niveogularis*, Kashmir Nuthatch *Sitta cashmirensis*, Spectacled Finch *Callacanthus burtoni* and Orange Bullfinch *Pyrrhula aurantiaca*. The two exceptions are Himalayan Quail *Ophrysia superciliosa* (which may now be extinct), and Kashmir Flycatcher *Ficedula subrubra*. In their list of threatened birds of the world, Collar *et al.* (1994) list Western Tragopan as Vulnerable, and Tytler's Leaf Warbler, White-throated Tit and Orange Bullfinch are all listed as Near-threatened. Palas is believed to support the largest remaining population of Western Tragopans in the world (Duke 1989, Bean *et al.* 1994).

## CLIMATE, HABITATS AND LAND USE IN PALAS

Palas experiences a typically temperate climate, with an estimated annual precipitation of 900-1,350 mm, falling predominantly as snow during the winter months (Khan 1989 cited in Rafiq 1994). It receives some summer rains, lying along the approximate northern limit of the influence of the summer monsoon, but is somewhat sheltered from this monsoon by the mountains to the south.

The area spans an altitudinal range of approximately 5 km, from the River Indus at 640 m up to the highest peak, Bahader Ser, at 5,151 m, and supports a wide variety of habitats. The topography of Palas is characterized by deep, steep-sided valleys and precipitous slopes. The major river traversing the area is the Musha'ga, which extends from the point where it enters the Indus for about 75 km eastwards to its source.

In the main valley bottoms and numerous tributary valleys there are fast-flowing, boulder-strewn rivers and streams. Oak *Quercus*-dominated scrub and woodland covers much of the lower slopes up to 1,900 m. This gives way to West Himalayan temperate forest above 2,000 m, comprising a mix of evergreen coniferous and deciduous broadleaf trees. The dominant evergreen species are Himalayan Cedar *Cedrus deodara*, Himalayan Blue Pine *Pinus wallichiana*, West Himalayan Silver Fir *Abies pindrow*, Himalayan Spruce *Picea smithiana*, and the oaks *Quercus baloot* and *Q. semecarpifolia*. A variety of deciduous broadleaf species, which predominate on the damper substrates, include maples *Acer*, Walnut *Juglans regia* and the rare elm *Ulmus wallichiana*.

Above 3,000 m subalpine Himalayan Birch *Betula utilis* forests are also found, grading into alpine scrub and meadows above 3,300 m. Higher still there are rocky peaks and ridges, with large areas of permanent snow above these.

The altitudinal range of these distinct vegetative zones is affected by aspect. South-facing slopes receive greater insolation and lower precipitation, thus experiencing warmer, drier conditions than similar altitudes with northerly aspects. Consequently habitat zones on south-facing slopes are located at relatively higher altitudes than on corresponding northern aspects (Rafiq 1994).

The human population of Palas is estimated at 30,000 (Rafiq 1994). Much of Palas has been subject to varying degrees of human impact. Many tree species are browsed by livestock, chiefly goats, from spring to autumn. The evergreen oak *Q. baloot*, in particular, is lopped on a sustainable basis for winter fodder. Commercial logging has had a detrimental effect on many of the temperate forest compartments, particularly the coniferous species. However, this practice has now been discontinued.

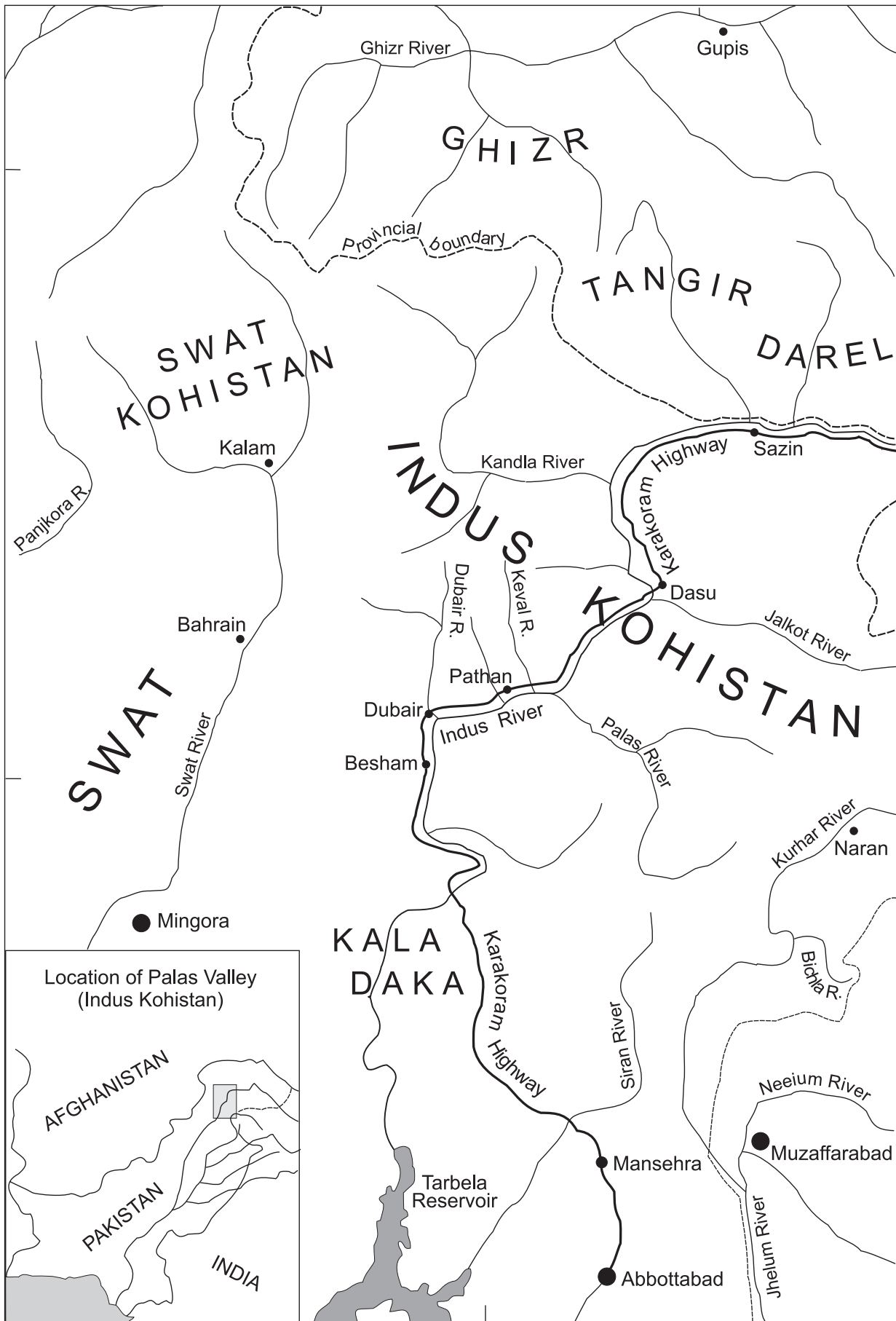


Figure 1. Location of Palas Valley (Indus Kohistan)

The subalpine birch forests have suffered some damage as a result of timber extraction for the construction of summer residences and lopping for firewood, and the alpine meadows have sustained substantial disturbance from grazing by domestic livestock during the summer months. Overgrazing has prevented regeneration of herb and shrub layers in some of the forest areas. Human-related disturbance has, however, created a number of new habitats, including agricultural land, grazing pastures and ponds.

Despite the changes rendered on the various habitats by the human population, substantial areas of Palas remain in a near primary state, and the region supports the largest extant tract of the west Himalayan temperate forest biotope in Pakistan. Human disturbance in Palas has had considerably less impact than in the neighbouring valleys of Jalkot, Kaghan, and particularly Allai, which have been heavily deforested.

### HISTORY OF ORNITHOLOGICAL WORK IN PALAS

Many field visits to Palas have been made for the purposes of conducting surveys of Western Tragopan and other pheasant species, under the auspices of BirdLife International and the Himalayan Jungle Project, with observations of other species being a secondary objective. Records presented here are based on observations made between May 1987 and March 1996 by a number of different ornithologists: Paul Walton and Guy Duke, May-June 1987 (Duke and Walton 1988); Guy Duke, May-June 1988 (Duke 1989); Jonathan C. Eames and Guy Duke, May-June 1989; Nigel Bean, Philip Benstead, Dave Showler, Philip Whittington and Naem Ashraf Raja, May-June 1994 (Bean *et al.* 1994); Durwyn Liley, Dave Gandy, Guy Thompson, Ainned Khan and Abdul Ghafoor, February 1995 (Liley *et al.* 1995); Chris Barker, Nigel Bean, Pete Davidson, Raf Drijvers, Dave Showler, Ahmed Khan, Mohammad Buzurg and Abdul Ghafoor, December 1995-March 1996 (Barker *et al.* 1996); Rob Whale and Mohammad Aslam Khan, a joint World Pheasant Association/Himalayan Jungle Project survey, December 1996 (Whale 1997). Additional records have been provided by Richard Grimmett who visited Palas in June 1993 (pers. comm.), and by Guy Duke and Naem Ashraf Raja during the course of numerous field visits between 1991 and 1995.

### THE HIMALAYAN JUNGLE PROJECT

The Himalayan Jungle Project (HJP) was established in 1991. It aims to safeguard the biodiversity of Palas by enabling local communities to tackle the linked causes of poverty and incipient natural resource degradation. An important component of the Project is to elaborate baseline data on biological diversity in Palas, in particular on the status and distribution of the threatened Western Tragopan and other species of special interest.

### SELECTED ANNOTATED SPECIES LIST FOR PALAS

The following annotated list incorporates the more interesting and significant ornithological records from Palas, including details of the eight restricted-range species. Information on many of these birds in north Pakistan is rather scant, and possibly inaccurate, and the inclusion of a number of species on this list is based on their status and distribution as given by Roberts (1991/1992). A full species list for Palas, including notes on status, abundance and breeding biology is presented in Appendix 1. Taxonomy and nomenclature follow Inskipp *et al.* (1996).

**Bold** type indicates a restricted-range species (Stattersfield *et al.* 1998).

**HIMALAYAN SNOWCOCK** *Tetraogallus himalayensis*  
Resident. Recorded in spring from Tiko Ser (1989) and Mali Siri Gali (1994), above 4,000 m. In September 1991, one pair was observed near the Kana Kunari Pass at 4,200 m. A flock of six birds was observed at the exceptionally low altitude of 2,100 m at Dader III in Kuz Palas on 9 January 1996. According to Roberts (1991) it has not been recorded below 3,000 m in Pakistan and Ali and Ripley (1987) stated that it only descends to 2,400 m in severe winters. The observation in January 1996 was made immediately prior to a period of exceptionally heavy snowfall.

**WESTERN TRAGOPAN** *Tragopan melanocephalus*  
Resident. Based on dawn call counts, the Palas population has been tentatively estimated at 325 pairs (Bean *et al.* 1994). During spring surveys, birds have been recorded between 2,400 and 3,350 m in conifer-dominated temperate forests. In winter, they are known to descend to as low as 1,735 m, where they have most often been encountered in *Quercus baloot* (oak) woodland.

**KOKLASS PHEASANT** *Pucrasia macrolopha*  
Resident. Fairly common and widespread. Recorded up to 3,350 m in spring, and as low as 1,600 m in winter.

**HIMALAYAN MONAL** *Lophophorus impejanus*  
Resident. Fairly common and widespread. Regularly recorded between 2,300 and 3,350 m in spring, and mainly between 2,000 and 2,500 m in winter. Roberts (1991) considered this species to be rare in Pakistan.

**SPECKLED PICULET** *Picumnus innominatus*  
A pair was observed near a nest-hole in a *Quercus baloot* tree between Shared and Bangaha on 22 May 1994. One was recorded at 1,900 m near Shuki Ser on 8 December 1995, and two, possibly a pair, were observed near Tokrat between 1,500 and 1,600 m on 11 February 1996. According to Roberts (1991) this species is a rare and local resident in Pakistan.

**BROWN-FRONTED WOODPECKER** *Dendrocopos auriceps*  
Recorded on four occasions, all above 1,550 m: two above Pichmoru on 19 May 1994, one near Gabir on 9 February 1995, one near Tokrat on 10 February 1996, and one above Haran on 11 February 1996.

CRESTED KINGFISHER *Megaceryle lugubris*

Only recorded on one occasion, with a single along the Musha'ga river at Kuz Paro on 28 February 1996. According to Roberts (1991) this species is a rare resident in Pakistan.

WHITE-THROATED NEEDLETAIL *Hirundapus caudacutus*

Only recorded on three occasions: five or more over Gadar on 27 June 1992, one over Bush on 18 May 1994, and at least six near the Malik Siri Gali pass on 30 June 1994. This species is a scarce summer visitor to Pakistan (Roberts 1991).

COMMON WOOD PIGEON *Columba palumbus*

Status uncertain. First recorded beyond doubt during the winter surveys in 1995/1996, when they were found to be very common, with flocks of up to 1,500 birds. A flock of about 140 pigeons observed near Gabir on 12 February 1995 were thought to have been this species. According to Roberts (1991) this species is a scarce resident in Pakistan, which chiefly occurs in northern Punjab.

SPECKLED WOOD PIGEON *Columba hodgsonii*

Status uncertain. Apart from two seen at Sar Bek on 14 June 1989, only encountered during the 1994 spring survey, when two or three birds were recorded from each of six localities. Roberts (1991) considers this species to be a rare seasonal visitor to Pakistan.

EURASIAN WOODCOCK *Scolopax rusticola*

Probably a summer visitor or altitudinal migrant. Regularly recorded during the spring surveys, and presumably on this basis a breeder, but no winter records as yet. Usually encountered in ones and twos. Roberts (1991) considered this species to be a rare resident in Pakistan.

LAMMERGEIER *Gypaetus barbatus*

Resident. More regularly recorded during the winter surveys than during those in spring, suggesting some immigration may occur in winter. Roberts (1991) gave the status of the species in Pakistan as scarce.

HEN HARRIER *Circus cyaneus*

Only recorded on two occasions: one female near Karo Ser on 25-26 December 1995, and one male in the same area on 28 December 1995. According to Roberts (1991) the species is a scarce winter visitor to Pakistan.

NORTHERN GOSHAWK *Accipiter gentilis*

One male and one female seen near Karo Ser on 25 December 1995 were probably a pair. The birds were heard calling vociferously to each other across a valley, and were seen in close proximity to one another, perhaps indicating some territoriality. A single was observed near Kot on 12 February 1996, and two were seen at Bale Banda (near Karo Ser) on 28 and 29 February 1996. Roberts (1991) considered this species to be a rare winter visitor to Pakistan.

LONG-LEGGED BUZZARD *Buteo rufinus*

Resident. Uncommon and only recorded during the spring surveys of 1989 and 1994, and during the winter survey of 1995/1996. One bird above Mukchaki in June 1994 was seen to take a lizard (an *Agama*) and a

medium-sized bird, during a 15 minute period, and was considered to be feeding young. According to Roberts (1991) this species is common as a winter visitor in Pakistan, but much rarer as a breeder, when it is confined to the northern mountains.

GOLDEN EAGLE *Aquila chrysaetos*

Resident. Fairly common, recorded regularly during most surveys. Displaying birds were watched above Shared in February 1995. Roberts (1991) considered this species to be scarce in Pakistan.

PEREGRINE FALCON *Falco peregrinus*

Only recorded on one occasion, a lone individual between Ishaq and Batel Bek on 12 January 1996. This species is an increasingly scarce winter visitor to Pakistan (Roberts 1991), with very few records away from the plains and foothills.

SCALY THRUSH *Zoothera dauma*

Only recorded on three occasions: two at Sar Bek on 14 June 1989, one between Ilo Bek and Paro on 29 June 1992, and one or two at Belgi on 31 May 1994. Sizeable tracts of favoured breeding habitat occur in Palas. Roberts (1992) considered this species to be scarce in Pakistan, where it is on the westernmost limit of its range.

EURASIAN BLACKBIRD *Turdus merula*

Resident. Only recorded from high altitudes. During the 1994 spring survey, it was not observed below 3,300 m. An adult with a juvenile were found in moist deciduous forest near Diwan on 15 June 1991. The species has a limited range within Pakistan (Roberts 1991).

RUFIOUS-BELLIED NILTAVA *Niltava sundara*

Only recorded on one occasion, when a single male was observed between Ilo Bek and Paro on 29 June 1992. This is one of the most westerly records for the species. According to Roberts (1992) this species is scarce in Pakistan.

WHITE-BELLIED REDSTART *Hodgsonius phaenicuroides*

Only two records: one or two males and one female were seen between Sherakot and Moru on 26 June 1992, and a male was recorded between Moru and Gidar on 27 June 1992. The latter bird was observed running in the open, never far from *Viburnum* shrubs, and singing from the top of a *Viburnum* clump. These records slightly extend the species's confirmed range (to the north-west) in Pakistan, where Roberts (1992) afforded it the status scarce. It has been reported from an area still further to the north-west, although this requires verification (Roberts 1992).

KASHMIR NUTHATCH *Sitta cashmirensis*

Resident. Uncommon. More regularly encountered during the winter surveys than those in spring. A pair was observed at a nest-hole in a *Cedrus deodara* tree on a *Quercus*-covered ridge above Pichmoru on 19 May 1994, and the male was seen entering with food.

WALLCREEPER *Tichodroma muraria*

Only observed during the 1995/1996 winter survey: two near Sachoi on 16 December, two between Kuz Paro and Shared on 17 December, one at Shared on 18 and

19 December, one near Kot on 12 February, and one at Kuz Paro on 2 March. These records suggest that this species occurs in Palas mainly as a winter visitor.

EURASIAN TREECREEPER *Certhia familiaris*

Status uncertain. Only recorded in spring, in small numbers, usually in coniferous forest above 2,600 m, where it sometimes occurs sympatrically with the more common Bar-tailed Treecreeper *Certhia himalayana*. A pair was seen courtship feeding at Shalko on 1 June 1994. According to Roberts (1992) this species is a rare resident in Pakistan.

FIRE-CAPPED TIT *Cephalopyrus flammiceps*

Summer visitor. Only observed during the 1994 spring survey, when a total of 13 birds were recorded. One pair was seen courtship feeding in *Quercus* forest above Karo Ser on 21 May 1994. This species is scarce in Pakistan (Roberts 1992).

WHITE-CHEEKED TIT *Aegithalos leucogenys*

Resident. Fairly common, generally seen at lower altitudes than White-throated Tit, though some overlap occurs. Usually encountered in small flocks of up to ten birds. A pair was seen carrying nest material at Pichmoru on 21 May 1994. Palas lies outside the breeding range of White-cheeked Tit as mapped in Roberts (1992).

WHITE-THROATED TIT *Aegithalos niveogularis*

Resident. Uncommon, typically recorded in small flocks of up to 20 birds, during both spring and winter surveys. Usually encountered between 2,400 and 3,000 m in spring, and between 1,750 and 2,200 m in winter. One was seen collecting nesting material (domestic chicken feathers) at Sartoe on 25 May 1994. Roberts (1992) considered this species to be rare and localized in Pakistan.

NORTHERN HOUSE MARTIN *Delichon urbica*/ASIAN HOUSE MARTIN *Delichon dasypus*

Summer visitor. House martins of one, or both, of these species have been seen, possibly even in mixed flocks. However, difficulties in separating them in the field have made the status of each unclear. Both species could breed (Roberts 1992).

GOLDCREST *Regulus regulus*

Resident. Regularly encountered on most surveys, usually above 2,000 m. One was seen carrying nest material at Bush on 18 May 1994. According to Roberts (1992) it is scarce in Pakistan.

BROOKS'S LEAF WARBLER *Phylloscopus subviridis*

Summer visitor. Locally fairly common, typically encountered at higher altitudes in temperate coniferous forest. This species's breeding range is largely confined to Pakistan (Roberts 1992).

LARGE-BILLED LEAF WARBLER *Phylloscopus magnirostris*

Summer visitor. Locally common, typically found in scrub and woodland along nullahs (gullies and small stream valleys). Roberts (1992) considered the species to be scarce in Pakistan.

TYTLER'S LEAF WARBLER *Phylloscopus tytleri*

Summer visitor, presumably breeding. Locally common, typically occurring in fir, *Abies pindrow* and the birch *Betula utilis* forest near the tree-line. Generally scarce in Pakistan (Roberts 1992).

GREEN SHRIKE BABBLER *Pteruthius xanthochlorus*

Status uncertain. Only recorded in winter; the first record was on 23 February 1995 in mature *Quercus* woodland at 1,900 m in Shared nullah. During the 1995/1996 winter survey, recorded on six occasions: three together near Shuki Ser on 18 December in *Quercus baloot* woodland at 1,700 m, at least one more bird later that day at the same locality in mixed coniferous woodland at 1,800 m, two near Karo Ser on 28 December in *Quercus baloot*/*Cedrus deodara* woodland at 2,000 m, one at Dader III on 8 January in heavily disturbed, mixed coniferous/*Quercus baloot* woodland, with extensive cleared areas, two in the same area on 9 January, and two near Tokrat at 2,100 m on 9 February. These records extend the western limit of this species's known range. Roberts (1992) considered it to be rare in Pakistan, listing just one tiny resident population in the Neelum valley, Azad Kashmir.

ALTAI ACCENTOR *Prunella himalayana*

The only record concerns a flock of at least 40 feeding in fields around Haran (1,400 m) on 12 February 1995. This species mainly occurs as an uncommon winter visitor in Pakistan, although it may occasionally breed (Roberts 1992).

RED AVADAVAT *Amandava amandava*

Only recorded on one occasion, when a small flock was observed feeding in ripe maize near Sharial on 18 September 1991. According to Roberts (1992) this species has not previously been recorded in the mountains of northern Pakistan.

CHAFFINCH *Fringilla coelebs*

Only recorded twice: a flock of 12 feeding in an open grassy area on the Palas side of the Indus near Pattan on 8 February 1995, and a single near Kot on 15 January 1996. Nearby, in Pattan, it was recorded on several dates during the 1995/1996 survey. This species only occurs as a winter visitor in Pakistan (Roberts 1992), primarily to Baluchistan, with very few records from the northern mountains.

PLAIN MOUNTAIN FINCH *Leucosticte nemoricola*

Resident. Common in alpine pastures during the spring and summer, descending in winter to open slopes and cultivated areas, often around habitation. A flock of 40 birds was observed at the very low altitude of 750 m near Kot on 15 January 1996, just prior to a period of exceptionally heavy snowfall. Roberts (1992) gave 1,500 m as the lowest altitude from which the species has been recorded in Pakistan.

SPECTACLED FINCH *Callacanthis burtoni*

Resident. Fairly common, but local, in coniferous forests. Usually encountered near the tree-line, but also occurring somewhat lower down in *Cedrus deodara* forest in winter. Often found in flocks, with a spring maximum of at least 15 at Shalko on 1 June 1994 and a winter

maximum of 41 in the Kabkot nullah on 16 February 1995. Of three pairs seen at Bush on 18 May 1994, one was observed carrying nesting material, and another was accompanied by a begging juvenile. A juvenile bird was seen at Shalko on 1 June 1994, and a male was seen feeding two juveniles above Pulbela on 21 June 1994. Roberts (1992) considered this species to be widespread but scarce.

**PINK-BROWED ROSEFINCH** *Carpodacus rodochrous*  
Resident. Recorded regularly, usually between 2,200 and 2,750 m in spring, and down to 820 m in winter. Roberts (1992) considered it to be scarce in Pakistan.

**WHITE-BROWED ROSEFINCH** *Carpodacus thura*  
Only recorded during the winter of 1995/1996, when all records were from the Batel Bek area: a flock of ten, including four adult males, on 13 January, and four on 14 January. A female rosefinch at Dader III on 9 January was also probably of this species. According to Roberts (1992) this species is a scarce resident in Pakistan.

**ORANGE BULLFINCH** *Pyrrhula aurantiaca*  
Resident. Uncommon. In spring, recorded in pairs and small flocks, the largest being a group of at least 15 observed feeding on *Salix* seeds above Sartoe on 26 May 1994. In May and June 1994, recorded across an altitudinal range of 2,400 to 3,000 m. In winter, recorded on six occasions, from as low as 1,550 m, and with a maximum of 11 birds, in a single flock, at 2,050 m near Batel Bek on 14 January 1996. Roberts (1992) considered this species to be scarce in Pakistan.

## REFERENCES

- Ali, S. and Ripley, S. D. (1987) *Compact handbook of the birds of India and Pakistan*. Second edition. New Delhi: Oxford University Press.
- Barker, C., Bean, N. J., Davidson, P. J., Drijvers, R. and Showler, D. A. (1996) Survey of Western Tragopan *Tragopan melanocephalus* in the Palas Valley, NWFP, December 1995–March 1996. Final report to BirdLife International and the Himalayan Jungle Project. Unpublished.
- Bean, N. J., Benstead, P. J., Showler, D. A. and Whittington, P. A. (1994) Survey of Western Tragopan *Tragopan melanocephalus* in the Palas Valley, NWFP – spring 1994. Unpublished report to Himalayan Jungle Project, Islamabad.
- Collar, N. J., Crosby, M. J. and Stattersfield, A. J. (1994) *Birds to watch 2: the world list of threatened birds*. Cambridge, U.K.: BirdLife International (Conservation Series No. 4).
- Duke, G. (1988) Survey of the Western Tragopan, Palas Valley, Indus Kohistan. Operation Raleigh Pakistan Expedition 14E Science Report. Unpublished.
- Duke, G. (1989) Survey of the Western Tragopan *Tragopan melanocephalus* and its montane forest habitat, Palas and Kandia valleys, Indus Kohistan, Pakistan. Unpublished report to ICBP, Cambridge, U.K.
- Duke, G. and Walton, P. (1988) Indus Kohistan: refuge of the Western Tragopan. Operation Raleigh, London. Unpublished.
- Eames, J. (1989) Birds recorded during the expedition. 15 May to 23 June 1989. Unpublished.
- Inskipp, T., Lindsey, N. and Duckworth, W. (1996) *An annotated checklist of the birds of the Oriental region*. Sandy: Oriental Bird Club.
- International Council for Bird Preservation (ICBP) (1992) *Putting biodiversity on the map: priority areas for global conservation*. Cambridge, U.K.: ICBP.
- Liley, D., Thompson, G., Gandy, D. and Ghafoor, A. (1995) Survey of Western Tragopan *Tragopan melanocephalus* in the Keyal and Palas valleys, February 1995. Unpublished report to Himalayan Jungle Project, Islamabad and BirdLife International, Cambridge, U.K.
- Rafiq, R. (1994) A preliminary botanical inventory and ethnobotanical checklist, Palas valley, District Kohistan, NWFP. Unpublished report, Himalayan Jungle Project, Islamabad, Pakistan.
- Roberts, T. J. (1991) *The birds of Pakistan*, 1. Karachi: Oxford University Press.
- Roberts, T. J. (1992) *The birds of Pakistan*, 2. Karachi: Oxford University Press.
- Stattersfield, A. J., Crosby, M. J., Long, A. J. and Wege, D. C. (1998) *Endemic bird areas of the world*. Cambridge, U.K.: BirdLife International (Conservation Series 7).
- Whale, R. (1997) Western Tragopan winter survey, Palas Valley. *Tragopan* 7: 11–13.

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## APPENDIX

SPECIES	Status	Abundance	Breeding evidence
HIMALAYAN SNOWCOCK <i>Tetraogallus himalayensis</i>	R	U/LC	
CHUKAR <i>Alectoris chukar</i>	R	C	
<b>WESTERN TRAGOPAN <i>Tragopan melanocephalus</i></b>	R	U/LC	
KOKLASS PHEASANT <i>Pucrasia macrolopha</i>	R	C	
HIMALAYAN MONAL <i>Lophophorus impejanus</i>	R	C	
MALLARD <i>Anas platyrhynchos</i>	?WV/PM	Ra	
COMMON TEAL <i>Anas crecca</i>	PM	U/S	
EURASIAN WRYNECK <i>Jynx torquilla</i>	SV	U/S	
SPECKLED PICULET <i>Picumnus innominatus</i>	R	U/S	
BROWN-FRONTED WOODPECKER <i>Dendrocopos auriceps</i>	R	U/S	
HIMALAYAN WOODPECKER <i>Dendrocopos himalayensis</i>	R	C	
SCALY-BELLIED WOODPECKER <i>Picus squamatus</i>	R	C	
COMMON HOOPOE <i>Upupa epops</i>	SV	FC	
EUROPEAN ROLLER <i>Coracias garrulus</i>	SV	U	
COMMON KINGFISHER <i>Alcedo atthis</i>	?SV	S	
CRESTED KINGFISHER <i>Megaceryle lugubris</i>	?R/AM	Ra	
EURASIAN CUCKOO <i>Cuculus canorus</i>	SV	C	
ORIENTAL CUCKOO <i>Cuculus saturatus</i>	SV	FC	
LESSER CUCKOO <i>Cuculus poliocephalus</i>	SV	FC	
SLATY-HEADED PARAKEET <i>Psittacula himalayana</i>	SV/?R	FC	
WHITE-THROATED NEEDLETAIL <i>Hirundapus caudacutus</i>	SV	U/S	
ALPINE SWIFT <i>Tachymarptis melba</i>	SV	C	
COMMON SWIFT <i>Apus apus</i>	SV	C	
HOUSE SWIFT <i>Apus affinis</i>	SV	C	
EURASIAN SCOPS OWL <i>Otus scops</i>	SV	?S	
TAWNY OWL <i>Strix aluco</i>	R	FC	
COLLARED OWLET <i>Glaucidium brodiei</i>	R	U/S	
SNOW PIGEON <i>Columba leuconota</i>	?R	LC	
COMMON WOOD PIGEON <i>Columba palumbus</i>	?R/WV	LC/I	
SPECKLED WOOD PIGEON <i>Columba hodgsonii</i>	?R	S	
ORIENTAL TURTLE DOVE <i>Streptopelia orientalis</i>	SV	C	
SPOTTED DOVE <i>Streptopelia chinensis</i>	?SV	U	
EURASIAN WOODCOCK <i>Scolopax rusticola</i>	SV	FC	
COMMON SANDPIPER <i>Actitis hypoleucos</i>	SV	U	
BLACK-WINGED STILT <i>Himantopus himantopus</i>	OV	Ra	
LAMMERGEIER <i>Gypaetus barbatus</i>	R	U/FC	
HIMALAYAN GRIFFON <i>Gyps himalayensis</i>	R	VC	
EURASIAN GRIFFON <i>Gyps fulvus</i>	N	Ra	
HEN HARRIER <i>Circus cyaneus</i>	?WV	S	
SHIKRA <i>Accipiter badius</i>	SV/?R	FC	
EURASIAN SPARROWHAWK <i>Accipiter nisus</i>	R	FC	
NORTHERN GOSHAWK <i>Accipiter gentilis</i>	WV/?R	Ra	
LONG-LEGGED BUZZARD <i>Buteo rufinus</i>	R	U/S	CF - June 1994
GOLDEN EAGLE <i>Aquila chrysaetos</i>	R	FC	
BOOTED EAGLE <i>Hieraaetus pennatus</i>	SV	FC	
COMMON KESTREL <i>Falco tinnunculus</i>	SV	FC	
PEREGRINE FALCON <i>Falco peregrinus</i>	WV	?Ra	
LONG-TAILED SHRIKE <i>Lanius schach</i>	SV	U	
BLACK-HEADED JAY <i>Garrulus lanceolatus</i>	R	C	FY - 22 June 1989
YELLOW-BILLED BLUE MAGPIE <i>Urocissa flavirostris</i>	?R	U	
SPOTTED NUTCRACKER <i>Nucifraga caryocatactes</i>	R	FC	
RED-BILLED CHOUGH <i>Pyrrhocorax pyrrhocorax</i>	?R	S	
YELLOW-BILLED CHOUGH <i>Pyrrhocorax graculus</i>	R	FC	
LARGE-BILLED CROW <i>Corvus macrorhynchos</i>	R	VC	N - 18 June 1989
COMMON RAVEN <i>Corvus corax</i>	?OV	?Ra	
EURASIAN GOLDEN ORIOLE <i>Oriolus oriolus</i>	SV	FC	
LONG-TAILED MINIVET <i>Pericrocotus ethologus</i>	SV	FC	FY - 18 July 1992
ASHY DRONGO <i>Dicrurus leucophaeus</i>	SV	FC	
ASIAN PARADISE-FLYCATCHER <i>Terpsiphone paradisi</i>	SV	FC	

SPECIES	Status	Abundance	Breeding evidence
BROWN DIPPER <i>Cinclus pallasii</i>	R	C	FY - May
BLUE-CAPPED ROCK THRUSH <i>Monticola cinclorhynchus</i>	SV	FC	NM - 20 May 1994
BLUE ROCK THRUSH <i>Monticola solitarius</i>	SV	U	
BLUE WHISTLING THRUSH <i>Myophonus caeruleus</i>	R	C	NM - May 1994, CF - June 1994
SCALY THRUSH <i>Zoothera dauma</i>	?SV	S	
EURASIAN BLACKBIRD <i>Turdus merula</i>	R	U	FY -15 June 1991
CHESTNUT THRUSH <i>Turdus rubrocanus</i>	R	C	NM - 27 May 1994, CF - 14 June 1989
DARK-THROATED THRUSH <i>Turdus ruficollis</i>	WV	U	
MISTLE THRUSH <i>Turdus viscivorus</i>	R/SV	U/FC	
SPOTTED FLYCATCHER <i>Muscicapa striata</i>	SV	Ra	
DARK-SIDED FLYCATCHER <i>Muscicapa sibirica</i>	SV	C	
RUSTY-TAILED FLYCATCHER <i>Muscicapa ruficauda</i>	SV	FC	FY - 11 + 18 July 1992
ULTRAMARINE FLYCATCHER <i>Ficedula supercilii</i>	SV	C	
SLATY-BLUE FLYCATCHER <i>Ficedula tricolor</i>	SV	C	
VERDITER FLYCATCHER <i>Eumyias thalassina</i>	SV	S	
RUFIOUS-BELLIED NILTAVA <i>Niltava sundara</i>	?R	Ra	
GREY-HEADED CANARY FLYCATCHER <i>Culicicapa ceylonensis</i>	SV	FC	
WHITE-TAILED RUBYTHROAT <i>Luscinia pectoralis</i>	SV	U	
INDIAN BLUE ROBIN <i>Luscinia brunnea</i>	SV	C	NM - 21 May 1994, CF - 19 June 1994
ORANGE-FLANKED BUSH ROBIN <i>Tarsiger cyanurus</i>	SV	FC	
RUFIOUS-BACKED REDSTART <i>Phoenicurus erythronota</i>	WV	Ra	
BLUE-CAPPED REDSTART <i>Phoenicurus coeruleocephalus</i>	SV	FC	CF - 18 May 1994
BLUE-FRONTED REDSTART <i>Phoenicurus frontalis</i>	SV	U	
WHITE-CAPPED WATER REDSTART <i>Chaimarrornis leucocephalus</i>	R	C	N - 11 June 1989, FY - 12 June 1994
PLUMBEOUS WATER REDSTART <i>Rhyacornis fuliginosus</i>	R	C	
WHITE-BELLIED REDSTART <i>Hodgsonius phaenicuroides</i>	SV	S	
LITTLE FORKTAIL <i>Enicurus scouleri</i>	R	FC	
SPOTTED FORKTAIL <i>Enicurus maculatus</i>	R	S	
COMMON STONECHAT <i>Saxicola torquata</i>	SV	C	N - 31 May 1994, FY - 14 June 1994
GREY BUSHCHAT <i>Saxicola ferrea</i>	SV	FC	
BRAHMINY STARLING <i>Sturnus pagodarum</i>	SV	Ra	
COMMON STARLING <i>Sturnus vulgaris</i>	WV	Ra	
<b>KASHMIR NUTHATCH <i>Sitta cashmirensis</i></b>	R	U	N + CF - 16 May 1994
WHITE-CHEEKED NUTHATCH <i>Sitta leucopsis</i>	R	FC	
WALLCREEPER <i>Tichodroma muraria</i>	?WV	S	
EURASIAN TREECREEPER <i>Certhia familiaris</i>	?R	Ra	
BAR-TAILED TREECREEPER <i>Certhia himalayana</i>	R	FC	N - 18 May + 13 June 1994; FY - 9 June 1989
WINTER WREN <i>Troglodytes troglodytes</i>	R	C	
FIRE-CAPPED TIT <i>Cephalopyrus flammiceps</i>	SV	S	
RUFIOUS-NAPED TIT <i>Parus rufonuchalis</i>	R	C	NM - 8 May 1994
SPOT-WINGED TIT <i>Parus melanolophus</i>	R	C	N - May 1994
GREAT TIT <i>Parus major</i>	R	FC	CF - 2 June 1994
GREEN-BACKED TIT <i>Parus monticolus</i>	R	FC	
<b>WHITE-CHEEKED TIT <i>Aegithalos leucogenys</i></b>	R	FC	NM - 21 May 1994
BLACK-THROATED TIT <i>Aegithalos concinnus</i>	?WV	LC	
<b>WHITE-THROATED TIT <i>Aegithalos niveogularis</i></b>	R	U	NM - 25 May 1994
PALE MARTIN <i>Riparia diluta</i>	SV	U	
EURASIAN CRAG MARTIN <i>Hirundo rupestris</i>	SV	FC	N - 16 May 1994
BARN SWALLOW <i>Hirundo rustica</i>	SV	Ra	
RED-RUMPED SWALLOW <i>Hirundo daurica</i>	SV	FC	
NORTHERN/ASIAN HOUSE MARTIN <i>Delichon urbica/dasyopus</i>	SV	C	
GOLDCREST <i>Regulus regulus</i>	R	FC	NM - 18 May 1994
HIMALAYAN BULBUL <i>Pycnonotus leucogenys</i>	R	FC	
BLACK BULBUL <i>Hypsipetes leucocephalus</i>	R	FC	
STRIATED PRINIA <i>Prinia criniger</i>	?R	Ra	



SPECIES	Status	Abundance	Breeding evidence
ORIENTAL WHITE-EYE <i>Zosterops palpebrosus</i>	SV	S	
BROWNISH-FLANKED BUSH WARBLER <i>Cettia fortipes</i>	SV	C	
TICKELL'S LEAF WARBLER <i>Phylloscopus affinis</i>	SV	S	
LEMON-RUMPED WARBLER <i>Phylloscopus chloronotus</i>	R	FC	CF – 21 June 1994
<b>BROOKS'S LEAF WARBLER <i>Phylloscopus subviridis</i></b>	SV	LFC	
HUME'S WARBLER <i>Phylloscopus humei</i>	SV	LC	
GREENISH WARBLER <i>Phylloscopus trochiloides</i>	SV	FC	
LARGE-BILLED LEAF WARBLER <i>Phylloscopus magnirostris</i>	SV	LC	
<b>TYTLER'S LEAF WARBLER <i>Phylloscopus tytleri</i></b>	SV	LC	
WESTERN CROWNED WARBLER <i>Phylloscopus occipitalis</i>	SV	C	CF – May 1994
GREY-HOODED WARBLER <i>Seicercus xanthoschistos</i>	R	C	CF – 12 June 1994
STREAKED LAUGHINGTHRUSH <i>Garrulax lineatus</i>	R	C	
VARIEGATED LAUGHINGTHRUSH <i>Garrulax variegatus</i>	R	FC	NM – 13 June 1989 + 31 May 1994
GREEN SHRIKE BABBLER <i>Pteruthius xanthochlorus</i>	?R	Ra	
LESSER WHITETHROAT <i>Sylvia curruca</i>	SV	LC	
ORIENTAL SKYLARK <i>Alauda gulgula</i>	SV	S	
HOUSE SPARROW <i>Passer domesticus</i>	?PM	S	
RUSSET SPARROW <i>Passer rutilans</i>	?SV	FC	
WHITE WAGTAIL <i>Motacilla alba</i>	SV	LFC	FY – 16 June 1994, CF – 12 June 1994
CITRINE WAGTAIL <i>Motacilla citreola</i>	SV	LFC	FY – 18 June 1994
GREY WAGTAIL <i>Motacilla cinerea</i>	SV	C	FY – 20 June 1994
TREE PIPIT <i>Anthus trivialis</i>	SV	Ra	
ROSY PIPIT <i>Anthus roseatus</i>	SV	C	N – 21 June 1994
ALPINE ACCENTOR <i>Prunella collaris</i>	?R/WV	U	
ALTAI ACCENTOR <i>Prunella himalayana</i>	WV	S	
RUFUS-BREASTED ACCENTOR <i>Prunella strophiata</i>	SV	LC	
BLACK-THROATED ACCENTOR <i>Prunella atrogularis</i>	WV	S	
RED AVADAVAT <i>Amandava amandava</i>	OV	Ra	
SCALY-BREASTED MUNIA <i>Lonchura punctulata</i>	OV	Ra	
CHAFFINCH <i>Fringilla coelebs</i>	WV	S	
FIRE-FRONTED SERIN <i>Serinus pusillus</i>	WV	U	
YELLOW-BREASTED GREENFINCH <i>Carduelis spinoides</i>	?R/SV	U	
EUROPEAN GOLDFINCH <i>Carduelis carduelis</i>	OV	S	
PLAIN MOUNTAIN FINCH <i>Leucosticte nemoricola</i>	R	C	
<b>SPECTACLED FINCH <i>Callacanthis burtoni</i></b>	R	LFC	
COMMON ROSEFINCH <i>Carpodacus erythrinus</i>	SV	FC	
PINK-BROWED ROSEFINCH <i>Carpodacus rodochrous</i>	R	FC	
WHITE-BROWED ROSEFINCH <i>Carpodacus thura</i>	WV	S	
<b>ORANGE BULLFINCH <i>Pyrrhula aurantiaca</i></b>	R	U	
BLACK-AND-YELLOW GROSBEAK <i>Mycerobas icterioides</i>	R	LC	
WHITE-WINGED GROSBEAK <i>Mycerobas carnipes</i>	?R	S/Ra	
ROCK BUNTING <i>Emberiza cia</i>	R	C	N – 12 June 1989
WHITE-CAPPED BUNTING <i>Emberiza stewarti</i>	SV	FC	FY – 25 May 1994, NM – 20 May 1994

**Bold** type denotes a restricted-range species

Status: OV = occasional visitor (the status of the species remains poorly understood owing to the lack of marked seasonality and paucity of records); PM = passage migrant; R = resident; SV = summer visitor; WV = winter visitor; ? = status uncertain, but most likely to be as indicated.

Abundance: C = common; FC = fairly common; I = irruptive; LC = Locally common; LFC = locally fairly common. Ra = rare; S = Scarce; U = uncommon

Breeding evidence: CF = observed carrying food; FY = observed with fledged young; N = nest found; NM = observed carrying nest material