

Threatened Birds of Asia:

The BirdLife International Red Data Book

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Recommended citation

BirdLife International (2001) *Threatened birds of Asia: the BirdLife International Red Data Book*. Cambridge, UK: BirdLife International.

© 2001 BirdLife International

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Internet: www.birdlife.net

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ISBN 0 946888 42 6 (Part A)

ISBN 0 946888 43 4 (Part B)

ISBN 0 946888 44 2 (Set)

British Library-in-Publication Data

A catalogue record for this book is available from the British Library

First published 2001 by BirdLife International

Designed and produced by the **Nature**Bureau, 36 Kingfisher Court, Hambridge Road, Newbury, Berkshire RG14 5SJ, United Kingdom

Available from the Natural History Book Service Ltd, 2–3 Wills Road, Totnes, Devon TQ9 5XN, UK. Tel: +44 1803 865913 Fax: +44 1803 865280 Email nhbs@nhbs.co.uk
Internet: www.nhbs.com/services/birdlife.html

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WHITE-THROATED BUSHCHAT

Saxicola insignis

Critical —
Endangered —
Vulnerable C1



This poorly known chat has a small, declining population as a result of loss of its wintering grassland habitats to drainage, conversion to agriculture, overgrazing, flooding, and thatch harvesting. These factors qualify it as Vulnerable.

DISTRIBUTION The White-throated Bushchat occurs in the breeding season in Kazakhstan, Russia and Mongolia, and in the non-breeding season in Nepal and India, with records of migrating birds from intervening countries. It breeds very locally in the mountains of Mongolia and an adjacent part of Russia, and it winters in the northern Gangetic plains and the duars of northern India and the terai of Nepal. It has been recorded on passage between these regions in Bhutan and western China. The listing of the species for Bangladesh (Rashid 1967; and thereafter Husain 1979, Ripley 1982) is presumably hypothetical and requires substantiation (see Remarks 2 under Manipur Bush-quail *Perdica manipurensis*).

■ **KAZAKHSTAN** It has been recorded in one area in north-eastern Kazakhstan on passage and during the breeding season, but there is no definite proof of breeding. A pair seen on an unstated date at **Zaysan lake** were apparently on spring migration (Khakhlov in Sushkin 1938). In addition, an adult male was collected near Zaysan, north of the lake, in summer and thus perhaps on the breeding grounds (although not in typical mountain habitat), but the original label is missing and there is thus some doubt about the locality (Kozlova 1932–1933). The species was reported breeding in small numbers “here and there” (Kozlova 1932–1933, Dement’ev and Gladkov 1951–1954).

■ **RUSSIA** A small breeding population was located close to the Mongolian border in the 1970s, but it may now be extinct there: south of **Tashanta** village, northern foothills of the Saylyugem range, 2,100 m, not more than four pairs, June 1970 and 1971 (Panov 1976), male, June 1974 (Neufeldt 1986), with no birds located in the same area in June–July 1977, possibly partly because c.10 specimens had been collected in the area over a period of 5–6 years (Loskot 1986).

■ **MONGOLIA** The species is a rare breeding visitor to central and western Mongolia, occurring in the subalpine and alpine zones of the Khangai (Hangayn Nuruu), Türgen-Harhira and Mongolian Altay (Altai) mountain ranges. Records are as follows: ■ **Uvs Siljugem mountains** (Saylyugem mountains, Siilhem mountain), juvenile male collected and probable adult seen on the southern slopes by the upper Syry-Dzhamata (Sary-Dzhamata) river, c.2,500 m, August 1914 (Sushkin 1938), undated (Bold 1997); ■ **Khovd Tsast mountain**, undated (Fomin and Bold 1991); ■ **Khökh Serkh Uul** (Khokh Serkh), undated (Fomin and Bold 1991); 40 km south of **Khovd** (Kobdo), undated (Kishchinskiy [Kistschinskij] *et al.* 1980 in Stresemann and Portenko 1982); ■ **Bumbag Hayrhan Uul** (Bumbat mountain), undated (Bold 1997); ■ **Ulaan Dabaa** (Ulaan Davaa), undated (Bold 1997); ■ **Mönkhkhairkhan** (Munch-Chajrchan-Ula) mountains, several pairs and families on the northern slopes at 2,800–3,100 m, two fledged young near the Ulaan Dabaa pass at 2,600 m, and one pair in the Borgiyngol river basin at 2,500 m, July 1979 (Kishchinskiy *et al.* 1982; also Fomin and Bold 1991); ■ **Bodonch river**, undated (Bold 1997); Jagalant Khairchan (untraced but presumably near Khovd, since the *Times atlas of the world* 1993 gives “Jargalant” as an alternative name), 2,500 m, one pair with a recently fledged juvenile

and another male, July 1995, the species possibly being widespread in suitable habitat (which was not surveyed) on Jagalant Khairchan, Bombat Khairchan (presumably Bumbag Hayrhan) and in the adjacent Altay (Bräunlich 1995); ■ *Dzavkhan* near **Otgon Tenger Uul** (Otgontenger, Otkhon-tengri snow peak), south-west Khangai mountains, June–July 1929 (four specimens in MCZ and ZMB; also Fomin and Bold 1991), at Naryn-Gol, south-west of Otgon Tenger Uul, undated (Kozlova 1932 in Stresemann and Portenko 1982); **Dzavkhan river** (Zavkhan river), undated (Fomin and Bold 1991); Khukh Nuur (not mapped; at 47°32'N 98°32'E), Hangayn Nuruu, 2,600 m, June 1997 (specimen in USNM); ■ *Gov²-Altay Khasagt Khairkhan Uul* (Khasagtkhairkhan Uul), undated (Fomin and Bold 1991); ■ *Arkhangai Chuluut Gol* river, undated (Bold 1997); ■ *Bayankhongor Bogdo mountain* (Bogd mountain), undated (Bold 1997); **Laman-Gegen** (Lamen-gegen), east Khangai, upper Tujn-Gol river, one young bird collected near the monastery, July 1926 (Stresemann and Portenko 1982); **Shargaljuut river** (Shargaljuut river), undated (Bold 1997); ■ *Övörkhangai Ongiin river*, undated (Bold 1997).

■ **CHINA** The species is a rare passage migrant, recorded in Qinghai, Ningxia and Yunnan, with records as follows:

■ **Qinghai Gyaring Hu** lake (Jialing lake), Madoi county, October 1960 (specimen in ASCN, also Xian Yaohua *et al.* 1964, Cheng Tso-hsin 1987); **Tongchi Gomba** (Drechu Gomba), “Camp 79”, six males, 4,200 m, April–May 1935 (Dolan 1938, Schäfer 1938, Schäfer and Meyer de Schauensee 1938, also Vaurie 1972, three males in AMNH); “**Camp 80**”, on the upper Jalung, within the Kiang steppe, where amongst c.50 birds recorded (presumably here and at other camps) there was only one female, 4,600 m, April 1935 (Schäfer 1938); **Chindu county**, undated (Cheng Tso-hsin 1987);

■ **Ningxia Helan Shan** mountains (= Ala Shan, Alxa), one young bird collected (which had already completed its post-juvenile moult), August 1880 (N. M. Przheval'skiy in Kozlova 1932–1933; also Cheng Tso-hsin 1987; see Remarks 1);

■ **Yunnan** km 47 on the **Lijiang-Daju** road, April 1988 (S. Jensen *per* C. R. Robson *in litt.* 1991).

■ **INDIA** This species is a winter visitor that has been recorded in the Gangetic plains from northern Haryana through Uttar Pradesh to Bihar (terai), and in the northern foothills of northern West Bengal and Assam (duars) (Ali and Ripley 1968–1998, Ripley 1982). Records are from:

■ **Haryana** Lalru (“Lallroo”), one, November 1866 (Beavan 1865–1868; but see Remarks 2), and nearby at **Ambala**, December 1922 (female in BNHS, Jones 1927);

■ **Uttar Pradesh Corbett National Park**, male, February 1989 (Bose *et al.* 1989); **Gonda**, Avadh (= “Oudh”), one, undated (*Stray Feathers* 9 [1881]: 505–507), and one male (perhaps the same), undated (Jesse 1902–1903); **Faizabad** (Fyzabad), Gorakhpur, December 1878 (male in BMNH); **Captainganj** (Kaptanganj), “Zillah Bustee”, October 1878 (*Stray Feathers* 7 [1878]: 454–455, female in BMNH); **Kasia**, Gorakhpur, December 1878 (juvenile male in BMNH); **Pipraich** (Piprach), Champaran (currently a district of Bihar), December 1878 (male in BMNH); **Kanpur** (“Cawnpore”), February, unspecified year (Marshall and Marshall 1875, Jesse 1902–1903, specimen in BMNH);

■ **Bihar Raxaul**, on the Nepal border, March 1937 (female in BMNH); **Sugauli** (“Segowlee”), two specimens collected, January, unspecified year (*Stray Feathers* 5 [1877]: 132–133; see Remarks 3); Baghownie, **Darbhanga district**, December 1902 (Inglis 1901–1904), March and December 1909 (three specimens in BNHS), January and November 1923 (two specimens in BMNH); “**Rajaputee**”, **Chupra** (Chhapra), Saran district, October–November 1897 (two specimens in BNHS); **Patna**, November 1937, March 1938, December 1938 (four specimens in BMNH);

■ **West Bengal** unspecified locality in the “Lower Hills of Sikkim” (and thus presumably in present-day West Bengal, but see Remarks 4), a specimen (in BMNH) of an unusually

small male taken by L. Mandelli's collectors in April 1873; **Jalpaiguri**, winter visitor, undated (Inglis *et al.* 1920), four, January 1931 (two males in BMNH, Inglis 1951–1969);

■ **Assam Manas National Park**, 1987 (Rahmani *et al.* 1988), February–April, 1986–1989 (Narayan and Rosalind 1997; also Anon 1990b); **Kaziranga National Park**, 4–5, April 1995 (Sarma *et al.* 1997).

In addition, two individuals were thought to be this species, one at Ataria, north of Lucknow, spring 1897 (Jesse 1902–1903), and another at Motipur, June 1899 (Inglis 1901–1904), but the identifications were inconclusive.

■ **NEPAL** Although the species was described from specimens thought to be taken in Nepal (Jerdon 1862–1864), it transpired that B. H. Hodgson's specimens came from Bihar just south of the border with Nepal (*Stray Feathers* 5 [1875]: 132–133). The species is a scarce and local winter visitor to the terai region, with records as follows: **Royal Sukla Phanta Wildlife Reserve**, fairly common in recent years (Baral and Mills 1992, H. S. Baral *in litt.* 1996, 1998, Baral 1997b), apparently including about 50, March 1993 (Irvin 1994), up to six, March 1997 (Giri 1997), a maximum of 26, December 1997 (Baral 1998), and three females, January 1999 (J.-C.



The distribution of White-throated Bushchat *Saxicola insignis*: (1) Zaysan lake; (2) Tashanta; (3) Siljugem mountains; (4) Tsat mountain; (5) Khökh Serkh Uul; (6) Khovd; (7) Bumbag Hayrhan Uul; (8) Ulaan Dabaa; (9) Mönkhkhairkhan; (10) Bodonch river; (11) Otgon Tenger Uul; (12) Dzavkhan river; (13) Khasagt Khaïrkhan Uul; (14) Chuluut Gol; (15) Bogdo mountain; (16) Laman-Gegen; (17) Shargaljuut river; (18) Ongiin river; (19) Gyaring Hu; (20) Tongchi Gompa; (21) Camp 80; (22) Chindu county; (23) Helan Shan; (24) Lijiang-Daju; (25) Ambala; (26) Corbett National Park; (27) Gonda; (28) Faizabad; (29) Captainganj; (30) Kasia; (31) Pipraich; (32) Kanpur; (33) Raxaul; (34) Sugauli; (35) Darbhanga district; (36) Chupra; (37) Patna; (38) Jalpaiguri; (39) Manas National Park; (40) Kaziranga National Park; (41) Royal Sukla Phanta Wildlife Reserve; (42) Manohara river; (43) Royal Chitwan National Park; (44) Lumbini Sanctuary; (45) Kosi Tappu Wildlife Reserve; (46) Kosi barrage; (47) Wangdi.

○ Historical (pre-1950) ● Fairly recent (1950–1979) ● Recent (1980–present) □ Undated

Kovacs *in litt.* 1999); along **Manohara river**, Kathmandu valley, 1,400 m, two immature males, October 1982 (Fleming *et al.* 1984; also Nepali 1986); **Royal Chitwan National Park** (see Remarks 5), at Meghauli, 50–100 m, one, March 1986 (Holt *et al.* 1986), two, April 1991, and three, January and November 1994 (Drijvers 1995), at Patna, one male, November 1997 (K. Pokharel verbally 1997), 1–2 males, December 1997 (B. Mahato verbally 1997) and north of Sauraha, just outside Royal Chitwan National Park, one male, December 1997 and January 1998 (K. Pokharel verbally 1998); **Lumbini Sanctuary**, one male, 1994 (*Bird Conservation Nepal Newsletter* 4, 3 [1995]: 2–3), although none, March 1998 (Baral 1998); **Kosi Tappu Wildlife Reserve**, one, October 1987 (Heinen 1988), one male, March 2000 (*Danphe* 9, 1/2 [2000]: 2); **Kosi barrage**, 50–100 m, unspecified numbers, April 1975 (Fleming *et al.* 1984), up to 10, March 1982 (Martins *et al.* 1983), three, April 1983 (P. Alström, U. Olsson and D. Zetterström *in litt.* 2000), three, March 1986 (J. N. Dymond *in litt.* 1999), one, March 1994 and April 1995 (*Bird Conservation Nepal Newsletter* 3, 4 [1994] 2, Drijvers 1995), one, March 1996 (Daulne and Goblet 1996), three, March 1996 (Davidson and Heywood 1996), up to two birds to the south of the barrage, undated (H. Choudhary *in litt.* 1996); Chisapani (not mapped), one, August 2000 (*Danphe* 9 [2000]: 3).

■ **BHUTAN** There is a single record: Bajothang, 2 km north of **Wangdi** (Wangdiphodrang), beside the Sang Chu, one male photographed, April 1999 (B. Carrick and P. Holt *in litt.* 1999).

POPULATION Although the White-throated Bushchat has always been infrequently recorded, it is perhaps not as rare as published records indicate, especially as it can be overlooked amongst congeners (Ali and Ripley 1968–1998). The paucity of recent information is at least partly explained by the remote and inaccessible nature of its breeding range and the lack of ornithologists in much of its wintering range. Outside the “Asian” region, the species has been reported breeding in one small area of Kazakhstan, but any population there is probably very small (and appears not to have been relocated since the 1930s, so may no longer even be extant). Until proven otherwise, therefore, the species should be treated as entirely endemic to the Asian region.

The population data accumulated so far throughout the range of the species suggest that total numbers might not exceed 1,000 birds. However, as some breeding populations are fairly dense (see Breeding), and as this species is perhaps likely to be overlooked, the true figure is here estimated to fall between 2,500 and 10,000 birds. If the results of fieldwork in the breeding and non-breeding ranges continue to indicate that numbers fall below this level, the conservation status of the species should be re-assessed (see Remarks 6).

Eastern Russia This species is apparently restricted as a breeding bird to the northern foothills of the Saylyugem range, close to the north-west Mongolian border, where Panov (1976) found an isolated population of no more than four pairs in the early 1970s. One bird was seen there in 1974 (Neufeldt 1986), but the population was considered extinct by 1977 as none was found in that year (Loskot 1986). The species may be only an irregular breeder in Russia (M. V. Cherkasova in Ponomareva and Vinokurov 1984), but no recent information is available and its current status is unclear.

Mongolia A quite large population was discovered in the subalpine zone of the Khangai mountains in 1929, the species being common on the southern flank of the Otgon Tenger Uul (Otkhon-Tengri peak) (Kozlova 1932–1933). Very little fieldwork has since been conducted in the potential breeding range of the species, although Kishchinskiy *et al.* (1982) found small numbers including groups of 3–5 pairs with young, and more dispersed solitary pairs, on the northern macro-slope of the Mönkhkhairkhan mountains (part of the Mongolian Altay range) in July 1979. Several were seen in Khovd province in July 1995, and it was considered that the species might be widespread in suitable habitat (which was not surveyed)

on Jagalant Khairchan, Bombat Khairchan (presumably Bumbag Hayrhan) and in the adjacent Altay (Bräunlich 1995).

India In the latter half of the nineteenth century, Hume (1880a) considered the species “not uncommon along the plains country at the foot of the Himalayas”. In Gorakhpur and Basti, it occurred “rather sparingly”, with perhaps one pair per 16 km transect of ideal habitat (see Ecology), a distance in which more than 20 Common Stonechats *Saxicola torquata* would probably be seen (*Stray Feathers* 7 [1879]: 519). While clearly a scarce bird, around 10 White-throated Bushchats were shot in these districts in a short period (*Stray Feathers* 7 [1879]: 519) and this suggests that quite large numbers probably inhabited northern India before the removal of prime habitat. In the following century, grassland was converted to agricultural fields or otherwise developed (see Threats under Swamp Francolin *Francolinus gularis* and Bengal Florican *Houbaropsis bengalensis*) and it seems certain that substantial a decline has occurred. There have been no records, for example, from the Gorakhpur and Basti districts of Uttar Pradesh since the nineteenth century (see Distribution). Baral (1998c) remarked that “although it has been recorded from many areas, none of them is known to have a regular wintering population”, and indeed on the basis of current information the regular Indian wintering population might be estimated as under 100 birds. This could, however, be misjudged; in particular, Assam might support higher numbers than is currently known, as large areas of suitable habitat remain unsurveyed (Baral 1998c). Nevertheless, the species is scarce and irregular at well watched Kaziranga National Park (Sarma *et al.* 1997, Choudhury 2000c), while at Manas National Park it appears to be regular in only very small numbers (Narayan and Rosalind 1997). Furthermore, it was not encountered in almost 10 years of research in Dudwa National Park, 1980s–1990s (A. R. Rahmani verbally 1998), perhaps one of the most likely sites for it to occur in Uttar Pradesh.

Nepal The species is a “fairly common winter visitor to Sukla Phanta, but rare elsewhere in Nepal” (Baral 1998c). It is scarce, for example, at Kosi barrage, with a maximum of 10 birds recorded (Martins *et al.* 1983), but declining to only one or two birds in the late 1990s (Baral 1998c), while it has virtually disappeared from Kosi Tappu Wildlife Reserve (*Danphe* 9, 1/2 [2000]: 2). The population is also rather small at Royal Chitwan National Park, where only 1–3 birds have been recorded. Baral (1998c) estimated a population of 110 birds in the country based on site surveys and extrapolation across potential available habitat. A small population may winter in the grasslands near the Mahakali river, which forms the border between Nepal and India (Baral 1998c).

ECOLOGY Habitat The White-throated Bushchat breeds very locally in alpine or subalpine meadows with scattered scrub in the mountains of Mongolia and at a single much drier, lower location in adjacent Russia (Stresemann and Portenko 1982). At 2,100 m in the northern foothills of the Saylyugem range (Altay Republic, Russia), the species occupied a hilly, semi-desert plateau with sparse grassy vegetation, scattered low shrubs and outcrops of ancient rock on the slopes and near the tops of low rounded hills (Panov 1976). Shallow ravines or gullies with small streams are a further feature of breeding habitat in this area, and nests were sited low down in the walls of such gullies; the drinking and bathing habits of captive birds suggested that the species would be unlikely to breed in areas without water (Panov 1976). Favoured habitat in the Khangai mountains in Mongolia is subalpine meadows at 2,430–2,600 m, near streams in areas with many gorges, rocky outcrops and scattered boulders, birds tending to perch on rocks or on the tops of shrub willow *Salix arbuscula* and birch *Betula exilis* and nesting in rock crevices (Kozlova 1932–1933). In the Mongolian Altay, breeding birds were similarly found in wet meadows with scree and rocky outcrops, but higher up, at 2,800–3,100 m (Kishchinskiy *et al.* 1982).

In winter, the species inhabits extensive patches of dry or moist grasslands, frequenting the large phantas (open short-grass plains) which once covered much of the Gangetic lowlands

but are now largely restricted to a few scattered protected areas in southern Nepal and northern India (Baral 1998c). In Nepal, it occurs between 75 and 250 m during winter, although it has been recorded at 1,400 m on passage (Baral *et al.* 1996). Its wintering habitat has variously been described as sugarcane fields, “ekra” (= *Erianthus ravaneae*) grass and other open grasslands in Bihar (Inglis 1951–1969), “heavy grassland, reeds and tamarisks along riverbeds, and cane fields” (Ali and Ripley 1968–1998), or “flat, open country thickly dotted with cane fields” (*Stray Feathers* 7 [1879]: 519, Oates 1889–1890). It is sometimes found in the reeds at Kosi barrage and at the edge of fields in the Kathmandu valley (Fleming *et al.* 1984), and has been reported frequenting mown grass at a race-course, along with other *Saxicola* species (Jones 1927). At Manas National Park it occurs on open grasslands composed largely of *Saccharum narenga* and *Imperata cylindrica*, interspersed with tall “elephant grass” and very few trees (Narayan and Rosalind 1997).

Recent investigations of habitat choice in Nepal (Baral 1998c, from which all information in this paragraph is taken) suggest some specialisation that is poorly understood. White-throated Bushchat was plentiful in some areas but absent from other apparently identical sites; within Sukla Phanta Wildlife Reserve, for example, it occurred on the Sukla phanta itself but not on any other grassland in the area. The grasslands at this site contained many types of grass with a few trees growing in damper patches and at the grassland periphery. The species inhabited the open grassland, typically perching on stems 3–5 m high. Birds were found in both burnt and unburnt grasslands. Prior to burning, they tended to avoid dense grasslands and occurred only at the edge of dirt roads or small patches of bare ground, this suggesting a preference for clear areas. After burning, they appeared to prefer burnt to unburnt patches, especially those with considerable amounts of unburnt tall stems (>1 m) and open ground; the stems provide perches from which they sally down onto the ground to pick up their insect prey (see Food). Most sites used by the species were burnt, with 15–75% unburnt tall grass stems. Optimum habitat thus appears to be a mosaic of disturbed and undisturbed ground. In Royal Chitwan National Park, they occur in newly formed *Saccharum spontaneum* grasslands. Much of this grassland is overgrazed, but parts contain a sufficient quantity of tall stems to be suitable for this species. The seasonally inundated habitat frequented at Kosi barrage is dominated by *Saccharum spontaneum*, sparsely dotted with tamarisk bushes, mostly below 2 m in height, and bare, sandy ground.

The habits of this bird are generally similar to other *Saxicola* species with which it sometimes feeds (Jones 1927, Inglis 1951–1969). It is generally solitary and well spaced in the winter quarters (*Stray Feathers* 7 [1879]: 519, Ali and Ripley 1968–1998, Fleming *et al.* 1984), although some populations can be quite densely packed and locally concentrated: during extensive observations in Nepal, up to three males were sometimes seen within 2 m of each other, but a female was only once observed within 5 m of a male (Baral 1998c). In Manas National Park, India, the species has been reported either singly or in loose pairs in early spring (Narayan and Rosalind 1997). Although it is reportedly shy and thus difficult to shoot at times (Dolan 1938, Schäfer and Meyer de Schauensee 1938, Vaurie 1972, Fleming *et al.* 1984), it can be approached in Nepal to roughly 10 m on foot and even closer with vehicles (Baral 1998c; see Food). Other reports from the breeding grounds in Mongolia suggest that individuals were not at all shy and thus easily shot (Koslova 1930, 1932).

Territoriality in the breeding season appears intense, males in the Saylyugem foothills vigorously defending small contiguous territories against conspecific intruders (Panov 1976). Wintering individuals also establish smaller, less defined foraging territories that appear to be occupied for the whole season (Baral 1998c). Aggressive interactions in winter have been observed between male White-throated Bushchats, and also interspecifically with male White-tailed Stonechat *Saxicola leucura* and Common Stonechat; this trio of species is often observed in fairly close association because of broad niche overlap (not shared by Grey Bushchat *S. ferrea* and Jerdon’s Bushchat *S. jerdoni*) in the winter quarters (Baral 1998c). Small

territories held by White-throated Bushchats on migration in Manas National Park, India, are apparently defended against intrusion by Common Stonechat (Narayan and Rosalind 1997).

Food There are no data from the breeding grounds. In winter the diet comprises “insects (mostly beetles) and their larvae; also some vegetable matter” (Ali and Ripley 1968–1998). One specimen was found to have “several tenebrionid beetles *Gonocephalus elongatum*” in its stomach (BMNH label data). Birds sometimes feed on winged insects and one was observed capturing a moth in flight (Baral 1998c). Foraging habits (perching on top of bushes or grasses and descending to the ground for insects) are typical of the genus (Ali and Ripley 1968–1998). A male observed for an hour at Sukla Phanta Wildlife Reserve, Nepal, changed perches 49 times, of which 11 were lower than 1 m and 38 were taller than 1 m, and dropped to the ground on eight occasions, remaining perched there for a total of 19 minutes (Baral 1998c). Indeed, the average time spent on the ground is apparently longer than for other *Saxicola*, with periods of 30 seconds being the norm and often up to a minute; an individual has even been seen feeding on a ploughed field in a thrush-like manner, “running with its head lowered close to the ground and raising its head while stationary” (Baral 1998c). In common with all *Saxicola* species present on the Sukla phanta, individuals often appear to follow walking observers, or even those riding bicycles (Baral 1998c). Although the reasons for this behaviour remain obscure, the fact that they follow herds of swamp deer *Cervus duvauceli*, suggests that it might relate to increased foraging success when insects are disturbed and flushed by moving animals (Baral 1998c).

Breeding The species breeds very locally in alpine and subalpine zones (Kozlova 1932–1933, Dement'ev and Gladkov 1951–1954, Panov 1976, Ali and Ripley 1968–1998). Both sexes apparently share parental duties (Kozlova 1932–1933). Several pairs usually breed together as a neighbourhood group, and up to three singing males can be seen and heard from the same spot (Kozlova 1932–1933, Panov 1976). The distance separating nests in the Saylyugem foothills in 1970 did not exceed 300 m (Panov 1976). In the Mongolian Altay, 3–5 pairs carrying food to their fledged young were sometimes only a few tens of metres apart; in other cases, sites occupied by individual pairs were separated by up to 1–2 km (Kishchinskiy *et al.* 1982). Breeding by different pairs is fairly synchronous, well grown nestlings and recently fledged young being noted in the Saylyugem foothills in late June (Panov 1976), but in the Khangai one late-June nest contained unincubated eggs, while recently fledged young were seen in late June at another site (Kozlova 1932–1933). In the Mongolian Altay, one pair was feeding nestlings 15–18 July, but apparently independent fledglings were also noted at this time (Kishchinskiy *et al.* 1982). Four nests found in the Saylyugem foothills were all in holes or crevices in the earth walls of shallow ravines or gullies, well concealed from above by overhanging grassy turf (Panov 1976); deep rock crevices are used in Mongolia (Kozlova 1932–1933). The species builds a bulky nest with thick walls; it is wider at the base than at the top and is composed mainly of dry grass lined with wool, feathers and dry moss (Panov 1976; also Kozlova 1932–1933). Four to five eggs are laid and incubation is by the female alone (Kozlova 1932–1933), while both parents feed the young before and after fledging (Panov 1976).

Migration At Zaysan lake (Kazakhstan), a pair was reported to have occurred on spring passage (see Distribution). In China (once quite far to the east in Yunnan; see map), the species has been recorded on spring migration in April–May, and on autumn migration in October (see Distribution). In spring, it seems to migrate along the Yalung and Yangtze rivers, stopping here and there for a few days' rest (Dolan 1938, Schäfer and Meyer de Schauensee 1938; also Vaurie 1972).

In Nepal and India it usually occurs between October and April, the extreme dates in India being 27 October and 10 April (Ali and Ripley 1968–1998, Baral 1998c) or, in Assam in 1986, 24 April (Narayan and Rosalind 1997). Individuals appear at Manas National Park in India in the spring, sometimes arriving as early as February, sometimes as late as April,

and holding small territories for variable periods before moving onward to their breeding grounds (Narayan and Rosalind 1997). The latest spring record in Nepal is of a male that remained at Sukla phanta over 3–6 May 1998 (Baral 1998c). Migrating individuals tend to be observed at higher altitudes as they cross the Himalayas, for instance in the Kathmandu valley (Baral 1998c) or Bhutan (P. Holt *in litt.* 1999), and up to 4,600 m in Qinghai, China (see Distribution). One interesting observation is that, in the late afternoon, all White-throated Bushchats wintering on the Sukla phanta, Nepal, appeared to move in a south-westerly direction, entirely vacating the eastern portion of the grassland (Baral 1998c). Although the function of this movement is unclear, one possibility is that they were attending a communal roost-site.

In all cases hitherto documented, the population appears to contain a preponderance of males. On the Sukla phanta, for example, the maximum count of 23 males far outweighs the corresponding figure of three females (Baral 1998). Other literature suggests that this skewed sex-ratio is a widespread phenomenon, as females have almost always been encountered or collected less frequently than males on the wintering grounds (see, e.g., *Stray Feathers* 5 [1877]: 132–133), and amongst around 50 birds recorded on migration in China, only one female was counted (Schäfer 1938). This circumstance might arise through some difference in migratory behaviour between the sexes rather than an actual sex-ratio difference throughout the population; however, it seems unlikely that females remain on the breeding grounds throughout the winter, because weather conditions are very harsh. Speculation that they prefer different habitat types or wintering grounds to the males, or are simply less detectable because of their behaviour or plumage characteristics, or indeed that they are actually outnumbered by males, requires clarification through further study.

THREATS *Habitat loss and degradation* No information is available regarding the state of the breeding habitat of the species, but it is unlikely to be unduly threatened given the modest levels of human population density and regional development. Ponomareva and Vinokurov (1984) indeed reported breeding habitats in Russia to be virtually untouched by human economic activity.

The destruction and modification of grassland and wetland habitats in its wintering range is thought to be the main concern (Rahmani 1988b). There have been huge declines in the area and quality of grasslands in South Asia (Bell and Oliver 1992, Peet *et al.* 1999a). Virtually all remaining grasslands within the species's wintering range are subject to intense pressures which threaten their future (Rahmani 1988b, 1992c, Javed and Rahmani 1991, Bell and Oliver 1992, Peet *et al.* 1999a). In many areas grasslands of conservation value are restricted to protected areas but continue to suffer degradation (Bell and Oliver 1992, Peet 1997), and grasslands are generally poorly represented in protected-area systems (Rahmani 1988b, 1992c, Baral 1998c, Buckton *et al.* 1999).

Habitat loss is the main threat to the species in Nepal, grazing, ploughing and burning being the primary underlying causes (Baral 1998c). Grassland habitat has disappeared rapidly in Nepal since 1970, and each year all grasslands within protected areas are cut, burnt and trampled by more than 100,000 people and their livestock, to say nothing of what happens to them outside protected areas (Baral 1998c). Intensive grazing or ploughing reduces grass height below the optimal range for this species, and while burning in moderation can actually have a positive effect (producing the preferred mosaic of cleared and uncleared areas), it can also, if not properly managed, eliminate suitable perches (Baral 1998c).

The restricted grassland south of Kosi barrage lies outside protected areas and is highly disturbed by a large number of local fishermen, cattle-grazing and flood damage, pressures that are thought to have caused the local decline in the species (Baral 1998c). Flood damage at Kosi barrage can maintain suitably disturbed grassland habitat, but if too heavy or frequent it reduces the quality of grassland for this species (Baral 1998c). Nearby, at Kosi Tappu

Wildlife Reserve, the number of people and domestic cattle is steadily increasing, along with associated disturbance, to the detriment of the environment (D. Petersson 1998). In the west of the country, tree planting is being encouraged on the open grasslands at Lumbini, with deleterious effects on habitat suitable for this bird (H. S. Baral *in litt.* 1998).

More detailed account of threats to grasslands in Nepal and northern India, with reference to Sukla Phanta Wildlife Reserve and other key sites, appear in the equivalent sections under Swamp Francolin and Bengal Florican.

MEASURES TAKEN *Russia* The White-throated Bushchat is included in the Russian Red Data Book (Kolosov 1983), but no measures have been taken for its conservation (Ponomareva and Vinokurov 1984).

Mongolia None is known.

India The species occurs irregularly and in small numbers at Kaziranga National Park and Manas National Park, Assam. It may well be overlooked on other grassland reserves in the terai of Uttar Pradesh, Bihar, West Bengal and Assam (but see Population).

Nepal Sukla Phanta Wildlife Reserve (155 km², of which almost half is grassland) supports a small wintering population of the species; there are plans to extend this area to 305 km², an action that will facilitate the creation of more phantas to the south-west (Baral 1998c). The species also occurs in smaller numbers in Royal Chitwan National Park (932 km²) of which around 21% is grassland, grass-jungle or riverine forest (Baral 1998c). Grasslands at Patna have recently developed following the evacuation of a village in the park, an action that has led to the emergence of additional habitat for the species, at least temporarily (Baral 1998c). It also winters irregularly in Kosi Tappu Wildlife Reserve (175 km²), an area subject to annual flooding and 70% of which is grassland (Baral 1998c). A crane sanctuary has been established at Lumbini, with possible benefits to suitable grassland habitat (Baral 1998c).

MEASURES PROPOSED The conservation requirements of the White-throated Bushchat should be viewed in combination with the needs of a variety of other threatened grassland birds within its range so that a programme of habitat management and research can be implemented with benefits to each of these species (see Measures Proposed under Bengal Florican).

Legal protection A recommendation has been forwarded to the government of Nepal to confer full legal protection to the species under the National Parks and Conservation Act (Baral 1998c). It should also be given the highest category of protection in China (Liu Naifa *in litt.* 1997) and India.

Protected areas and grassland management In eastern Russia (and other Central Asian countries that were formerly part of the USSR), Ponomareva and Vinokurov (1984) proposed that surveys should be undertaken to find out where the species is breeding and that “zakazniks” (seasonal reserves or sanctuaries) be established for the protection of the whole complex of montane-steppe species.

In the wintering range, the protection and management of grasslands is the main conservation focus for this and several others species (see Remarks 7 under Bengal Florican). Even highly grazed open areas quickly regenerate into high-quality grassland habitat if properly protected and managed; in Nepal, they are naturally and quickly colonised by either *Saccharum spontaneum* or *Imperata cylindrica* grasses and this bushchat uses the habitat within one or two years (Baral 1998c, 2000a). For this reason, proposed extensions to protected areas should include as much potential grassland as possible, even if the habitat does not immediately appear suitable for threatened species.

Kosi Tappu Wildlife Reserve should be considered for expansion and proper management to maximise and protect suitable habitat. In addition, open areas to the east of Sukla Phanta Wildlife Reserve near Radhapur and Jhilmila could be converted to grassland areas of

outstanding importance for birds and mammals; some of this area is apparently already within reserve boundaries and requires management or an integrated community project to re-establish high-quality grassland and swampland habitat with value to local people and wildlife (Baral 1998c).

General grassland-management recommendations for India and Nepal are made under Bengal Florican and Swamp Francolin; it should be noted that the preference of this species for some open areas means that a rotational clearance regime at key sites is required so that suitable habitat is made available. Although small amounts of habitat disturbance (burning and clearing) are of benefit to this species as it provides areas of open ground suitable for foraging, the activities of people on grasslands within protected areas require monitoring and control (Baral 1998c).

Education A programme of talks, posters, audio-visual presentations and field outings should lay the foundations for public awareness of conservation problems and possibilities in grasslands of the terai and duars of India and Nepal (Baral 1998c, Choudhury 2000c).

Research As so little is known of its distribution and population in the breeding season, fieldwork in Kazakhstan, Mongolia and adjacent Russia should focus clarifying these issues and identifying any threats. An intensive survey of the Gangetic plains during winter, focusing on all potential natural grassland areas, is required to identify further key sites for the species; if any wintering populations are found in India they should receive immediate conservation action. Ringing and colour-banding surveys would provide useful information regarding movement and site-fidelity of individuals. Grasslands in the south-west portion of Rupandehi district, Nepal, on the border with Kapilvastu district, deserve exploration for populations of this species, as do the grasslands along the Mahakali river (Baral 1998c). Further study into micro-habitat requirements is required, especially given the fact that the species appears to favour some grasslands in winter while remaining absent from apparently identical areas; an investigation of the characteristics of occupied and unoccupied sites may shed some light on the precise requirements of the species (Baral 1998c). A long-term study is required to determine the effect of grassland management on its populations.

REMARKS (1) Although several first-winter birds were reportedly collected by Przheval'skiy in the Helan Shan mountains (Ningxia) in August–September 1880 (Stresemann and Portenko 1982), the subadult male from August 1880 was apparently the only specimen collected (R. L. Potapov *per* M. Wilson *in litt.* 2001). (2) As noted by Whistler (1918), the record from Lalroo is described at length by Beavan (1865–1868) but then omitted by Baker (1922–1930), suggesting either an oversight or a withdrawn record. (3) Although these specimens (including the type) were first listed as taken in Nepal (Gray and Gray 1846, Blyth 1847), A. O. Hume (*Stray Feathers* 5 [1877]: 132–133) pointed out that they were in fact taken “some 16 miles south of the Nepal frontier and on the main road to Khatmandoo”. (4) As this record is presumably that referred to as “Bhutan duars” (a term denoting foothills in West Bengal west of the Tista river and in eastern Assam bordering Bhutan), in April of an unspecified year (*Stray Feathers* 5 [1877]: 495–502, Hume 1880a, Oates 1889–1890; also Inglis 1951–1969), this latter locality is not mapped. (5) A record of a single bird in Royal Chitwan National Park, at Narayani river, December 1994 (Smith *et al.* 1996), was considered provisional by Baral (1998c). (6) Baral (1998c) suggested that the status of the White-throated Bushchat should be revised to Endangered.