

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

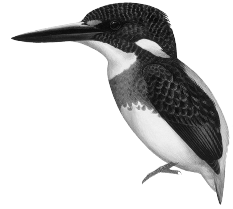
Designed and produced by the **Nature**Bureau, 36 Kingfisher Court, Hambridge Road, Newbury, Berkshire RG14 5SJ, United Kingdom

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.

BLUE-BANDED KINGFISHER

Alcedo euryzona



Critical —
Endangered —
Vulnerable **A1c; A2c**

This kingfisher is largely restricted to lowland forested rivers and, as such, is inferred to have undergone a rapid and continuing population decline as a result of disastrous losses in the extent of this habitat throughout its range. It therefore qualifies as Vulnerable.

DISTRIBUTION The Blue-banded Kingfisher (see Remarks 1) is basically a Sundaic species which ranges from central Myanmar and Thailand through Peninsular Malaysia (see Remarks 2), Borneo and Sumatra to Java; the population on Java is subspecifically distinct (nominata *euryzona*) from the undifferentiated but wide-ranging remaining populations (*peninsulae*; see Remarks 3). Records are from:

■ **MYANMAR** 60 km north of **Taunggyi**, Shan Hills, undated (Wickham 1930–1931); **Kaukarit**, June of an unspecified year (Sharpe and Ogilvie Grant 1892); **Myawadi** (Myawadee), January of an unspecified year (Sharpe and Ogilvie Grant 1892) and Thaungyin (Thoungyeen river), 1878–1879 (Bingham 1880), and Thoungchuyan (or Thoungchuyem), road to Myawadee, January 1877 (male in BMNH); foot of **Nwalabo Reserved Forest** (Mount Nwalabo), April 1878 (female in BMNH; also Hume and Davison 1878); Tatpayarang river, Klong Ngan drainage, **Pakchan**, Mergui district, March 1928 (Smith 1942); **Malewun** (Malewoon), Bankachon, March 1875 (female in BMNH; also Oates 1883); **Bankachon** (Bankasoon), April and May 1877 (two specimens in BMNH; also Hume 1875);

■ **THAILAND** **Kao Luang**, September 1928 (Riley 1938); **Huai Kha Kaeng Wildlife Sanctuary**, undated (*Bird Conserv. Soc. Thailand Bull.* 15,10 [1998]: 8); **Kaeng Krachan National Park** at Thorthip waterfall, Phetchaburi province, March 1991 (specimen in TISTR); **Huai Taken Pho**, May 1992 (U. Treesucon *in litt.* 2000); **Khlong Nakha Wildlife Sanctuary**, August 1981 (P. D. Round *in litt.* 2000); **Surat Thani** (Ban Dohn, Bandon), undated (Robinson 1928); **Kao Nong**, Bandon, June 1913 (two specimens, one labelled as at 350–450 m, in AMNH); **Khao Sok National Park**, Surat Thani province, June 1984 (P. D. Round *in litt.* 2000); **Khao Nor Chuchi** (Khao Pra-Bang Khram Wildlife Sanctuary), Trang, October 1992 (Y. Meekaeo *per* P. D. Round *in litt.* 2000); Gap Patilong, **Trang**, December 1909 (female in BMNH; also Kloss 1911) and Chong and its surrounding hills, Trang, December 1909 (male in BMNH; also Robinson and Kloss 1910–1911); **Khao Banthat Wildlife Sanctuary**, Trang, June 1984 (P. D. Round *in litt.* 2000); **Hala-Bala Wildlife Sanctuary** at Tharn To waterfall (Bala sector), Narathiwat, April 1991 (S. Supparatvikorn *per* P. D. Round *in litt.* 2000); Khlong Saeng Wildlife Sanctuary, Surat Thani, unattributed and therefore provisional record (P. D. Round *in litt.* 2000); Thung Yai Wildlife Sanctuary, Kanchanaburi/Tak provinces, unattributed and therefore provisional record (P. D. Round *in litt.* 2000); Bung Kroeng Kavia Non-Hunting Area (untraced), Kanchanaburi province, March 1988 (A. Kasem *per* P. D. Round *in litt.* 2000); Sadet Nai Kromaluang Chumphon Park (untraced) (Rap Ro Wildlife Sanctuary), Chumphon, June 1985 (P. D. Round *in litt.* 2000); Khaw Sai Dow (Kao Soi Doi) (untraced), Trang, February 1899 (Riley 1938); Seechal (Sichol) (untraced), May 1930 (Riley 1938);

■ **MALAYSIA** ■ **Peninsular Malaysia** **Temengor Forest Reserve**, March 1994 (Davison 1995); **Aring**, Kelantan, August 1899 (Bonhote 1901); **Taiping** on the Larut Hills, Perak, undated (Robinson 1909, 1928, Kloss 1911; hence Forshaw 1985), and several places in “North and

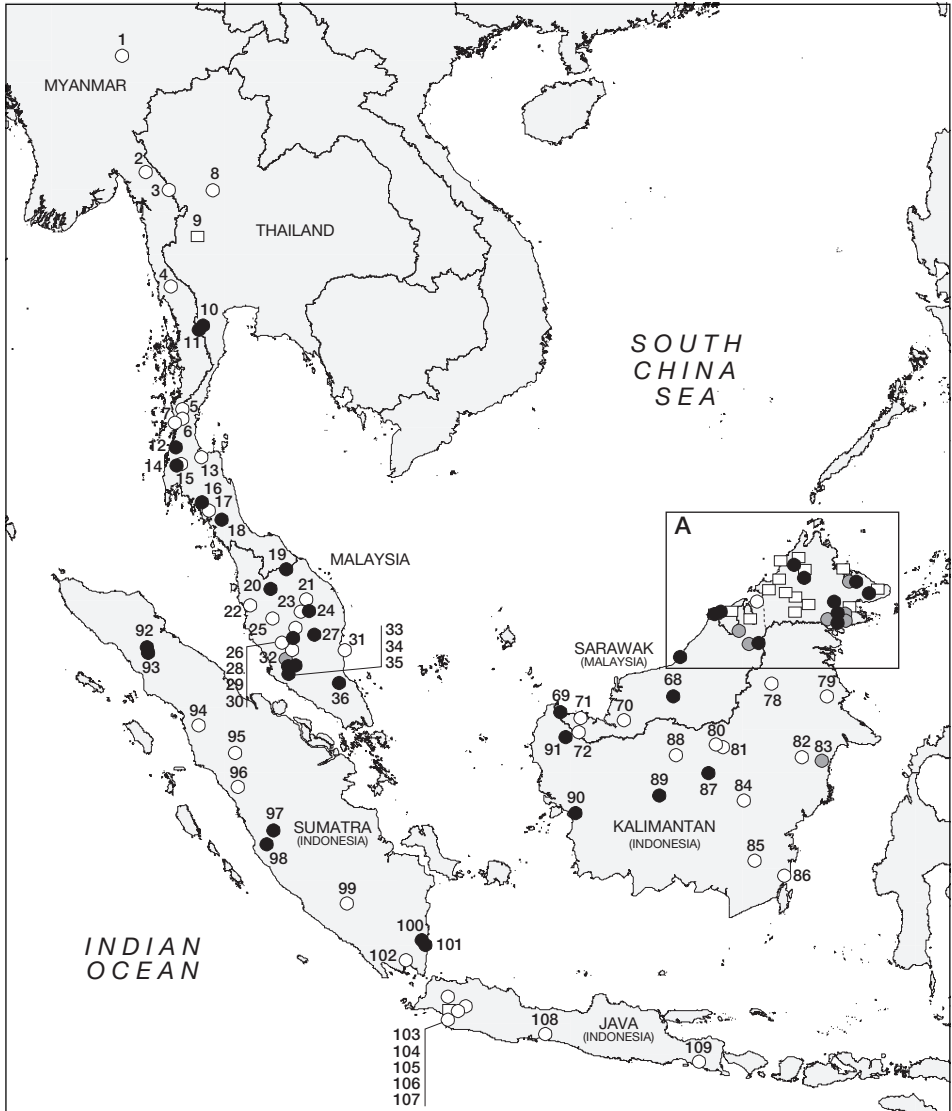
Central Perak”, undated (Robinson and Kloss 1910–1911); at the foot of **Gunung Tahan**, Pahang, undated (Robinson 1928) and foot of Gunung Tahan at Kuala Teku (“not uncommon”), undated (Robinson 1909, Robinson and Kloss 1910–1911); **Taman Negara National Park** on the Sungai Tahan and the Sungai Terengganu, early 1986 (Harrap 1986), Kuala Kenyiam, July 1996 (*Enggang* 4,4: 10); **Lubok Tamang** (“third camps”), Pahang, June 1923 (male in BMNH); near (10 km west of) **Kuala Lipis** (Genting and Punjom), Pahang, May 1910 (Kloss, 1911, Robinson 1928); **Tekam Forest Reserve**, April 1979 to June 1981 (Johns 1986); **Sungai Perdak** (Sungai Perdik), Ulu Langat, Selangor, August 1999 (*Suara Enggang* September–October 1999: 42); **Semangko pass**, near Bukit Fraser, “constantly met” in February 1908 (Robinson 1909; hence Robinson and Kloss 1910–1911); **Bentong**, Pahang, June 1910 (male in BMNH; also Kloss 1911, Robinson 1928); lowlands of **Pahang**, 1901 (Hartert 1902b; date derived from evidence cited under Crestless Fireback *Lophura erythrophthalma*); **Ulu Gombak**, Selangor, 1963, seven ringed (Medway and Wells 1964; hence Wells 1999); **Sungai Kenoh**, Negeri Sembilan, September 1997 (Sebastian 1997), and hill streams in the state earlier in the century (Robinson 1928), including c.24 km north-east of Seremban, around 1911 (Kloss 1911); **Sungai Tekala**, Selangor, October/November 1998 (*Suara Enggang* November–December 1998: 33); **Universiti Kebangsaan Malaysia**, in period 1983–1993 (Ford and Davison 1995); **Sungai Kinchin**, May 1989 (*Enggang* 2,6: 4);

■ **Sabah Mokodau river**, undated (Sheldon *et al.* in press); **Kabayau** (Kabayay), undated (Sheldon *et al.* in press); (foot of) Gunung Kinabalu in presumably what is today **Kinabalu Park**, March 1887 (Sharpe and Whitehead 1889–1890; two specimens, one labelled as at 900 m, in AMNH), and April 1888 (Sharpe and Whitehead 1889–1890; three specimens, all labelled as at 600 m, in AMNH), January 1894 (male in BMNH), up to 1,200 m in recent years (Smythies and Davison 1999); **Muruk**, undated (Sheldon *et al.* in press); **Kabili-Sepilok Forest Reserve**, undated (Sheldon *et al.* in press); **Kaingaran**, undated (Sheldon *et al.* in press); near **Kipungit waterfall**, September–October 1991 (Verbelen 1991); **Kidukarok river**, undated (Sheldon *et al.* in press); **Gomanton** (Gomantong), 150 m, April 1956 (male in BMNH); **Sukau**, August 1996 (C. F. Brooks *in litt.* 1999); **Rinangisan**, undated (Sheldon *et al.* in press); **Saliwangan**, undated (Sheldon *et al.* in press); **Keningau**, undated (Sheldon *et al.* in press); Labau river, **Lumerau**, undated (Sheldon *et al.* in press); **Ulu Tiulon**, undated (Sheldon *et al.* in press); **Tabin Wildlife Reserve**, September/October 1988 (Goh *et al.* 1989); **Silabukan**, undated (Sheldon *et al.* in press); **Danum Valley Conservation Area**, July 1986 (Smith 1986), June 1998 (I. Mauro *in litt.* 1999), including Ulu Segama Forest Reserve, between May 1989 and October 1990 (Lambert 1992), and Bole river, undated (Sheldon *et al.* in press); **Maliau**, undated (Sheldon *et al.* in press); **Madai**, undated (Sheldon *et al.* in press); **Simatuoh**, undated (Sheldon *et al.* in press); **Kalabakan Forest Reserve**, May–July 1982 (Mitra and Sheldon 1993); **Gunung Magdalena**, 300 m, June 1956 (female in BMNH); 18 km north of **Kalabakan**, October 1962 (Thompson 1966); **Quoin hill** at the Cocoa Research Station, 220 m, Tawau, September 1962 (Thompson 1966; male in USNM); **Brumas**, March 1982 (Sheldon *et al.* in press);

■ **Sarawak Lawas river**, undated (Sharpe 1876–1879); **Gunung Mulu National Park**, 50 m, April–May 1978 (Wells *et al.* 1978); **Bario**, Kelabit plateau, 1,400 m, April 1948 (male in AMNH, this probably the record in Smythies 1957), and April 1995 (Gregory-Smith 1996); **Kubaan river**, Tutoh, 400–600 m, February 1965 (Fogden 1976); **Similajau National Park**, September 1995 (Duckworth *et al.* 1996); **Pelagus rapids**, April 1996 (Gregory-Smith 1997); **Gunung Gading National Park**, April 1997 (Sreedharan 1998); **Anyut**, Paku, Seribas, in the south-west, November 1916 (male in BMNH); Matang river, near **Kuching**, undated (Banks 1935a); **Pangkalan Ampat**, July 1892 (male in AMNH); Gunung Silikan (untraced), 600 m, July 1895 (male in BMNH);

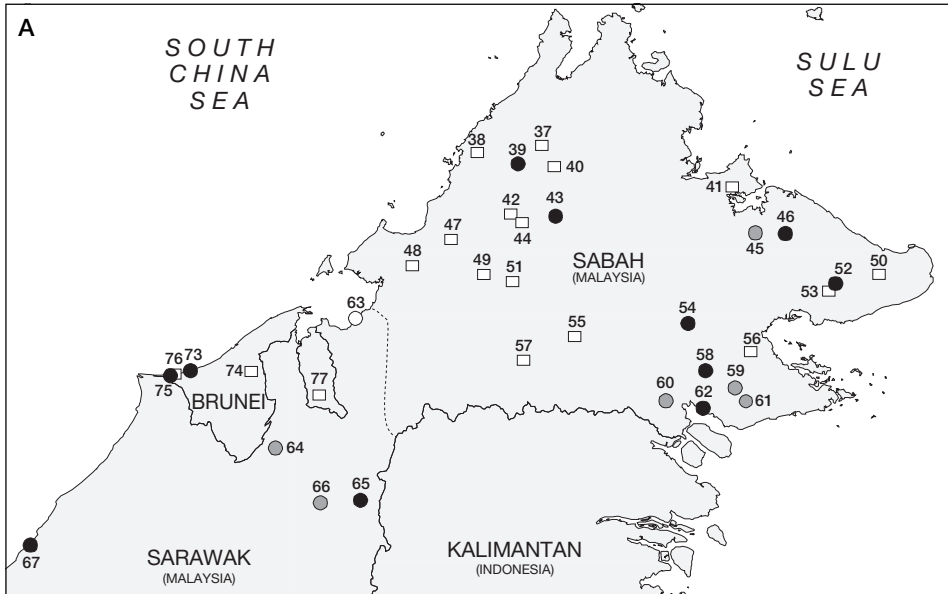
■ **BRUNEI Seria**, January 1989 (Mann 1991); **Sungai Benutan**, undated (Mann 1987); **Kuala Belait**, October 1990 (Mann 1991); **Ulu Belait**, undated (Mann 1987); **Ulu Temburong National Park** (see Measures Taken), undated (Mann 1987);

■ **INDONESIA Kalimantan** ■ **East Kalimantan Badang**, on the Bahau river in the Bulungan/Kajan system, early May/early July 1935 (Stresemann 1938a), this presumably fairly near camp 3 north of Mandurau (untraced), on the Bulungan (or Kajan) river, early 1914 (Voous 1961); **Sungai Birang**, September 1912 (male in USNM); **Long Kay**, April/May 1916 (Voous 1961); Long Blu on the **Sungai Blu**, Upper Mahakam, 1896 or 1897 (Büttikofer 1899); **Sungai Telen**, 1925 (Kloss 1930a); **Kutai National Park**, “uncommon”, July–September 1974 (Pearson 1975); Sungai Mahakam, at the confluence of the Blu and Bluve (Long Bloe) rivers, therefore near to present-day **Batukelau** 200 m, October–December 1899 (Finsch 1900, 1905); Mitgoan (untraced but in eastern Borneo), May 1941 (male in MZB); Miou (untraced but in eastern Borneo), May 1941 (male in MZB); ■ **South Kalimantan Mindai**, near **Barabai**, around 1881



(Blasius 1884a,b); **Klumpang bay**, March 1908 (specimen in USNM); ■ **Central Kalimantan** above **Muara Joloi** at the confluence of the Busang and Murung rivers, 150–200 m, Barito Ulu (Barito river headwaters), July–September 1989 (Wilkinson *et al.* 1991a,b); ■ **West Kalimantan Gunung Liang Kubung**, between 780 and 1,135 m, March/May 1894 (Büttikofer 1899); **Bukit Raya Nature Reserve** at Utbalang, 750 m, May 1994 (male in MZB); **Gunung Palung National Park** at Cabang Panti, 1986–1995 (Laman *et al.* 1996); **Gunung Niut Nature Reserve**, 1986 (Simons 1986);

Sumatra ■ **Aceh upper Mamas valley**, “uncommon along streams and rivers in forested hills and mountains up to 1,250 m”, 1980s (van Marle and Voous 1988); **Kotacane**, Ketambe, Gunung Leuser National Park, October 1981 (specimen in MZB); ■ **North Sumatra** Panobasan



The distribution of Blue-banded Kingfisher *Alcedo euryzona* (main map opposite; map A above):

- (1) Taunggyi; (2) Kaukarit; (3) Myawadi; (4) Nwalabo Reserved Forest; (5) Pakchan; (6) Malewun; (7) Bankachon; (8) Kao Luang; (9) Huai Kha Kaeng Wildlife Sanctuary; (10) Kaeng Krachan National Park; (11) Huai Taken Pho; (12) Khlong Nakha Wildlife Sanctuary; (13) Surat Thani; (14) Kao Nong; (15) Khao Sok National Park; (16) Khao Nor Chuchi; (17) Trang; (18) Khao Banthat Wildlife Sanctuary; (19) Hala-Bala Wildlife Sanctuary; (20) Temengor Forest Reserve; (21) Aring; (22) Taiping; (23) Gunung Tahan; (24) Taman Negara National Park; (25) Lubok Tamang; (26) Kuala Lipis; (27) Tekam Forest Reserve; (28) Sungai Perdak; (29) Semangko pass; (30) Bentong; (31) Pahang; (32) Ulu Gombak; (33) Sungai Kenoh; (34) Sungai Tekala; (35) Universiti Kebangsaan Malaysia; (36) Sungai Kinchin; (37) Mokodau river; (38) Kabayau; (39) Kinabalu Park; (40) Muruk; (41) Kabili-Sepilok Forest Reserve; (42) Kaingaran; (43) Kipungit waterfall; (44) Kidukarok river; (45) Gomanton; (46) Sukau; (47) Rinangisan; (48) Saliwangan; (49) Keningau; (50) Lumerau; (51) Ulu Tiulon; (52) Tabin Wildlife Reserve; (53) Silabukan; (54) Danum Valley Conservation Area; (55) Maliau; (56) Mada; (57) Simatuoh; (58) Kalabakan Forest Reserve; (59) Gunung Magdalena; (60) Kalabakan; (61) Quoin hill; (62) Brumas; (63) Lawas river; (64) Gunung Mulu National Park; (65) Bario; (66) Kubaan river; (67) Similajau National Park; (68) Pelagus rapids; (69) Gunung Gading National Park; (70) Anyut; (71) Kuching; (72) Pangkalan Ampat; (73) Seria; (74) Sungai Benutan; (75) Kuala Belait; (76) Ulu Belait; (77) Ulu Temburong National Park; (78) Badang; (79) Sungai Birang; (80) Long Kay; (81) Sungai Blu; (82) Sungai Telen; (83) Kutai National Park; (84) Batukelau; (85) Barabai; (86) Klumpang bay; (87) Muara Joloi; (88) Gunung Liang Kubung; (89) Bukit Raya Nature Reserve; (90) Gunung Palung National Park; (91) Gunung Niut Nature Reserve; (92) upper Mamas Valley; (93) Kotacane; (94) Padangsidempuan; (95) Kayutanam; (96) Padang Highlands; (97) Gunung Tujuh region; (98) Muara Sako; (99) Lahat; (100) Way Kambas National Park; (101) Pos Way Kanan; (102) Telukbetung; (103) Jasinga; (104) Cimarinjung; (105) Pelabuhanratu; (106) Cikahuripan; (107) Gunung Gede-Pangrango; (108) Rampoa; (109) Kali Sanen.

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

(near **Padangsidempuan**), Tapanuli, May 1939 (two specimens in MZB); ■ **West Sumatra Kayutanam**, August–September 1878 (Salvadori 1879); **Padang Highlands**, “uncommon over 1,500 m” undated (Robinson and Kloss 1924); **Gunung Tujuh region**, August 1987 (D. A. Holmes *in litt.* 1999); **Muara Sako** (close to and possibly inside Kerinci-Seblat National Park), below 200 m, August 1987 (Holmes 1996); ■ **South Sumatra Lahat**, nineteenth century (male in MZB; also Kloss 1931), and in mangrove habitats in unspecified areas (unmapped) in March 1989 (Verheugt *et al.* 1993); ■ **Lampung Way Kambas National Park** at the headquarters (outside the park), July 1991 (Heath 1991, Holmes unpublished 1993); upstream of **Pos Way Kanan**, July 1991 (Parrott and Andrew 1996), August 1993 (Parrott and Andrew 1996); between **Telukbetung** and Sukadana, 1876 (Tweeddale 1877c);

Java ■ **West Java Jasinga**, November 1827 (Schlegel 1862–1873); **Cimarinjung**, Preanger, November 1902 (Forshaw 1985); Wijnkoops Bay (**Pelabuhanratu**), Sukabumi, undated (Bartels 1906, Robinson and Kloss 1924b); **Cikahuripan**, Preanger, May 1923, with eggs from March (Hellebrekers and Hoogerwerf 1967, Forshaw 1985); **Gunung Gede-Pangrango**, 1,500 m, October 1898 (female in AMNH), May–June 1899 (Forshaw 1985), and evidently year-round at that time (see Bartels 1902, 1906); ■ **Central Java Rampoa** (“near a waterfall”), South Seraju mountains, June 1925 (Voous 1948); ■ **East Java** tributaries of the river **Kali Sanen**, southern mountains, including July 1937 (Kooiman 1940).

Several localities on Borneo (Kayan Mentarang, Muara Wahau and Kintap) are mentioned, with sources, in Smythies and Davison (1999) but the sources in question do not appear to confirm them.

POPULATION The assessment of status in this species is problematic, since assertions of its rarity are usually matched by remarks about its secretiveness. On Borneo it has been characterised as locally common but elsewhere generally scarce, particularly at the extremities of its range (Forshaw 1985), also as not uncommon in the lowlands and the Kelabit uplands (Smythies 1957, 1981). However, as a stream-haunting kingfisher its distribution and populations are linear and hence constrained; moreover, habitat destruction in the level lowlands and adjacent low hills in the Sundaic region (see Threats) must have caused a marked and continuing regression in numbers.

Myanmar W. Davison found it “not very uncommon” and in one place (Nwalabo) “comparatively common”, but everywhere “exceedingly shy” (Hume and Davison 1878); Bingham (1880) likewise referred to its “extreme wariness”, and Wickham (1929–1930) dubbed it “rare and shy”. There appear to be no modern records or assessments.

Thailand Robinson and Kloss (1910–1911), although judging it “nowhere common”, explained its rarity in collections not as a biological condition but through its “extreme wariness and shyness”.

Malaysia Peninsular Malaysia Even 70 years ago the species was “by no means common” (Chasen 1939a) and “everywhere a rare bird” (Robinson 1928). Today it is described as “a tough bird to find away from Taman Negara” (*Suara Enggang* November–December 1998: 33). Wells (1999) noted that pairs are widely spaced along rivers and probably territorial, and that constant-effort mist-netting sites along one river showed that never more than one pair, and possible offspring, were taken in any one year.

Sabah In the late 1880s J. Whitehead found it “sparingly” on streams draining from Kinabalu but considered it “very shy” (Sharpe and Whitehead 1889–1890). Thompson (1966) judged it “fairly common along streams deep in the primary forest at Quoin Hill”, and this helped influence its general assessment as “resident and fairly common along rivers and streams deep in primary forest in the lowlands up to 2,000 ft” (Gore 1968). Sheldon *et al.* (in press) confirm this, noting that the species is “more commonly netted than seen” and, on the basis of netting records, proves fairly common along rivers in primary forest.

Sarawak Banks (1935a) considered it “really quite a common bird if looked for in the right places, far up stream in some headwaters”, attributing its rarity in collections to the difficulty of shooting birds, since they fly up- or downstream at the first disturbance. Fogden (1976) reported the species common (defined as “seen regularly in small numbers”) in the Tutoh headwaters, northern Sarawak, in early 1965.

Indonesia Kalimantan In the south-east Grabowsky (1885) called it rare, but it is considered “common” in Gunung Palung National Park, Kalimantan (Laman *et al.* 1996).

Sumatra In southern Sumatra the words “extreme rarity” were used about this species based on fieldwork in 1876 (Tweeddale 1877c). It is now regarded as uncommon, still with no breeding record (van Marle and Voous 1988).

Java On Java it was judged “certainly not a common species” (Hellebrekers and Hoogerwerf 1967) and “always rare” (van Balen 1987).

ECOLOGY Habitat The Blue-banded Kingfisher is a “wild, restless” but sedentary bird of mid-sized (although “small” in Smythies 1981), permanently flowing (hence clear) rocky and shingly streams, both under and breaking the canopy, within lowland and low foothill tropical evergreen and semi-evergreen forest and back mangroves, apparently generally reaching no higher than 850 m, although as high as 1,250 m in the Kelabit uplands and 1,400 m in Sabah (Hume and Davison 1878, Bartels 1906, Robinson and Kloss 1910–1911, Chasen 1939a, Smythies 1981, Forshaw 1985, Harrap 1986, Wells 1999, Sheldon *et al.* in press; also Sharpe and Whitehead 1889–1890, Pearson 1975) and even (*contra* 900 m in Sody 1956) 1,500 m in the Padang highlands, Sumatra, and on Gunung Gede-Pangrango, Java (see Distribution). On Gunung Mulu it was found in mixed dipterocarp forest with widely spaced trees and an open understorey (Wells *et al.* 1978). It is chiefly a bird of primary forest areas but may be found in logged forest; however, in more open areas it tends to be replaced by the Blue-eared Kingfisher *Alcedo meninting* (Sheldon *et al.* in press; also Johns 1986, 1989).

It seemingly has its core habitat at the lowland/foothill interface. Thus, referring to the Malay Peninsula, Robinson (1928) indicated it is “not found in low flat country or near the sea”, while Chasen (1939) defined it as a “bird of submontane heavy forest, in which it follows the rapidly flowing streams into the adjacent lowland forest... [and] is never found far from mountains”. In Java Bartels (1902) reported it nesting on a mountain stream at 1,000 m. In Borneo Grabowsky (1885) described it as only on streams in the hills, J. Whitehead implied the same when he wrote that the species is found “on the rocky streams which come from Kina Balu” (Sharpe and Whitehead 1889–1890), and Smythies (1957) typified it as a bird of “streams in old jungle in the lowlands, especially small streams in the headwaters of rivers”. MacKinnon and Phillipps (1993) described it as “probably predominantly submontane”. However, Wells (1999) generalised habitat in continental areas as extending into lowland areas and explicitly challenged the above notions: “the widely held view that this kingfisher is most abundant on hill-streams probably cannot be sustained, although it happens to be the only *Alcedo* in that habitat”. It has only been recorded in lowland (not swamp or upland) forest in Gunung Palung (Laman *et al.* 1996).

J. Whitehead reported that at one site he found a pair whose daily routine began with a flight upstream in the half-light of early dawn, the birds returning an hour or so later, flying low over the water and cutting corners through the forest (Sharpe and Whitehead 1889–1890).

Food The stomach of two birds contained the remains of small fish (Finsch 1905) and W. Davison judged the species to live entirely on fish (Hume and Davison 1878); this is also the view of Wells (1999), based on bill morphology. However, although the importance of fish is generally confirmed by other records, crustaceans (Chasen 1939a), lizards and insects (Smythies 1981) are also taken, the last being hunted from a perch both in the air and on the ground (Vowles and Vowles 1997).

Breeding In continental Asia, nests with 4–5 eggs, Malaysian Peninsula, were placed in the banks of small streams in dense forests at 300–600 m, in February (Robinson 1928; see Remarks 4); eggs are also recorded from the Peninsula in June (Forshaw 1985). Nest-building in the banks of a creek was under way, April and May, in southernmost Myanmar (Hume and Davison 1878). On the Greater Sundas a female with an enlarged oviduct and granular ovary was taken in Sabah in March (Sheldon *et al.* in press), an immature bird, Kelabit uplands (Sarawak), dates from April (in AMNH), a pair were carrying food in a way that suggested they had young in the nest, August, Brunei (Vowles and Vowles 1997), and three moulting immatures, West Sumatra, were taken in late August and early September (Salvadori 1879). Eggs are recorded for March and nestlings for June, Java (Hellebrekers and Hoogerwerf 1967, Forshaw 1985), and a pair with young had nested at c.1,000 m along a mountain stream on Pangrango (Bartels 1902).

THREATS Deforestation in the Sundaic lowlands—biologically one of the most diverse biomes of the world—has proceeded at catastrophic speed in the past few decades, seriously compromising the future of every one of the uncountable multitude of primary-forest life-forms in the region, including that of this particular species, even inside key protected areas (for an outline of the crisis, see Threats under Crestless Fireback *Lophura erythrophthalma*). Wells (1999) judged that core habitat of the Blue-banded Kingfisher has still not been defined, and that, even if forested streams on hill slopes prove to be important for it, no larger streams escape the impact of logging (i.e. on water quality and hence on prey species or prey accessibility). Moreover, huge areas of low montane forest in Kalimantan against the Sarawak border have been parcelled out as mining concessions (B. F. King verbally 1998), and in some areas (e.g. Taman Negara National Park, Peninsular Malaysia) increasing riverine traffic may now be creating levels of disturbance to which this species is intolerant (R. F. A. Grimmett *in litt.* 2000).

MEASURES TAKEN The only conservation this species has experienced is through protected areas (in which category “forest reserves” do not fall). It has been recorded from the following protected areas: *Thailand* Bung Kroeng Kavia Non-Hunting Area, Kaeng Krachan and Khao Sok National Parks, and Huai Kha Kaeng, Rap Ro, Khlong Nakha, Khao Pra-Bang Khram, Khao Banthad and Hala-Bala Wildlife Sanctuaries; *Peninsular Malaysia* Taman Negara National Park; *Sabah* Danum Valley Conservation Area; *Sarawak* Gunung Mulu, Gunung Gading and Similajau National Parks (but Gunung Gading is small, isolated, damaged and illegally occupied to the point that in 1997 further survey work was not being countenanced: Sreedharan 1998); *Brunei* Ulu Temburong (Batu Apoi) National Park (see Dawn 1993); *Kalimantan* Kutai National Park, Gunung Niut Nature Reserve and Gunung Palung National Park; *Sumatra* Gunung Leuser and Way Kambas National Parks, with the consideration that Muara Sako may be in or near Kerinci-Seblat National Park (see Distribution under Sumatran Ground-cuckoo *Carpococcyx viridis*); and *Java* Gunung Gede-Pangrango National Park (see Distribution).

MEASURES PROPOSED Urgent concerted survey of and conservation effort for major tracts of extreme lowland primary forest in the Sundaic region is called for in the equivalent section under Crestless Fireback.

The ecology of the Blue-banded Kingfisher needs to be clarified through studies of population density, breeding success, feeding patterns, dispersal and survival in a number of carefully evaluated primary and secondary habitats at different elevations. In particular, its response to habitat disturbance through logging needs evaluation (Wells 1999). The results of this work will allow for improved reserve design and habitat management in all future efforts to secure viable populations of the species.

REMARKS (1) The scientific name of this species is now stable, but Laubmann (1942) called it *euryzonia* based on a first emendation (1838) of an original *cryzona* (1830), although *euryzonia* was replaced by *euryzona* in 1847. (2) Wells (1999) noted that, of the 27 political divisions in the “Thai-Malay Peninsula”, this species had been recorded from 16, namely Pakchan, Chumphon, Ranong, Surat Thani, Phangnga, Nakhon Si Thammarat, Phatthalung, Trang, Satul, Narathiwat, Kedah, Kelantan, Perak, Pahang, Selangor and Negeri Sembilan; there is apparently a doubtful record from Melaka (Kumar 1999). (3) Laubmann (1942) considered birds from Sumatra to belong to the nominate race, not to his *peninsulae*; Bartels (1938) regarded Sumatran birds as intermediate, while Chasen (1935), using the name *nigricans* for continental birds, thought that the nominate included all the Sundaic islands. This circumstance appears unsatisfactory and further work on the taxonomy of the species is desirable. (4) In noting that this record stems from E. C. S. Baker, Wells (1999) demoted it to tentative only (see Remarks 2 under Grey-crowned Prinia *Prinia cinereocapilla*).