

Threatened Birds of Asia:

The BirdLife International Red Data Book

Editors

N. J. COLLAR (Editor-in-chief),
A. V. ANDREEV, S. CHAN, M. J. CROSBY, S. SUBRAMANYA and J. A. TOBIAS

Maps by

RUDYANTO and M. J. CROSBY

Principal compilers and data contributors

■ **BANGLADESH** P. Thompson ■ **BHUTAN** R. Pradhan; C. Inskipp, T. Inskipp ■ **CAMBODIA** Sun Huan; C. M. Poole ■ **CHINA** ■ **MAINLAND CHINA** Zheng Guangmei; Ding Changqing, Gao Wei, Gao Yuren, Li Fulai, Liu Naifa, Ma Zhijun, the late Tan Yaokuang, Wang Qishan, Xu Weishu, Yang Lan, Yu Zhiwei, Zhang Zhengwang. ■ **HONG KONG** Hong Kong Bird Watching Society (BirdLife Affiliate); H. F. Cheung; F. N. Y. Lock, C. K. W. Ma, Y. T. Yu. ■ **TAIWAN** Wild Bird Federation of Taiwan (BirdLife Partner); L. Liu Severinghaus; Chang Chin-lung, Chiang Ming-liang, Fang Woei-horng, Ho Yi-hsian, Hwang Kwang-yin, Lin Wei-yuan, Lin Wen-horn, Lo Hung-ren, Sha Chian-chung, Yau Cheng-teh. ■ **INDIA** Bombay Natural History Society (BirdLife Partner Designate) and Sálím Ali Centre for Ornithology and Natural History; L. Vijayan and V. S. Vijayan; S. Balachandran, R. Bhargava, P. C. Bhattacharjee, S. Bhupathy, A. Chaudhury, P. Gole, S. A. Hussain, R. Kaul, U. Lachungpa, R. Naroji, S. Pandey, A. Pittie, V. Prakash, A. Rahmani, P. Saikia, R. Sankaran, P. Singh, R. Sugathan, Zafar-ul Islam ■ **INDONESIA** BirdLife International Indonesia Country Programme; Ria Saryanthi; D. Agista, S. van Balen, Y. Cahyadin, R. F. A. Grimmett, F. R. Lambert, M. Poulsen, Rudyanto, I. Setiawan, C. Trainor ■ **JAPAN** Wild Bird Society of Japan (BirdLife Partner); Y. Fujimaki; Y. Kanai, H. Morioka, K. Ono, H. Uchida, M. Ueta, N. Yanagisawa ■ **KOREA** ■ **NORTH KOREA** Pak U-il; Chong Jong-ryol, Rim Chuyon. ■ **SOUTH KOREA** Lee Woo-shin; Han Sang-hoon, Kim Jin-han, Lee Ki-sup, Park Jin-young ■ **LAOS** K. Khounbolin; W. J. Duckworth ■ **MALAYSIA** Malaysian Nature Society (BirdLife Partner); K. Kumar; G. Noramly, M. J. Kohler ■ **MONGOLIA** D. Batdelger; A. Bräunlich, N. Tseveenmyadag ■ **MYANMAR** Khin Ma Ma Thwin ■ **NEPAL** Bird Conservation Nepal (BirdLife Affiliate); H. S. Baral; C. Inskipp, T. P. Inskipp ■ **PAKISTAN** Ornithological Society of Pakistan (BirdLife Affiliate) ■ **PHILIPPINES** Haribon Foundation for Conservation of Natural Resources (BirdLife Partner); N. A. D. Mallari, B. R. Tabaranza, Jr. ■ **RUSSIA** Russian Bird Conservation Union (BirdLife Partner Designate); A. V. Andreev; A. G. Degtyarev, V. G. Degtyarev, V. A. Dugintsov, N. N. Gerasimov, Yu. N. Gerasimov, N. I. Germogenov, O. A. Goroshko, A. V. Kondrat'ev, Yu. V. Labutin, N. M. Litvinenko, Yu. N. Nazarov, V. A. Nechaev, V. I. Perfil'ev, R. V. Ryabtsev, Yu. V. Shibaev, S. G. Surmach, E. E. Tkachenko, O. P. Val'chuk, B. A. Voronov. ■ **SINGAPORE** The Nature Society (Singapore) (BirdLife Partner); Lim Kim Seng ■ **SRI LANKA** Field Ornithology Group of Sri Lanka (BirdLife Affiliate); S. Kotagama; S. Aryaprema, S. Corea, J. P. G. Jones, U. Fernando, R. Perera, M. Siriwardhane, K. Weerakoon ■ **THAILAND** Bird Conservation Society of Thailand (BirdLife Partner); U. Treesucon; R. Jugmongkol, V. Kongthong, P. Poonswad, P. D. Round, S. Supparatvirkorn ■ **VIETNAM** BirdLife International Vietnam Country Programme; Nguyen Cu; J. C. Eames, A. W. Tordoff, Le Trong Trai, Nguyen Duc Tu.

With contributions from: S. H. M. Butchart, D. S. Butler (maps), P. Davidson, J. C. Lowen, G. C. L. Dutson, N. B. Peet, T. Vetta (maps), J. M. Villasper (maps), M. G. Wilson

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Wellbrook Court, Girton Road, Cambridge, CB3 0NA, United Kingdom

Tel: +44 1223 277318 Fax: +44 1223 277200 Email: birdlife@birdlife.org.uk

Internet: www.birdlife.net

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SOCIABLE PLOVER

Vanellus gregarius

Critical —
Endangered —
Vulnerable A1a,c; A2b,c; C1



This species has a small population which has undergone a rapid reduction, for largely unknown reasons. It therefore qualifies as Vulnerable.

DISTRIBUTION The Sociable Plover breeds just outside the Asian region as here defined, in the west-central Asian steppes, wintering in north-east Africa, the Middle East and northern India.

Outside Asian region Its breeding range lies in Russia to the north of the Caspian and Aral Seas and through the northern half of Kazakhstan (apparently also once in Ukraine), dispersing through Kyrgyzstan, Tajikistan, Uzbekistan, Turkmenistan, Afghanistan, Iran, Iraq, Saudi Arabia, Syria and Turkey, to key wintering sites in Israel and Eritrea, and birds also winter occasionally in Oman (Collar *et al.* 1994, Tucker and Heath 1994). The main breeding areas in Kazakhstan are the Naurzum steppes (Kustanai Oblast), the Kurgaldshin steppes (Akmolinsker Oblast) and the Aktjubinsk steppes (Aktjubinsk Oblast) (A. Kovshar *per* A. Bräunlich *in litt.* 2000), but the population is now very thinly spread indeed (see Population) and the breeding range is evidently correspondingly reduced.

Asian region The Sociable Plover is known only as a winter visitor and wanderer in the Asian region, with wintering regular only in India and occasional in Pakistan, with a few stragglers reaching Mongolia, China, Sri Lanka and the Maldives; there is also an unconfirmed historical record from Bangladesh (see Remarks 1).

■ **MONGOLIA** There are two records, as follows: ■ **Arkhangai Ögiy Nuur**, adult, August 1998 (H.-J. Fünfstück *per* A. Bräunlich *in litt.* 2000); ■ **Dornod Tsogiin Tsagaan Nuur** (Shagain-Tsagan-Nure) lake, adult, June 1995 (Goroshko 1996).

■ **CHINA** There is one record: ■ **Hebei Shijiutuo** (“Happy island”), south of Beidaihe, one with large flocks of Grey-headed Lapwings *Vanellus cinereus*, September 1999 (*Oriental Bird Club Bull.* 29 [1999]: 51–56).

■ **PAKISTAN** The species was suspected by Fulton (1904) to breed in the vicinity of Drosh, as it was present in May, but this probably involved a late migrant. Records are from: ■ **North-West Frontier Province Gilgit**, 1,750 m, four, April 1878, April 1879 (two specimens in BMNH, Biddulph 1881, Scully 1881); ■ **Bumboret (Bimboret) valley**, 1,850 m, one, April or May 1902 (Fulton 1904); ■ **Drosh**, Chitral, 1,300–2,050 m, May (although specimens apparently dated March) 1902 (two specimens in BNHS, Fulton 1904), 1902–1903 (Perreau 1910); ■ **Nowshera**, one, around 1921 (specimen in BNHS, *J. Bombay Nat. Hist. Soc.* 28: 303), undated (female in BMNH); ■ **Peshawar**, March 1877 (specimen in BMNH); ■ **Fort Lockhart**, 2,000 m, one, 1904–1907 (Whitehead 1909, 1910–1911); ■ **Thal** (Thall), Kurram valley, large flocks in April, 1898 (Ratray 1899); ■ **Dera Ismail Khan district**, north-western plains, two, March 1997 (Kylänpää 2000); ■ **Baluchistan lChaman**, on the Afghanistan border, “very uncommon”, undated (Barnes 1881), also recorded in April, undated (J. A. Murray in Ticehurst 1927); and ■ **Murdan**, Hassam Abdul camp ground, three, February 1870 (specimen in BMNH), March 1871 (specimen in BMNH); ■ **Sind** north of **Jacobabad**, undated (male in BMNH), and in Jacobabad district, a flock of six, February 1972 (Roberts 1991–1992); ■ **Eastern Narra**, February 1879 (male in BMNH), possibly the undated record mentioned by Swinhoe (1887).

for “Narra”; **Qambar**, “flocks”, January 1872 (specimens in BMNH, Hume 1872–1873); **Manchar lake**, January 1872 (male in BMNH, Hume 1872–1873), February 1914 (three males in BMNH; see Remarks 2); near **Sanghar**, January 1876 (male in BMNH); **Sunari lake** (Soneri lake), December 1939 (female in FMNH); **Pithoro**, January 1911 (specimen in BNHS, Abdulali 1968–1996); Dalpaka, **Hyderabad**, March 1906 (female in BNHS, Abdulali 1968–1996); **Khar**, near Hab dam reservoir, winter visitor in the early 1980s (Roberts 1991); **Khinjar lake**, January–February 1934 (nine specimens in UMMZ); **Karachi**, November 1919 (two specimens in BMNH); **Nagar Parkar**, one in breeding plumage, December 1980 (Roberts 1991–1992); ■ **Punjab Jhelum district**, several flocks in March–April, undated (Whistler and Ticehurst 1916); **Khabbaki lake**, Shahpur district, c.850 m, a flock of c.12, October 1947 (specimen in BMNH, Waite 1948); **Lahore**, occasionally seen at the end of the cold weather and evidently on northward migration, c.1910–1915 (Currie 1916a) and Fullun dur (Jullundur: Whistler ms), near Lahore, March, c.1910–1915 (Currie 1916a); **Jhang district**, at Sheik Chur, November 1917 (two specimens in BMNH), at Mochiwala, flocks, February 1918 (female in BMNH), at Gahr Maharaja, a flock, January 1919 (three specimens in BMNH), and by the Chenab river, April 1919 (male in BMNH), well distributed in riverine agricultural fields in the district, 1917–1920, including at Khiwa and Billiwala (Whistler 1922a, ms; also Roberts 1991–1992), November 1940 (two males in NMS), and “a flock... on the banks of the Chenab river near Jhang”, November 1947 (Waite 1948); near **Multan**, November 1940 (female in BMNH); Khundai, **Muzaffargarh**, February 1938 (male in BMNH); **Bahawalpur**, February 1868 (female in BMNH).

■ **INDIA** The main wintering range lies in the north and west of the country, with small numbers occasionally straggling as far south as Kerala. Apart from some untraced (see Remarks 3) and unconfirmed records (see Remarks 4), the only recent records are from Haryana and Rajasthan. Records are from:

■ **Himachal Pradesh Simla** (“Simla hills”), October 1932 (specimen in BNHS);

■ **Punjab Ferozpur** (Ferozepore), November 1857 (female in SMF), autumn 1902 (two specimens in BMNH), also Nya hills, near Ferozpur, November 1867 (male in BMNH), and elsewhere in Ferozpur district at Hamidwala, December 1934 (male in BMNH); **Ludhiana**, pre-1880 (specimen in BMNH); **Murinda** (Morinda), Rupnagar district, a flock, December 1915 (Whistler 1918); Urneewalla, here presumed to be **Arniwala**, March 1870 (specimen in BMNH), October 1870 (specimen in BMNH);

■ **Haryana Mubarakpur** (Mubariqqur), three, November 1915 (Whistler 1918); **Ambala** (Umballah), at Lallroo, November 1866, February 1867 (three specimens in BMNH, Beavan 1865–1868); **Darazpur**, February 1926 (specimen in BNHS, Abdulali 1968–1996); **Sirsa**, March 1868 (two specimens in BMNH), February 1931, and nearby one at Parwali lake, February 1933 (Koelz 1940), probably in this region at Ortu, one, March 1933 (Koelz 1940), and at Zillah, March 1868 (two specimens in BMNH); **Bhiwani**, Bhiwani district, January 1936 (female in NMS); **Sultanpur** (Sultanpore, Sultanpur jheel), Gurgaon district, October–February, 1876–1878 (17 specimens in BMNH and SMF), several, February 1984 (B. F. King verbally 1998), 25, February 1993 (Holman 1993), up to 55, February 1993 (K. D. Bishop *in litt.* 1999);

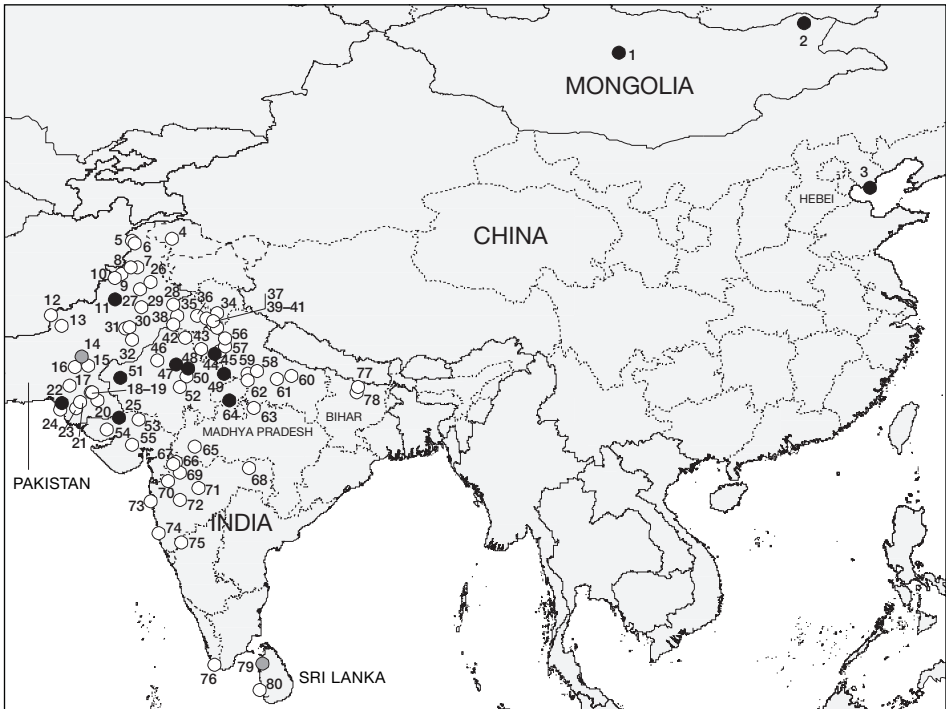
■ **Delhi Delhi**, 1871 (specimen in BMNH), two small flocks, 1931–1945 (Frome 1947–1948);

■ **Rajasthan Bikaner**, January 1912 (specimen in BMNH); **Tal Chappar Sanctuary**, five, October 1995 (Sangha 2000), 15, January 1996 (P. Alström, U. Olsson and D. Zetterström *in litt.* 2000, Sangha 2000), 11, February 1998 (Sangha 2000); **Revasa**, **Sikar**, one juvenile, January 1998 (Sangha 2000); **Keoladeo National Park**, Bharatpur, flocks of up to 16, December 1987 (Berlijn *et al.* 1988), several sightings of up to 40, February 1988 (Kovacs 1988, P. J. Hines *in litt.* 1999), unspecified numbers, January 1990 (Buckton and Morris 1990), three,

February 1997 (K. D. Bishop *in litt.* 1999), recorded in most winters in the drier southern parts of Koladahaar (P. Holt verbally 1999); **Sambhar lake**, October–December, 1869–1973 (four specimens in BMNH, Adam 1873); **Jaisalmer**, c.8, mid-1980s (B. F. King verbally 1998); **Nasirabad**, Ajmer district, “small flock”, December 1935 (specimen in BMNH);

■ **Gujarat Deesa** (Disa), October 1875 (two females in BMNH, Butler 1875–1877); **Kutch** (Kachch), undated (Stoliczka 1872); in Kathiawar, specifically at **Wadhwan** (“Wodwan”), c.1870 (Lloyd 1873) and “Gondud” (possibly Gondal), c.1870 (Lloyd 1873);

■ **Uttar Pradesh Muzaffarnagar** (Mozaffarnaggar), large flocks, January 1871 (male in BMNH); “Karkode”, **Meerut**, October 1898 (two specimens in BNHS, Abdulali 1968–1996); **Fatehgarh**, October 1872 (female in BMNH); Dhurrous, **Mainpuri**, February 1872 (two specimens in BMNH); **Gonda** (“Gondah Oudh”), undated (two specimens in MNHN); unspecified localities in Avadh (=Oudh) (Irby 1861), and from around **Lucknow**, December 1898 and 1899 (Jesse 1901), with undated specimens from the region reported by Reid (1886); **Etawah**, November



The distribution of Sociable Lapwing *Vanellus gregarius*: (1) Ögyi Nuur; (2) Tsoigin Tsagaan Nuur; (3) Shijiutuo; (4) Gilgit; (5) Bumboret valley; (6) Drosh; (7) Nowshera; (8) Peshawar; (9) Fort Lockhart; (10) Thal; (11) Dera Ismail Khan district; (12) Chaman; (13) Murdan; (14) Jacobabad; (15) Eastern Nara; (16) Qambar; (17) Manchar lake; (18) Sanghar; (19) Sunari lake; (20) Pithoro; (21) Hyderabad; (22) Khar; (23) Khinjar lake; (24) Karachi; (25) Nagar Parkar; (26) Jhelum district; (27) Khabbaki lake; (28) Lahore; (29) Jhang district; (30) Multan; (31) Muzaffargarh; (32) Bahawalpur; (33) unallocated; (34) Simla; (35) Firozpur; (36) Ludhiana; (37) Murinda; (38) Arniwala; (39) Mubarakpur; (40) Ambala; (41) Darazpur; (42) Sirsa; (43) Bhiwani; (44) Sultanpur; (45) Delhi; (46) Bikaner; (47) Tal Chappar Sanctuary; (48) Sikar; (49) Keoladeo National Park; (50) Sambhar lake; (51) Jaisalmer; (52) Nasirabad; (53) Deesa; (54) Kutch; (55) Wadhwan; (56) Muzaffarnagar; (57) Meerut; (58) Fatehgarh; (59) Mainpuri; (60) Gonda; (61) Lucknow; (62) Etawah; (63) Bundelkhand; (64) Madhav National Park; (65) Mhow; (66) Shahada; (67) Nandurbar; (68) Nagpur; (69) Dhule; (70) Wadala; (71) Jalna; (72) Ahmednagar; (73) Bombay; (74) Ratnagiri; (75) Belgaum district; (76) Trivandrum; (77) Madhubani; (78) Darbhanga district; (79) Wilapattu National Park; (80) Colombo.

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

1868 (female in BMNH), November 1870 (male in BMNH), and Burra in Etawah district, November 1865 (male in BMNH); “Kalpu”, **Bundelkhand**, February, undated (male in BMNH);

■ **Madhya Pradesh Madhav** (Shivpuri) **National Park**, 6–7, December 1990–January 1991 (Saxena and Shrivastava 1992); **Mhow**, undated (Jerdon 1862–1864; also Briggs 1931);

■ **Maharashtra** Dhamarkud, **Shahada**, February 1884 (male in NMS), with specimens seemingly labelled “Shada” probably from here, February 1881 (two in BMNH); **Nandurbar**, four, December 1880 (Davidson 1882); 64 km south of **Naggur**, one, undated (Blanford 1869); **Dhule** (Dhulia), January 1884 (female in BMNH); **Wadala** (Wadale), Godaveri river, undated (specimen in AMNH); **Jalna**, undated (Jerdon 1862–1864); “Kakanathan”, north of **Ahmednagar**, March 1874 (male in BMNH), and “Khairitrintgar” (illegible), 80 km north of Ahmednagar (both labels partly illegible), February 1875 (female in BMNH); **Bombay** (=Mumbai), 40–50, December 1899 (Ali and Abdulali 1936–1939, Abdulali 1968–1996); **Ratnagiri**, three, October 1878 (Vidal 1880);

■ **Karnataka Belgaum district**, a few, undated (Butler 1881);

■ **Kerala Trivandrum**, five, January 1900 (Ferguson and Bourdillon 1903–1904);

■ **Bihar** Maiser chaur, **Madhubani** “subdivision”, January–February 1903 (Inglis 1901–1904); **Darbhanga district**, November 1912, December 1914, February 1915 (specimen in BNHS, two specimens in YPM), possibly all from Madhubani.

■ **MALDIVES** A single record is given as certain by Ash and Shafeeg (1994): Seenu Atoll (not mapped), one individual, September of unspecified year (Phillips 1963). There are also two other reports: Malé (not mapped), small flocks on playing fields during the north-east monsoon, undated (Phillips and Sims 1958); Addu Atoll (not mapped), one, September 1975 (Strickland and Jenner 1978).

■ **SRI LANKA** The species is (or was) a winter vagrant in small numbers to the low-county wet zone (Henry 1955, Phillips 1978; also Lamsfuss 1998, Grimmett *et al.* 1998), with records as follows: **Wilapattu National Park**, 12 birds, September 1972 (Phillips 1978); **Colombo**, on the Galle face, collected, c.1870 and October 1873 (Legge 1880; also Cave 1907), with flocks of up to nine at the racecourse with Pacific Golden Plovers *Pluvialis fulva* on the wide expanse of grass, October and November of several (unspecified) years (Wait 1931, Henry 1955).

POPULATION The Sociable Plover has suffered a rapid decline and contraction of its breeding range, with total numbers now thought to be fewer than 10,000 mature individuals (Collar *et al.* 1994, Tucker and Heath 1994).

Extralimital In northern Kazakhstan a decline of 40% between 1930 and 1960 was followed by a further halving of numbers between 1960 and 1987 (Collar *et al.* 1994, Tucker and Heath 1994), and a rapid decline continued through the 1990s (Shevchenko 1998). In Russia, there are thought to be only 1,000–2,100 pairs west of the Urals, and an estimated 2,000 pairs in the Orenburg region east of the Ural river, although these may be overestimates (V. V. Khrokov *in litt.* 1999). Surveys in parts of Russia adjacent to the Kazakhstan range found only a single pair in 1997 (Boere and Yurlov 1998), and many breeding colonies west of the Urals and in the eastern part of the range have disappeared (Shevchenko 1998). The total number now in Kazakhstan is estimated to be a few hundred (100–900) individuals only (A. Kovshar *per* A. Bräunlich *in litt.* 2000), or just 500–600 breeding pairs in the country and 1,000 pairs in the total range of the species (Khrokov 2000 in Eichhorn and Heinicke 2000).

Pakistan Historically, the species was a locally common winter visitor and passage migrant. In the main valley at Chitral it was “fairly common” in winter or on passage in flocks of 4–5 (Fulton 1904, Perreau 1910), and a very common migrant in the Kurram valley in April with up to 300 passing in a day (Ratray 1899). It was scarce, however, on passage through the Gilgit region of “Kashmir” (in the portion currently administered by Pakistan) (Biddulph

1881, Scully 1881). In Jhang district of Punjab, Whistler (1922a) found it not uncommon in winter in agricultural fields, 1917–1920, and it was observed in this area until the 1940s (Waite 1948), but there have been no subsequent records in the entire state (Roberts 1991–1992). It was “often met with” in Sind, occurring “in flocks from 20 to 100” (Hume 1872–1873). Likewise, Ticehurst (1922–1924) considered it “a fairly common winter visitor” in northern Sind, where “considerable flocks may at times be met with”, but Holmes and Wright (1968) did not encounter it in three years in the state during the 1960s. Ticehurst (1922–1924), moreover, only encountered two small flocks during his visits to southern Sind, and concluded that it might not even occur there annually. In the early 1970s, F. J. Koning spent four winters visiting all the major wetland areas of Pakistan and only encountered one small flock (Roberts 1991–1992; see Remarks 5). Although seemingly “regular and fairly common in Pakistan” on the basis of early literature (Ali and Ripley 1968–1998), there have been very few recent records, and Roberts (1991–1992) concluded, with good reason, that it has “become very rare now in Pakistan”.

India In 1910–1920 the species was a common winter visitor to areas of the Punjab, regularly occurring in large flocks (BMNH label data). It was “common” around Sirsa, Haryana, in early 1931, with flocks of up to 20 birds seen, but absent from the same areas in 1933 (Koelz 1940), suggesting that wintering populations fluctuate annually and regionally. Nineteenth-century reports from Kutch, Gujarat, suggested that it was “very common in open country” (Stoliczka 1872), “very common” in flocks of 4–5 and up to 50–60 (Butler 1875–1877) or common during winter (Lester 1896). A. O. Hume added a footnote to Butler’s (1875–1877) treatise on the birds of northern Gujarat to the effect that this species is “common throughout the entire region”. Some 70 years later, between 1944 and 1948, it was not located in a survey of Gujarat, prompting the conclusion that its winter population must be variable and erratic (Ali 1954–1955), although now it is easier to interpret these results as evidence of an overall decline. Dharmakumarsinhji (1955) concluded that it was “uncommon in Saurashtra” (a defunct state roughly equating to the Kathiawar peninsula) and there have been no recent confirmed records from Gujarat.

At Muzaffarnagar, Uttar Pradesh, large flocks were recorded in January 1871 and it was regarded as common in fields near a river (BMNH label data). Irby (1861), who gave an accurate description of the species, considered it “exceedingly common” between January and March in Avadh (=Oudh), Uttar Pradesh, forming flocks of “six to upwards of fifty”. However, it was never seen by Reid (1887) in the same region and he felt that “it cannot be common”. A few years later, Jesse (1901, 1902–1903) had observed flocks of 10–30 on three or four occasions around Lucknow in December, but still asserted that “common it certainly is not”. There are no recent records from the state.

The species was thought “not common” around the lake at Sambhar, Rajasthan, in winters around 1870 (Adam 1873), and it was described as “a cold weather visitant more or less commonly throughout” the Bombay Presidency (then comprising Sind in Pakistan, Rajasthan, Maharashtra, and portions of central India) (Barnes 1885). Most recent sightings in Rajasthan are from Keoladeo National Park (Bharatpur), although even here records are sporadic (Sangha 2000). In the Deccan, it was described as “common in some parts of the district during the cold weather” (Davidson and Wenden 1878) and “rare” (Butler 1881), but again there are no confirmed recent reports.

Numbers have dropped dramatically and the species is encountered at very few sites. Repeated visits to dry areas of Gujarat and Rajasthan on ecotourism trips used to result in annual sightings in the 1980s, for example, but this is no longer the case and few have been seen since c.1992 (B. F. King verbally 1998).

Sri Lanka W. E. Wait (in Baker 1922–1930) remarked that “a few birds come” to Sri Lanka during winter. Lamsfuss (1998) described it as a “rare visitor to Sri Lanka, occasionally appearing in small groups on the west coast”, while Grimmett *et al.* (1998) stated that it is a “scarce and irregular winter visitor to lowlands”. It is now very rare in the country.

ECOLOGY Habitat The Sociable Plover has a sporadic and irruptive pattern of semi-colonial breeding, mainly in the transition zones between *Stipa* and *Artemisia* grassland steppes where bare saline areas occur near waterbodies; the wintering grounds are dry plains, sandy wastes and short-grass areas, often adjacent to water (Collar *et al.* 1994, Tucker and Heath 1994). The extent to which natural areas may be required is not clear, but nesting birds in Kazakhstan appear to favour grazed land (Eichhorn and Heinicke 2000). The wintering areas in South Asia are dry cultivated or uncultivated plains, sandy wastes and areas of short grass, often adjacent to water (Adam 1873, Hume 1872–1873, Butler 1875–1877), although Baker (1922–1930) stated that the birds preferred “cultivated, or semi-cultivated tracts rather than stony or sandy wastes and deserts”. The species usually avoids “marshy places, and frequents waste land, plough, young wheat, etc.” (Ticehurst 1922–1924). While birds usually fed in wheatfield stubble in Jhang district, Pakistan, one migrant was seen on a sand-spit of a large river (Whistler 1922a). The species was described as “very tame and easy to approach, even in the open” by Jesse (1902–1903). In India it is generally found in singles, pairs or small parties, sometimes mixed with groups of other waders (Baker 1922–1930, 1926–1935); it often associated with coursers *Cursorius* in Gujarat (Stoliczka 1872). In former times it congregated in vast numbers before migrating from its breeding habitat (Baker 1926–1935), apparently returning in spring in equally large numbers (Ratray 1899), but scattering in winter to form smaller flocks (Baker 1922–1930).

Food Birds feed in typical plover fashion by walking slowly and picking up visible items from the ground, sometimes probing between clods and around the base of small plants (Roberts 1991–1992). On the breeding grounds the food is almost entirely insects, particularly beetles and their larvae (Coleoptera), grasshoppers (Orthoptera) and moth larvae (Lepidoptera) (Cramp and Simmons 1983). On the Indian wintering grounds the diet appears to be roughly similar: Butler (1875–1877), referring to birds taken in Gujarat, stated that “it feeds principally upon coleopterous insects, grasshoppers, small caterpillars, worms, &c., all of which I myself have taken from its stomach”. The stomach of another Indian specimen contained “small insects and tiny stones” (BMNH label data) and another taken in Punjab had eaten “freshly sown grains of wheat and green caterpillars” judging by the contents of its crop (BMNH label data).

Breeding There is a sporadic and irruptive pattern of semi-colonial breeding (Cramp and Simmons 1983). Eggs and nesting habits closely resemble those of Northern Lapwing *Vanellus vanellus* (Baker 1922–1930, Baker 1926–1935). The breeding season falls between the end of March and early July, most eggs being laid between mid-April and mid-June (Baker 1922–1930). The earliest clutch recorded was on 26 March, and a few pairs may lay late or second clutches up until late July (Baker 1926–1935). The nest is situated in open country and is usually a simple scrape in the earth, often unlined except for a small amount of “accumulated rubbish” (Baker 1926–1935) or “leaves, grass, moss etc.” (Baker 1922–1930). When the substrate is damp and boggy, such as the shores of lakes and rivers, birds may construct a nest of grass and weeds (Baker 1926–1935). As with most plovers, the full clutch usually contains four eggs (average of 66 clutches, 4.2) (Glutz von Blotzheim *et al.* 1975). Incubation is about 25 days and the young fledge 35–40 days later (Cramp and Simmons 1983).

Migration Early records indicate that the species migrated in very large flocks (Baker 1922–1930), although this is evidently no longer the case. Spring migration through the Gilgit region occurred in March and April with a return passage in autumn (Biddulph 1881, Scully 1881), although birds do not remain off-passage for long: flocks paused by the Kurram river for only a day or two (Ratray 1899). Nearby in Kohat they passed through in small flocks from the end of February until the end of March, 1904–1907 (Whitehead 1909, 1910–1911). The precise routes taken by birds appear to vary considerably from year to year, since large numbers passed through Kohat in 1905, but few in 1906 (Whitehead 1909, 1910–1911). In Jhang district, Punjab, Whistler (1922a) found the species over three winters with extreme dates of 1 November to 24 February (and a “belated straggler” on 19 April 1919).

While the bulk of the Indian wintering population is centred on Rajasthan, Uttar Pradesh and Gujarat, birds have been recorded as far south as Kerala, possibly owing to drought, related to failure of the monsoon (Ferguson and Bourdillon 1903–1904). The occurrence of a flock on the esplanade at Bombay in December 1899 was unusual and coincided with a famine in Gujarat and the Deccan which had presumably forced these birds out of their usual wintering range (Ali and Abdulali 1936–1939). Butler (1875–1877) reported that his earliest sighting in autumn was on 3 October 1875 and his last in spring was 10 March 1876, both in the region of Deesa, northern Gujarat.

Post-breeding flocks were formerly sometimes of several hundred or even up to 1,000 (Cramp and Simmons 1983), and even in recent years in Kazakhstan July–August flocks of 70–108 birds have been recorded in Kustanai Oblast, although birds on spring migration in south-eastern Kazakhstan are mostly alone or in very small flocks, with an exceptional record of a flock of 33 south of Balkhash on 1 April 1995 (N. N. Berezovikov *et al.* 1999 *per A. Kovshar per A. Bräunlich in litt.* 2000).

Despite dwindling numbers the species remains prone to vagrancy, regularly occurring in the western Palearctic as far west as Britain, while in Asia the records from China, the Maldives and Sri Lanka represent similar deviations from normal migration patterns.

THREATS In Europe, the Middle East and Central Asia, known factors cannot explain the magnitude of recent declines, but key threats probably affect birds at wintering and passage sites (Collar *et al.* 1994, Tucker and Heath 1994). On the breeding grounds, it is threatened by the conversion of steppe to arable cultivation, but large areas of apparently suitable breeding habitat are unoccupied (V. V. Khrokov *in litt.* 1999). As a conspicuous ground-nesting species, it is vulnerable to predation and human disturbance: many colonies are destroyed during agricultural operations or are predated by Rooks *Corvus frugilegus*, which have increased considerably in breeding regions, and the species may have been adversely affected by the increasingly dry climate in its breeding and wintering ranges (Collar *et al.* 1994, Tucker and Heath 1994). In the central Volga–Ural sands there has been a shift in breeding habitat from steppe to areas of grassland among sand-dunes, where nesting success is very low owing to high predation pressure from foxes *Vulpes* (Shevchenko 1998). The reason for the shift in habitat appears to be climatic, as the likelihood of drought has increased from 5–8% in the 1960s to c.20% in the 1990s with the intensification of a xero-thermal period, and steppe habitat appears to be the most strongly affected (Shevchenko 1998). In marginal breeding areas such as riverside meadows and pastures, grazing has increased along with trampling of eggs by livestock, and controlled flooding has disrupted nesting (Collar *et al.* 1994, Shevchenko 1998).

Information on the threats to this species in Asia is given below; the information available tends to suggest that the factors underlying this species's decline must apply predominantly in the breeding range.

Pakistan None is known, although widespread high levels of hunting (Roberts 1991–1992) possibly affect the species. An account of changing land-use patterns in the Sind desert appears in Threats under Great Indian Bustard *Ardeotis nigriceps*; the general trend has been for a reduction of true desert habitat but it is not clear whether this constitutes a threat to the Sociable Plover, a species that can survive in cultivated areas (see Ecology). It is possible that increased pesticide use has reduced the prey population levels to some extent.

India Open areas and fallow land favoured by the species are disappearing, and grassland is becoming covered by exotic *Prosopis juliflora* trees (H. S. Sangha *in litt.* 1999). Dry areas of Gujarat, Haryana and Rajasthan are disappearing under cultivation, and this might be a factor underlying a decline, although the species is often seen in cultivated areas. A discussion of threats to the deserts of north-west India (principally conversion to agriculture, irrigation and associated disturbance) appears under Great Indian Bustard and White-browed Bushchat

Saxicola macrorhyncha. There is apparently little hunting pressure in the Indian subcontinent (H. S. Sangha *in litt.* 1999). Pesticides are used liberally in India, however (see Threats under Sarus Crane *Grus antigone*) and may have affected habitat quality.

MEASURES TAKEN In Europe and Central Asia, the Sociable Plover is legally protected in Armenia, Kazakhstan, Russia, Turkmenistan, Ukraine and Uzbekistan (Collar *et al.* 1994, Tucker and Heath 1994), but this is generally not enforced (V. Morozov *in litt.* 1999). It is listed on Appendix I of the CMS (Bonn Convention, for which see Boere 1991). Measures taken in Asia that may have benefited this species are given below.

Protected areas In India, the species occurs in winter around sanctuaries such as Sultanpur jheel and Keoladeo National Park. However, as the habitat favoured by this species differs from other waterbirds, it is not subject to the same threats and indeed it is probably secure in many areas of arable land in the wintering range.

MEASURES PROPOSED The key need is to identify whether or not the severe declines experienced by the species are caused by factors on the breeding grounds, presumably involving changes to the quality of natural steppe habitat and the type and intensity of its use by humans. Thus, surveys are required of the breeding range and detailed habitat requirements in Kazakhstan, and consideration may need to be given to protecting large areas of grassland steppe from conversion to agriculture; livestock numbers may need to be regulated to limit the negative impact of grazing; breeding aggregations should be located on an annual basis and these sites managed during the nesting period. Within South Asia surveys are needed to locate key wintering and passage sites, and to identify the source of and solution to pertinent threats, if any. The potential impact of pesticides should be investigated, and in Pakistan the levels of hunting should be assessed and, if necessary, controlled. In both Pakistan and India, protection of short-cropped dryland habitats may be needed (see under Great Indian Bustard and White-browed Bushchat).

REMARKS (1) The Sociable Plover was listed as a possible winter visitor to Bangladesh by Rashid (1967; see Remarks 2 under Manipur Bush-quail *Perdica manipurensis*), and “scarce resident” in Dhaka (Dacca) on the basis of “Hume’s lists” (Husain *et al.* 1974). Neither of these claims is sufficiently well substantiated to treat as confirmed. A further putative recent record is mentioned by Harvey (1990) but this is also best considered inconclusive. While it may have been a scarce visitor in the past, albeit without any definite records, there have been no recent reports (P. M. Thompson *in litt.* 1997). (2) Three males taken by R. Meinertzhagen from Manchar lake in February 1914 are all in full breeding plumage, unlike almost all other February birds, suggesting that these specimens might be mislabelled or that different populations have differing breeding regimes (NJC). In fact, all three of these specimens apparently show signs of re-stuffing (P. M. Rasmussen *in litt.* 1999) and might therefore best be discounted. However, Butler (1875–1877) mentioned that summer plumage is not acquired “much before February,” and Cramp and Simmons (1983) noted that some males assume full breeding plumage by late January, so the dates are not impossible. (3) A specimen taken at Bunar, January 1915 (specimen in BNHS), is possibly from “Bengal”, in other words West Bengal or Bangladesh (Abdulali 1968–1996) (there is in fact a Buna at 22°39’N 89°29’E in Bangladesh, and this might be the site referred to, although there is no record of C. Primrose, the collector, visiting Bangladesh). (4) A record of several flocks totalling c.125 birds on the golf course at Mandvi, Gujarat, throughout August 1947 (G. M. B. Sparks *in litt.* 2000) is here treated as provisional. Similarly, a report that the species is a common winter visitor to Coringa Wildlife Sanctuary in Andhra Pradesh (Rao *et al.* 1996) is presumably erroneous. (5) It should, of course, be noted that the species is by no means tied to wetlands in its South Asian range (see Ecology).