

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

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 **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

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.

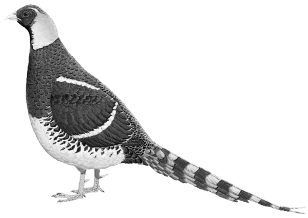
ELLIOT'S PHEASANT

Syrmaticus ellioti

Critical —

Endangered —

Vulnerable A1c,d; A2c,d



This species is listed as Vulnerable because it occupies easily exploited forest isolated in low-lying and heavily populated areas, and is probably rapidly declining because of ongoing habitat loss and hunting.

DISTRIBUTION Elliot's Pheasant is endemic to south-east China, south of the Yangtze river, where it is recorded from Guizhou, Hubei, Anhui, Zhejiang, Fujian, Jiangxi, Hunan, Guangxi and Guangdong, with its main range in southern Anhui, Zhejiang and Jiangxi. Records (by province and autonomous region; see Remarks 1) are as follows:

■ **CHINA** ■ **Guizhou Fanjiang Shan National Nature Reserve**, Jiangkou, Yinjiang and Songtao counties, collected at Heiwanhe, April 1995 (male and female in GMCN), two males and a female collected, summer 1992 and 1993 (Wang Qishan *in litt.* 1997); **Tongren county**, November 1988 (male in KIZCN); **Leigong Shan Nature Reserve**, Leishan, Taijiang, Jianhe and Rongjiang counties, male collected, June 1992, but "very rare", 1992–1994 (Ding Ping *et al.* 1996a, Wang Qishan *in litt.* 1997); **Sandu county**, where a pair obtained in Libo market in February 1999 were reported to have been collected in the Sandu–Jiuqian area to the north (Li Zhumei 2000); Shuichun village, **Libo county**, fresh tail feathers found in a house, February 1999, male collected, March 1999 (Li Zhumei 2000);

■ **Hubei Chongyang county**, undated (Ding Ping *in litt.* 2000; also Ding Ping 1998); **Jiugong Shan Nature Reserve**, Tongshan county, undated (Liu Donglai *et al.* 1996), recorded in Tongshan county, undated (Ding Ping *in litt.* 2000; also Ding Ping 1998); **Tongcheng county**, undated (Ding Ping *in litt.* 2000; also Ding Ping 1998);

■ **Anhui** recently recorded in the Jiuhua, Huangshan and Tianmu mountains of southern Anhui, in the following counties and cities: **Xuancheng county**, undated (Li Binghua 1985, Wang Qishan *in litt.* 1997); **Guichi**, September 1979 (male in AUCN); **Ningguo county**, undated (Li Binghua 1985); **Jingde county**, undated (Li Binghua 1985); **Huang Shan Nature Reserve**, Huangshan city (Taiping county), collected in or near the reserve at Jiaocun, December 1978 (male in AUCN), and Daqiao, January and November 1979 (three specimens in AUCN; also Liu Donglai *et al.* 1996); **Guniujiang National Nature Reserve**, Shitai and Qimen counties, undated (Liu Donglai *et al.* 1996, MacKinnon *et al.* 1996), recorded from Shitai county (Li Xiangtao 1996) and Qimen county, December 1980 (female in AUCN), possibly referring to Guniujiang reserve and/or other sites in this county; **Qingliangfeng Nature Reserve**, She Xian and Jixi counties, rarely seen in recent years (Song Chaoshu 1997; also Liu Donglai *et al.* 1996), recorded from Jixi and She Xian counties (Li Xiangtao 1996), possibly referring to Qingliangfeng reserve and/or other sites in these counties; **Xiuning county**, December 1978 (female in AUCN); Shengde (untraced), undated (Li Binghua 1985, Wang Qishan *in litt.* 1997);

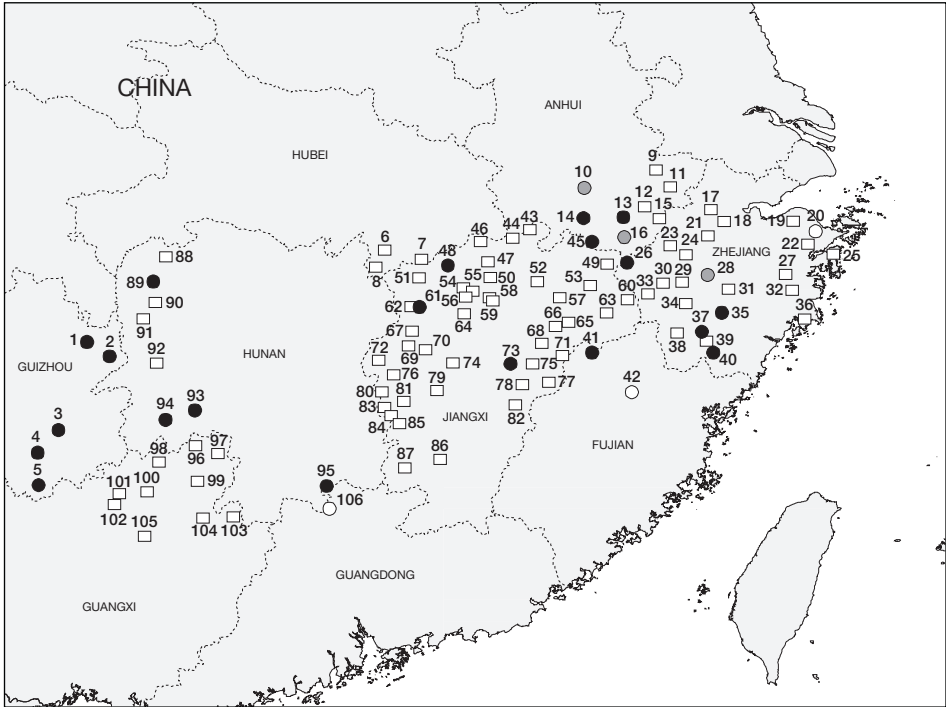
■ **Zhejiang** near Mogan Shan (Mokanshan), reported by local people (Beebe 1936); **Lin'an county**, undated (Li Xiangtao 1996); **Fuyang**, undated (Li Xiangtao 1996); **Yuyao county**, undated (Li Xiangtao 1996); **Ningbo** (Ningpo) (type locality), November–December 1871, 1872, December 1873 (Swinhoe 1872, 11 specimens in AMNH, BMNH, MCML and RMNH); **Tonglu county**, undated (Li Xiangtao 1996); **Fenghua**, undated (Li Xiangtao 1996); **Chun'an county**, undated (Li Xiangtao 1996); **Jiande county**, undated (Li Xiangtao 1996); **Xiangshan**

county, undated (Li Xiangtao 1996); **Gutian Shan Nature Reserve**, Kaihua county, collected in Kaihua county, 1980–1986 (six specimens in HUCN and WUCN), with ecological studies of the species in or near the reserve at Xiaobelong and Shuiwu in 1983–1987 (Ding Ping and Zhuge Yang 1990; also Liu Donglai *et al.* 1996, MacKinnon *et al.* 1996), population in and around the reserve estimated at 500–600 birds, July–September 1999 (Ding Ping 2000); **Tiantai county**, undated (Li Xiangtao 1996); **Jinhua county**, December 1972 (female in SNHMCN); **Longyou**, undated (Li Xiangtao 1996); **Qu Xian county** (Quzhou city), undated (Li Xiangtao 1996); **Yongkang county**, undated (Wang Qishan *in litt.* 1997); **Linhai county** (Taizhou), undated (Li Xiangtao 1996); **Jiangshan county**, undated (Li Xiangtao 1996); **Suichang county**, undated (Li Xiangtao 1996); Lishui tree farm, **Lishui county**, 1983–1987 (Ding Ping and Zhuge Yang 1990); **Wenling county**, undated (Li Xiangtao 1996); Wuxi, **Yunhe county**, 1983–1987 (Ding Ping and Zhuge Yang 1990); **Longquan county**, undated (Li Xiangtao 1996); **Jingning county**, undated (Li Xiangtao 1996, Ding Ping *in litt.* 2000); **Wuyanling National Natural Reserve**, Taishun county, 1983–1987 (Ding Ping and Zhuge Yang 1990), female, April 1987, “small numbers” present in the lower altitude forests (King and Zheng Guangmei 1988, Young 1988), male, May 1992 (MJC), 1992–1993 (Wang Qishan *in litt.* 1997);

■ **Fujian Wuyi Shan Nature Reserve**, Jianyang, Chongan, Guangze and Shaowu counties, at Guadun (Kuatan), Chongan county, obtained in winter 1873–1874 (Père David in La Touche 1925–1934), tail feathers of a male found in spring 1897 and seven collected in winter 1897–1898, November 1900, August and November 1901 and December 1917, one seen by a hunter in 1898 and a broken egg obtained was said to be of this species, although “apparently very rare and seldom trapped by the local hunters” (La Touche 1900, La Touche and Rickett 1905, specimens in BMNH, MCZ and SMNS), collected at “Wuyishan”, November 1985 (specimen in NEFUCN; also Liu Donglai *et al.* 1996); **Kienningfu** (“Kieh Ning Fu”), near Yamakan, Min river, 270 km north-west of Fuzhou, a dried specimen obtained near Yamakan in 1899 said to be from this locality, and local people reporting it “not uncommon” there (Rickett 1900a);

■ **Jiangxi Pengze county**, undated (Li Xiangtao 1996); **Hukou county**, undated (Li Xiangtao 1996); **Guangkeng**, upriver on the Luan Ho from Wuyuan, one heard, 300 m, December 1986 (King 1987a); **Ruichang county**, undated (Li Xiangtao 1996); **De’an**, undated (Li Xiangtao 1996); **Wuning county**, c.15 at Yi Shan, c.200–800 m, December 1986 (King 1987a; also Yue Huiqun 1996); **Wuyuan county**, undated (Li Xiangtao 1996); **Yongxiu county**, undated (Li Xiangtao 1996); **Xiushui county**, undated (Li Xiangtao 1996); **Boyang county**, undated (Yue Huiqun 1996); **Dexing**, undated (Li Xiangtao 1996); **Jing’an county**, undated (Yue Huiqun 1996); **Anyi county**, undated (Li Xiangtao 1996); **Fengxin**, undated (Yue Huiqun 1996); **Wannian county**, undated (Li Xiangtao 1996); **Xinjian county**, undated (Li Xiangtao 1996); Meiling, suburban **Nanchang**, undated (Yue Huiqun 1996); **Yushan county**, undated (Li Xiangtao 1996); **Guan Shan Nature Reserve**, Yifeng county, six, December 1991, two males and five females, November 1992 (Stevens *et al.* 1993, Lewthwaite 1996), May 1994 (juvenile female in JASCN), male and three females (one dead), December 1997 (K. S. Lee *per J. Fellowes in litt.* 1999), recorded from Yifeng county (Yue Huiqun 1996), possibly referring to Guan Shan reserve and/or other sites in this county; **Tonggu county**, undated (Yue Huiqun 1996); **Shangrao county**, undated (Li Xiangtao 1996); **Gao’an**, undated (Li Xiangtao 1996); **Guixi**, undated (Li Xiangtao 1996); **Yingtian city**, undated (Li Xiangtao 1996); **Wanzai county**, undated (Yue Huiqun 1996); **Jinxi county**, undated (Li Xiangtao 1996); **Yichun county**, undated (Yue Huiqun 1996); **Fenyi**, undated (Li Xiangtao 1996); **Zixi county**, undated (Li Xiangtao 1996); **Pingxiang city**, undated (Li Xiangtao 1996); **Yihuang county**, undated (Li Xiangtao 1996), recorded in Yihuang Hunan Hu Nature Reserve (Chinese Tiger Nature Reserve), undated (MacKinnon *et al.* 1996), at Dongpi, December 1995–January 1996 (Allen 1996); **Xiajiang county**, undated (Li Xiangtao 1996); **Nancheng county**, undated (Li Xiangtao 1996); **Qianshan**, undated (Li Xiangtao 1996); **Lichuan county**, undated (Li Xiangtao 1996); **Nanfeng**

county, undated (Li Xiangtao 1996); **Ji'an county**, undated (Li Xiangtao 1996); **Lianhua county**, undated (Li Xiangtao 1996); **Yongxin county**, undated (Li Xiangtao 1996); **Guangchang**, undated (Li Xiangtao 1996); **Ninggang county**, undated (Li Xiangtao 1996); **Jinggang Shan Nature Reserve**, Jinggang Shan city, undated (Yue Huiqun 1996; also Liu Donglai *et al.* 1996); **Suichuan county**, undated (Li Xiangtao 1996); **Ganzhou**, undated (Li Xiangtao 1996); **Chongyi county**, undated (Li Xiangtao 1996);



The distribution of Elliot's Pheasant *Syrnaticus elliotti*: (1) Fanjing Shan National Nature Reserve; (2) Tongren county; (3) Leigong Shan Nature Reserve; (4) Sandu county; (5) Libo county; (6) Chongyang county; (7) Jiugong Shan Nature Reserve; (8) Tongcheng county; (9) Xuancheng county; (10) Guichi; (11) Ningguo county; (12) Jingde county; (13) Huang Shan Nature Reserve; (14) Guniujiang National Nature Reserve; (15) Qingliangfeng Nature Reserve; (16) Xiuning county; (17) Lin'an county; (18) Fuyang; (19) Yuyao county; (20) Ningbo; (21) Tonglu county; (22) Fenghua; (23) Chun'an county; (24) Jiande county; (25) Xiangshan county; (26) Gutian Shan Nature Reserve; (27) Tiantai county; (28) Jinhua county; (29) Longyou; (30) Qu Xian county; (31) Yongkang county; (32) Linhai county; (33) Jiangshan county; (34) Suichang county; (35) Lishui county; (36) Wenling county; (37) Yunhe county; (38) Longquan county; (39) Jingning county; (40) Wuyanling National Natural Reserve; (41) Wuyi Shan Nature Reserve; (42) Kienningfu; (43) Pengze county; (44) Hukou county; (45) Guangkeng; (46) Ruichang county; (47) De'an; (48) Wuning county; (49) Wuyuan county; (50) Yongxiu county; (51) Xiushui county; (52) Boyang county; (53) Dexing; (54) Jing'an county; (55) Anyi county; (56) Fengxin; (57) Wannian county; (58) Xinjian county; (59) Nanchang; (60) Yushan county; (61) Guan Shan Nature Reserve; (62) Tonggu county; (63) Shangrao county; (64) Gao'an; (65) Guixi; (66) Yingtan city; (67) Wanzai county; (68) Jinxi county; (69) Yichun county; (70) Fenyi; (71) Zixi county; (72) Pingxiang city; (73) Yihuang county; (74) Xiajiang county; (75) Nancheng county; (76) Qianshan; (77) Lichuan county; (78) Nanfeng county; (79) Ji'an county; (80) Lianhua county; (81) Yongxin county; (82) Guangchang; (83) Ninggang county; (84) Jinggang Shan Nature Reserve; (85) Suichuan county; (86) Ganzhou; (87) Chongyi county; (88) Sangzhi county; (89) Yongshun county; (90) Guzhang county; (91) Jishou county; (92) Huaihua; (93) Wugang county; (94) Suining county; (95) Yizhang county; (96) Ziyuan county; (97) Quanzhou county; (98) Longsheng county; (99) Haiyang Shan Nature Reserve; (100) Shoucheng Nature Reserve; (101) Rong'an county; (102) Rongshui county; (103) Fuchuan; (104) Gongcheng county; (105) Luzhai county; (106) Yang-mei-lang.

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

■ **Hunan Sangzhi county**, undated (Li Xiangtao 1996); **Yongshun county**, Wuling Shan, May–June 1990 (He Fenqi 1990); **Guzhang county**, undated (Li Xiangtao 1996); **Jishou county**, undated (Li Xiangtao 1996); **Huaihua**, undated (Li Xiangtao 1996); **Wugang county**, June 1984 (Zhao Xiubi 1994); **Suining county**, October 1982 (Zhao Xiubi 1994); **Yizhang county**, 1995 (two males in HNUCN);

■ **Guangxi Ziyuan county**, undated (Li Xiangtao 1996); **Quanzhou county**, undated (Li Xiangtao 1996); **Longsheng county**, undated (Li Xiangtao 1996); **Haiyang Shan Nature Reserve**, Xing'an, Lingchuan, Guanyang and Yangshuo counties, undated (Wu Mingchuan 1984 and Li Hanhua and Shen Lantian 1988 in He Fenqi and Lu Taichun 1991), recorded from Xing'an, Lingchuan and Guanyang counties (Li Xiangtao 1996), possibly referring to Haiyang Shan reserve and/or other sites in these counties; **Shoucheng Nature Reserve**, Yongfu and Lingui counties, undated (Liu Donglai *et al.* 1996), recorded from Yongfu and Lingui counties (Li Xiangtao 1996), possibly referring to Shoucheng reserve and/or other sites in these counties; **Rong'an county**, undated (Li Xiangtao 1996); **Rongshui county**, undated (Li Xiangtao 1996); **Fuchuan**, undated (Li Xiangtao 1996); **Gongcheng county**, undated (Li Xiangtao 1996); **Luzhai county**, undated (Li Xiangtao 1996);

■ **Guangdong "Yang-mei-lang"** (possibly in southern Hunan), male collected, 1,200 m, May 1930, but "very rare" (Yen 1932a).

Unconfirmed localities are Baiyong Nature Reserve (Yangchun county) and Yunji Shan Nature Reserve (Xinfeng county) (Liu Donglai *et al.* 1996); these reserves are outside the documented range of this species.

POPULATION The numbers of Elliot's Pheasant in the wild are poorly known, and the limited information available is somewhat contradictory. In the past, it has been reported to total less than 1,000 individuals (Li Xiangtao 1996), and has been described as extremely local and not abundant anywhere, "although they are very timid and rather silent which may to a certain extent account for their apparent scarcity" (Beebe 1936). However, recent records from Guizhou and Hubei provinces (see Distribution) have greatly extended its known range to the west, and there have been reports that it is locally common, "as common as Ring-necked Pheasant *Phasianus colchicus* is in the north of China" (He Fenqi verbally 1996). He Fenqi in McGowan and Garson (1995) estimated its total population at 10,000–50,000 birds, within a highly fragmented range where it is believed to be declining; this is considered to be a reasonable estimate by Ding Ping *in litt.* (1999), given the numbers that he and his colleagues have found during recent surveys.

Some detailed information is available on its population densities from several parts of its range. At Leigong Shan Nature Reserve in Guizhou, a density of 0.1 birds per km² (one bird in 10 km²) was estimated in broadleaf forest inside the nature reserve, and 0.08 per km² (one bird in 12.5 km²) in mixed broadleaf and coniferous forest outside the reserve (Liang Wei *et al.* 1996). Surveys of five sites in Kaihua county in Zhejiang in summer and winter 1984 estimated a summer density of 3.5 birds per km² (or about one bird in 0.285 km²) and a winter density of 6.9 birds per km² (or one bird per 0.145 km²) (Zhuge Yang and Ding Ping 1988, 1991). The population in and around Gutian Shan Nature Reserve in Zhejiang was estimated at 500–600 birds in 1999; the population density in the reserve was estimated at 8.8 birds per km² and outside the reserve at 3.5 birds per km² (Ding Ping 2000). Monitoring of the numbers of this species in the wild game market at Kaihua in Zhejiang from 1978 to 1984 showed some evidence of decline there, with annual totals of: 14 (1978), 11 (1979), 6 (1980), 5 (1981), 2 (1982), 3 (1983) and 4 (1984) (Ding Ping and Zhuge Yang 1989).

The size of the population of this species in Jiangxi is particularly unclear. A total of less than 1,000 birds was estimated for this province in 1986, distributed mainly in the north-east, north-west and south; it was believed that there were no populations in any of the nature reserves there and that if no action was taken within the next 10–20 years this species

might be extirpated (Long Tizon in King 1989d). However, recent studies have indicated that this species can now be found at 41 localities covering more than two-thirds of Jiangxi province, and in some places in the north and centre of the province it is still “quite common” (Song Xiangjin 1994). In the early 1990s, a population of 1,000 was reported to occur in Guanshan Nature Reserve (Stevens *et al.* 1993).

ECOLOGY Habitat Elliot’s Pheasant occurs in a wide variety of vegetation types in the subtropical zone of the mountains of south-east China, mainly in lower and mid-altitude forests between 200 and 1,900 m; the most important habitats are evergreen broadleaf forest, mixed evergreen and deciduous broadleaf forest, deciduous broadleaf forest, mixed coniferous and broadleaf forest, coniferous forest, bamboo forest and scrub (Ding Ping 1998). Evergreen broadleaf forest, mixed evergreen and deciduous broadleaf forest and coniferous forest with a tree cover of more than 90% are the preferred breeding habitats; the most important plant species affecting their habitat use are *Mussaenda shikokiana*, *Camellia oleifera*, *Lindera reflexa*, *Eriobotrya japonica*, *Ilex pubescens*, *Eurya muricata*, *Vaccinium bracteatum*, *Loropetalum chinense*, *Rubus* spp., *Carex* spp., *Aster ageratoides* and *Cyrtomium fortunei* (Ding Ping 1998).

At five survey sites in Zhejiang, it bred mainly in mixed evergreen broadleaf and coniferous forest and in coniferous forest at 500–1,000 m, moving in winter and early spring into scrub at 300–500 m and in autumn into montane forest at 1,000–1,500 m (Ding Ping and Zhuge Yang 1990). In southern Anhui, at the northern extreme of its range, it also shows seasonal altitudinal migration, moving down to low altitudes in winter (when severe weather can drive birds down to below 300 m), moving uphill in spring, and moving to higher-altitude forests to feed on fruit in autumn (Li Binghua 1985). However, no such seasonal altitudinal movements are shown by the population at Wuyanling in southern Zhejiang (Shi Jianbin and Zheng Guangmei 1995).

In Zhejiang, evergreen broadleaf forest and mixed evergreen broadleaf and coniferous forest were the most important habitats, the dominant vegetation being *Pinus massoniana*, *Cunninghamia lanceolata*, *Castanopsis carlesii* and *C. sclerophylla*, with an average tree cover of 70% and scrub layer of 35%; the birds nested in forests where evergreen broadleaf trees were the dominant vegetation, mainly *Lithocarpus glaber*, *Cyclobalanopsis glauca*, *Schima superba*, *Castanopsis carlesii* and *C. sclerophylla*, with tree cover of c.90% and shrub layer 30–50%, but they also nested in coniferous forest, mainly *Cunninghamia lanceolata*, with a tree cover of 80–90% and scrub layer of 50–80% (Ding Ping and Zhuge Yang 1990). At Leigong Mountain Nature Reserve in Guizhou they used six kinds of forest (evergreen broadleaf forest, evergreen and deciduous broadleaf mixed forest, deciduous broadleaf forest, coniferous and broadleaf mixed forest, sparser woods with shrub forest, shrub forest); they are mainly found at 1,000–1,900 m, on slopes of less than 50°, in forest with a dense shrub layer (Ding Ping *et al.* 1996a).

Food This species is omnivorous, feeding mainly on plants, including fruits, seeds, leaves, buds, roots, stems and some grains, maize and peas, and they also eat insects, insect larvae and eggs; the diet varies seasonally, with mainly seeds in autumn, ferns, grain, maize, buds and rhizomes in winter and fruits, seeds, insects and sometimes the eggs of other birds in summer (Li Binghua 1985, Liang Wei *et al.* 1996). At Kaihua in Zhejiang, *Astragalus sinicus* is widely cultivated and it has become the main food for Elliot’s Pheasants in spring (Zhuge Yang and Ding Ping 1991).

Breeding Elliot’s Pheasant is polygynous, and usually one male pairs with two or three females, and the males do not help in nesting, incubation or the rearing of chicks (Ding Ping *et al.* 1990). The eggs are laid from mid-March to late May, and the clutch size is 4–12 eggs, usually 5–8 (Li Binghua 1985, Ding Ping *et al.* 1990, Ding Ping and Zhuge Yang 1990).

THREATS Elliot’s Pheasant is one of four threatened bird species that are entirely restricted to the “South-East Chinese Mountains Endemic Bird Area”, threats and conservation

Table 1. Changes in the extent of natural habitats within this species's range in south-east China. The data in this table are reproduced from MacKinnon *et al.* (1996), and show the estimated areas (both original and remaining in km²) of presumably suitable habitats within this species's known range in south-east China, and the area of each habitat estimated within existing protected areas. However, it is important to note that this only gives an indication of the extent of reduction (or increase) of presumed habitats, as there is no information on the time-scale over which they have been lost, and this species does not necessarily occur throughout each habitat in this region of China.

Habitat	Original	Remaining	%	Protected	%
deciduous/evergreen broadleaf forest	229,575	22,838	10	8,151	3.6
subtropical coniferous forest	93,137	165,323	178	16,581	17.8
subtropical evergreen broadleaf forest	682,066	45,298	7	19,839	2.9
tropical limestone forest	16,300	1,630	10	0	0
tropical semi-evergreen forest	69,698	3,707	5	240	0.3

measures in which are profiled by Stattersfield *et al.* (1998). Further information relevant to its conservation is given in the accounts for the other threatened species that occur in the forests of south-east China, White-eared Night-heron *Gorsachius magnificus*, White-necklaced Partridge *Arborophila gingica*, Cabot's Tragopan *Tragopan caboti* and Brown-chested Jungle-flycatcher *Rhinomyias brunneata*.

Habitat loss The range of this species in south-east China is densely populated, and most of the natural forest has been cleared or modified as a result of the demands for agricultural land and timber (McGowan and Garson 1995; see Table 1). Suitable breeding habitat in mature, closed-canopy forest continues to be reduced and fragmented, and many of the surviving populations of this species must be small and isolated. Current threats include the clearance of forest for replacement with plantations of *Cunninghamia lanceolata* (but note that these plantations may become suitable nesting habitat for this species once mature: see Ecology), burning of forest in man-made hill fires, and the collection of firewood (Wang Qishan *in litt.* 1997). Industrial pollution leading to acid rain is a serious problem in this part of China (MacKinnon *et al.* 1996), which could be affecting some of the forests inhabited by this species. In Leigong Shan Nature Reserve there has been serious habitat loss because of logging and economic activities such as the harvesting of tree bark for Chinese medicine, and populations of Elliot's Pheasant there are now isolated in eight discontinuous fragments of forest (Ding Ping *et al.* 1996b, Liang Wei *et al.* 1996).

Hunting Hunting for food is a serious problem, and has caused the populations of many game species to crash (McGowan and Garson 1995, MacKinnon *et al.* 1996). Interviews with 61 hunters in 30 villages at Leigong Shan in Guizhou revealed the following annual totals of birds hunted between November and March: 52 (1989–1990), 78 (1990–1991), 56 (1991–1992) and 47 (1992–1993) (Liang Wei *et al.* 1996). A total of 45 were recorded in the wild game market at Kaihua in Zhejiang between 1978 and 1984 (Ding Ping and Zhuge Yang 1989).

Disturbance Human disturbance is also likely to be a significant problem in many forest areas (Wang Qishan *in litt.* 1997), for example in Leigong Shan where economic activities such as the collection of herbs for Chinese medicine occur (Ding Ping *et al.* 1996b, Liang Wei *et al.* 1996).

MEASURES TAKEN Legislation Elliot's Pheasant is a Nationally Protected Species (First Class) in China (McGowan and Garson 1995, Zheng Guangmei and Wang Qishan 1998). It is listed on Appendix I of CITES.

Protected areas This species has been recorded in or near to several protected areas: Fanjingshan National Nature Reserve in Guizhou (419 km², higher altitude forests apparently in good condition, lower slopes rather degraded), Leigong Shan Nature Reserve in Guizhou (473 km², forests apparently almost totally destroyed), Jiugong Shan Nature Reserve in Hubei

(47 km², forests rather small), Qingliangfeng Nature Reserve in Anhui (10 km², some conifer and broadleaf forest, apparently rather damaged but of some value), Guniujiang National Nature Reserve in Anhui (71 km², forests apparently in quite good condition), Huang Shan National Forest Park in Anhui (117 km², forest apparently in good condition), Gutian Shan Nature Reserve in Zhejiang (14 km², forest apparently in quite good condition), Wuyanling Nature Reserve in Zhejiang (190 km², forest apparently in moderately good condition), Wuyi Shan Nature Reserve in Fujian (565 km², forest apparently in very good condition), Guanshan Nature Reserve in Jiangxi (22 km², forests apparently in good condition), Jinggang Shan Nature Reserve in Jiangxi (155 km², forests apparently in fine condition), Yihuang Hunan Hu (Chinese Tiger) Nature Reserve in Jiangxi (239 km², condition of forests unknown), Haiyang Shan Nature Reserve in Guangxi (904 km², forests apparently badly damaged) and Shoucheng Nature Reserve in Guangxi (759 km², forests apparently badly damaged) (protected areas size and condition from MacKinnon *et al.* 1996).

Two of these protected areas are known to support important populations of this species, Guanshan Nature Reserve in Jiangxi (see Population) and Gutian Shan Nature Reserve in Zhejiang (Ding Ping 2000; also *in litt.* 1999), and several of the other reserves appear to contain sufficient areas of forest also to support substantial populations. However, the forests in many of the others are relatively small and isolated, and may not be large enough to support viable populations.

Captive breeding The history of this species in captivity is described in detail by Knoder (1983). There are estimated to be c.1,000 individuals in captivity worldwide (McGowan and Garson 1995), and it has been bred in captivity in several zoos in China (Zheng Guangmei and Wang Qishan 1998). It is, however, by no means clear that captive breeding is needed, since this must have the goal of re-introduction (for which see IUCN/SSC 1998), and for this to happen there must be suitable habitat. The most important activity must therefore remain habitat conservation.

MEASURES PROPOSED *Protected areas* Although Elliot's Pheasant occurs in many protected areas, its status in most of them is poorly understood and a review of areas of suitable habitat is required throughout its range, to determine which are the key sites for its conservation, whether there is a need to upgrade the status of any reserves or to extend their boundaries to include additional areas of forest, whether measures are necessary at some sites to rehabilitate and restore suitable habitat, and whether some new protected areas need to be established (McGowan and Garson 1995, P. J. K. McGowan *in litt.* 1999).

MacKinnon *et al.* (1996) made the following recommendations for the protected areas where this species has been recorded: at Fanjingshan National Nature Reserve, carefully develop buffer zones; at Leigong Shan Nature Reserve, choose a few small areas of remaining good forest and protect well as genepool reserves; at Jiugang Shan Nature Reserve, if possible extend to include more forest; at Guniujiang National Nature Reserve, extend northwards to the outer edge of forests; at Huang Shan Nature Reserve, retain and strengthen protection; at Huang Shan National Forest Park, strengthen protection; at Gutian Shan Nature Reserve, enlarge to c.25 km²; at Wuyanling Nature Reserve, strengthen protection; at Wuyi Shan Nature Reserve, enlarge reserve and link over the border with the Jiangxi (Wuyishan) reserve; at Guanshan Nature Reserve, enlarge the reserve; at Jinggang Shan Nature Reserve, link up with Taoyuandong Nature Reserve in Hunan and Suichuan Chuizhou further south to form part of Nanshan Tiger Conservation Unit, and revegetate where necessary; at Haiyang Shan and Shoucheng Nature Reserves, re-evaluate the reserves. At Leigong Shan Nature Reserve, most attention has been focused on the protection of the threatened tree, *Taiwania flousiana* (Ding Ping *et al.* 1996b), and here and in the other reserves where Elliot's Pheasants occur it is necessary to ensure that management practices are sympathetic to the conservation of this bird and its habitat.

Habitat protection Given that Elliot's Pheasant has such an extensive range, it is necessary to protect its habitat outside nature reserves by controlling logging, and some areas should be declared as no logging zones (Wang Qishan *in litt.* 1997).

Research As described above (and see Remarks 1), further extensive surveys should be conducted throughout the range of this species, with the objective of reviewing the effectiveness of the existing protected-area system for its conservation (and for the conservation of the other threatened forest birds of south-east China: see above), and determining whether new (or modifications to existing) reserves are required. Populations need to be monitored at known sites, and further ecological studies are needed to determine the requirements of this species in various types of forest (McGowan and Garson 1995). Many of these research objectives are being addressed between 1999 to 2002, when this species and its conservation will be intensively studied during a project entitled "Studies on the mechanism of ecological adaptations and conservation strategy of the rare and endangered pheasants in China", funded by the National Natural Science Foundation of China (Zhang Zhengwang 1999).

Education Conservation education and better law enforcement are required to prevent poaching (Wang Qishan *in litt.* 1997), and to help prevent illegal logging in protected areas.

REMARKS (1) Many of the published records of this species (and of other galliforms in mainland China) are given by county, and they often do not include the actual localities where birds were found, the type of records (specimens collected, sight records, reports by local people, etc.), the number of individuals recorded and the dates of the records. Such records are very important for the understanding of the overall distribution of a species, but are of limited value for assessing its conservation status and in helping to decide where to target conservation actions. The collection and publication of more detailed information is necessary to improve understanding of the conservation status of this and other Chinese birds.