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 Hean; 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 Sálim 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 **M. 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 Jinyoung **LAOS** K. Khounboline; 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. Supparatvikorn *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

Recommended citation

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

© 2001 BirdLife International

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

BirdLife International is a UK-registered charity

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, electrical, chemical, mechanical, optical, photocopying, recording or otherwise, without prior permission of the publisher.

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 NatureBureau, 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

The presentation of material in this book and the geographical designations employed do not imply the expression of any opinion whatsoever on the part of BirdLife International concerning the legal status of any country, territory or area, or concerning the delimitation of its frontiers or boundaries.

SLENDER-BILLED VULTURE

Gyps tenuirostris

Critical ■ A1c,e; A2c,e

Endangered \square — Vulnerable \square C1



This newly recognised species is classified as Critical because it has suffered an extremely rapid population decline, particularly across the Indian subcontinent, as a result of epidemic disease, compounded by poisoning, pesticide use and changes in the processing of dead livestock.

DISTRIBUTION The Slender-billed Vulture (see Remarks 1 under Indian Vulture *Gyps indicus*) is found in India north of, and including, the Gangetic plain, west to at least Himachal Pradesh and Haryana, south to southern West Bengal (and possibly northern Orissa), east through the plains of Assam, and through southern Nepal, north and central Bangladesh, and Myanmar (except the north). It once occurred in South-East Asia, but it is now thought to be extinct in Thailand and Malaysia, and the only recent records are from Cambodia and southern Laos (Ali and Ripley 1968–1998, Brown and Amadon 1968, King *et al.* 1975, Sarker and Sarker 1985a, Boonsong *et al.* 1991, Inskipp and Inskipp 1991, del Hoyo *et al.* 1994, Alström 1997, Grimmett *et al.* 1998, Satheesan 2000a; see Remarks 1 under White-rumped Vulture *G. bengalensis* for comments on the comprehensiveness of the following account).

Considerable confusion over the taxonomy and identification of *Gyps* vultures has occurred (see Remarks 1), making it difficult to be sure of claims for this species. However, it appears to be allopatric or parapatric with Indian Vulture (P. C. Rasmussen and S. J. Parry *in litt*. 2000). The regions where the two species' ranges abut (or potentially do so) are: Haryana, Delhi, north-eastern Rajasthan, northern Madhya Pradesh, northern Orissa, southern Uttar Pradesh, and southern Bihar. Records in the following account have been assigned to this species based on nest-site (trees; see Ecology: Breeding) or the location relative to the range detailed above. The available evidence suggests that in regions north and east of the zone of potential confusion with Indian Vulture, records can safely be assumed to refer to Slender-billed Vulture, and these sites are listed in bold below. For localities within the zone of potential confusion, sites are only considered confirmed (and listed in bold) in the case of firm identification, usually museum specimens.

- *INDIA* This species is found in the lower Himalayas and Gangetic plain from Himachal Pradesh and Haryana in the west, to southern West Bengal (and possibly northern Orissa), and east through Assam and the North-east Hill States. Records are known from the following localities and states:
- *Himachal Pradesh* Nurpur, Kangra district, April 1923 (Whistler 1926a); Zakat Khana, Kulu, undated (Whistler 1926b);
- *Haryana* Ambala, female collected December 1914 (Jones 1916); Kalesar Wildlife Sanctuary, 1993–1995 (Kalsi 1998a);
- Uttar Pradesh Almora, Kumaon, undated (Osmaston 1916); Alumbagh, specimen collected, 1857–1860 (Irby 1861); Bareilly, 1980s (Satheesan 1999); near Chakia, Benares (Varanasi), January 1921 (Gill 1921); Corbett National Park (Satheesan 2000a); New Forest, Dehra Dun, 1990s (Mohan 1996; also 1990s Singh 2000); Dudwa National Park, 1991–1994 (Javed and Rahmani 1998); Gorakhpur district, 1910s (Osmaston 1913); Lucknow, February 1918 (Mathews 1918); Naini Tal, 1990s (Kazmierczak and Singh 1998); Pithoragarh, 1990s (Sultana and Khan 2000); Rajaji National Park, 1990s (Pandey et al. 1994), May 2000 (Rao 2000);

- *Orissa* Bhitarkanika Wildlife Sanctuary, 1992–1993 (Pandav 1996); Similipal, 1990–1993 (Rahmani and Prakash 2000a);
- West Bengal Alipur (Alipore), undated (Anon. 1941); Barddhaman (Bardwan), 1870s (Ball 1878); Buxa Wildlife Sanctuary, February–March 1992 (Allen et al. 1996); Calcutta, three specimens collected 1844 (Blyth 1849–1852); Damodar valley, 1968–1971 (Gauntlett 1986); Durgapur, 1968–1971 (Gauntlett 1986); Jaldapara Wildlife Sanctuary, undated (Satheesan 2000a); Jalpaiguri district, 1910s (Inglis et al. 1920); Khardah, 1890s (Munn 1899); Mogra, 1890s (Munn 1899), undated clutch (Oates 1902); Purnea, undated clutch (Oates 1902); Titaghur, 1890s (Munn 1899);
 - Sikkim undated record(s) at unspecified locality (Ali 1962);
- Assam Assam valley, undated (Hume 1888), this referring to the Brahmaputra valley in Assam, in which most of the following sites are found; Diju (Deejoo), 1900s (Stevens 1914–1915); Dibru Saikhowa National Park, December 2000 (R. Naoroji in litt. 2001); Dibrugarh, January 1986 (Rao et al. 1989); Kamrup (Kamarap) district, 1989 (Saikia and Bhattacharjee 1990c), including at Darangi and Krishnai, December 2000 (R. Naoroji in litt. 2001); Kaziranga National Park, 1993–1999 (Barua and Sharma 1999), 1999–2000 (R. Naoroji in litt. 2001, J.-M. Thiollay in litt. 2001); Nameri National Park, December 2000 (R. Naoroji in litt. 2001); North Cachar Hills district, 1890s (Baker 1894–1901); Tezpur, November–December 1985 (Rao et al. 1989);
- *Arunachal Pradesh* Kamleng, January—April 1990 (Katti *et al.* 1992); Naharlagun, 1990s (Singh 1994); Namsai, 1990s (Singh 1994); Pasighat, 1990s (Singh 1994);
 - *Meghalaya* Khasia hills, 1886–1906 (Baker 1907b).
- NEPAL The Slender-billed Vultures is widespread throughout the country, mainly below 350 m, but up to 1,525 m in summer. Records are known from: Annapurna Conservation Area, undated (Inskipp 1989); Dhangarhi, male collected early 1950s (Rand and Fleming 1957); Kathmandu, 1870s specimen (Scully 1879); Kosi Tappu Wildlife Reserve, undated (Inskipp 1989); Nepal valley, 1870s (Scully 1879), March—June 1947 (Biswas 1960–1966); Phulchowki mountain, undated (Inskipp 1989); Royal Bardia National Park, undated (Inskipp 1989); Royal Chitwan National Park, undated (Inskipp 1989).
- BANGLADESH This species is resident in the north-east, north-west and central regions. Records are known from: Bhairab Bazaar, February 1992 (Thompson et al. 1993); Chandpur Bazaar, Sylhet district, undated (Baker 1932–1935); Chittagong, undated (Bates 1935), seven, November 1966 (Mountfort and Poore 1968); Jewdhara forest station, Chandpai range, July 1982 (Sarker 1983); Sundarbans area, 1980s (Sarker and Sarker 1986); Sylhet, undated (Hume 1888).
- MYANMAR The species was formerly resident throughout, except in the north, but its present status is unknown (Robson 2000). Records are known from: Arakan, c.1910 (Hopwood 1912; also undated Smythies 1986); Inle lake, December 1982 (Thet Tun and Sayer 1983); Minbu district, 1934–1937 (Roseveare 1952); Southern Shan States, 1890s (Rippon 1901; also undated Harrington 1909); Tenasserim (Taninthayi), undated (Harrington 1909); Upper Pegu, undated (Oates 1882).
- THAILAND It formerly occurred in the north-west, north-east, central, and south-east, and it was a rare non-breeding visitor in the south (Robson 2000), but it may now be extinct. Records are known from: Bangkok, male collected May 1918 (Williamson 1918), also an undated specimen (Gyldenstolpe 1920); Nong Hoi, two specimens collected January 1939 (Morioka and Yang 1996); Sakerat, undated specimen (Gyldenstolpe 1920); Trang, undated (Deignan 1963).

- *MALAYSIA* It was probably never more than a rare non-breeding visitor to Peninsular Malaysia, and there are no recent records (Robson 2000). Historical records are known from: **Johor**, 1982 (A. Napier *in litt*. 2000); **Kuala Berang**, Ulu Terengganu, specimen collected June 1947 (Gibson-Hill 1949, Medway and Wells 1976, Wells 1999); **Penang**, 1890s (Deignan 1963, Medway and Wells 1976, Wells 1999); near **Taiping**, Perak, specimen collected "about 1893" (Chasen 1939a, Gibson-Hill 1949, Medway and Wells 1976, Wells 1999).
- LAOS The species once occurred throughout Laos, but is now restricted to the southern parts of Champasak and Attapu provinces in the south of the country, and may soon become extinct (Thewlis et al. 1998). Records are known from: Attapu province, around 1930 (Engelbach 1932); Mekong river at Ban Hongkhong (Ban Hangkhon), April—May 1996 (Thewlis et al. 1998); southern parts of Champasak province, c.1930 (Engelbach 1932), 1997 (Oriental Bird Club Bull. 26 [1997]: 60–66); Salavan (Saravane), 1925–1927 (Delacour et al. 1928); Savannakhet province, 1940s (David-Beaulieu 1944, 1949–1950); between Senamsai and Ban Sompoy, December 1997 (Duckworth et al. 1999); Xe Kong plains in Xe Pian NBCA, October 1992—July 1993 (Thewlis et al. 1995; also April—May 1996 Thewlis et al. 1998); Xiang Khouang (Tranninh), 1940s (David-Beaulieu 1944, 1949–1950).
- CAMBODIA The species was once probably resident throughout the country, being known from the "Mekong–Great lake plain", c.1960 (Thomas 1964); northern Kampot province, c.1960 (Thomas 1964); Kaoh Nhek (Khonhek) area, Mondulkiri, with a minimum of four seen in June 2000 (Oriental Bird Club Bull. 32 [2000]: 66–76, R. J. Timmins in litt. 2001); Kompong Thom, December 1927–January 1928 (Delacour 1929b); Lomphat town, Ratanakiri, November 1996 (Goes 1999a).
- *VIETNAM* It formerly occurred in southern and central regions, but there are no recent records. Records are known from: **Cochinchina**, undated (Oates 1883), 1938–1939 (Engelbach 1940); South Annam, 1938–1939 (Engelbach 1940) including **Pleiku** region, 1930s (David-Beaulieu 1939).

POPULATION As with White-rumped and Indian Vultures, the Slender-billed Vulture was once common. In South-East Asia populations declined through the latter half of the nineteenth century and the first half of the twentieth century, and are now probably very small and restricted in distribution. In India and Nepal, the species was common until very recently, with sharp population declines noted in the last few years (Satheesan 1999). Notes on population sizes and trends at specific localities are as follows:

India Population declines noted for "vultures" (presumably encompassing this species within the distributional range detailed above) have been noted throughout northern India (see under White-rumped Vulture).

Himachal Pradesh Records were claimed at Zakat Khana and this species was reported to occur in the lower hills of Kulu (Whistler 1926b); a record of 2–3 individuals at Nurpur, Kangra district, in April 1923 was ascribed to "G. indicus" (Whistler 1926a), but presumably refers to Slender-billed Vulture, given the current understanding of the ranges of these two species.

Haryana Breeding was recorded at Ambala (Jones 1916), and the species was considered an uncommon winter migrant at Kalesar Wildlife Sanctuary (Kalsi 1998a; presumably this species rather than Indian Vulture). In 1999 and 2000, despite almost weekly journeys covering 100–180 km, not a single White-rumped or "Long-billed" Vulture was seen (S. C. Sharma in litt. 2000).

Uttar Pradesh "Large numbers" used to be sighted in the 1980s in Bareilly (Satheesan 1999); it was considered occasional in Rajaji National Park (Pandey *et al.* 1994) (although 103 were counted there in May 2000: Rao 2000), an uncommon migrant at Dudwa National Park (Javed and Rahmani 1998), and not very common in Gorakhpur district (Osmaston 1913). It

was known to breed in Corbett National Park (Satheesan 2000a). In New Forest, Dehra Dun, it was recorded as fairly common, probably breeding, by Mohan (1996), but Singh (2000) only had two records in Dehra Dun district in February 1990.

Orissa Pandav (1996) reported "Long-billed Vultures" to be common breeders at Bhitarkanika Wildlife Sanctuary in 1992–1993; as the habitat here consists of mangrove forest, it seems likely that this refers to Slender-billed rather than Indian Vulture. What was presumed to refer to this species was reported to be "locally extinct" during surveys in April–June 2000 at Similipal (Rahmani and Prakash 2000a,b).

West Bengal This species was considered "locally distributed" in Calcutta district, being "plentiful" at Mogra, scarce about Titaghur, breeding near Khardah (Munn 1899), common in Jalpaiguri district (Inglis et al. 1920) and "probably under-recorded by the nine records" in Durgapur and the Damodar valley during 1968–1971 (Gauntlett 1986). It was known to breed in Jaldapara Wildlife Sanctuary (Satheesan 2000a), but was reported to be "locally extinct" during surveys in April–June 2000 in protected areas at Jaldapara and Buxa (Rahmani and Prakash 2000a.b).

Arunachal Pradesh This species was "seen quite often" at Pasighat, and also recorded at Naharlagun (150–200 m) and at Namsai (Singh 1994); additionally one was seen at 400 m at Kamleng during January–April 1990 (Katti et al. 1992).

Assam It was once stated to be "very common" in eastern Assam (Ali and Ripley 1968–1998), but it was not commonly seen in North Cachar (Baker 1894–1901). Nesting populations were found in 1989 in Kamrup district (Saikia and Bhattacharjee 1990c), and it was known as a common resident in Kaziranga National Park (Barua and Sharma 1999). In November 1999 a journey from Gauhati airport to Kaziranga National Park, covering 239 km and involving intensive watching for raptors, resulted in records of two White-rumped Vultures, with only four during a day in the central and west of the park and a further 14 on a second day in the eastern part of the park, so that altogether, given the high densities of wild mammals inside the park and of domestic ones outside, the numbers of vultures appeared "abnormally low" (J.-M. Thiollay *in litt*. 2001). It is, nevertheless, moderately encouraging that fieldwork in December 2000 yielded daily records of this species, including as many as 25 in Kaziranga, most of which were juveniles (R. Naoroji *in litt*. 2001); and A. Choudhury (*in litt*. 2001) considered that the species was "still commonly seen".

Meghalaya It was considered common in the Khasia hills (Baker 1907b), but its present status is unknown.

Nepal This was reported to be "one of the more common vultures around villages and open fields of the terai" in winter (Rand and Fleming 1957), "tolerably common" in the Nepal valley (Scully 1879), and seen on "a few occasions" near villages in Nepal valley in 1947 (Biswas 1960–1966). In the 1980s it was considered a fairly common resident and partial altitudinal migrant up to 1,525 m, breeding at Bardia and Chitwan, but probably overlooked elsewhere (Inskipp and Inskipp 1988).

Bangladesh Once stated to be "very common" (Ali and Ripley 1968–1998), this species was more recently considered to be an uncommon resident in village areas (Thompson and Johnson 1996) in the north-east, north-west and central regions (Harvey 1990), and less common than White-rumped Vulture but widely distributed in open country in most districts (Sarker 1983, Sarker and Sarker 1985), being occasional in the Sundarbans area (Sarker and Sarker 1986). It was common in Chittagong (Bates 1935), and seven were recorded there in November 1966 (Mountford and Poore 1968; listed incorrectly as *G. indicus jonesi*). Recent records include individuals in a mixed-species flock east of Bhairab Bazar in February 1992 (Thompson *et al.* 1993).

Myanmar The Slender-billed Vulture was once considered "common" (Walden 1876), being recorded in the Southern Shan states by Rippon (1901). It was fairly common in Minbu district during 1934–1937 (Roseveare 1952), and in the 1950s it was stated to be very common

in Arakan, but less common than White-rumped Vulture (Smythies 1953), but it was not seen in West or Central Burma during a visit in April 1995 (Robson *et al.* 1998).

Thailand Deignan (1963) regarded W. L. Abbott's "large white vulture" apparently common in Trang in the early part of the twentieth century as being of this species. At the beginning of the twentieth century, Gyldenstolpe (1913) regarded this species as "the most common vulture" among the "great flocks of vultures seen around the towns", although he later contradicted this, stating that it was "apparently more rare" than the other species (Gyldenstolpe 1920). Even though it was still fairly common in the 1960s, within a decade it had become rare (see e.g. Cheke 1972) and it in 1985 it was estimated to be on the verge of extinction (Round and Chantrasmi 1985). It is possibly now extinct (Lekagul and Round 1991).

Malaysia The only reliable records in Peninsular Malaysia were of a single specimen taken in 1893 from Taiping, Perak (Chasen 1939a, Wells 1999), and another from Kuala Berang, Ulu Trengganu, in 1947 (Gibson-Hill 1949, Wells 1999, G. Noramly *in litt*. 2000). Blyth (1875) mentioned seeing two in a Melaka collection (with undetermined source in Malaysia), noting that "no doubt a vulture of any kind is rare there, or it would not have been deemed worthy of preservation". Deignan (1963) regarded W. L. Abbott's "large white vulture" apparently common in Penang in the early part of the twentieth century as being of this species. An individual, presumed to be Slender-billed Vulture, was seen at Johor in 1982 (A. Napier *in litt*. 2000). On the evidence available this species was probably never more than a non-breeding visitor to the Peninsula, and the source populations are probably now extinct (Wells 1999).

Laos It occurred throughout the country 50 years ago (Thewlis et al. 1998), being formerly abundant in Tranninh and Savannakhet province, although the least frequent of the vultures (David-Beaulieu 1944, 1949–1950); in Campasak and Attapu provinces it was also common but again the least frequent (Engelbach 1932). It is now restricted to the southern parts of Champasak and Attapu provinces, and may soon become extinct (Thewlis et al. 1998). Recent records come from: Xe Pian NBCA where the maximum number at a single carcass was 10 on the Xe Kong plains in March 1993, where this was generally the least numerous of the three vulture species, with three individuals recorded in January 1993, and none positively identified in 1995 (Thewlis et al. 1998), but with 8–19 between Senamsai and Ban Sompoy in December 1997 (Duckworth et al. 1999); the Mekong river at Ban Hongkhong (=Ban Hangkhon) where at least one was positively identified in a mixed party of 10 vultures in April 1996 (Thewlis et al. 1998) and another in February 1997 (Oriental Bird Club Bull. 26 [1997]: 60–66); and Attapu where four were seen over the town in January 1993 (Duckworth et al. 1998, Evans et al. 2000); but see relevant account for White-rumped Vulture for records and local reports of unidentified vultures that may have also referred to Slender-billed Vulture.

Cambodia A flock was recorded near Kompong Thom during 1927–1928 (Delacour 1929b), and the species was considered "fairly common" in the "Mekong–Great lake plain" (Thomas 1964). It has certainly declined; recent records include three seen in Lumphat town, Ratanakiri, in November 1996 (Goes 1999a); and at least four out of flock of 31 vultures at Khao Nhek, Mondulkiri province, in June 2000 (*Oriental Bird Club Bull.* 32 [2000]: 66–76) where it was "clearly the least numerous of the three vulture species" (the others being *Gyps bengalensis* and *Sarcogyps calvus*) (R. J. Timmins *in litt.* 2001).

Vietnam This species was once known from Cochinchina and South Annam (Engelbach 1940), apparently occurring "throughout South Vietnam" (Wildash 1968), but there are no recent records (J. C. Eames in Thewlis *et al.* 1998).

ECOLOGY *Habitat* The Slender-billed Vulture is found in much the same habitat as the White-rumped (for which see relevant account): generally in drier open country in the vicinity of human habitation, but also breeding in open country far from villages (Baker 1932–1935, Satheesan 2000a). In South-East Asia it was found in open and partly wooded country, generally in the lowlands (Lekagul and Round 1991, Robson 2000). In the Indian subcontinent, it often

associates with White-rumped Vulture (Inskipp and Inskipp 1991). Slender-billed Vultures were noted roosting in *Ficus religiosa* trees in Dehra Dun, Uttar Pradesh (Singh 2000).

Food See relevant accounts for White-rumped and Indian Vultures. In the Sundarbans, Bangladesh, this species was reported to feed on carcasses of domestic animals, and also on those of wild deer and pigs killed by tigers *Panthera tigris* (Sarker and Sarker 1985).

Breeding This species, in contrast to Indian Vulture, has only been recorded nesting in trees, usually large ones (often Ficus), usually at a height of 7–14 m, often near villages (Baker 1932–1935, Ali and Ripley 1968–1998, Brown and Amadon 1968, Grubh 1978, del Hoyo et al. 1994, Alström 1997, Grimmett et al. 1998, Rasmussen and Parry 2000, in press; see comments under Ecology: Breeding for Indian Vulture). In Khardah, Calcutta, it bred in tall tar palms (Munn 1899), and in Kamrap district, Assam, Mangifera indica (mango) and Anthocephalus indicus (kadam) were used for nests (Saikia and Bhattacharjee 1990c). In Myanmar, large, isolated letpan trees are favoured (Smythies 1986). The breeding season was December–January in Myanmar (Smythies 1986), in Kamrup district, Assam (Saikia and Bhattacharjee 1990c) and elsewhere in India (Baker 1932–1935). The clutch-size is one (Brown and Amadon 1968). Nest sites are used for many years in succession (Baker 1932–1935, Brown and Amadon 1968); colonies of up to 7–8 pairs have been recorded (Baker 1932–1935). One colony was reported to contain three nests of this species alongside two of White-rumped Vulture in a Ficus religiosa (peepal) tree in Lucknow, Uttar Pradesh, in February 1918 (Mathews 1918).

THREATS In the Indian subcontinent the weight of evidence suggests that the catastrophic population declines suffered by this species are likely to have been caused by a disease factor, presumed to be a virus (see the relevant account for White-rumped Vulture, for which the threats are probably identical to those for this species).

In South-East Asia the decline in vulture populations, including this species, was probably a consequence of a reduction in the supply of carcasses, and increased human persecution (J. W. Duckworth *in litt*. 2000; see details in the relevant account for White-rumped Vulture). For example, 50 years ago, David-Beaulieu (1949–1950) commented on the senseless shooting of this species by Europeans, and this threat remains: in Xe Pian NBCA one was shot "by a passing wealthy Laotian" in March 1993 (Thewlis *et al.* 1998). In Thailand a great reduction in the availability of carrion, along with human disturbance of nest sites were believed to be the main causes of population declines (Round and Chantrasmi 1985), although around Chiang Mai the population decline was attributed largely to poisoning from strychnine-laced carcasses (Cheke 1972; see Population: Thailand under White-rumped Vulture).

MEASURES TAKEN See the relevant account for White-rumped Vulture and, for the field identification of this species from Indian Vulture see Remarks 3 under that species.

MEASURES PROPOSED See the relevant account for White-rumped Vulture, for which the conservation action required is largely the same as for this species.

Given the considerable confusion over the identification and taxonomy of this species and Indian Vulture, a detailed study of museum specimens is required to check their identification and provenance in order to validate the presumed distribution of these forms. This should be supported with field surveys, particularly in the region where the ranges of the two forms abut (see Distribution) using the identification features best described by Alström (1997) and Rasmussen and Parry (in press).

REMARKS (1) A record of "a few Long-billed Vultures" reported to be found on refuse heaps below Srinagar, Kashmir (Bates and Lowther 1952; also noted occurring in Kashmir by del Hoyo *et al.* 1994), was well west of the known range and should be considered unconfirmed.