



HELM FIELD GUIDES

Birds of Central Asia

Kazakhstan • Turkmenistan • Uzbekistan • Kyrgyzstan
Tajikistan • Afghanistan



Raffael Ayé • Manuel Schweizer • Tobias Roth

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Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan,
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Raffael Ayé and Manuel Schweizer
with Tobias Roth

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Cover artwork

Front: Saxaul Sparrows (Alan Harris)

Back, top to bottom: Gùldenstädt's Redstart (Dave Nurney); Sociable Lapwing (Dave Nurney); Pallas's Sandgrouse (John Gale); Black Lark (Bill Zetterström)

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Figure 1. Map of the region.

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INTRODUCTION

This book is the first comprehensive field guide to the birds of Central Asia. As used in this book, Central Asia comprises the former Soviet republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan as well as Afghanistan. This is more a pragmatic definition rather than a geographical, historical or even zoogeographical one. Different geographical regions have been referred to as 'Central Asia' in the literature and there is no unambiguous definition or usage. The traditional Russian zoological and geographical literature has used the term for the mountains and deserts from Jungaria and Kashgaria to Western Sayan, northern Mongolia, the Gobi desert and the Tibetan plateau (east Kazakhstan and Kyrgyzstan to Baikal, Mongolia and western China), while 'Middle Asia' has been used for Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan and Southern Kazakhstan. In contrast, the usage 'Central Asia' for Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan is common in the English literature (these areas were formerly known as 'Turkestan'). Such a definition has also been adopted by BirdLife International and the Ornithological Society of the Middle East, the Caucasus and Central Asia (OSME). As Afghanistan, which is neither in the Middle East nor in the Oriental Region, shares many species with the 'Central Asian' countries lying to the north, it has been included in this book.

As can be expected for such a large region with a wide altitudinal range, a variety of different habitats and accordingly, a rich avifauna can be found in Central Asia. More than 635 species have been recorded in the region and are covered in this book. All three endemic species of the region are songbirds, namely Afghan Snowfinch *Montifringilla theresae*, Pander's Ground Jay *Podoces panderi* and Zarudny's Sparrow *Passer zarudnyi*. A fourth species, the possible breeding endemic Large-billed Reed Warbler *Acrocephalus orinus*, is also a passerine. Central Asia is located in the Palearctic ecozone or realm and lies just east of the border usually used to separate the Palearctic into an eastern and a western part. Hence, the avifauna of Central Asia can be basically characterised as Eastern Palearctic, though several typical Western Palearctic species occur in the region as well. Moreover, the ranges of many species typical of the Oriental or Indo-Malayan ecozone extend into Central Asia or just penetrate into the very east of Afghanistan. The varied avifauna of Central Asia includes species typical of the vast Eurasian steppe zone, high mountain specialists shared with the Tibetan Plateau and the Himalayas, species adapted to arid environments and characteristic of the Saharo-Sindian desert belt and even elements of the Holarctic boreal forests. Moreover, Central Asia constitutes an important stop-over site and corridor for migrating birds of the Central Asian flyway and an overwintering area for many species.

Although we have tried to study as many taxa as possible in the field or in museum collections, and visited much of the region covered, this book relies heavily on the enormous and extraordinary research on the birds of Central Asia conducted by local scientists and ornithologists. Moreover, we strongly benefited from the wealth of articles on the identification and taxonomy of Asian birds in scientific journals and birdwatching magazines published during recent decades. Knowledge of the distribution, identification and taxonomy of birds constantly grows; some of the information given may consequently already be out of date by the time this field guide goes to print and, hence, field guides must be considered as work in progress. When the work on this book started, the Large-billed Reed Warbler, for example, was only known from the type specimen collected in north-west India and a bird trapped in Thailand. Nowadays, however, it is clear that this enigmatic species breeds in the mountains of the southern part of Central Asia and has been previously overlooked. Likewise, we may have missed important publications and mistakes may have crept in during the production process. Hence, we warmly welcome any new information, comments, corrections and suggestions for future editions of this field guide. Please send material for the attention of the authors to the publisher's address.

We hope that this book will help many birdwatchers, ornithologists, naturalists and conservationists to identify the birds they see. Our own interest in birdwatching was partly driven by the publication of marvellous field guides during our youth. We would see our goals fulfilled if this guide helped to attract more and more people to the fascinating hobby, profession or vocation of watching birds, and ultimately raised awareness of the importance of protecting the many threatened bird species and our natural heritage as a whole.

HOW TO USE THIS BOOK

THE PLATES

The plates in this book are approximately in family taxonomic order, following Dickinson (2003), but a few species appear out of sequence due to design constraints. Every species recorded in the region since 1950 has been illustrated in all its major plumages, including any sex, age and seasonal variation. Colour morphs have been depicted if relevant, and many distinct and identifiable subspecies have also been illustrated.

SPECIES ACCOUNTS

Names and species covered

Each species is given an English and scientific name. See the 'Taxonomy and Nomenclature' section on p.17 for an explanation of the rationale for the taxonomic and nomenclatural approach applied in this book.

Generally, all species recorded in the region since 1950 are included in the main part of the book but only records published up to mid-2011 could be considered. A few exceptions and species recorded prior to 1950 are listed in Appendix I on p.312. Some species for which no documented record exists, but whose future occurrence is considered likely, have been additionally included in the main part. We cannot exclude the possibility that we have missed some vagrant species that have recently been recorded and welcome any new information.

Measurements

As an indication of the overall and comparative size of the bird, a measurement of the total length from bill- to tail-tip is given in centimetres. There is a lot of intraspecific size variation in birds and there are also differences between sexes, age-classes and populations in certain species. Moreover, length measurements are notoriously difficult to take and depend on how they were obtained. Nevertheless, we have chosen to give only a single figure rather than a range for the great majority of species, as this is mostly accurate enough for comparisons under field conditions. Only in exceptional cases is a range of values given for size. In species where there are large size differences between the sexes, separate measurements are given for males and females. For those species for which a notion of the wingspan seemed particularly useful for identification, we also give a range of measurements for wingspan. The measurements were taken from various authoritative sources including Rasmussen & Anderton (2005).

Geographical variation

Many species are represented by different subspecies (or races). All subspecies that we consider valid and that occur in the region are listed within the respective species text, or it is indicated that the species is considered monotypic. The subspecies with the widest distribution in the region is listed first. Subspecies that we do not consider to be separable in the field are listed together. The breeding or wintering range for the subspecies with the widest distribution is best seen on the distribution maps (see below); approximate indications of the regional breeding range for additional subspecies are given in brackets after each subspecies name. Passage migrants (PM), winter visitors (WV) and vagrants (V) that do not breed in the region are identified as such by the corresponding abbreviation and often approximate information on their occurrence is also given. Subspecies that we consider distinct enough to be identifiable under field conditions are described in a separate section within the species text. Slight variations in coloration or size are not considered to be perceptible in the field; however, these are mentioned in several cases nevertheless. Although subspecies within some species show seemingly marked differences, it is often not possible to identify single individuals to subspecies level. It should also be noted that the distribution areas are not well known for many subspecies and the information given in standard literature is even contradictory in some cases. Where subspecific variation is clinal (i.e. where morphological differences from one subspecies to another change gradually across the range), the delimitation of the range of two subspecies may even be arbitrary. Thus, the ranges given are in many cases only approximate. The exceptions are some allopatric (non-overlapping) subspecies that are confined, for example, to distinct mountain regions. For some subspecies that are markedly distinct and have been proposed as potential splits or may be considered as incipient species, English names are given in 'single quotation marks'.

Identification and plumage terminology

The species accounts usually begin with a characterisation of the general appearance and overall impression ('jizz') and identification features applicable in all plumages. Similar species are often first mentioned here. The plumage is described afterwards. If plumages vary between sexes and/or different ages classes, they are described separately, beginning with the different plumages of males, followed by females, juveniles and different immature plumages.

We have usually refrained from describing plumages in detail and describe characteristics with regards to similar species, age-classes, sex or subspecific differences. However, more detailed descriptions are given in some cases. The main identification characters are usually mentioned first and key features are italicised. As such, the texts convey vital information on how reliable a difference that may be seen on the plate actually is for identification or to what degree it may be subject to variation. Even for criteria that are known or thought to be reliable, be aware that *identification should never be based on a single character* but rather relies on a combination of features. This is especially important for species that are difficult to identify.

Plumages vary according to age and season. Every bird species has at least two different plumages, but several different plumages can be distinguished in gulls and big raptors, for example (see Appendices 2 and 3, respectively). Different plumages are usually attained by moult, i.e. the change of feathers by losing old ones and growing new ones. However, wear and bleaching of feathers can alter the appearance of plumages considerably.

The first full contour plumage in birds is called the juvenile plumage (Juv). It is usually quickly replaced through the post-juvenile moult (post-juv moult) by the first-winter (1st-win) plumage. Especially in smaller birds, this plumage may no longer be distinguishable from the adult (Ad) or ad non-breeding (Ad Non-br) plumage. However, in most larger birds, several immature (Imm), i.e. non-adult, plumages follow. The first winter is then followed by the first-summer (1st-sum) plumage and this by the second-winter (2nd-win) plumage and so on. Large gulls as an example can usually be separated from older birds until their third-summer (3rd-sum). They are considered as adult from their fourth-winter (4th-win) onwards. First-year birds (1st-yr) are either in their first-winter or first-summer plumage, second-year birds (2nd-yr) in their second-winter or second-summer plumage and so on.

In some cases, the concept of calendar years is used. The term first calendar year (1stCY) refers to time period from hatching to 31st December of the same year. The second calendar year (2ndCY) defines the period from 1st January of the following year to 31st December. A bird in its first winter can thus either be in its first or second calendar year.

Voice

Bird vocalisations can be very complex and differ in innumerable ways and parameters. Describing them in simple words is thus inherently difficult. Even more than differences in coloration and patterning, differences in vocalisations are perceived and described subjectively. Therefore, users of this book will need to invest time in learning at least the most common vocalisations in the field, listening to the birds and memorising their sounds. Nowadays, numerous recordings that are published on CDs or on the internet (see some useful links in the 'Organisations and Websites' section on page 31) help birdwatchers to familiarise themselves with vocalisations before going to the field or to compare what they have heard with recordings afterwards. With the development of mobile internet connections, comparisons can even be done directly while hearing the bird in the field in some areas. Despite the availability of recordings and advanced technology, we have decided to include voice descriptions with a certain level of detail in this guide. In fact, such descriptions are not replaced but rendered more useful by the widespread availability of recordings. The voice descriptions presented in this book will hopefully help the user in many instances to pick out the more constant differences between two species, when a few recordings available on the internet may suggest numerous differences, some of which are just a consequence of individual or geographical variation. We encourage readers to compare our descriptions with available recordings to get used to the inherently clumsy transcriptions and the meaning of the special characters used therein. It may also be useful to try and repeatedly pronounce the transcriptions, first slowly and then at what may be a more realistic pace. However, before doing so, users should study and memorise the following conventions.

General aspects and technical terms

The transcriptions are given in *italics*, while the rest of the voice descriptions is in normal script. We have avoided using many technical terms and instead tried to use words as generally understood.

A phrase is a group of notes, elements or syllables that are repeated (two or more times).

Volume

The transcriptions do not render the absolute volume of a vocalisation. Volume cannot be compared between different species on the same plate nor between different vocalisations of the same species. Rather, changes in volume within the same vocalisation are coded. Normal lower-case script has been used for the lowest-volume parts of a vocalisation or for the whole vocalisation if there are only moderate changes in volume.

Lower case = lowest-volume ('softest') parts of a vocalisation

SMALL CAPS = distinctly louder parts of the same vocalisation

UPPER CASE = much louder parts within a vocalisation

Pitch

Obvious changes in pitch have been identified using slashes immediately before the note that rises or falls in pitch. Slight changes in pitch have not been marked with slashes. Be aware that the vowels used in transcriptions may also give a hint at slight changes in pitch. Very often the pitch influences the way we hear vowels in a vocalisation. The following vowels tend to be in a sequence of gradually higher-pitched vocalisations: oo, uu, aa, aeae, yy, ii, ee.

/ = following note (or part of a note, part of a syllable) distinctly rising in pitch

\ = following note distinctly falling in pitch

// = following note very strongly rising in pitch

\\ = following note very strongly falling in pitch

Note that /, \, // and \\ do not denote any pauses: /sweelyoo is one single tone that is first up- and then downslurred.

In some cases, slashes have been used preceding a sign for a pause. In this case, the note following the pause is not slurred, it is either higher- or lower-pitched than the preceding one.

Pauses and other symbols

Single apostrophes, hyphens, spaces and commas denote gradually longer pauses:

tee'tee; tee-tee; tee tee; tee, tee represent increasing length of pauses between the two tee-notes.

Brackets have been used to denote optional parts of a vocalisation. If, for example, tee-tee is sometimes but not always preceded by tit, this is denoted as:

(tit)-tee-tee

... indicates that a vocalisation continues in a similar manner.

Pronunciation of letters

Most letters have been used as they are pronounced in standard British English. The following warrant a short explanation:

ae – as in 'bad' pronounced with a German or New Zealand accent; often used for slightly nasal sounds

i – as in 'it'

ts – pronounced together as one sharp sound as in 'wits'

y – pronounced like German ü

z – as in 'zealous'

zh – a 'voiced' sh-sound, similar to the second g in 'garage'

Habitat

A brief description of habitat and altitudinal range is given for each species. If not stated otherwise, the habitat and altitude describes the breeding habitat. We use the term lowlands for altitudes below c. 600 m, foothills between 600 and 1800 m and mountains above 1800 m.

Abbreviations

Ad	adult
Ad Br	adult individual in breeding plumage
Ad Non-br	adult individual in non-breeding plumage
Afg	Afghanistan
C	central
cf.	compare with
E	East, eastern
Imm	immature
Juv	juvenile plumage
Kaz	Kazakhstan
Kgz	Kyrgyzstan
m	metres
MB	migrant breeder
N	North, northern
PM	passage migrant
S	South, southern
Tjk	Tajikistan
Tkm	Turkmenistan
Uzb	Uzbekistan
V	vagrant
W	West, western
WV	winter visitor
1stCY	Individual in first calendar year
2ndCY	Individual in second calendar year (later years accordingly)
1st-win	Individual in first-winter plumage
2nd-win	Individual in second-winter plumage (later years accordingly)
1st-sum	Individual in first-summer plumage
2nd-sum	Individual in second-summer plumage (later years accordingly)
1st-yr	Individual in a plumage of its first year
2nd-yr	Individual in a plumage of its second year (later years accordingly)

MAPS

A distribution map is provided for each species regularly breeding or wintering in the region. Usually, no maps are given for regularly occurring migrants that do not breed or winter, or for vagrants. The distribution maps are based on regional handbooks and monographs on the different species groups. Some of the most important references used for many species were Abdusalyamov (1971–77), Gavrin *et al.* (1962), Dolgushin (1960), Dolgushin *et al.* (1970; 1972), Gavrillov & Gavrillov (2005), Habibi (2007), Korelov *et al.* (1974), Kreuzberg-Muhina *et al.* (2005), Paludan (1959), Rustamov & Kovshar (2007) as well as Wassink & Oreeel (2007). The website www.birds.kz compiled by Askar Issabekov and Vladilyen Karasev with many documented records from all over Kazakhstan provided helpful additional information for many species. Moreover, some of the maps benefited from data in travel reports published on the internet, data from the collections of the National University of Uzbekistan and the University of Samarkand and our own observations. Data from these sources were entered in a database by the authors, Prof. Oleg Mitropolskiy, Tamara Badasyants and Victoriya Filatova. All maps were corrected by one or several experts. However, we

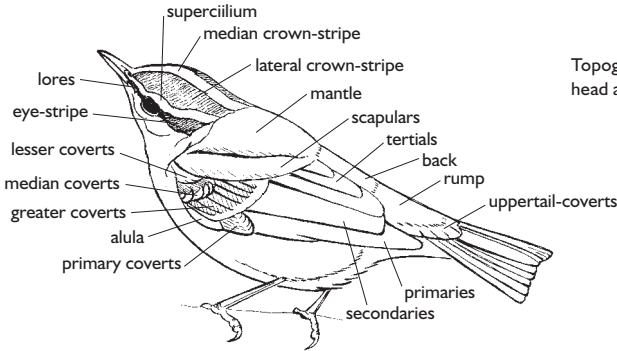
are certain that there will be a number of mistakes and that for many species, the distribution may change over the years. Information on possible amendments is always welcome.

Inevitably, the maps are on a small scale and cannot provide all the details of the distribution of a given species. Therefore, species with a patchy distribution (e.g. because they breed in patchy habitats) are difficult to map. In order to keep the maps as clear as possible we only used the following distribution categories:

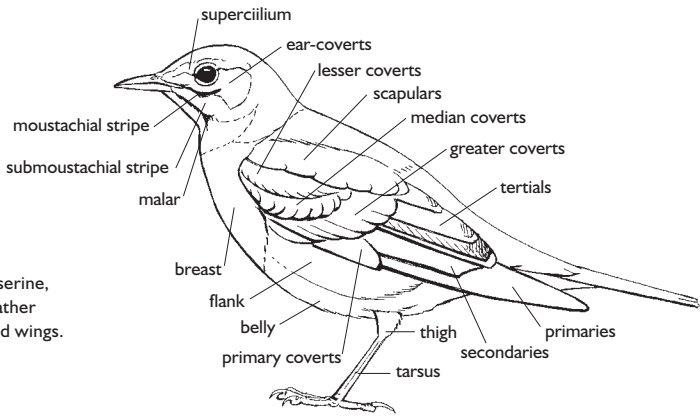
- **Resident:** indicates the area where the species is present all year round including when breeding.
- **Breeding:** indicates breeding range that is abandoned in winter. The range shown should not include places where the species is recorded during summer but not breeding. For some species summer distribution is tricky to distinguish from real breeding distribution; in such cases we also include areas where breeding is likely (i.e. nesting sites are available), but from which there are no breeding records.
- **Winter:** indicates the range where the species is present during winter (mainly December to February).
- **Migration and non-breeding summer range:** indicates areas where the species is a regular migrant. Lilac arrows indicate migration direction. Within the area indicated by the arrow, the species can be seen but not as regularly as in the shaded areas.

? Question marks may be used for areas where, based on the available evidence, it is uncertain whether a species occurs, or where the few observations of the species suggest irregular occurrence. Question marks are used in the respective colours to indicate possible occurrence during the breeding and wintering seasons, or year-round.

BIRD TOPOGRAPHY

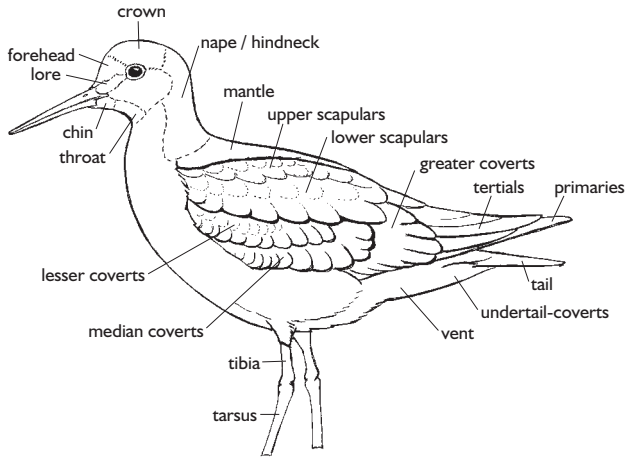


Topography of a passerine, showing head and upperpart feather tracts.

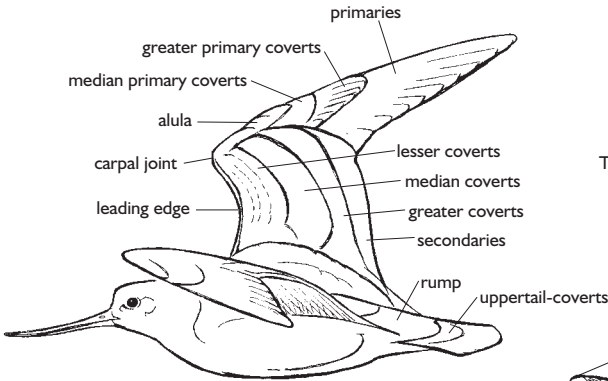


Topography of a passerine, showing the main feather tracts of the body and wings.

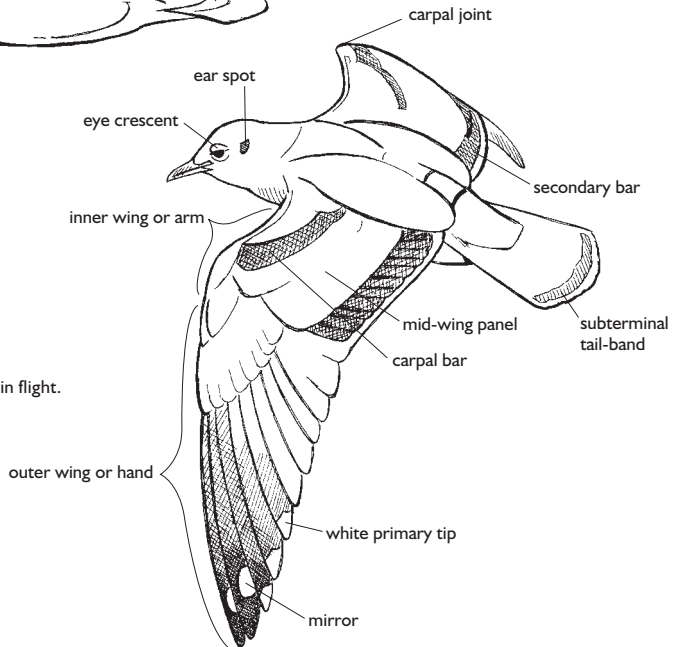
Topography of a shorebird.



Topography of a shorebird in flight.



Topography of a small gull in flight.



GLOSSARY

- Albino** Individuals that are unable to produce any pigment due to a genetic defect are called albinos and are completely white.
- Allopatric** Two species are considered as allopatric if their ranges do not overlap. Opposite of sympatric.
- Arm** The inner part of the wing, closer to the body than the carpal joint.
- Bare parts** Parts of a bird without feathers (especially bill, legs and eyes).
- Bib** A small, conspicuously coloured patch on the chin and throat.
- Biome** Major ecological communities characterised by their climate and distinct fauna and flora.
- Broom** Splayed primary fingers.
- Carpal** The bend of the wing or 'wrist' joint.
- Conspecific** Belonging to the same species (e.g. subspecies or races).
- Crepuscular** Active at dusk or dawn (twilight).
- Diurnal** Active in the daytime.
- Eclipse plumage** Female-like plumage attained by moult after breeding, e.g. of male ducks and sunbirds.
- Endemic** Species (or other taxonomic units) restricted in their distribution to a particular region.
- Extralimital** Occurring outside the geographic region covered in this book.
- Gape** Fleishy corner at the base of the mandibles, particularly obvious in juveniles.
- Hand** The outer part of the wing, beyond the carpal joint.
- Hybrid swarm** A population whose individuals show mixed characters as a consequence of extensive hybridisation between different species.
- Immature** General term for all non-adult plumages.
- Juvenile** The first full contour plumage in birds is called the juvenile plumage.
- Leucistic** Unusually pale plumage due to a deficiency of pigmentation.
- Mandibles** Upper and lower parts of the bill.
- Melanistic** Individuals with an abnormally dark plumage.
- Morph** Colour variant, unrelated to season, age or sex and not geographically segregated as subspecies.
- Monotypic** In the context of this book, used for species for which no subspecies are recognised.
- Nail** Horny bump at tip of upper mandible of swans, geese and ducks, and some other birds.
- Oriental or Indo-Malayan** Term for the biogeographic region or ecozone ranging from Afghanistan and through the Indian subcontinent south of the Himalayan foothills and through China south of the Yangtze to Southeast Asia.
- Palaearctic** Term for the biogeographic region or ecozone consisting of Europe, Asia north of the Himalayan foothills and the Yangtze river, northern Africa, and the northern and central parts of the Arabian Peninsula. It is divided into Eastern and Western parts along the Ural mountains and river and the western border of Iran.
- Parapatric** The ranges of parapatric species abut, but do not overlap.
- Polytypic** In the context of this book, used for species for which two or more subspecies are recognised.
- Primary projection** The extension of the primaries beyond the end of the tertials on the closed wing, expressed as a percentage of the visible part of the tertials.
- Race** An alternative name for a subspecies.
- Rectrices** Tail feathers.
- Remiges** Secondaries and primaries (i.e. flight feathers).

Rictal spot Spot at the sides of the bill near the gape.

Speculum Glossy panel across the secondaries in some ducks.

Subadult Almost adult; used for older immature birds.

Sympatric Two species are considered as sympatric if their ranges overlap. Opposite of allopatric.

Tail-projection The extension of the end of the tail beyond the tips of the closed wings.

Tertials The innermost secondaries.

Wing-projection The extension of the tips of the closed wings beyond the tail tip.

Wing-bar A stripe or bar on the upperwing, usually formed by pale tips of the greater coverts and often also by the median coverts (double wing-bars); can also be formed by pale or more often dark centres of the median coverts.

Wing-stripe A stripe or bar on the upperwing formed by pale bases to the rectrices. Usually only visible in flight.

TAXONOMY AND NOMENCLATURE

Since the wide use of DNA sequence data in phylogenetic research, the taxonomic world is in constant flux and new results are being published constantly. Consequently, any new taxonomy can be considered as already outdated by the time of its publication. For reasons of convenience, the taxonomy used in this book primarily follows Dickinson (2003). However, we have tried to incorporate firmly supported and broadly accepted new taxonomic results concerning species, subspecies and generic levels, which disagree with the above-mentioned source. In some cases, the results of recent or even as yet unpublished studies have been included. Decisions to accept or reject proposed splits or lumps should be accounted for; they may not always be devoid of subjectivity and may reflect an author's preference in some cases. However, deviations from Dickinson (2003) are justified as follows:

- We follow Collinson *et al.* (2006) and Sangster *et al.* (2005) and treat White-winged Scoter *Melanitta deglandi*, including the subspecies *M. d. stejnegeri* in our region, as specifically distinct from Velvet Scoter *M. fusca*. Moreover, Common Scoter *M. nigra* is treated as specifically distinct from Black Scoter *M. americana* and is thus considered as monotypic following Sangster *et al.* (2005).
- We follow Ferguson-Lees & Christie (2001) and tentatively treat Altai Falcon *Falco altaicus* as a valid species, because this will make observers aware of its existence and may lead to a better understanding in the future. However, this ill-known taxon is sometimes considered either a morph or a subspecies of Saker *Falco cherrug* or Gyrfalcon *Falco rusticolus* and is possibly of hybrid origin between the two. In order to express the uncertainty associated with the validity of the taxon, we include in brackets the species names of Saker and Gyrfalcon: *Falco (cherrugrusticolus) altaicus*.
- According to the results of molecular genetic and morphological studies (do Amaral 2009, Kruckenhauser *et al.* 2004, Riesing *et al.* 2003), we split Eastern Buzzard *Buteo japonicus* from Common Buzzard *B. buteo*.
- We treat Steppe Eagle *Aquila nipalensis* as monotypic (Clark 2005).
- We follow, for example, Sangster *et al.* (2005) for the generic treatment of eagles and include *Hieraetus* in *Aquila*.
- The generic treatment of gulls and the taxonomy of 'large white-headed gulls' follows Sangster *et al.* (2007); the generic treatment of terns is in accordance with the proposition of Sangster *et al.* (2005).
- According to the results of Olsson *et al.* (2010), we split the *Lanius-excubitor-meridionalis* complex into three species in our region: Asian Grey Shrike *Lanius lahtora* including *L. l. pallidirostris* and *L. l. aucheri*; Great Grey Shrike *Lanius excubitor* including *L. e. excubitor* and *L. l. homeyeri*; and Northern Grey Shrike *Lanius borealis* including *L. b. mollis* and *L. b. sibiricus*. Within the latter, the taxon *funereus* is treated as a synonym of *L. b. mollis* (Svensson in prep.)

- We follow Rasmussen & Anderton (2005) and treat the Large-spotted Nutcracker *Nucifraga multi-punctata* as a separate species from Eurasian Nutcracker *N. caryocatactes*.
- According to the recommendation of Knox *et al.* (2002) and Parkin *et al.* (2003), Hooded Crow *Corvus cornix* (with subspecies *C. c. sharpii* and *C. c. cornix* in the region) and Carrion Crow *C. corone* (with subspecies *C. c. orientalis* in the region) are treated as separate species. *C. c. orientalis* is sometimes considered to deserve species status; however, we tentatively keep it as a subspecies of *C. corone*.
- Rasmussen & Anderton (2005) proposed splitting Indian Golden Oriole *Oriolus kundoo* from European Golden Oriole *O. oriolus*. We tentatively apply this treatment, although the evidence for this split is still scanty.
- We follow the propositions of Gill *et al.* (2005) and Sangster *et al.* (2005) in the generic treatment of tits. The 'cinereus-group' of the 'Parus major-complex' is treated as specifically distinct from the 'major-group' and is split from the 'minor-group' as *Parus cinereus* (Päckert *et al.* 2005; Päckert & Martens 2008). Despite marked morphological differences, we include the 'bokharensis-group' in *Parus major* because the two only show low genetic and acoustic differences and there is evidence for introgression and hybridisation between them (Päckert *et al.* 2005; Päckert & Martens 2008). According to the recommendation of Päckert & Martens (2008), we tentatively lump Yellow-breasted Tit *Cyanistes flavipectus* with Azure Tit *C. cyanus*, and Spot-winged Tit *Parus melanolophus* with Coal Tit *Periparus ater*.
- We follow, for example, Harrap & Quinn (1996) and split Black-headed Penduline Tit *Remiz macronyx* (with subspecies *R. m. macronyx* and *R. m. neglectus*) and White-crowned Penduline Tit *R. coronatus* (with subspecies *R. c. coronatus* and *R. c. stoliczkae*) from Eurasian Penduline Tit *R. pendulinus* (with subspecies *R. p. jaxarticus* and *R. p. caspius* in the region).
- We treat the taxa *henei*, *persica* and *leucophaea* as belonging to a single species, Asian Short-toed Lark *Calandrella cheleensis*. However, according to preliminary genetic results, *C. c. leucophaea* might be treated as a distinct species, and *C. c. henei*, probably together with *C. c. persica*, might also be specifically distinct from the extralimital *C. c. cheleensis* (P. Alström *in litt.*)
- The subspecies *Locustella naevia mongolica* of Grasshopper Warbler is treated as a synonym of the subspecies *L. n. straminea* (Kennerley & Pearson 2010).
- Following the recommendations of Knox *et al.* (2002), we split the polytypic Eastern Olivaceous Warbler *Iduna pallida* from the extralimital monotypic Western Olivaceous Warbler *I. opaca* and consider *I. rama* as monotypic. But in contrast to Knox *et al.* (2002), we use the generic name *Iduna* instead of *Hippolais* for *I. pallida*, *I. rama* and *I. caligata*, following Dickinson (2003). This treatment is supported by recent molecular phylogenetic results (e.g. Fregin *et al.* 2009) and was also adopted by Kennerley & Pearson (2010).
- Subspecific treatment of Blue Rock Thrush *Monticola solitarius* is in accordance with Clement & Hathway (2000) and Rasmussen & Anderton (2005).
- We follow Shirihai *et al.* (2001) for the recognition of subspecies in the *Sylvia curruca* complex. However, we include the desert and semi-desert populations of our region, formerly treated as *S. c. minula*, in *S. c. halimodendri* (Urban Olsson *in litt.*).
- Following Shirihai *et al.* (2001), we treat Eastern Orphean Warbler *Sylvia crassirostris* (with subspecies *S. c. jerdoni* and *S. c. balchanica* in the region) as specifically distinct from the extralimital Western Orphean Warbler *S. hortensis*, and treat Asian Desert Warbler *S. nana* as a separate species from the extralimital African Desert Warbler *S. deserti*.
- We follow Dickinson (2008) in accepting that the name *golzii* Cabanis 1873 has priority over the name *hafizi* for the easternmost populations of Common Nightingale *Luscinia megarhynchos*.
- We treat White-eared Bulbul *Pycnonotus leucotis* and Himalayan Bulbul *P. leucogenys* as two distinct species following, for example, Rasmussen & Anderton (2005). They are often lumped as White-cheeked Bulbul *P. leucogenys*.

- The populations of Black Redstart *Phoenicurus ochruros* from the Pamir-Alai mountains, with more extensive black on the upperparts than more northern birds, are included in *P. o. phoenicuroides* following Roselaar & Shirihai (in prep.) and are not included in the larger *P. o. rufiventris* from the Himalayas and central China.
- According to the molecular phylogenetic results of Zink *et al.* (2009), and the recommendations of Urquhart (2002), we treat Eastern Stonechat *Saxicola maurus* as a separate species and tentatively include the subspecies *S. t. variegatus* in this species (Urquhart 2002).
- We consider the different 'colour variants' found in Variable Wheatear *Oenanthe picata* as representing three subspecies (*O. p. picata*, *O. p. opistholeuca*, *O. p. capistrata*) which intergrade with each other in different regions, in accordance with Panov (2005).
- We follow Rasmussen & Anderton (2005) and split Turdoides *huttoni* from Common Babbler *T. caudata*.
- Following Svensson *et al.* (2005), we treat Taiga Flycatcher *Ficedula albicilla* as a distinct species from Red-breasted Flycatcher *F. parva*.
- Indian Sparrow *Passer indicus* is tentatively treated as a distinct species from House Sparrow *P. domesticus*. Hybridisation seems to be limited or even negligible at the contact zone between *P. i. bactrianus* and *P. d. domesticus* with the former being a breeding migrant and the latter being more or less sedentary. However, in our region, the situation is more complicated in the south-western part of the range of Indian Sparrow where at least *P. i. indicus* intergrades with *P. d. persicus* (Gavrilov & Korelov 1968; Gavrilov 1965; Summers-Smith 1988; Vaurie 1956; Yakobi 1979). Further studies are needed.
- Kirwan (2004) pointed out the morphological distinctiveness of Afghan Scrub Sparrow *Passer yatii* and that it could potentially deserve species status. We tentatively adopt treatment as a full species here.
- Kirwan *et al.* (2009) suggested that Zarudny's Sparrow *Passer zarudnyi* be specifically distinct from the extralimital Desert Sparrow *P. simplex* and we follow this treatment here.
- We follow Alström *et al.* (2003) in the taxonomic treatment of pipits and wagtails.
- In accordance with Rasmussen & Anderton (2005), we split Spotted Great Rosefinch *Carpodacus severtzovi* (with subspecies *C. s. severtzovi*, *C. s. diabolicus* and *C. s. kobdensis*) from the extralimital Caucasian Great Rosefinch *C. rubicilla*. We restrict the distribution of *C. s. diabolicus* to north-east Afghanistan.
- The taxonomic treatment of *Emberiza striolata* follows Kirwan & Shirihai (2007).

GEOGRAPHY AND BIOGEOGRAPHY

Central Asia comprises a huge territory ranging from the Caspian Sea in the west to the Altai and the Xinjiang Uyghur Autonomous Region of China in the east, and from the Sistan Basin and the mountains of Baluchistan in the south to the west Siberian lowlands in the north. A detailed geographic and biogeographic treatment of the region covered is beyond the scope of this book. Some general information is nevertheless given.

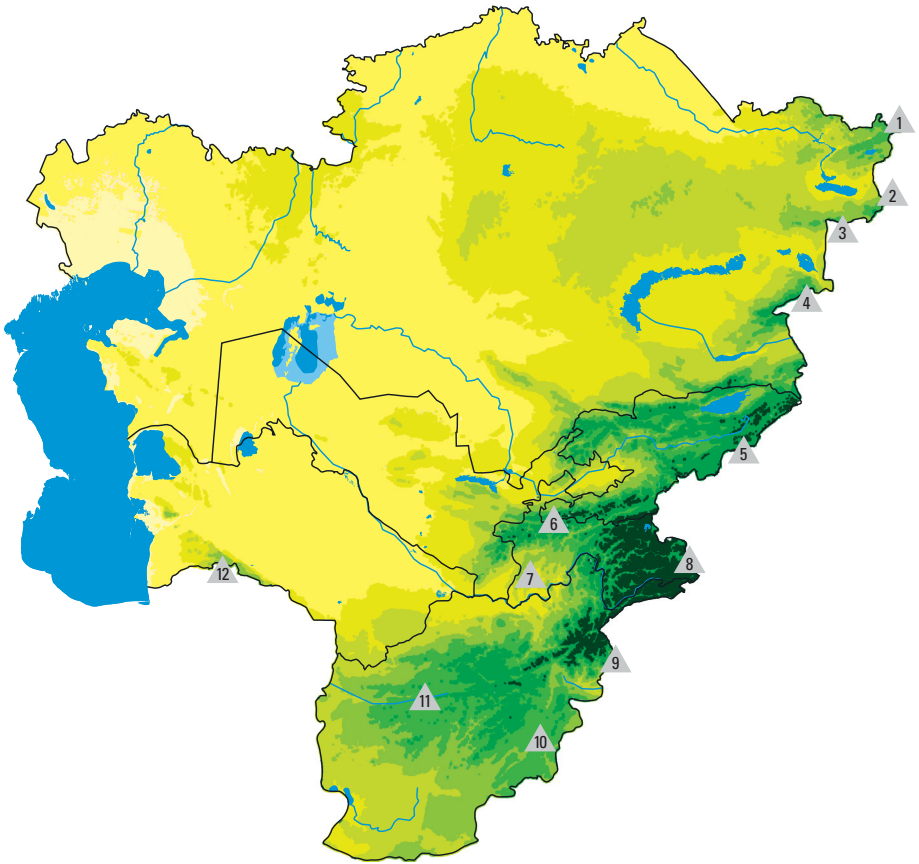
TOPOGRAPHY

Central Asia is characterised by several mountain ranges. The Tien Shan dominates Kyrgyzstan and penetrates into south-eastern Kazakhstan and north-eastern Uzbekistan. It marks the northern border of the Ferghana valley, while the latter's southern delimitation is formed by the Pamir-Alay. This mountain range is usually divided into the Hissor-Alay of southern Kyrgyzstan, northern Tajikistan and south-eastern Uzbekistan, the Southern Tajik Mountains and the Pamir – often called the roof of the world – in eastern Tajikistan and extreme north-eastern Afghanistan. To the south, central and eastern Afghanistan is dominated by the Hindu Kush, which is subdivided into the Safed-Koh (Paropamisus) range in the north and the Koh-e Baba further south. Besides several smaller mountains, other major ranges reach peripherally into Central Asia: the Altai penetrates into north-eastern Kazakhstan, while the Tarbagatai, the Saur mountains and the Jungarian Alatau reach into eastern Kazakhstan. Moreover, the north-western part of the Kopet Dag (Turkmen-Khorasan mountain range) lies in the south-west of Turkmenistan. By far the highest among these mountain ranges are the Tien Shan, Hindu Kush and Pamir ranges, which reach 7439 m, 7485 m and 7495 m, respectively. Next comes the Hissor-Alay, reaching well above 5000 m in numerous places.

The most extensive waterbodies in Central Asia include the Caspian Sea in the west and the Aral Sea on the border between Kazakhstan and Uzbekistan, Lakes Balkhash, Zaysan and Alakol in Kazakhstan, Issyk-Kul in Kyrgyzstan and Qarakul in the Pamir in Tajikistan. The most famous rivers of Central Asia are the Syr Darya and the Amu Darya which both flow into the Aral Sea. The largest lakes of Afghanistan are the Sistan and Pouzak lakes in the Sistan basin. While the Syr Darya rises in the Tien Shan, the Amu Darya originates in the Pamir under the names of the Pamir and Panj rivers. The Ili is the major river feeding into Lake Balkhash. The Ural river flows from the north into the Caspian Sea. The Irtysh flows through northern Kazakhstan before merging with the Ob in western Siberia and its two largest tributaries, the Ishim and Tobol, run through northern Kazakhstan too.

CLIMATE

Central Asia generally has an arid and very continental climate with low rainfall over much of the area, and hot summers and very cold winters. As is typical for a continental climate, not only annual, but also daily temperature differences can be very high. The main periods of rainfalls are in winter in large parts of the region, but in late spring and summer in northern Kazakhstan. Annual rainfall in the region varies from less than 50 mm in some desert regions to around 1500 mm in the Western Altai (even around 2500 mm according to some sources). Apart from the Altai, the climate is most humid in the Tien Shan, on the northern slopes of the Hissor-Alay, in the Jungarian Alatau and the Tarbagatay, where annual precipitation can also exceed 1000 mm. In the named mountain ranges, precipitation falls year-round with a peak in late spring. Inner mountain areas like the plateau of the eastern Pamir (typically 100–200 mm precipitation per year) together with the true deserts are among the areas with lowest rainfall. In eastern Afghanistan, annual rainfalls are again higher than in the inner mountain areas, reaching 500 mm at lower altitudes and more than 1000 mm at high altitude.











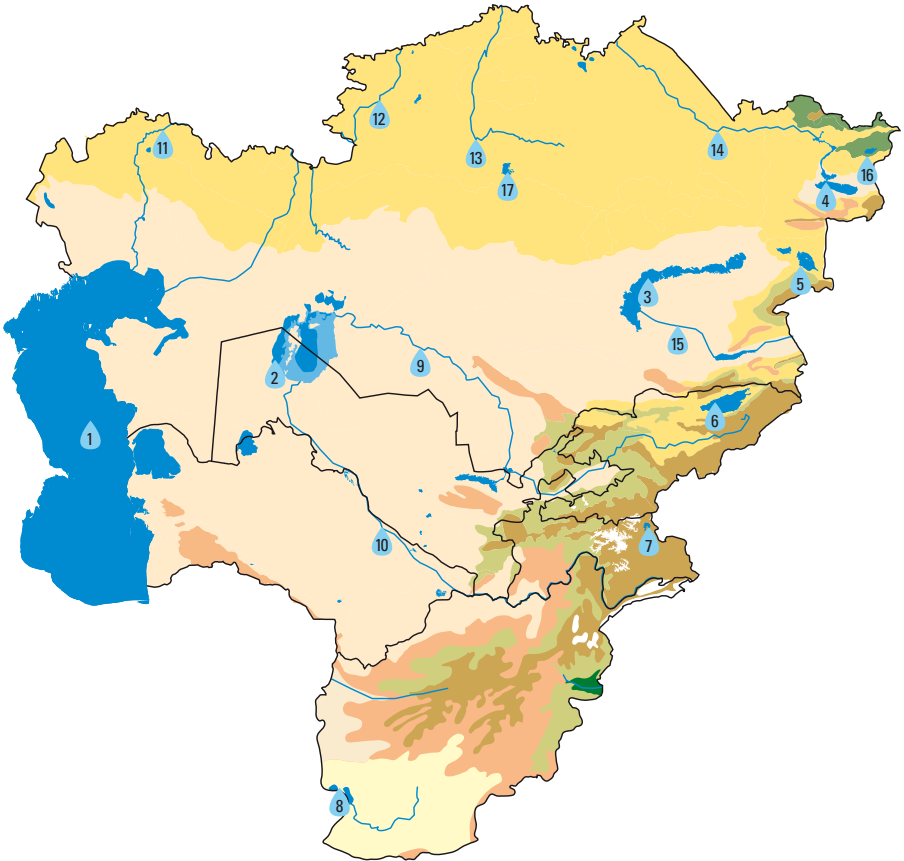
- | | | | |
|---|---------------|----|---------------------|
|  | < 0 m | 5 | Tien Shan |
|  | 0 – 250 m | 6 | Hissor–Alay |
|  | 250 – 500 m | 7 | Southern Tajik mts. |
|  | 500 – 1000 m | 8 | Pamir |
|  | 1000 – 2000 m | 9 | Hindu Kush |
|  | 2000 – 3000 m | 10 | Koh–e Baba |
|  | 3000 – 4000 m | 11 | Safed–Koh |
|  | > 4000 m | 12 | Kopet Dag |

Figure 2. Topography of Central Asia, showing the principal mountain ranges (produced by the authors based on data from CGIAR SRTM).

BIOMES AND HABITATS IN CENTRAL ASIA

Central Asia comprises a huge range of altitudes and especially a wide latitudinal extension. As a consequence, the region is rich in different habitat types. A detailed description of all of them would be outside the scope of this book. However, a short description of the major biomes is given. Varying definitions for the term biome exist, but here biomes can be considered as major local ecological communities that are characterised by their climate and distinct fauna and flora. The biomes presented here correspond to the terrestrial biomes as defined by the Central Asian IBA Programme, based on the World Wildlife Fund's Ecoregions scheme (Kashkarov *et al.* 2008; Olson *et al.* 2001; Sklyarenko *et al.* 2008) as far as the former Soviet republics are concerned. For Afghanistan, the biomes were adapted from these sources and classifications of the vegetation of Afghanistan (Breckle 2007).



- | | | |
|---|--|--|
| ■ Sino - Himalayan subtropical forest | ■ Irano - Turanian mountains | ■ Waterbody |
| ■ Boreal forest | ■ Eurasian steppe | ■ Former waterbody |
| ■ Sino - Himalayan temperate forest | ■ Eurasian desert and semi-desert | Glacier |
| ■ Eurasian high montane (Alpine and Tibetan) | ■ Saharo - Sindian Desert | |

1. Caspian Sea; 2. Aral Sea; 3. Lake Balkhash; 4. Lake Zaysan; 5. Lake Alakol; 6. Issyk-Kul; 7. Lake Qarakul; 8. Sistan Lake; 9. Syr Darya; 10. Amu Darya; 11. Ural River; 12. Tobol River; 13. Ishim River; 14. Irtys River; 15. Ili River; 16. Lake Markakol; 17. Lake Tengiz

Figure 3. Major biomes and waterbodies of Central Asia. Adapted from a map provided by BirdLife International and based on Breckle (2007), Kashkarov *et al.* (2008) and Sklyarenko *et al.* (2008).



Coniferous forest, Altai, Kazakhstan (*Raffael Ayé*)



Open coniferous forest, near Marakol Lake, north-east Kazakhstan (*Tobias Roth*)

Boreal forest (taiga)

This biome is only found in north-east Kazakhstan within our region and includes different forest types, such as coniferous, mixed broadleaf-coniferous and broadleaf deciduous. Moreover, it includes forest tundra and forest steppe as well as various types of wetlands. Characteristic species of this biome in our region are Hazel Grouse, Western Capercaillie, Swinhoe's Snipe, Ural, Great Grey and Pygmy Owls, Siberian Jay, Siberian Tit and Pallas's Rosefinch.



Eurasian steppe, north Kazakhstan (*Raffael Ayé*)



Stipa steppe, north Kazakhstan (*Raffael Ayé*)

Eurasian steppe

Most of northern Kazakhstan is dominated by this biome. It is defined by vast steppes and forest steppes, but also by wetlands like freshwater and saline lakes and marshes. Representative species of this biome include Pallid Harrier, Steppe and Eastern Imperial Eagles, Demoiselle Crane, Sociable Lapwing, Asian Dowitcher, Black-winged Pratincole, Great Black-headed and Relict Gulls, and White-winged and Black Larks.



Kyzyl Kum desert, west Uzbekistan (*Manuel Schweizer*)



Zaysan depression, north-east Kazakhstan (*Tobias Roth*)

Eurasian desert and semi-desert

Deserts and semi-deserts dominate much of the Central Asian landscape. Typical of this biome in Central Asia are tugai and saxaul forests. While the former is typical floodplain vegetation, the latter is a sparse forest in arid and semi-arid regions. This biome includes areas of semi-desert scrub, dunes, oases, salty deserts and clay, sand and gravel plains. Characteristic birds include Macqueen's Bustard, Caspian Plover, Pallas's Sandgrouse, Yellow-eyed Pigeon, White-winged Woodpecker, Turkestan Ground Jay, Sykes's Warbler, Asian Desert Warbler, Saxaul Sparrow, Zarudny's Sparrow and Red-headed Bunting.



Saharo-Sindian desert on the Irano-Afghan border (*Raffael Ayé*)

Saharo-Sindian desert

The Saharo-Sindian desert biome extends into the region of the Sistan Basin. In this typical desert biome, temperatures are mild in winter and even hotter in summer than in other parts of the region. Typical elements of the Saharo-Sindian avifauna are Spotted and Crowned Sandgrouse, Greater Hoopoe-Lark, Bar-tailed and Desert Larks, Grey Hypocolius, Streaked Scrub-Warbler, Trumpeter Finch and Afghan Scrub Sparrow.



High altitude habitat in the Kazakh Altai (*Raffael Ayé*)



Chatyr Kul, a high altitude lake, south-east Kyrgyzstan (*Manuel Schweizer*)



Tash Rabat, south-east Kyrgyzstan (*Manuel Schweizer*)

Eurasian high montane (alpine and Tibetan)

This biome covers the high-altitude sections of the regional mountain ranges, mostly above 2500–2800 m. Habitats include scrub and open vegetation above and at the tree-line, including grassland, rocky areas and montane wetlands as well as gravel and sand plains. Representative species found in this biome are Bar-headed Goose, Himalayan Vulture, Altai, Himalayan and Tibetan Snowcocks, Lesser Sand Plover, Ibisbill, Brown-headed Gull, Tibetan Sandgrouse, Snow Pigeon, Hume's Lark, Brown and Altai Accentors, Sulphur-bellied Warbler, White-browed Tit-Warbler, White-tailed Rubythroat, Gldenstdt's Redstart, Plain and Brandt's Mountain Finches, Red-mantled, Blyth's, Great and Red-fronted Rosefinches and White-winged Grosbeak.



Irano-Turanian mountains (with Eurasian steppe habitat outside the canyon) in south-east Kazakhstan (*Manuel Schweizer*)



Irano-Turanian mountains, Zeravshan range, south-east Uzbekistan (*Manuel Schweizer*)

Irano-Turanian mountains

This biome is characterised by arid and semi-arid mountains with scrub and woodland and diverse rocky areas. Representative species include See-see Partridge, Upcher's Warbler, Plain Leaf Warbler, White-throated Robin, Variable, Finsch's and Red-tailed Wheatears, Eastern Rock Nuthatch, and White-capped and Grey-necked Buntings.



Walnut forest, Arslanbob, south-west Kyrgyzstan (*Tobias Roth*)



Ala Archa, north Kyrgyzstan (*Paul Walser*)

Sino-Himalayan temperate forests

This biome is found in Central Asia mainly between 1500 and 2700 m with representative habitats consisting of montane grasslands and different forest types including montane, broadleaf deciduous, mixed broadleaf-coniferous as well as coniferous forests. Characteristic species are Black-throated Accentor, Hume's Leaf Warbler, Western Crowned Warbler, Rusty-tailed Flycatcher, Blue-capped and Eversmann's Redstarts, Black-breasted Tit and Bar-tailed Treecreeper.



Margalla hills, Pakistan (Werner Müller, SVS/BirdLife Switzerland)



Margalla hills, Pakistan (Werner Müller, SVS/BirdLife Switzerland)

Sino-Himalayan subtropical forests

This biome includes montane temperate, subtropical and subalpine forest, and associated grassland and scrub. It reaches into our region in a small area of Afghanistan, namely the Kabul river valley and the low-lying surroundings near Jalalabad. Much of the natural vegetation has been destroyed in this area. Birds characteristic of this biome are Slaty-headed Parakeet, Himalayan and Black Bulbuls, Blue-capped Rock-thrush, Tickell's Thrush, Striated Prinia and Black-headed Jay.

ORGANISATIONS AND WEBSITES

AFGHANISTAN

Wildlife Conservation Society (WCS)

The Wildlife Conservation Society (WCS) has a country office in Afghanistan. WCS conservationists are working with local people in the central highlands of Bamiyan Province's Hindu Kush mountain range and the Wakhan Pamirs to survey wildlife, set up monitoring programmes, and conduct studies on disease threats. They are conducting training workshops and environmental education classes to help communities find ways to manage their natural resources sustainably. WCS is also helping the communities to develop sustainable resource by-laws and is training village rangers to monitor wildlife and enforce these local regulations.

Working closely with the Afghan government, WCS recently helped establish the country's first national park. The park, known as Band-e-Amir, safeguards a series of six crystal-blue lakes and fragile, natural travertine dams. The area is considered eligible to be a UNESCO World Heritage Site and hosts a good population of the endemic Afghan Snowfinch. WCS staff also developed the park's management plan and helped the Afghan government hire and train local rangers. The hope is that ecotourism can create opportunities for supplemental income and provide an incentive for villagers to preserve the park's wildlife and ecosystems. WCS is also working towards transboundary cooperation in conservation in the Pamirs between Afghanistan, Pakistan, Tajikistan and China. The endangered Marco Polo Sheep, Snow Leopard, and other species range across these national borders, so conservation measures must involve all four countries if they are to be successful over the long term.

Contact information:

WCS Afghanistan Country Program

web: www.wcs.org and www.wcsafghanistan.org

KAZAKHSTAN

Association for the Conservation of Biodiversity of Kazakhstan (ACBK)

The Association for the Conservation of Biodiversity of Kazakhstan (ACBK) is a not-for-profit organisation working in Kazakhstan since 2004. ACBK operates through its head office in the capital Astana and seven branch offices all over the country. In 2010 ACBK founded the Centre for Conservation Biology in Almaty for leading research and supporting ACBK conservation activities.

ACBK focuses its activities on:

Conserving species. The critically endangered Sociable Lapwing is one of BirdLife's Preventing Extinctions Programme species. Since 2005 ACBK, together with the RSPB, has been successfully working on the breeding grounds in Kazakhstan and on the migration routes and wintering areas in the Middle East and Africa to determine why this enigmatic species has declined.

Protecting sites. The *Altyn Dala Conservation Initiative* is a large-scale initiative aimed at conserving globally important biodiversity, critically endangered species and habitats in the area covering 3 to 4 million hectares across Kazakhstan's steppe and semi-desert belt. *Important Bird Areas*. A total of 121 IBAs cover 5.5% of Kazakhstan, which is equal to 15 million ha. 31.4% of sites are fully or partly protected. Eight IBAs are regularly monitored by ACBK's student clubs. ACBK lobbies for the legal protection of IBAs.

Building capacity. ACBK supports a network of eight student clubs, based at universities across the country. More than 150 dedicated people are getting trained and involved in nature conservation projects.

Raising awareness. Annually around 10,000 school children get involved in various educational campaigns.

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KYRGYZSTAN

NABS Public Association in Kyrgyzstan

The NABS Public Association in Kyrgyzstan was founded in 2002. Its aim is the conservation of biodiversity. An important element of the practical conservation work is to fight against poaching and illegal trafficking of wild animals. The confiscation of five Snow Leopards and the release of 127 Sakers in 2004 has received much recognition. Since 2002 NABS Kyrgyzstan has been running a rehabilitation centre for wild animals in Ananevo, from where each year dozens of confiscated animals are released into the wild. The same year the former zoo of Karakol was taken over.

Since 1999 annual counts of the waterbirds at Issyk-kul have been conducted, and since 2004 counts have also been made in seasons other than winter and from other areas of the country. In addition, surveys of the population size of other vertebrate species have been carried out. As a result, the first checklist of vertebrates of Kyrgyzstan was published in June 2010. The checklist presents all vertebrate species in four languages, with current information on status and distribution. It is accessible online at www.wildlife.kg. Contributions in the form of new records or pictures are welcome from anyone.

In December 2010 NABS was awarded the status of BirdLife Affiliate and thus now belongs to the BirdLife family.

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UZBEKISTAN

Uzbekistan Society for the Protection of Birds (UzSPB)

The Uzbekistan Society for the Protection of Birds (UzSPB) was registered as a non-governmental, non-profit organisation in 2007 and works for the conservation and study of birds in Uzbekistan. UzSPB is the BirdLife Affiliate for this territory; it works through a head office in the capital Tashkent, three local branches and five local student clubs throughout Uzbekistan. The Society has 166 members and a staff of five people.

UzSPB focuses its activities on:

Conserving species: Numbers and distribution of the globally endangered Saker Falcon and Egyptian Vulture have been studied. Action plans are being prepared and first conservation work started.

Protecting sites: A total of 48 Important Bird Areas (IBAs) cover 4.6% of Uzbekistan, which is more than 2 million ha. After the inventory, activities are lobbying to include IBAs in the national Protected Area law, the development of IBA action plans for priority sites and setting up a network of IBA caretakers, living close to IBAs. Fourteen IBAs are regularly monitored by UzSPB's staff, ornithologists, student clubs and members/volunteers.

Building capacity: UzSPB supports a network of five student clubs, based at universities across the country. In 2011, more than 80 committed students were trained through an interactive education programme and are involved in projects.

Raising awareness: UzSPB annually organises campaigns, such as the Bird of Year Campaign or the World Environmental Day, where around 200 school children are reached through education activities, drawing contests and field excursions.

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