

# Threatened Birds of Asia:

## The BirdLife International Red Data Book

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## CHINESE EGRET

### *Egretta eulophotes*

Critical  —  
Endangered  —  
Vulnerable  C1



*This migratory colonial waterbird has a small, declining population, principally as a result of the reclamation of tidal mudflats and estuarine habitats for industry, infrastructure development and aquaculture. These factors qualify it as Vulnerable.*

**DISTRIBUTION** The Chinese Egret breeds in the Russian Far East, North Korea, South Korea and mainland China, and is a passage and/or winter visitor to Japan (where nesting has been attempted), Hong Kong (where it formerly nested), Taiwan (where it was reported to breed in the nineteenth century), Thailand, Vietnam, the Philippines, Malaysia, Singapore, Brunei and Indonesia (Sumatra, Java, Kalimantan and Sulawesi) (see Remarks 1). It is an accidental visitor to the Aleutian islands in the USA (AOU 1998), but records from the Mentawai islands, West Sumatra (Chasen 1935) and Christmas island (to Australia) (Sharpe 1898; also Chasen 1933, 1935, Gibson-Hill 1949) were based on misidentified specimens (Wells 1999). Old reports from India and Myanmar were possibly also based on misidentifications, although they could also indicate that the wintering range of the species extends further to the west than is currently known (see Remarks 2).

■ **RUSSIA** The historical status of this species in the Russian Far East is unclear (see Remarks 3), but it is now a fairly regular visitor to the coast and islands in Primorye, where breeding has recently been proved, and it has also been recorded in Khabarovsk. Records (by province) are as follows:

■ **Khabarovsk Bol'shoy Shantar island** (Ostrov Bolshoy Shantar, Bolshoi Pelis island), Sea of Okhotsk, 1956–1957 (Lansdown 1990);

■ **Primorye** Kuznetsova river mouth, **Olimpiady Cape** (Cape Olympiad) (Mys Olimpiady, Cape Olimpiada), eastern slopes of Sikhote-Alin mountains, female collected, June 1915 (Vorob'ev 1954; also Dement'ev and Gladkov 1951–1954); **Sikhote-Alin' State Reserve**, eastern slopes of Sikhote-Alin mountains, one, April 1977, pair, June 1977 (Elsukov 1981); **Ol'ga bay**, eastern slopes of the Sikhote-Alin' mountains, 1956–1957 (Lansdown 1990), single birds, pairs or flocks of up to nine birds regularly recorded, April–July 1973–1988 (Labzyuk 1981, 1990); **Amur bay**, De Friz peninsula, Peter the Great bay, singles seen, June 1952, June 1955, May 1957, May 1959 (Omel'ko 1962); **Vladivostok**, one at a small lake, May 1978 (Nazarov and Kurinnyi 1981); **Mongugay river** (Mangugay river), Amur Gulf, one collected, undated (Vorob'ev 1954 in Murton 1972); islands in Peter the Great bay, regularly recorded in small numbers, undated (Labzyuk and Nazarov 1967, Labzyuk *et al.* 1971), including **Furugelm island**, Peter the Great bay, 30–40 pairs nesting, a total of 35 chicks fledged from 14 of the nests, summer 1998 (Litvinenko and Shibaev 1999a); near **Tumen river mouth** (Tumangan river), Peter the Great bay, May–June (unspecified year) (Nazarov and Kurinnyi 1981), birds from the breeding colony on Furugelm island feeding along the coast between the Tumen river mouth and Pos'yet bay (Possiet bay), 1998 (Litvinenko and Shibaev 1999a).

■ **JAPAN** The first confirmed record of Chinese Egret in Japan was in 1956, but it has now been recorded in almost all coastal regions of the country and is regarded as an uncommon non-breeding visitor, mainly between April and October with a few winter records in the south. It has made an unsuccessful breeding attempt in Ishikawa prefecture, and breeding has also been suspected in Miyagi prefecture. Records (by island and prefecture) are as follows:

**Hokkaido Nemuro**, undated (Wildlife Information Center, Hokkaido 1985); **Furen-ko** lake, Nemuro, almost annual in April–July in the 1970s and 1980s (Brazil 1991; also Scott 1989); **Shunkunitai**, Nemuro-shi, almost annual in April–July in the 1970s and 1980s (Brazil 1991), one, June 1994 (*Birder* 94/9); lower **Ishikari-gawa** river, Ebetsu-shi, one, June 1987 (WBSJ 1987); **Otaru-shi**, one, April 1995 (WBSJ 1998); **Ishikari**, undated (Wildlife Information Center, Hokkaido 1985);

**Honshu** ■ **Aomori** Jusan-ko lake, **Shiura-mura**, Kitatsugaru-gun, two, September 1995 (WBSJ 1997a), single birds, May 1998 (Y. Yajima *in litt.* 1998); ■ **Iwate Unozumai-gawa river mouth**, Kamaishi-shi, one, May 1987 (WBSJ 1987), one, May 1989 (WBSJ Miyako Chapter database); ■ **Miyagi Gamo lagoon**, Sendai-shi, possibly bred, as fledged juveniles were photographed, but no nest was found, July 1990 and July 1991 (WBSJ Miyagi Chapter 1992, N. Moores *in litt.* 1997); Torinoumi, **Watari-cho**, Watari-gun, August 1991 (WBSJ Miyagi Chapter 1992); ■ **Akita** unspecified localities, undated (OSJ 2000); ■ **Ibaraki** unspecified localities, undated (OSJ 2000); ■ **Chiba Funabashi** seaside park, Funabashi-shi, one (in summer plumage), August 1998 (*Birder* 98/10); **Gyotoku**, Ichikawa-shi, one (in summer plumage), August 1998 (*Birder* 98/10); **Yatsu tidal flat**, Narashino-shi, single birds, July 1994 and 1995 (*Birder* 94/10, 95/10); ■ **Tokyo Kasai** seaside park, Edogawa-ku, adult seen, July 1998 (*Birder* 98/10); ■ **Kanagawa Tama-gawa river mouth**, Kawasaki-shi, juvenile, July 1993 (*Birder* 93/9), singles seen, July–August 1995 (*Birder* 95/10), one, October 1996 (*Birder* 97/1), one, July 1999 (*Birder* 99/9); **Sagami-gawa river mouth**, one (in summer plumage) photographed, June 1982 (WBSJ Kanagawa Chapter 1995); ■ **Niigata Sado island**, April 1973 (Brazil 1991, OSJ 2000); near **Joetsu-shi** (Joetsu), one, September 1990 (Nakamura 1994); ■ **Toyama Kurobe-gawa river mouth**, Kurobe-shi, July 1995 (WBSJ Toyama Chapter database); Shimao, **Himi-shi**, September 1986 (WBSJ Toyama Chapter database); **Katakai-gawa river mouth**, Uozu-shi, June 1993 (WBSJ Toyama Chapter database); **Sho-gawa river mouth**, Shinminato-shi, October 1986, June 1990 (WBSJ Toyama Chapter database); **Horioka**, Shinminato-shi, late March 1987, August 1988, August 1990, July–August 1991 (WBSJ Toyama Chapter database); Kawaguchi, **Shimminato-shi**, June 1986, May 1987, June 1988, May 1989 (WBSJ Toyama Chapter database); Amaharashi, **Takaoka-shi**, October 1986 (WBSJ Toyama Chapter database); **Joganji-gawa**, Toyama-shi, July 1991 (WBSJ Toyama Chapter database); ■ **Ishikawa Hegura-jima** island, May 1986 (Brazil 1987, 1991); **Nishi-wan**, Nanao-shi, two, May–August 1986 (WBSJ 1987); **Tatsuruhama-cho**, nest built and egg laid, but did not hatch, 1986 (Brazil 1991), pair present in the same colony for about one month in 1996, but no nesting recorded (Tokiguni and Miura *per* N. Moores *in litt.* 1997); ■ **Shizuoka Fuji-gawa river mouth**, Fuji-shi, one (in summer plumage), May 1999 (*Birder* 99/7); **Hamana-ko** lake, Nakano-shima island, Maisaka-cho, Hamana-gun, one, October 1995 (WBSJ Totomi Chapter database); ■ **Aichi** Shiokawa-higata, **Tahara-cho**, Atsumi-gun, one, May 1993 (*Birder* 93/7); ■ **Osaka Osaka** (Osaka-nanko Bird Park), Suminoc-ku, one, August 1996, one, May 1997 (*Birder* 96/11, 97/7); southern **Osaka bay**, at least three seen and female collected, April–June 1956, the first confirmed record of this species in Japan (Kobayashi 1956); **Kashii-gawa river mouth**, Sennan-shi, one, May 1994 (*Birder* 94/7); ■ **Wakayama Hidaka-gawa river mouth**, Goboshi, July 1985 (WBSJ 1986); Aizu-gawa river mouth, **Tanabe-shi**, one, August 1993 (WBSJ Wakayama Chapter 1995); ■ **Tottori Karo-ko** (Karo-kaigan) coast, Tottori-shi, April 1995 (WBSJ Tottori Chapter database); **Kaseichi-gawa river mouth**, Otsuka, Tohaku-cho, Tohaku-gun, June 1990 and 1991 (WBSJ Tottori Chapter database); ■ **Shimane Inashi-gawa river mouth**, Ijima-cho, Yasugi-shi, one, June–September 1993, one, June 1994 (*Birder* 93/12, 94/8), one, June 1996 (WBSJ Tottori Chapter database); **Hii-gawa** river, Hirata-shi, one, November 1993 (*Birder* 94/2); ■ **Hiroshima Yawata-gawa river mouth**, Nishi-ku, Hiroshima-shi, one, April 1990 (WBSJ Hiroshima Branch 1998); Mitarai-gawa river mouth, **Hatsukaichi-cho** (Hatsukaichi-shi), one, September 1977 (WBSJ Hiroshima Branch 1998); **Kurose-gawa river mouth**, Kure-shi, one, December 1979 (WBSJ Hiroshima Chapter database); Agaminami, **Kure-**

**shi**, one, July 1975 (WBSJ Hiroshima Branch 1998); **Hironishi-oogawa river mouth**, Kure-shi, one, December 1975 (WBSJ Hiroshima Branch 1998); ■ **Yamaguchi Mi-shima** island, Hagi-shi, May 1988 (WBSJ Yamaguchi Chapter database), May 1998 (WBSJ Kitakyushu Chapter database); Yahara Park, **Yamaguchi-shi**, one, April 1995 (WBSJ 1997a); Minami-iwakuni, **Iwakuni-shi**, four, April 1986 (WBSJ 1986); **Tokuyama-shi**, one, April 1996 (WBSJ 1997a);

*Shikoku* ■ **Tokushima Yoshino-gawa river mouth**, Tokushima-shi, two, July 1993 (*Birder* 93/9), and August 1997 (WBSJ Tokushima Chapter database); **Katsuura-gawa river mouth**, Tokushima-shi, July 1987 (WBSJ Tokushima Chapter database); ■ **Ehime Kamo-gawa river mouth**, Saijo-shi, singles, June 1993, May 1996, May 1997 (WBSJ Ehime Chapter database) and September 1998 (*Birder* 98/12); **Shigenobu-gawa river mouth**, Masaki-cho, Iyo-gun and Matsuyama-shi, one, June–September 1997, one, June 1998 (WBSJ Ehime Chapter database, *Birder* 98/9);

*Kyushu* ■ **Fukuoka Sone tidal flat**, Kokuraminami-ku, Kitakyushu-shi, two, April 1995, one, May 1997, one, April 1998 (K. Samoto *in litt.* 1998), one, July 1999 (*Birder* 99/9); **Tsu Yazaki**, one to two, mid-summer 1992 (N. Moores *in litt.* 1997); **Tsuiki-machi**, Chikujogun, one, April 1995 (Morimoto and Tamada *in litt.* 1998); **Hakata bay**, adults seen from May–October 1992 and two juveniles seen in July (one stayed until October), suggesting possible breeding in northern Kyushu (N. Moores *in litt.* 1997), and indeed present annually from April to July, but no breeding or courtship display behaviour observed (S. Nakamura *in litt.* 1997), singles at Imazu (in Hakata bay), Nishi-ku, Fukuoka-shi, May 1993 and August 1994 (*Birder* 93/8, 94/11), at Wajiro (in Hakata bay), Higashi-ku, Fukuoka-shi, recorded in the 1970s (Brazil 1991), one, May 1993 (in summer plumage), one, May 1997 (*Birder* 93/7, 97/8); **Maebaru-shi**, one, May–June 1995 (WBSJ 1997a); ■ **Saga Daijyu-garami, Saga-gun**, singles, May–June 1995 (Wild Bird Society of Saga 1997), one young bird seen in late May 1999 (*Birder* 99/8); **Kashima-shi**, summer 1986 (Wild Bird Society of Saga 1997); ■ **Nagasaki Sago**, Kamiagata-cho, Kamiagata-gun, one, May 1993 (*Birder* 93/7); Mine-gawa river, **Tsushima** island, one, May 1986 (WBSJ 1986); **Ikitsuki-jima** island, Ikitsuki-cho, Kitamatsuura-gun, one, April 1996 (*Birder* 96/8); **Danjo islands**, undated (OSJ 2000); ■ **Kumamoto Kami-jima** island, Hondo-shi, one, April 1986 (WBSJ 1986); ■ **Oita Katano, Kitsuki-shi**, singles, March 1995, August 1995, October 1995, November 1995, July 1996 (*Birder* 95/6, 95/10, 95/12, 96/2, 96/10), one at Yasaka-gawa river mouth, Kitsuki-shi, February 1995 (*Birder* 95/5); ■ **Miyazaki** unspecified localities, undated (OSJ 2000); ■ **Kagoshima Taniyama**, Kagoshima-shi, one, June 1996 (*Birder* 96/9); Oura-kantaku, Oura-cho, **Kawanabe-gun**, three, April 1995 (*Birder* 95/7);

*Nakano-shima* island, Tokara islands, up to four, May 1994 (*Birder* 94/7, 94/8);

*Takara-jima* island, Tokara islands, up to four, April–June 1998 (*Birder* 98/9, Anezaki 1999);

*Amami-ooshima* island, Ose coast, **Kasari peninsula**, one, June 1991 (Ishida 1992), singles, May 1996, June 1998 (*Birder* 96/8, 98/7); **Naze-shi**, one (in summer plumage), May 1996 (*Birder* 96/7); **Akina**, Tatsugo-cho, one, May 1995 (*Birder* 95/8), one (in summer plumage), May–June 1996 (*Birder* 96/8, 96/9);

*Okinawa* island, **Awase**, Okinawa-shi, one, January 1994 (*Birder* 94/3); Senaga (not mapped), near Yone, Naha-shi, April (unspecified year) (Yoshimi 1992 in McWhirter *et al.* 1996); Okuma (not mapped), March–April 1975 (Bruce 1975a);

*Miyako-jima* island, **Yonaha bay**, one, September 1997 (*Birder* 97/12);

*Yonaguni-jima* island, four (in summer plumage) at Hikawa-hama, April 1991 (McWhirter *et al.* 1996);

*Ishigaki-jima* island, one, January 1980, March 1981 (McWhirter *et al.* 1996), one, December 1995 (*Birder* 95/3), juvenile, September 1996 (*Birder* 96/12), one, March 1998 (*Birder* 98/5);

*Iriomote-jima* island, June 1906 (female in AMNH).

■ **KOREA** ■ **NORTH KOREA** This species is a summer visitor to North Korea, with several breeding colonies on islands off the west coast. If they are disturbed, they may shift their colonies from one island to another (Pak U-il *in litt.* 1998). It regularly visits other areas for feeding and on passage. Records (by province) are as follows: ■ **North Pyongan Synuiju** (Shini-ju), undated (Sonobe 1987, Tomek 1999); **Yongampo**, April 1929 (male in YIO); **Pankungri**, collected, April 1958 (Tomek 1999); near **Nanshi** (Nanschi), male collected in October (unspecified year) (Kuroda 1932 in Meise 1934); **Ryonghyonri**, collected, May 1958 (Tomek 1999); **Uido**, collected, June 1967 (Tomek 1999); **Tasa-do** island, collected, May, August and September 1959 (Won 1963); **Cholsan**, undated (Sonobe 1987, Tomek 1999); **Sonchon**, collected, May 1959 (Won 1963); **Jongju** (Chong-ju), undated (Sonobe 1987, Tomek 1999); **Kwaksan** (Paksan), five collected, May and September 1955 (Won 1963, Tomek 1999); **Pakchon county**, November 1927 (female in YIO); **Gyoei island** (Gyei island), 100 birds in total on this island and Hyongge island in 1995, 150 birds in total in 1996 (Pak U-il *in litt.* 1998); near **Posan-ni** (Posanri), up to eight, July 1989 (Fiebig 1993); **Chongchon-gang estuary**, including the Pakchon Plain and the Mundok Plain, recorded on migration, undated (Chong and Morishita 1996); near **Ae-do**, flock of 25 birds seen in flight, July 1989 (Fiebig 1993); **Sogam-do** island, 52 pairs breeding in 1980, but not breeding annually at this site (Fiebig 1993), c.40–50 breeding birds, undated (Chong and Morishita 1996); **Hyongje island** (Hyongge island), 100 birds in total on this island and Gyoei island in 1995, 150 birds in total in 1996 (Pak U-il *in litt.* 1998); **Tegam-do** (Taegam-do) island, c.50–60 breeding birds, undated (Chong and Morishita 1996, Tomek 1999), 100–120 birds, 1995 and 1996 (Pak U-il *in litt.* 1998); **Chamcha-do** island, c.150 birds, 1995 and 1996 (Pak U-il *in litt.* 1998); Rapdo island (Sonchonrap-do) and **Mugi-do** (uninhabited islands), Haean-ui, breeds, undated (Won 1963), May 1980 (Pak U-il *et al.* 1981 in Tomek 1999), with a mean breeding population of c.200 birds (Fiebig 1993), 120–150 birds on Rapdo island (Sonchonrap-do) and 120 birds on Mugi-do, 1995 and 1996 (Pak U-il *in litt.* 1998); Yob-do island (Yob island) (untraced), off north-west coast of North Pyongan, large breeding colony, undated (Mori 1939 in Austin 1948); ■ **South Pyongan Tok-do** island, 80 birds in 1991, 600 birds in 1995 (Chong Jong-ryol *in litt.* 1998), c.600 birds in 1995, c.300 birds in 1996 (Pak U-il *in litt.* 1998); **Nampho** (Nampo), Taedong river mouth, one, May 1980 (Mauersberger 1981), up to six, October 1988, August 1989, April–June 1990 (Fiebig 1993); **Onchon**, undated (Sonobe 1987, Tomek 1999); ■ **South Hwanghae Haeju**, April 1987 (Glowacinski *et al.* 1989 in Tomek 1999).

■ **SOUTH KOREA** This species is a summer visitor which breeds on several islands in Kyonggi province and occurs elsewhere on passage. Records (by province) are as follows: ■ **Kangwon Ch'ongch'o lake**, Sokcho city, where “a few” occur in spring (Park Jin-young *in litt.* 1999); ■ **Kyonggi and Seoul Kanghwa island**, seven in the Uipori area on the east side, September 1985 (B. Watts *in litt.* 1999), up to 92 on the south, April–June 1988, 30 at Sunduri, June 1988 (Long *et al.* 1988), at Yocha-ri in 1991, maximum counts of 10 (April), 32 (May), 27 (June), 117 (August), 170 (September), eight (October), two (November) (Won 1991), up to 103 seen, April–May 1998 (N. Moores *per* Lee Woo-shin *in litt.* 1999), some roosting on small islets at Sunda-ri in the south, and seawalls and fishponds in the south-west (Moores 1999), 310 seen, August 1999 (Park Jin-young *in litt.* 1999); **Sin-do** (Shin-do) island, c.400 birds, August 1987, 427 nests found in June 1988, 193 nests with 156 eggs and 358 juveniles counted in June 1991 (Won 1991, Chong and Morishita 1996; see Population); **Yongjong island**, up to 64, May 1988 (Long *et al.* 1988, Chong and Morishita 1996), at Unnam-ri, recorded in spring and autumn 1989–1991, maximum in spring 20 birds, May 1989, maximum in autumn 87 in September 1989, 42 in September 1990 and 22 in September 1991 (Won 1991), up to six, April–May 1998 (N. Moores *per* Lee Woo-shin *in litt.* 1999), nine, August 1999 (Park Jin-young *in litt.* 1999); **Sammok island**, recorded in autumn 1990–1991, maximum counts being 120 in October 1990 and 130 in September 1991 (Won 1991), but numbers rapidly declining from c.150 in 1993 to no birds in 1997 (Park *et al.* 1997); near **Sosa**

(Sosa Po-ri), Yellow Sea coast, two, October 1962 (Fennell and King 1964); 12 km north-east of **Inchon**, Yellow Sea coast, two females collected, August–September 1962 (Fennell and King 1964), collected at Inchon (Chemulpo) in spring (year unspecified) (male in AMNH); **Yonghung island** (Yong Hung or Sonjae, Younghung), 81 birds, May 1998 (N. Moores *per* Lee Woo-shin *in litt.* 1999), reported to breed, undated (Moores 1999); **Taebu-do**, 148 birds, September 1998 (Moores 1999), 44 birds, August 1999 (Park Jin-young *in litt.* 1999); **Namyang bay**, two to three, May 1998 (N. Moores *per* Lee Woo-shin *in litt.* 1999), 42 birds, August 1999 (Park Jin-young *in litt.* 1999); ■ **South Chungchong Asan bay**, one, April 1998 (N. Moores *per* Lee Woo-shin *in litt.* 1999), three, August 1999 (Park Jin-young *in litt.* 1999); **Cheonsu bay**, up to 10 annually in winter (although this record needs to be confirmed: Park Jin-young *in litt.* 1999), two seen, May 1998 (N. Moores *per* Lee Woo-shin *in litt.* 1999), 74 birds (undated), most seen roosting on the eastern flats (Moores 1999); **Kum river**, one, May 1998 (N. Moores *per* Lee Woo-shin *in litt.* 1999); ■ **South Kyongsang Nakdong estuary**, collected at Pusan (Fusan), April 1886 (male in USNM), one at Paekhap-dung, between April 1992 and April 1993 (Kim and Won 1997), with “a few” occurring in spring (Park Jin-young *in litt.* 1999); ■ **North Cholla Yubu-do** (Yooboo) island, five, August 1999 (Park Jin-young *in litt.* 1999); **Tongjin estuary**, Saemankeum area, nine, late February 1997 (Kim and Yoo 1997); ■ **South Cholla Chilsan island**, c.100 birds in 1991, falling to c.50 in 1993 (Lee Woo-shin *in litt.* 1998); **Aphae island**, undated (Moores 1999); **Suncheon bay**, one, December 1996 (B. Wright *in litt.* 1999); **Hwangsan**, Haenam, one or two, April–May 1998 (N. Moores *per* Lee Woo-shin *in litt.* 1999); ■ **Cheju Cheju island** (Quelpart island), undated (Kuroda and Mori 1918), April 1929 (male in YIO); **Mosulpo**, one or two, April–May 1993 (Cresswell *et al.* 1993).

■ **CHINA** ■ **MAINLAND CHINA** The Chinese Egret was formerly reported to nest in south-east China, but there have been no recent reports from there. It currently has breeding colonies on several offshore islands in Liaoning, and has also been reported to breed on islands off Shandong (both sets of islands being called Changshan islands). There are reports of nesting from inland localities in Jilin, Henan and Hunan, but given that all other documented breeding localities are coastal, and the potential for confusion with other egret species (see Remarks 1), these records should be regarded with caution until they have been confirmed. It also occurs along the eastern and southern coasts (and rarely inland) on migration, with occasional summer and winter records. Records (by province) are as follows:

■ **Heilongjiang Xingkai Hu National Nature Reserve**, Mishan city, undated (Luan Xiaofeng *et al.* 1999);

■ **Jilin Melmeg Nature Reserve** (Momoge), Zhenlai county, 1–2 pairs reported to breed inside the reserve at Hujia Wopeng, undated (Wu Zhigang and Han Xiaodong 1992; but see Remarks 1); **Jilin prefecture**, undated (Jilin Wildlife Conservation Society 1987); **Yanbian prefecture**, undated (Jilin Wildlife Conservation Society 1987); **Hunchun**, near Tumen river delta, May–July 1959 (Fu Tongsheng *et al.* 1984); **Changbai Shan** mountains, “summer visitor”, below 800 m, undated (Fu Tongsheng *et al.* 1984), not reported for more than 20 years (Zhao Zhengjie 1985); **Tonghua city**, undated (Jilin Wildlife Conservation Society 1987);

■ **Liaoning Sitaizi**, Fengcheng county, one collected, November 1932 (Mizuno 1934); **Tangshancheng**, Fengcheng county, one collected, October 1932 (Mizuno 1934); **Yalu Jiang estuary**, one collected, October 1931 (Mizuno 1934); **Beijingzi**, Donggou, October (unspecified year) (Liaoning Ornithological Survey Team 1986, Huang Mupeng *et al.* 1989); **Xingren Tuo** island, Changshan islands, 315 birds, July 1999, breeding colonies found (Ding Changqing *et al.* 1999c); **Yuanbao Tuo** island, Changshan islands, a 10 ha island c.3 km south of Xingren Tuo, 220–250 adults, July 1999 (Ding Changqing *et al.* 1999c); **Wangjia Dao** island, Changhai, September (unspecified year) (Liaoning Ornithological Survey Team 1986, Huang Mupeng *et al.* 1989); Dantuozi, **Jinxian county**, eight nests found, June 1982 (Huang Mupeng *et al.* 1989); **Xiaolongshan Dao** (She Dao, Snake island) island, Dalian city, in She Dao-Laotieshan

Nature Reserve, two colonies of 14 nests and 11 nests found at the cliffs of Wugou, May 1982 (Huang Mupeng *et al.* 1989), with similar numbers (to those in 1982) recorded in 1985 and 1986, but in decline since 1987 (Pei Xiaoming *et al.* 1994); **Haimao Dao** island, Dalian city, breeding confirmed since 1990, 150–200 birds and 12 nests, June 1990 (Pei Xiaoming *et al.* 1994), c.300 breeding birds estimated, undated (Su Hualong 1994); **Lüshun** (Lüshunkou, Port Arthur), Dalian city, male collected near Lüshun in the bay of Sotowan, May 1917 (N. Kuroda 1918), summer visitor, from late April or early May to late September or early October, 21 seen at Dakoujing and seven at Yanwo in 1990, probably non-breeding immature birds (Pei Xiaoming *et al.* 1994);

■ **Yunnan Lugu Hu** lake, Ningliang county, one seen, January 1992 (He Fenqi and Zhang Yinsun 1993);

■ **Shanxi Xiaruyue** reservoir, Fanshi county, April 1991 (Su Hualong and Liu Huanjin 1995); Maying Hai lake (Tianchi lake) and Yazhi Hai lake, **Ningwu county**, total of eight, April, September and October in 1992 and 1993 (Zhao Qibao 1996);

■ **Hebei Beidaihe**, one collected from a group of eight, August 1941, eight seen, July 1944, one seen, June 1945 (Hemmingsen and Guildal 1968), “scarce” passage migrant (Beidaihe Bird Society 1992), small numbers seen by many observers at the Yanghe estuary, Henghe reservoir, Henghe sandflats and “Lighthouse Point”, in April–September during the late 1980s and the 1990s (Williams *et al.* 1992, many observers *in litt.*); **Shijituo** (“Happy island”), south of Beidaihe, one, September 1994 (Dierschke and Heintzenberg 1994), one, September 1999 (P. Alström, U. Olsson and D. Zetterström *in litt.* 2000);

■ **Shandong Changshan islands**, Changdao National Nature Reserve, Changdao county, reported to breed on several uninhabited islands, including Cheyou Dao (on the assumption that this island was given as “Dongyou Dao” in error), Gaoshan Dao and Houfan Dao, undated (Fan Qiangdong and Xu Jianmin 1996); **Weihai city** wetlands, including Bahe Gang, Mishan, Longjiaoshan and Yuehu, “rare summer visitor”, 1995–1997 (Yan Liqin *et al.* 1998); **Qingdao** coastal wetlands, June 1937 (two specimens in ASCN), five, January 1990 (Waterbird Specialist Group 1994); **Ping Shan, Danian Shan** and **Cheniu Shan** islands, Yellow Sea, “summer visitor”, July 1984 (Zhou Benxiang 1985), five pairs on “Second island”, a satellite of Chenlu Shan island, 1985, ten pairs, 1987 (Cheng Zhaoqing in Lansdown undated; see Lansdown 1990);

■ **Henan Sanmenxia Nature Reserve**, Sanmenxia city, two records of single birds in February in the early 1990s (Wang Wenlin *et al.* 1998), March and October 1995, 14 birds reported from Sanmenxia reservoir in November 1996 (Wang Wenlin *et al.* 1999); Paifang island, Nanwan reservoir, Xinyang county, 18 nests reported in 1990 and five in 1991 (Wen Zhenzhong and Sun Rurong 1993; but see Remarks 1);

■ **Anhui Shijiu Hu** lake, female collected, December (unspecified year) (Wang Qishan *et al.* 1980); **Shengjin Hu Nature Reserve**, Guichi city and Dongzhi county, three seen, January 1989 (Coulter *et al.* 1991);

■ **Jiangsu Lianyungang city**, June 1926 (two specimens in ASCN); **Yancheng Nature Reserve**, Xiangshu, Binhai, Sheyang, Dafeng and Dongtai counties, “passage migrant”, undated (Wang Hui 1991); **Suzhou city** (Hsükow), common migrant on the salt pans and seashore, May (unspecified year) (Courtois 1927 in La Touche 1925–1934), 13–15 birds at Mt Huqiu, 1991 (Wang Qishan 1999);

■ **Shanghai Shawaishan island**, June 1911 (Sowerby 1943, female in BMNH); **Shanghai**, male collected, May 1926 (Sowerby 1943); **Qingpu county**, undated (Huang Zhengyi *et al.* 1991); **Songjiang county**, undated (Huang Zhengyi *et al.* 1991); **Jinshan county**, undated (Huang Zhengyi *et al.* 1991);

■ **Zhejiang Ningbo** (Ningpo), September 1898 (male in AMNH), September 1908, April 1909 (two specimens in MNHN), spring (year unspecified) (male in MCZ); **Zhuxi**, Xiangshan Gang, Xiangshan county, one, May 1999 (Ding Ping in prep.); **Wenling county**, undated (Zhuge Yang 1990); **Yueqing county**, collected, undated (Zhuge Yang 1990); **Lingkun island**,



Wenzhou bay, Cangnan county, ten, May 1999 (Ding Ping in prep.); **Yongxingzhen** (Yongxing), Wenzhou bay, Ouhai county, seven, May 1999, one, July 1999 (Ding Ping in prep.); **Dongtou**, August 1972 (specimen in ASCN); **Wencheng county**, undated (Zhuge Yang 1990); **Rui'an county**, undated (Zhuge Yang 1990); **Longjiang**, Wenzhou bay, Cangnan county, ten, May 1999 (Ding Ping in prep.);

■ **Fujian** (note that the Mazu Dao and Jinmen Dao islands are under the administration of Taipei); **Beigantang Dao** (Beigan), Mazu Dao (Matsu) islands, one, 1996 (CWBF database); Nangan, **Mazu Dao** (Matsu) islands, singles, 1995, 1996 and 1997 (CWBF database); **Fuzhou** (Foochow), collected or obtained in March–June and December, 1886–1922 (La Touche 1892, many specimens in BMNH, MCZ, USNM, ZMH), nesting in “some numbers” with Little Egrets *Egretta garzetta*, late nineteenth century, in paddyfields and along the river (La Touche 1925–1934), April 1934 (specimen in WUCN), 1960s (specimen in NEFUCN); **Changting** (Tingchow, Ting-tschou), April 1909 (male in ZMH); **Jinmen Dao** (Chin-men Tao, Kinmen or Quemoy) island, single birds, 1994 and 1997 (CWBF database); **Xiamen** (Amoy), several collected (including the type), “rare and solitary in habits while with us in summer” (Swinhoe 1860; also Murton 1972);

■ **Hunan** Dong Dongting Hu Nature Reserve, Yueyang county, up to 17 (in breeding plumage) reportedly found in Yangjiaoshan egret colony, undated (Lei Gang and Qian Weirong 1998; but see Remarks 1);

■ **Guangxi** northern **Beibu bay** (Gulf of Tonkin), “very rare passage migrant”, less than five records, undated, in mangroves and on tidal flats (Zhou Fang *et al.* 1999); **Beihai** (Pakhoi), 1885 (specimen in BMNH);

■ **Guangdong** **Shantou** (Swatow), May 1887 (specimen in AMNH), “very abundant”, summer c.1890 (La Touche 1892), “common breeding bird”, May–September (year unspecified) (Streich 1903); **Haifeng**, October 1959 (specimen in ASCN); **Futian Nature Reserve**, “occasional summer visitor”, undated (Wang Yongjun and Chen Guizhu 1998);

■ **Hainan Dongzhaigang Nature Reserve**, Qionghshan county, 13 birds, December 1997, on the mudflats (Zou Fasheng *et al.* 1999); **Lingao county**, one collected, June (unspecified year) (GIEBDSYU 1983); **Tunchang county**, one collected, December (unspecified year) (GIEBDSYU 1983); **Shanhu Dao** island, Xisha islands (Paracel islands), December 1974 (specimen in ASCN).

■ **HONG KONG** Between 1958 and 1983, small numbers were present during the summer in colonies of other ardeids at Yuen Long, A Chau and Yim Tso Ha (part of the Sha Tau Kok egretty), and breeding was reported in several years. Since 1985, this species has been a scarce passage migrant, recorded mainly from the Deep Bay area (HKBWS database) as follows: **Yim Tso Ha** (part of the Sha Tau Kok egretty), Starling inlet, first recorded in 1956 and since then up to 10 pairs found, breeding confirmed in August 1963 (Herklots 1967), up to three breeding pairs in 1967–1972 and 1975, in other years (1964, 1965, 1973, 1974, 1977–1980, 1983 and 1987) birds present but apparently not breeding (HKBWS database), breeding reported at Yim Tso Ha until 1985 (Lansdown 1990), no breeding of any species of herons and egrets at this site since 1995 because of increased cross-border traffic between Hong Kong and China, and reclamation of nearby fishponds as open car parks and container storage depots (Lui *et al.* 1997); **Deep Bay** area, including Mai Po, Ping Shan, Ha Tsuen, Chuk Yuen, Nam Sang Wai, and Tsim Bei Tsui, reported in small numbers (usually single birds) in spring and summer, from 1958 to present (HKBWS database); **A Chau**, Starling inlet, one pair bred, 1982 (HKBWS database); **Yuen Long** egretty, several birds present and up to three pairs reported to breed, 1958–1962, maximum of 11 birds, April 1960 (HKBWS database); **Tsing Yi**, three, May 1980 (HKBWS database); **Clear Water bay**, one, April 1988 (HKBWS database); **Cheung Chau**, eight, April 1997 (HKBWS database); **Pearl island**, one, May 1989 (HKBWS database); Castle Rock, **Po Toi island**, one, April 1997 (HKBWS database); Wong Tsuen egretty (untraced), five, May 1961 (HKBWS database).

■ **TAIWAN** This species is recorded from many parts of Taiwan, but most records are from the north. It is currently mainly a passage migrant, but a few individuals remain during winter or summer (Sha Chien-chung *in litt.* 1998). Swinhoe (1863a,c) reported that it was relatively common in northern Taiwan (in comparison to elsewhere in southern China) in the nineteenth century, and thought that it was breeding there with “the common species [presumably Little Egret]”, although he “never succeeded in taking their eggs”. For records on Jinmen Dao and Mazu Dao islands, refer to Fujian Province above. Records are as follows: **Chinshan**, 30 in 1998, singles in 1994 and 1995, seven in 1996 (CWBF database); **Yehliu**, singles from 1992–1994, 11–16 birds from 1995–1997, three in 1998 (CWBF database); **Tanshui river** (Tamsuy river), five, May 1975 (Blackshaw 1978); **Watuwei**, “a few”, 1992–1998 (except 1994), maximum of 18 birds in 1996 (CWBF database); **Kuantu**, one seen and photographed, December 1974 (Blackshaw 1978), one to three, 1992–1993 (CWBF database); **Shetzu**, on the opposite side of the river to Kuantu, 10–15 birds recorded annually, 1992–1994, one in 1995, four in 1997 (CWBF database); **Chuntou**, several, 1995–1997, maximum count of 12 birds in 1996 (CWBF database); **Hsutsokang** (Hsutsuokang), Tayuan, 30–40 birds in 1996 and 1998, only four birds in 1997 (CWBF database); **Tayuan**, 14 birds, 1996, 72 birds, 1997, eight birds, 1998 (CWBF database), one, January 1997 (Fang Woei-hong 1998a); **Taipei city** (“North Formosa”), 1861–1862 (Mees 1977, two specimens in RMNH); **Wuku** and Luchong swamp, west bank of the Tanshui river, undated (Scott 1989); **Huachiangta bridge** (Huachung bridge), five, 1996 (CWBF database); **Kungliao**, 2–3 birds, 1996–1998 (CWBF database); **Tienliaoyang**, nine in 1996, one in 1997 (CWBF database); **Hsiapu**, one, 1996, six, 1998 (CWBF database); **Tachuang**, recorded annually in 1995–1998, maximum count of 18 birds in 1998 (CWBF database); **Touchien river**, nine, 1998 (CWBF database); **Chu-an**, 46 birds, April 1984 (L. L. Severinghaus *in litt.* undated), 18 birds, 1995 (CWBF database); **Kangnan**, 2–4 annually in 1995–1998, but 30 in 1996 (CWBF database); **Lanyang estuary**, passage migrant, mostly seen during spring migration, accounting for almost 50% of the records in Taiwan in 1980–1994, usually less than 10 birds sighted, but maximum count of 104 in April 1990 (Sha Chien-chung *in litt.* 1998), seven in 1992, more than 16 birds recorded annually from 1993–1998, maximum count of 63 birds in 1997 (CWBF database), 38, April 1999 (*Oriental Bird Club Bull.* 30 [1999]: 52–56); **Sanchi**, two, 1998 (CWBF database); Chingchuankang, **Taya**, Taichung, 10 birds, 1993 (CWBF database); **Tatu estuary**, Taichung and Changhua counties, “a few” annually, 1994–1997 (CWBF database); **Hanpao**, Changhua county, “a few” annually, 1995–1998 (CWBF database); **Hualien estuary**, Hualien, 25 birds in 1995 and 1996, but only 4–8 birds in 1997 and 1998 (CWBF database); **Nantou county**, 16 birds, 1995 (CWBF database); **Chipei island** (Chipeiyu island), 16 birds, 1998 (CWBF database); **Makung island**, four, 1995 (CWBF database); **Hsingjen** reservoir, 100 seen, 1997 (CWBF database); **Hua Yu** island, 36 birds, 1998 (CWBF database); **Chimei**, 14 birds, 1995 (CWBF database); **Tsengwen estuary**, 1–2 in 1994, 1997 and 1998 (CWBF database); **Anping**, male collected, April 1931 (Dien Zuh-ming 1955), collected in July 1929 and May 1933 (five) (Hachisuka and Udagawa 1950–1951, six specimens in YIO); Szutsau, **Tainan city**, “a few” in 1993, 1997 and 1998 (CWBF database); **Chishan**, Kaohsiung, 12 birds, 1998 (CWBF database); **Yungan** saltworks, Kaohsiung, three, 1996 (CWBF database); **Lichia river**, Taitung county, nine, 1996 (CWBF database); **Lungluan Tan**, Pingtung, 7–8 birds, September 1985 (L. L. Severinghaus *in litt.* undated), 25 birds, 1996 (CWBF database); **Kenting**, Pingtung county, 38 birds in 1995, eight birds in 1996 and 1997 (CWBF database).

■ **THAILAND** This species is a non-breeding visitor to peninsular Thailand, with records as follows: **Khao Sam Roi Yot National Park**, on a beach 10 km south of the visitor centre, one, January 1995 (P. D. Round *in litt.* 1999, P. Schiermacker-Hansen *in litt.* 1999); **Phangnga province**, at Laem Pakarang, Takuapa district, one in October 1994 and one (in breeding

plumage), April 1995 (*Oriental Bird Club Bull.* 22 [1995]: 57–62, P. D. Round *in litt.* 1999), four at Haat Pakarang, October 1998 (*Bird Conserv. Soc. Thailand Bull.* 16, 1 [1999]: 13–14); **Phuket**, one collected, 1879 (Deignan 1963); **Krabi bay**, recorded almost annually in 1991–1997, in January, March, April and December, maximum count of seven in January 1996 (P. D. Round *in litt.* 1999); **Ko Libong**, two, March 1984 (P. D. Round *in litt.* 1999), one at Ha Toop, April 1990 (*Oriental Bird Club Bull.* 12 [1990]: 40–44), singles in January 1991, November and December 1993, two in March 1994 (P. D. Round *in litt.* 1999); **Pattani bay**, Pattani province, collected at Kampong Dato, October 1901 (specimen in BMNH), one, October 1988 (P. D. Round *in litt.* 1999).

■ **VIETNAM** This species is a non-breeding visitor, with records, arranged from north to south, as follows: **Thai Thuy**, Thai Binh, one, October 1996 (J. C. Eames *in litt.* 1997); **Xuan Thuy Nature Reserve**, Nam Dinh, one, March 1988 (Scott 1989), two individuals, March 1989 (Scott 1989), spring 1996 (Pedersen and Nguyen Huy Thang 1996), three individuals, October 1999 (A. W. Tordoff *in litt.* 2000); **Cua Day estuary**, Nghia Hung district, Nam Dinh, three, April 1993 (T. Carlberg *in litt.* 1999; also Carlberg 1993), at least three, between March and May 1994 (J. C. Eames *in litt.* 1997, Pedersen *et al.* 1998); **Cam Ranh bay**, Khanh Hoa, eight, April 1991 (Eames *et al.* 1992); Bai Boi Coastal Protection Forest and **Dat Mui Nature Reserve**, Ca Mau, a total of 15 seen between both sites, March 1999 (Buckton *et al.* 1999), a total of 83 in March 2000 (N. Moores *in litt.* 2000).

A record from Tram Chin National Park, Dong Thap, January–March 1992 (Anon. 1993c) has now been withdrawn (*per* S. T. Buckton *in litt.* 2000).

■ **PHILIPPINES** Although not listed for the Philippines by either Hachisuka (1931–1935) or Rand and Rabor (1960), there are both historical and increasingly regular recent records from at least 16 islands, with notable congregations on Leyte, Palawan and around Bohol, and the recent count of as many as 1,600 birds on Leyte strongly suggests that the Eastern Visayas are in fact the key wintering area for this species. Records (see Remarks 1) are as follows:

*Basilan* unspecified locality, October 1925 (Kuroda 1927);

*Batan Basco* at Songsong bay, June 1985 (female in USNM);

*Bohol Inabanga coast*, nine, April 1987 (Howes 1987b); also probably 1991 (Anon. 1991); islets of **Mahaba**, **Calituban**, **Banacon**, **Tahong-tahong** and **Bubuajan**, where a total of 635 birds were observed, March–April 1991 (Anon. 1991, A. Jensen *in litt.* 1994);

*Calauit* without locality, October 1989 (Diesmos 1992), 1995 (A. C. Diesmos verbally 1995);

*Cebu Mactan island*, 17, April 1987 (Howes 1987b); **Olango island**, three, March 1990 (Greensmith 1990), 80, probably 1991 or 1992 (P. M. Magalsay *per* C. M. Poole *in litt.* 1994), 15, February 1994 (Hornbuckle 1994), 15, January 1995 (A. J. Long verbally 1997), 10, January 1996 (SC), six, February 1997 (J.-P. Turpin *in litt.* 1997);

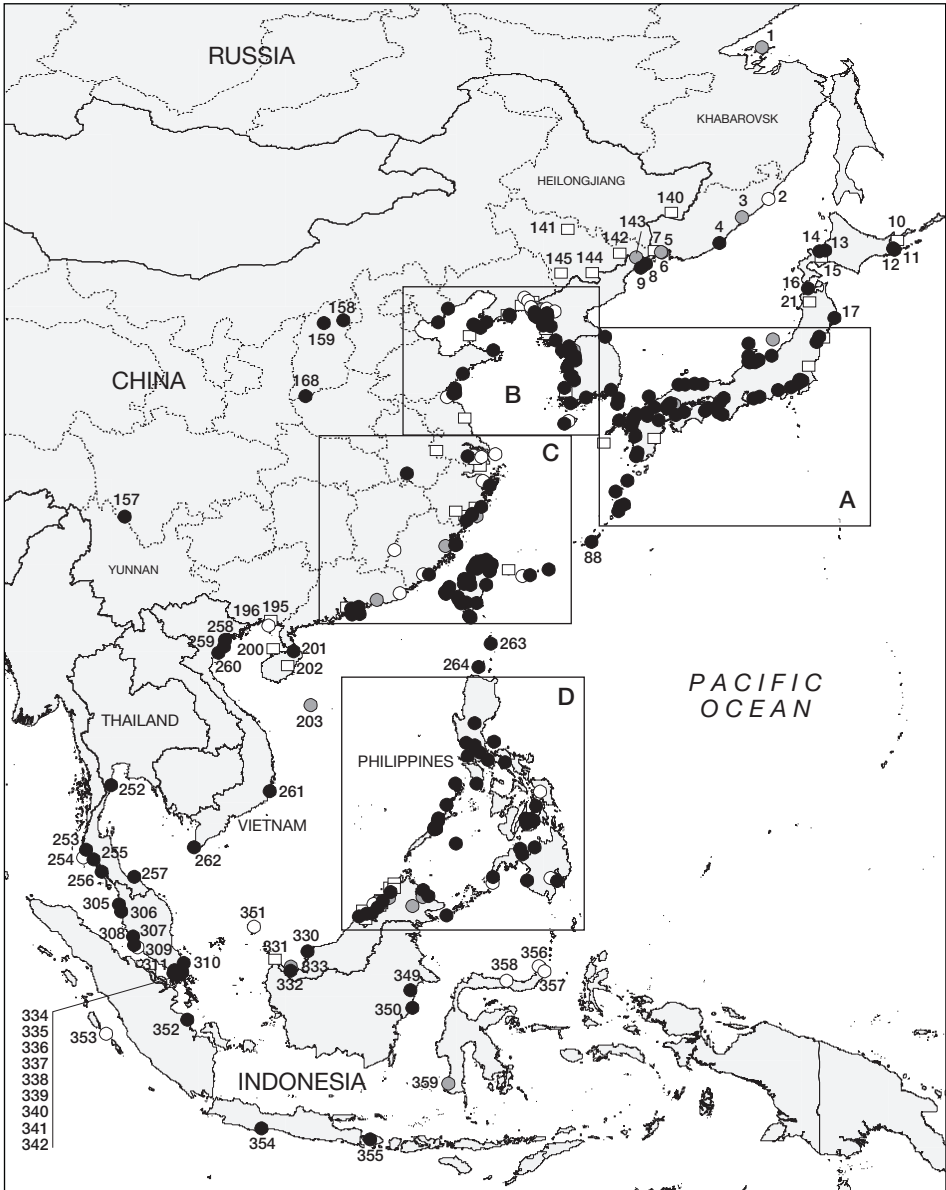
*Dalupiri* (Batanes province) probably 1991 (Anon. 1991);

*Leyte* near **Ormoc City**, 1,600 in 1991 (C. M. Poole *in litt.* 1994);

*Luzon* c.6 km north-east of **San Jose**, Nueva Ecija province, April 1983 (Gast and King 1985); **Puerto Rivas**, Bataan province, undated (Y. Shigeta *in litt.* 1994); **Parañaque**, Manila bay, undated (S. Alonzo-Pasicolan verbally 1995); **IRRI** (International Rice Research Institute), Los Baños, Laguna, undated (C. C. Custodio verbally 1996); fishponds c.2.5 km south-south-east of **Matabungkay**, Batangas, up to seven, April 1983 (Gast and King 1985); **Tayabas bay** at Pagbilao and Unisan, 1980s and 1991 (Scharringa 1988, Scott 1989, Anon. 1991); **Ragay Gulf**, Quezon, 41, April 1987 (Howes 1987b, Anon. 1991);

*Mindanao* with records obtained during the DENR-PAWB Bird Count Reports during 1991–1994 (all *per* BRT) from **Alubijid**, Misamis Oriental, undated; **Bonifacio**, Misamis Occidental, undated; **Sinacaban**, Misamis Occidental, undated; **Talon-talon**, Zamboanga City,

**The distribution of Chinese Egret *Egretta eulophotes* (map opposite):** (1) Bol'shoy Shantar island; (2) Olimpiady Cape; (3) Sikhote-Alin' State Reserve; (4) Ol'ga bay; (5) Amur bay; (6) Vladivostok; (7) Mongugay river; (8) Furugelm island; (9) Tumen river mouth; (10) Nemuro; (11) Furen-ko; (12) Shunkunitai; (13) Ishikari-gawa; (14) Otaru-shi; (15) Ishikari; (16) Shiura-mura; (17) Unozumai-gawa river mouth; (18) Gamo lagoon; (19) unallocated; (20) Watari-cho; (21) Akita; (22) Ibaraki; (23) Funabashi; (24) Gytoku; (25) Yatsu tidal flat; (26) Kasai; (27) Tama-gawa river mouth; (28) Sagami-gawa river mouth; (29) Sado Island; (30) Joetsu-shi; (31) Kurobe-gawa river mouth; (32) Himi-shi; (33) Katakai-gawa river mouth; (34) Sho-gawa river mouth; (35) Horioka; (36) Shimminato-shi; (37) Takaoka-shi; (38) Joganji-gawa; (39) Hegura-jima; (40) Nishi-wan; (41) Tatsuru-hama-cho; (42) Fuji-gawa river mouth; (43) Hamana-ko; (44) Tahara-cho; (45) Osaka; (46) Osaka bay; (47) Kashii-gawa river mouth; (48) Hidaka-gawa river mouth; (49) Tanabe-shi; (50) Karo-ko; (51) Kaseichi-gawa river mouth; (52) linashi-gawa river mouth; (53) Hii-gawa; (54) Yawata-gawa river mouth; (55) Hatsukaichi-cho; (56) Kurose-gawa river mouth; (57) Kure-shi; (58) Hironishi-oogawa river mouth; (59) Mi-shima; (60) Yamaguchi-shi; (61) Iwakuni-shi; (62) Tokuyama-shi; (63) Yoshino-gawa river mouth; (64) Katsuura-gawa river mouth; (65) Kamo-gawa river mouth; (66) Shigenobu-gawa river mouth; (67) Sone tidal flat; (68) Tsuyazaki; (69) Tsuiki-machi; (70) Hakata bay; (71) Maebaru-shi; (72) Saga-gun; (73) Kashima-shi; (74) Sago; (75) Tsushima; (76) Ikitzuki-jima; (77) Danjo islands; (78) Kami-jima; (79) Kitsuki-shi; (80) Miyazaki; (81) Taniyama; (82) Kawanabe-gun; (83) Nakano-shima; (84) Takara-jima; (85) Kasari peninsula; (86) Naze-shi; (87) Akina; (88) Awase; (89) Yonaha bay; (90) Yonaguni-jima; (91) Ishigaki-jima; (92) Iriomote-jima; (93) Synuiju; (94) Yongampo; (95) Pankungri; (96) Nanshi; (97) Ryonghyonri; (98) Uido; (99) Tasa-do; (100) Cholsan; (101) Sonchon; (102) Jongju; (103) Kwaksan; (104) Pakchon county; (105) Gyoei island; (106) Posan-ni; (107) Chongchon-gang estuary; (108) Ae-do; (109) Sogam-do; (110) Hyongje island; (111) Tegam-do; (112) Chamcha-do; (113) Mugi-do; (114) Tok-do; (115) Nampho; (116) Onchon; (117) Haeju; (118) Ch'ongch'o lake; (119) Kanghwa island; (120) Sin-do; (121) Yongjong island; (122) Sammok island; (123) Sosa; (124) Inchon; (125) Yonghung island; (126) Taebu-do; (127) Namyang bay; (128) Asan bay; (129) Cheonsu bay; (130) Kum river; (131) Nakdong estuary; (132) Yubu-do; (133) Tongjin estuary; (134) Chilsan island; (135) Aphae island; (136) Suncheon bay; (137) Hwangsan; (138) Cheju island; (139) Mosulpo; (140) Xingkai Hu National Nature Reserve; (141) Jilin prefecture; (142) Yanbian prefecture; (143) Hunchun; (144) Changbai Shan; (145) Tonghua city; (146) Sitaizi; (147) Tangshancheng; (148) Yalu Jiang estuary; (149) Beijiingzi; (150) Xingren Tu; (151) Yuanbao Tu; (152) Wangjia Dao; (153) Jinxian county; (154) Xiaolongshan Dao; (155) Haimao Dao; (156) Lüshun; (157) Lugu Hu; (158) Xiaruyue; (159) Ningwu county; (160) Beidaihe; (161) Shijutuo; (162) Changshan Islands; (163) Weihai city; (164) Qingdao; (165) Ping Shan; (166) Danian Shan; (167) Cheniu Shan; (168) Sanmenxia Nature Reserve; (169) Shijiu Hu; (170) Shengjin Hu Nature Reserve; (171) Lianyungang city; (172) Yancheng Nature Reserve; (173) Suzhou city; (174) Shawaishan island; (175) Shanghai; (176) Qingpu county; (177) Songjiang county; (178) Jinshan county; (179) Ningbo; (180) Zhuxi; (181) Wenling county; (182) Yueqing county; (183) Lingkun island; (184) Yongxingzhen; (185) Dongtou; (186) Wencheng county; (187) Rui'an county; (188) Longjiang; (189) Beigantang Dao; (190) Mazu Dao; (191) Fuzhou; (192) Changting; (193) Jinmen Dao; (194) Xiamen; (195) Beibu bay; (196) Beihai; (197) Shantou; (198) Haifeng; (199) Futian Nature Reserve; (200) Dongzhaigang Nature Reserve; (201) Lingao county; (202) Tunchang county; (203) Shanhu Dao; (204) Yim Tso Ha; (205) Deep Bay; (206) A Chau; (207) Yuen Long; (208) Tsing Yi; (209) Clear Water bay; (210) Cheung Chau; (211) Pearl island; (212) Po Toi island; (213) Chinshan; (214) Yehliu; (215) Tanshui river; (216) Watzuwei; (217) Kuantu; (218) Shetzu; (219) Chuntou; (220) Hsutsokang; (221) Tayuan; (222) Taipei city; (223) Wuku; (224) Huachiangta Bridge; (225) Kungliao; (226) Tienliaoyang; (227) Hsiapu; (228) Tachuang; (229) Touchien river; (230) Chu-an; (231) Kangnan; (232) Lanyang estuary; (233) Sanchi; (234) Taya; (235) Tatu estuary; (236) Hanpao; (237) Hualien estuary; (238) Nantou county; (239) Chipei island; (240) Makung island; (241) Hsingjen; (242) Hua Yu; (243) Chimei; (244) Tsengwen estuary; (245) Anping; (246) Tainan city; (247) Chishan; (248) Yungan; (249) Lichia river; (250) Lunguan Tan; (251) Kenting; (252) Khao Sam Roi Yot National Park; (253) Phangnga province; (254) Phuket; (255) Krabi bay; (256) Ko Libong; (257) Pattani bay; (258) Thai Thuy; (259) Xuan Thuy Nature Reserve; (260) Cua Day estuary; (261) Cam Ranh bay; (262) Dat Mui Nature Reserve; (263) Basco; (264) Dalupiri; (265) San Jose; (266) Puerto Rivas; (267) Minasawa; (268) Parañaque; (269) IRRi; (270) Matabungkay; (271) Tayabas bay; (272) Ragay gulf; (273) Calauit; (274) Lagen; (275) Sabang; (276) St Paul's Subterranean River National Park; (277) Tagburos; (278) Irawan; (279) Iwahig Penal Colony; (280) White beach; (281) unallocated; (282) Puerto Princesa; (283) Bancaobanco point; (284) Tubbataha; (285) Caminawit; (286) Mactan island; (287) Olango; (288) Calituban islet; (289) Banao islet; (290) Bubaujan islet; (291) Mahaba islet; (292) Tahong-tahong islet; (293) Inabanga coast; (294) Catbalogan; (295) Ormoc city; (296) Alubijid; (297) Santa Cruz; (298) Kumalawit; (299) Davao gulf; (300) Bonifacio; (301) Sinacaban; (302) Talon-talon; (303) Basilan; (304) Sitankai; (305) Batu Uban; (306) Kuala Gula; (307) Tanjung Karang; (308) Pulau Tengah; (309) Tanjung Tongkah; (310) Jason bay; (311) Kukup; (312) Mengkabong; (313) Pulau Libaran; (314) Likas bay; (315) Tanjung Aru; (316) Lok Kawit; (317) Mumiang; (318) Sandakan; (319) Papar; (320) Bongawan; (321) Binsulok river mouth; (322) Kuala



Penyu; (323) Padas Damit; (324) Labuan; (325) Menumbok; (326) Kinabatangan river; (327) Kuala Trusan; (328) Rangau; (329) Limbang; (330) Pulau Bruit; (331) Samunsam Wildlife Sanctuary; (332) Bako-Buntal; (333) Semengoh Fisheries Centre; (334) Sungai Buloh Nature Park; (335) Kranji; (336) Seletar estuary; (337) Pulau Ubin; (338) Pasir Ris Beach Park; (339) Serangoon sewage treatment works; (340) Jurong; (341) West Coast road; (342) Kampong Tanah Merah; (343) Brunei bay; (344) Kampong Serasa; (345) Bandar Seri Begawan; (346) Tutong river; (347) Kampong Wasan; (348) Seria; (349) Kutai National Park; (350) Mahakam delta; (351) North Natuna; (352) Berbak National Park; (353) Sipura; (354) Pangandaran; (355) Bali; (356) Mantehage; (357) Kema; (358) Kwandang; (359) Bulurokeng.

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

undated; **Kumalawit**, Sultan Kudarat, undated; **Santa Cruz**, Davao City, undated (specimen in MCML); **Davao Gulf**, May 1987 (Howes 1987b);

**Mindoro Caminawit**, San Jose, Occidental Mindoro, up to three, April 1983 (Gast and King 1985), December 1991 and December 1992 (Evans *et al.* 1993a);

**Palawan Lagen** island, April or May 1997 (Gonzalez *et al.* 1997); **Sabang**, February 1994 (Hornbuckle 1994); **St Paul's Subterranean River National Park**, February 1994 (P. A. J. Morris *in litt.* 1994); **Tagburos** salt pans, April and May 1983 (Clarke 1983, Fisher mss), February 1984 (Gibbs 1984), April 1987 (Jensen and Hornskov 1992) and January 1988 (Sargeant 1989); **Irawan**, probably in 1991 (Anon. 1991); paddies at **Iwahig Penal Colony**, April–May 1987 (Jensen and Hornskov 1992); **White Beach**, March 1986 (Turton *et al.* 1986), April 1987 (Jensen and Hornskov 1992), and 70 individuals, February 1997, (P. A. J. Morris *in litt.* 1997); **Puerto Princesa** at Canigaran, April 1947 (female in PNM), March 1992 (R. J. Timmins *in litt.* 1997), February 1994 (Hornbuckle 1994) and at Puerto Aventura, 1983, and subsequently at least 149 in March 1991 (Redman 1993), 200 in October 1991 (M. Heegaard and A. Jensen verbally 1997), with 20 at Garceliano beach, March 1994 (Davidson ms), December 1996 (B. Gee *in litt.* 1997), up to 18 at the airport, April–May 1983 (Gast and King 1985) and without specific locality, October 1925 (Baud 1978); **Bancaobanco Point**, April 1983, 28 (Fisher mss);

**Polillo Minasawa** island, probably 1991 (Anon. 1991);

**Samar Cathalogan**, April of an unstated year (male in BMNH);

**Tumindao Sitankai**, probably 1991 (Anon. 1991);

**Tubbataha** reef on the north and south islets, May 1995 and May 1996 (A. S. Manamtam verbally 1996, BRT).

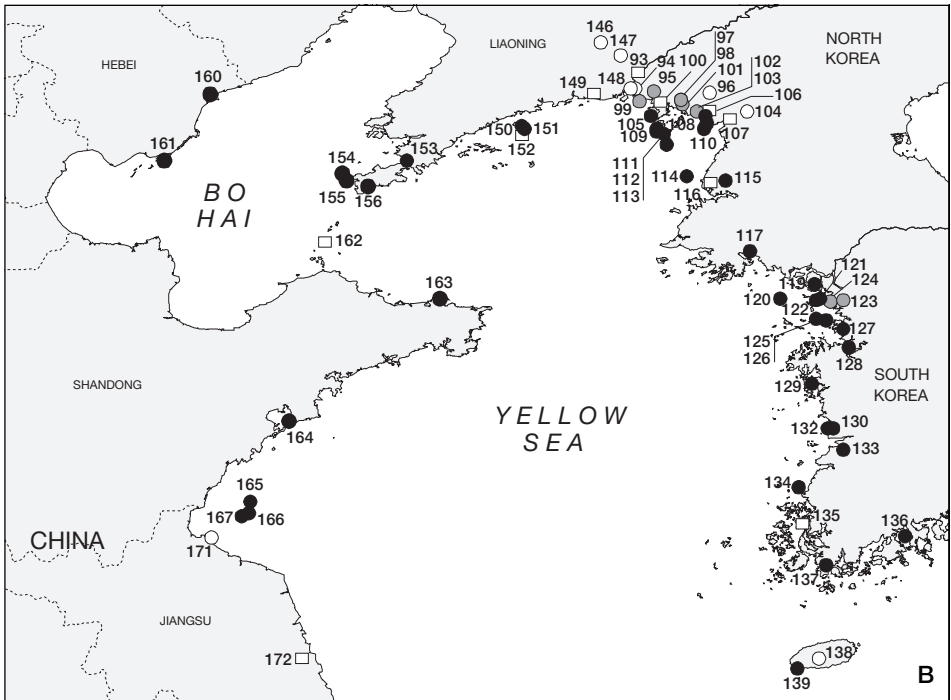
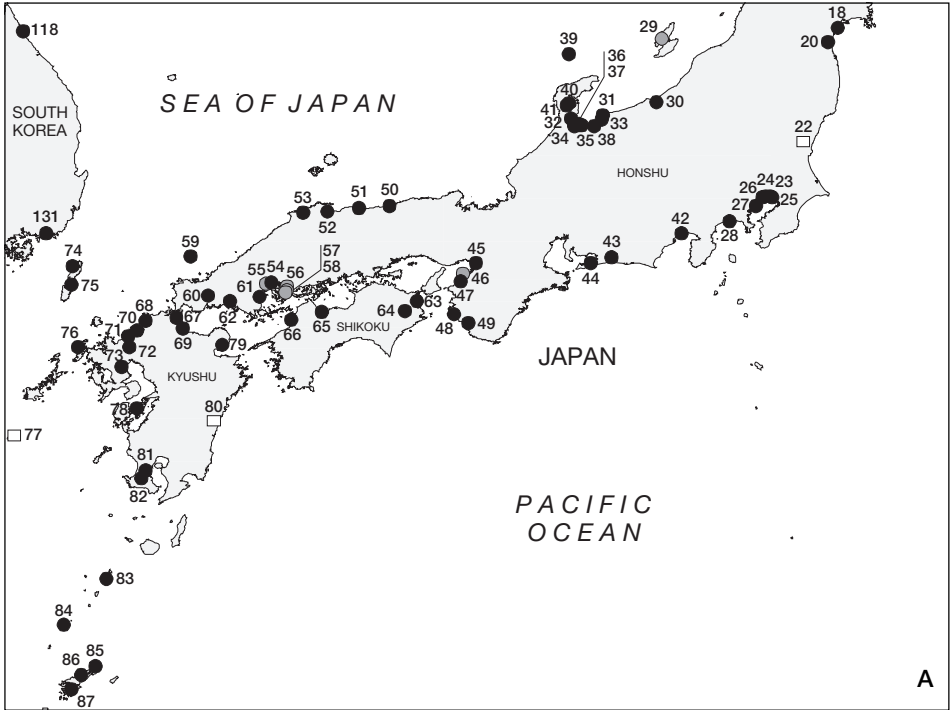
There are undated records which require confirmation from Negros Occidental at Himamaylan, Ilog wetland and Kabankalan, and from Panay (Antique province) at San Jose, Hamtic, Sibalon and San Remigio (E. Arregadas verbally 1996).

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**The distribution of Chinese Egret *Egretta eulophotes* (map A opposite):** (18) Gamu lagoon; (20) Watari-cho; (22) Ibaraki; (23) Funabashi; (24) Gyotoku; (25) Yatsu tidal flat; (26) Kasai; (27) Tama-gawa river mouth; (28) Sagami-gawa river mouth; (29) Sado island; (30) Joetsu-shi; (31) Kurobe-gawa river mouth; (32) Himi-shi; (33) Katakai-gawa river mouth; (34) Sho-gawa river mouth; (35) Horioka; (36) Shimminato-shi; (37) Takaoka-shi; (38) Joganji-gawa; (39) Hegura-jima; (40) Nishi-wan; (41) Tatsuru-hama-cho; (42) Fuji-gawa river mouth; (43) Hamana-ko; (44) Tahara-cho; (45) Osaka; (46) Osaka Bay; (47) Kashii-gawa river mouth; (48) Hidaka-gawa river mouth; (49) Tanabe-shi; (50) Karo-ko; (51) Kaseichi-gawa river mouth; (52) Inashi-gawa river mouth; (53) Hii-gawa; (54) Yawata-gawa river mouth; (55) Hatsukaichi-cho; (56) Kurose-gawa river mouth; (57) Kure-shi; (58) Hironishi-oogawa river mouth; (59) Mi-shima; (60) Yamaguchi-shi; (61) Iwakuni-shi; (62) Tokuyama-shi; (63) Yoshino-gawa river mouth; (64) Katsuura-gawa river mouth; (65) Kamo-gawa river mouth; (66) Shigenobu-gawa river mouth; (67) Sone tidal flat; (68) Tsuyazaki; (69) Tsuiki-machi; (70) Hakata Bay; (71) Maebaru-shi; (72) Saga-gun; (73) Kashima-shi; (74) Sago; (75) Tsushima; (76) Ikitsuki-jima; (77) Danjo islands; (78) Kami-jima; (79) Kitsuki-shi; (80) Miyazaki; (81) Taniyama; (82) Kawanabe-gun; (83) Nakano-shima; (84) Takara-jima; (85) Kasari peninsula; (86) Naze-shi; (87) Akina; (118) Sokcho city; (131) Nakdong estuary.

**(map B opposite):** (93) Synuiju; (94) Yongampo; (95) Pankungr; (96) Nanshi; (97) Ryonghyonri; (98) Uido; (99) Tasa-do; (100) Cholsan; (101) Sonchon; (102) Jongju; (103) Kwaksan; (104) Pakchon county; (105) Gyoei Island; (106) Posan-ni; (107) Chongchon-gang estuary; (108) Ae-do; (109) Sogam-do; (110) Hyongje island; (111) Tegam-do; (112) Chamcha-do; (113) Mugi-do; (114) Tok-do; (115) Nampho; (116) Onchon; (117) Haeju; (119) Kanghwa island; (120) Sin-do; (121) Yongjong island; (122) Sammok island; (123) Sosa; (124) Inchon; (125) Yonghung island; (126) Taebu-do; (127) Namyang bay; (128) Asan bay; (129) Cheonsu bay; (130) Kum river; (132) Yubu-do; (133) Tongjin estuary; (134) Chilsan island; (135) Aphae island; (136) Suncheon bay; (137) Hwangsan; (138) Cheju island; (139) Mosulpo; (146) Sitaizi; (147) Tangshancheng; (148) Yalu Jiang estuary; (149) Beijingzi; (150) Xingren Tuo; (151) Yuanbao Tuo; (152) Wangjia Dao; (153) Jinxian county; (154) Xiaolongshan Dao; (155) Haimao Dao; (156) Lüshun; (160) Baidaihe; (161) Shijutuo; (162) Changshan islands; (163) Weihai city; (164) Qingdao; (165) Ping Shan; (166) Danian Shan; (167) Cheniu Shan; (171) Lianyungang city; (172) Yancheng Nature Reserve.

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



■ **MALAYSIA** In Peninsular Malaysia, the Chinese Egret is a local and uncommon non-breeding visitor which has been assumed to winter at a few sites along the west coast (Wells 1999). It was possibly a common winter visitor to Sarawak (and presumably also Sabah) in the late nineteenth century (Smythies 1981), but there have only been a few subsequent records. Records are as follows:

■ **Peninsular Malaysia** in Penang, Perak, Selangor, Melaka and Johor: **Batu Uban**, Penang, one, August 1997 (*Suara Enggang* November–December 1997); **Kuala Gula** mudflats, Perak, including in Matang Forest Reserve, more than 30 (fewer by mid-December), November–December 1964 (Wells 1999), up to three, 1965 (Medway and Nisbet 1967), three, February 1985 (I. Lewis *in litt.* 1999), five, January 1986, 10, March 1986 (Wells 1990c); also Harrap 1986), 13 (including 11 in breeding plumage) at Sungai Rubiah (Rubiah river mouth), close to Kuala Gula, March 1986 (Wells 1990c); **Tanjung Karang**, Selangor, up to two, November–December 1988 (*Enggang* 2, 1 [1989]), February 1989 (*Enggang* 2, 3 [1989]), April 1995 (D. J. Hope *in litt.* 1997); **Pulau Tengah** (Tengah island), Kelang islands, Kelang estuary, Selangor, 1965 (Medway and Nisbet 1967), c.30, February 1967 (Wells 1999; also Medway and Nisbet 1968), 5–8, March 1989 (Wells 1999), 28, January 1990 (*Enggang* 3, 1 [1990]); **Tanjung Tongkah** (Tonkah Point, Ton Kah), Melaka, January 1879 (male in BMNH); **Jason bay** (Jason's bay), Johor, one, February 1998 (*Oriental Bird Club Bull.* 28 [1998]: 44–48), one, October 1998 (*Oriental Bird Club Bull.* 29 [1999]: 51–56, D. Dann *in litt.* 1999); **Kukup**, south-west Johor, up to 13, December 1998 (*Suara Enggang* January–February 1999: 8);

■ **Sabah Mengkabong**, undated (Sheldon *et al.* in press); **Pulau Libaran** (Libaran island), off north-east Sabah, two, one of which had a metal ring on the left leg and a blue plastic ring on the right, December 1997 (P. Alind *in litt.* 1998); **Likas bay**, up to 14, December 1984, regularly present in winter, 1984–1990 (Sheldon *et al.* in press), 15, October 1997 (D. Richardson *in litt.* 1999); **Tanjong Aru**, undated (Sheldon *et al.* in press); **Lok Kawi** beach, near Kota Kinabalu, undated (F. H. Sheldon in Lansdown undated), one on the coast north of Kota

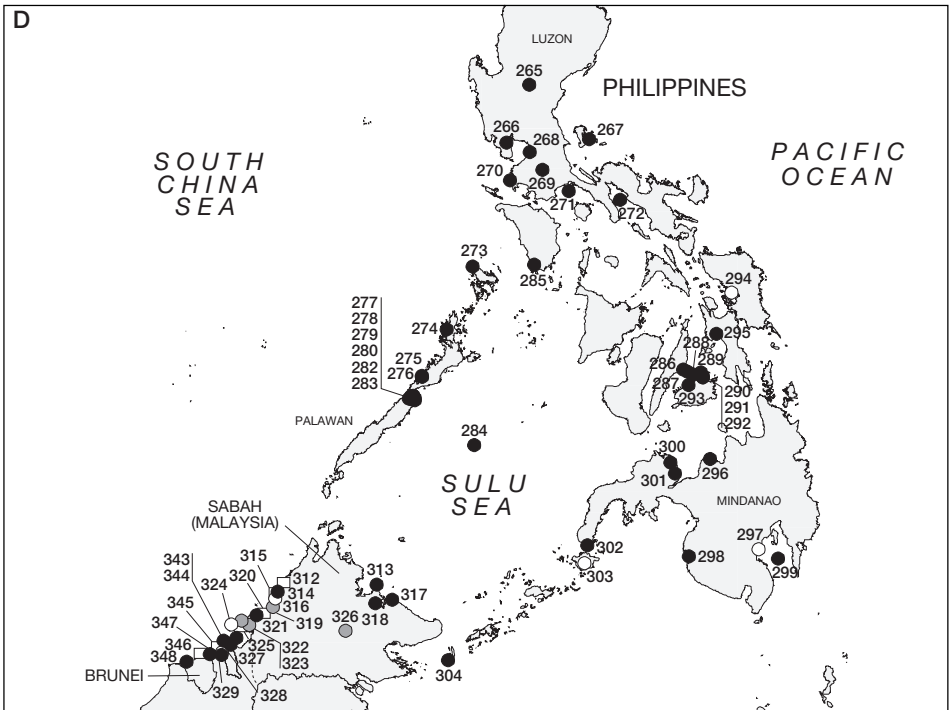
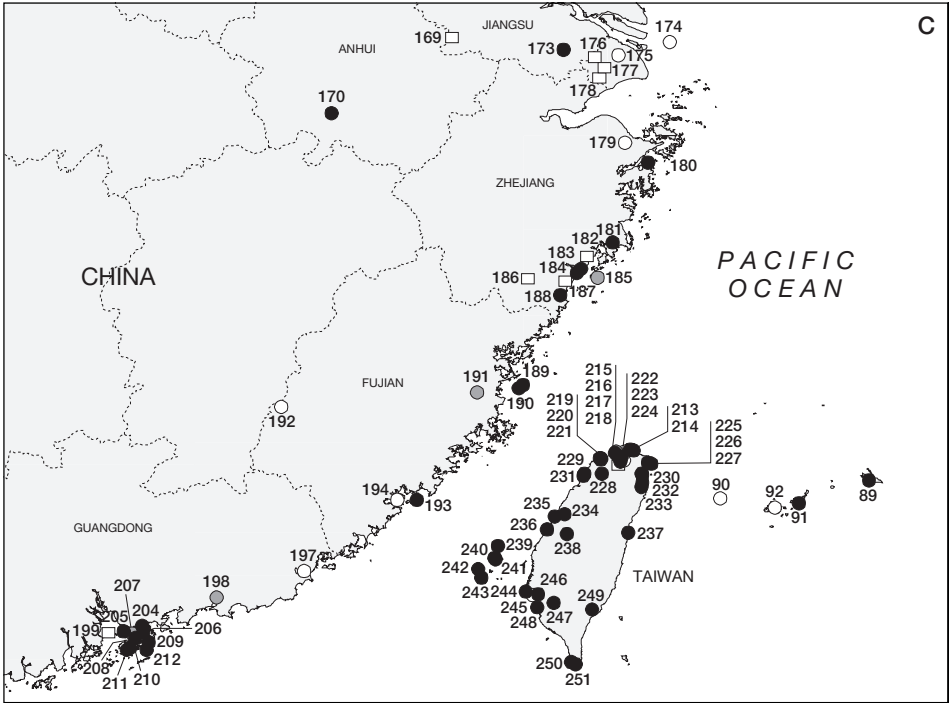
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**The distribution of Chinese Egret *Egretta eulophotes* (map C opposite):** (89) Yonaha bay; (90) Yonaguni-jima; (91) Ishigaki-jima; (92) Iriomote-jima; (169) Shijiu Hu; (170) Shengjin Hu Nature Reserve; (174) Shawaishan Island; (175) Shanghai; (176) Qingpu county; (177) Songjiang county; (178) Jinshan county; (179) Ningbo; (180) Zhuxi; (181) Wenling county; (182) Yueqing county; (183) Lingkun Island; (184) Yangxingzhen; (185) Dongtou; (186) Wencheng county; (187) Rui'an county; (188) Longjiang; (189) Beigantang Dao; (190) Mazu Dao; (191) Fuzhou; (192) Changting; (193) Jinmen Dao; (194) Xiamen; (197) Shantou; (198) Haifeng; (199) Futian Nature Reserve; (204) Yim Tso Ha; (205) Deep Bay; (206) A Chau; (207) Yuen Long; (208) Tsing Yi; (209) Clear Water bay; (210) Cheung Chau; (211) Pearl island; (212) Po Toi island; (213) Chinshan; (214) Yehliu; (215) Tanshui river; (216) Watzuwei; (217) Kuantu; (218) Shetzur; (219) Chuntou; (220) Hsutsokang; (221) Tayuan; (222) Taipei city; (223) Wuku; (224) Huachiangta bridge; (225) Kungliao; (226) Tienliaoang; (227) Hsiapu; (228) Tachuang; (229) Touchien river; (230) Chu-an; (231) Kangnan; (232) Lanyang estuary; (233) Sanchi; (234) Taya; (235) Tatu estuary; (236) Hanpao; (237) Hualien estuary; (238) Nantou county; (239) Chipei island; (240) Makung island; (241) Hsingjen; (242) Hua Yu; (243) Chimei; (244) Tsengwen estuary; (245) Anping; (246) Tainan city; (247) Chishan; (248) Yungan; (249) Lichia river; (250) Lungluan Tan; (251) Kenting.

**(map D opposite; sequence not as in text):** (265) San Jose; (266) Puerto Rivas; (267) Minasawa; (268) Parañaque; (269) IRRRI; (270) Matabungkay; (271) Tayabas bay; (272) Ragay gulf; (273) Calauit; (274) Lagen; (275) Sabang; (276) St Paul's Subterranean River National Park; (277) Tagburos; (278) Irawan; (279) Iwahig Penal Colony; (280) White Beach; (281) unallocated; (282) Puerto Princesa; (283) Bancaobancao point; (284) Tubbataha; (285) Caminawit; (286) Mactan Island; (287) Olango; (288) Calituban islet; (289) Banacon islet; (290) Bubujan islet; (291) Mahaba islet; (292) Tahong-tahong islet; (293) Inabanga coast; (294) Catbalogan; (295) Ormoc city; (296) Alubijid; (297) Santa Cruz; (298) Kumalawit; (299) Davao gulf; (300) Bonifacio; (301) Sinacaban; (302) Talon-talon; (303) Basilan; (304) Sitankai; (312) Mengkabong; (313) Pulau Libaran; (314) Likas bay; (315) Tanjong Aru; (316) Lok Kawi; (317) Mumiang; (318) Sandakan; (319) Papar; (320) Bongawan; (321) Binsulok river mouth; (322) Kuala Penyu; (323) Padas Damit; (324) Labuan; (325) Menumbok; (326) Kinabatangan river; (327) Kuala Trusan; (328) Rangau; (329) Limbang; (343) Brunei bay; (344) Kampong Serasa; (345) Bandar Seri Begawan; (346) Tutong river; (347) Kampong Wasan; (348) Seria.

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





Kinabalu, March 1994 (T. Anderson *in litt.* 1999); **Mumiang**, 16, December 1984 (Sheldon *et al.* in press); **Sandakan**, one collected, 1952 (Smythies 1981), one, December 1990 (T. Carlberg *in litt.* 1999); Ka-Karis, upper **Kinabatangan river**, male collected, 60 m, October 1963 (Thompson 1966, Smythies 1981); **Papar** (Kuala Papar), October 1968, January 1969 (Smythies 1981); **Bongawan**, undated (Sheldon *et al.* in press); **Binsulok river mouth**, one (in breeding plumage), April 1983 (Sheldon *et al.* in press); **Kuala Penyu**, 1959 (Gore 1968); **Padas Damit** estuary, Klias peninsula, March 1975 (Wells 1976); **Menumbok**, undated (Sheldon *et al.* in press); **Labuan**, March 1892 (specimen in BMNH);

■ **Sarawak** **Kuala Trusan**, Brunei bay, May 1986 (Howes 1986; see Scott 1989); **Rangau**, Limbang river estuary, one collected, 1934 (Smythies 1981); **Limbang** coast, Brunei bay, April 1986 (Howes 1986; also Scott 1989); **Pulau Bruit**, Rajang delta, 150 km north-east of Kuching, 16, November 1985, five, April 1986 (Scott 1989); **Samunsam Wildlife Sanctuary**, 85 km north-north-west of Kuching, undated (Scott 1989); **Bako-Buntal** bay, September 1968 (Croxall 1969); **Semengoh Fisheries Centre**, December 1994–January 1995, and December 1995 (Gregory-Smith 1996).

■ **SINGAPORE** The Chinese Egret is an uncommon winter visitor to North, East, West and Pulau Ubin (Lim and Gardner 1997), with small numbers occurring each year along the north coast. In the early 1990s, the favoured site shifted from the degraded Serangoon estuary to the unprotected Seletar estuary (Lim 1994a), but they are now more dispersed than previously (because of disturbance) and range from Sungei Buloh in the west to Pulau Ubin in the east (Lim Kim Seng *in litt.* 2000). Records are from: **Sungai Buloh Nature Park**, one, October 1995, one, January 1997 (Lim Kim Seng *in litt.* 2000); **Kranji**, one, April 1986 (Wells 1990c); **Seletar estuary**, including near the airbase, two adults (one collected), October 1940 (Gibson-Hill 1949a,b), two seen, November 1963 (Medway and Wells 1964), small group on the mudflats, winter 1990/1991 (Wells 1999), and this now the favoured site of the species in Singapore (Lim 1994), maximum of 21 in 1991, two, March 1994 (Lim Kim Seng *in litt.* 2000); **Pulau Ubin**, one seen, October 1992, this bird having been colour-banded at Sin-do (Shin-do), South Korea, in July 1990 (Mundkur 1993), one, April 1994, 13 birds, March 1996, one, March 1997 (Lim Kim Seng *in litt.* 2000; also *Suara Enggang* July–August 1997); **Pasir Ris Beach Park** (Pasir Ris Park), one, January 1995, two, March 1997 (Lim Kim Seng *in litt.* 2000; also *Suara Enggang* July–August 1997), one seen on the estuary, April 1998 (D. Cooper and F. Cooper *in litt.* 1999); Serangoon estuary, including **Serangoon sewage treatment works**, up to five (in full breeding plumage), plus three birds thought to be this species, April 1979 (Wells 1984), minimum of three (in breeding plumage), April 1980 (Wells 1986), up to 17, January 1983 (P. Alström, U. Olsson and D. Zetterström *in litt.* 2000), 14, April 1983 (Wells 1990a), 13 (in breeding plumage), March 1986, five, April 1986 (Wells 1990c), only two birds at this by then degraded site, March–April 1987 (Wells 1990c), two, March 1997, two, October 1997, up to two, January–March 1998 (Lim Kim Seng *in litt.* 2000); **Jurong**, up to three seen on the prawn-ponds, March–April and October–December 1964 (Medway and Nisbet 1965); **West Coast road**, nine seen on prawn-ponds, October 1973 (Wells 1975); **Kampung Tanah Merah** (Tanah Merah), up to three, October–December 1999 (Lim Kim Seng *in litt.* 2000); Lorong Halus (untraced), one, March 1997 (*Suara Enggang* July–August 1997).

■ **BRUNEI** The species is a regular non-breeding visitor in small numbers to Brunei bay (Scott 1989): **Brunei bay** at Tg. Puan, P. Berbunuk, P. Siarau, P. Badukang, 1986–1988 (Mann 1988); **Kampung Serasa** (Serasa), at least 13 birds, December 1984, 15–25, April 1986 (Mann 1987), up to 27 birds, March 1989 (Mann 1991); **Bandar Seri Begawan**, undated (Mann 1987); **Tutong river**, undated (Mann 1987); **Kampung Wasan** (Wasan), 1986–1988 (Mann 1988); **Seria**, October 1974, May and October 1975 (Smith 1977), 1986–1988 (Mann 1988), 4–6 birds, October 1988–May 1989, five, October 1989–May 1990 (Mann 1991), five, January

1990 (Perennou *et al.* 1990), single birds regularly recorded, September–March 1988–1994 (M. J. Seal Coon *in litt.* 1999).

■ **INDONESIA** There are sparse winter records from the Greater Sunda islands and Sulawesi, as follows:

*Kalimantan* ■ **East Kalimantan Kutai National Park** at Teluk Kaba, October 1996 (Holmes 1997); **Mahakam delta** at Pulau Jawa and Senipah, November 1987 (Holmes 1997);

*North Natuna* islands, Sungei Ulu, Bungurun island, April 1909, and Sadanau island, September 1928 (Chasen 1935, Gibson-Hill 1949b, Morioka and Yang 1996);

*Sumatra* ■ **Jambi Berbak National Park**, Jambi, October 1983 (Silvius and Verheugt 1986, van Marle and Voous 1988);

*Sipura*, Mentawai islands, October 1924 (specimen in ZRCNUS; also Chasen and Kloss 1926, Morioka and Yang 1996);

*Java* ■ **West Java** 10 km west of **Pangandaran**, April 1988 (Andrews 1993);

*Bali* birds corresponding to fieldguide descriptions recorded, early 1980s (Ash 1984);

*Sulawesi* ■ **North Sulawesi Mantehage**, off the coast of Minahassa, April 1893 (Meyer and Wiglesworth 1898); **Kema**, October 1893 (Meyer and Wiglesworth 1898); Morowali, listed by Scott (1989), presumably on the basis of WWF (1980), but White and Bruce (1986) questioned this record; **Kwandang**, October 1914 (Riley 1924); **Bulurokeng**, February and April 1979 (Andrew and Holmes 1990); Rano Sindu (untraced), March 1917 (specimen in USNM).

**POPULATION** Rose and Scott (1997) estimated the global population of this species at 1,800–2,500 birds. On the basis of the evidence presented below (including newly discovered nesting colonies in mainland China), its breeding population is estimated at 2,600–3,400 birds, including 100 birds in Russia, 900–1,300 in North Korea, 600–1,000 in South Korea and 1,000 in mainland China. Its numbers have fallen recently at the nesting colonies in South Korea, and its coastal habitats are under pressure in many parts of its range (see Threats), so it is likely that its global population is in decline. The historical status of the Chinese Egret is difficult to judge, because of the very incomplete data available and because some of the old reports of large numbers may have involved confusion with other species (see Remarks 1). The theory that the species declined dramatically at the end of the nineteenth century because of large-scale hunting for plumes (Vincent 1966–1971, Murton 1972, Hancock and Kushlan 1984) appears to be contradicted by evidence that it remained relatively numerous in Korea and mainland China after the plume trade had declined (see relevant sections below and Distribution).

**Russia** It occurs in relatively small numbers in the Russian Far East (but see Remarks 3). A breeding colony of 30–40 pairs was discovered on an island in Peter the Great bay in 1998 (Litvinenko and Shibaev 1999a).

**Japan** The species is currently a regular non-breeding visitor to Japan, mainly in the summer months and usually in small numbers. It has attempted to nest there, but there is no evidence of successful breeding (see Distribution).

**Korea** In the early twentieth century this species was numerous on a small island off the North Korean coast (Mori 1939 in Austin 1948), and Austin (1948) regarded it as a locally common summer visitor to northern Korea. Won (1963) noted that it was “easily seen” in spring in North Korea and was “very common” in fields and reclaimed land. By the 1950s, however, it was realised that the species had become very rare. Both Vincent (1966–1971) and Murton (1972) concluded that the reduced distribution of the species was caused by its slaughter for plumes at the end of the nineteenth century (Hancock and Kushlan 1984). However, the reports by Mori (1939), Austin (1948) and Won (1963) on this species in the early to mid-twentieth century seem to contradict the commonly accepted theory that there

**Table 1. Number of breeding Chinese Egrets in North Korea in the mid-1990s (data from Pak U-il *in litt.* 1998).**

Site	Number of birds
Rapdo (Sonchonrap-do)	120–150*
Mugi-do	120
Chamcha-do	150
Tegam-do (Taegam-do)	100–120
Tok-do	300–600
Other islands, including Gyoei and Hyongge	100–150
*Fiebig (1993) estimated the mean breeding population on Rapdo at c.200 birds.	

was a dramatic decline in the late nineteenth century from which the species never fully recovered (see also China below).

In the 1990s, about 600–1,000 birds were estimated to be breeding in South Korea (Han Sang-hoon *in litt.* 1997) and about 1,000–1,200 birds in North Korea (Pak U-il *in litt.* 1998), although the data available on individual colonies indicate that the total population in North Korea may be c.900–1,300 (see Table 1), and there are presumably some additional birds in undiscovered or uncounted colonies. The breeding colonies in South Korea have suffered recent declines as a result of habitat destruction and human disturbance: the population discovered on Sin-do (Shin-do) in the 1980s rapidly decreased from 500 pairs in 1988–1989 to 100 pairs in 1994 (Park Jin-young verbally 1995), and in 1995 only three birds remained (Chong Jong-ryol *in litt.* 1998). On Chilsan island, 100 individuals were observed in 1991, falling to 50 individuals in 1993 (Lee Woo-shin *in litt.* 1998). Fiebig (1993) reported 52 pairs breeding on Sogam-do island in 1980, but also noted this is not an annual breeding site.

In late summer Chinese Egrets gather at southern Kanghwa island before migration, with peak numbers exceeding 400 in July and August; the minimum number of birds using Kanghwa island and the Incheon area during southward migration is estimated to be between 700 and 1,000 (Park Jin-young *in litt.* 1999). Yongjong and Sammok islands were formerly also very important stop-off areas, with a peak of over 350 birds, but numbers have fallen since construction of the new airport (Park Jin-young *in litt.* 1999). The wintering population in South Korea is believed to consist of only a few birds, although data are lacking (Park Jin-young *in litt.* 1999).

**Mainland China** Swinhoe (1863) noted this species was sparsely distributed throughout southern China, but commonest in northern Taiwan, while La Touche (1892) reported it as “very abundant” near Shantou (Swatow) in Guangdong in summers in the late nineteenth century. By the end of the nineteenth century, egrets were hard hit by the plume trade: in a letter dated 25 August 1899, Rickett (1900b) noted mass destruction of egrets in areas near Fuzhou (Foochow) in Fujian, the money paid for the egret plumes being so good that in the spring of 1899 every man who could shoot at all was on the lookout, and “a terrible slaughter began on the arrival of the wretched egrets...the country may be said to have [been] swept clean.” Several sites were “entirely depopulated” and at one egretry, where some Chinese Egrets and more Little Egrets nested, local mandarins put up notices warning people against molesting the birds; however, poachers discovered the location of the feeding ground and shot the entire colony, causing the villagers to become “very angry because of the bad smell that arose from the decaying bodies of the nestlings” (Rickett 1900b). Nevertheless, the species was reported as still relatively numerous in the 1920s at Suzhou in Jiangsu (Courtois 1927), and was noted by Cheng Tso-hsin (1940) to be common in Guangdong from May to September. Assuming these birds were correctly identified, it seems this species was either not fatally hit by the egret plume trade in the late nineteenth / early twentieth century, or it had already recovered in some localities. It was regarded as “common” in the 1920s or 1930s (see also Korea above), and the decline of the species in more recent times might have been

caused by other reasons; however, judging its status from old records is problematic, as it is easily overlooked or misidentified in the field (see Remarks 1).

The current population probably stands at over a thousand birds. Su Hualong (1994) estimated at least 300 breeding birds on the island of Haimao Dao, and in the late 1990s at least 100 birds were banded there by a joint Chinese–Korean team (Kim Jin-han verbally 1998), which suggests there were probably still hundreds of birds there at that time. About 25 nests were reported on the nearby Xiaolongshan Dao (She Dao) in the mid-1980s but numbers were reported to have declined since 1987 (Pei Xiaoming *et al.* 1994). In July 1999 about 500 were counted on Liaoning's Changshan islands (Ding Changqing *et al.* 1999c). Adding the recent counts of Haimao Dao and Changshan islands together, and on the assumption that there are other undiscovered (or uncounted) colonies in Liaoning, Shandong and elsewhere, the number of this species in China probably therefore exceeds 1,000 individuals.

**Philippines** This egret has been described as a rare, or uncommon but regular, winter visitor to the Philippines (duPont 1971, Dickinson *et al.* 1991). It has been found frequently only since the early 1980s (Gast and King 1985), although this may be due, in part, to identification problems (Lansdown 1990). It seems to be most abundant (or, perhaps, most conspicuous, given identification difficulties in non-breeding plumage) as a passage migrant, being recorded mainly in spring (March to May, with one record in June), with relatively few explicit (month-dated) autumn and winter records. Amadon (1951) speculated (as did Gast and King 1985) that the species may be a breeding resident in the Philippines, and it is conceivable that non-breeding individuals linger over the summer, although the lack of records between July and September renders this unlikely.

A minimum of 1,600 birds (on Leyte; see Distribution) appears to be present in the Philippines for at least part of the winter period (*per* C. M. Poole *in litt.* 1994). This constitutes a major proportion of the estimated world population of 2,600–3,400 individuals (see above). Other important areas are Bohol and offshore islets, where 635 were counted in March–April 1991 (Anon. 1991, A. Jensen *in litt.* 1994), Palawan (200 at Puerto Aventura in October 1991 and 70 at White Beach in February 1997: M. Heegaard and A. Jensen verbally 1997, P. A. J. Morris *in litt.* 1997), and Cebu (80 on Olango island in 1991 or 1992, and 17 on Mactan island in April 1987: C. M. Poole *in litt.* 1994, Howes 1987b). On Luzon small numbers occurred at Tayabas bay during the 1980s, and 41 were at Ragay Gulf in April 1987 (Howes 1987b). In the Sulu Sea, the small numbers on Tubbataha reef in May 1995 and 1996 (A. S. Manamtam verbally 1996, BRT) presumably refer to northbound migrants.

**South-East Asia** In Malaysia, Singapore, Brunei and Indonesia the species is a scarce but doubtless regular winter visitor, and it is probable that a small but not insignificant proportion of the world's population is dispersed along the coastline of Borneo and Sulawesi between October and March each year. The fact that as many as seven specimens were collected in Sarawak in the 1890s was adduced as evidence that the species was then a common winter visitor (Smythies 1981). At least 16 birds were identified but possibly many more were present in late 1985 on the western coast (Edwards *et al.* 1986). In Vietnam, it is believed to be a regular passage migrant in small numbers through the Red River delta, and occurs regularly in the Mekong delta and other coastal areas of south Vietnam (J. C. Eames *in litt.* 1997).

**ECOLOGY Habitat** The favoured habitat of Chinese Egret appears to be shallow tidal estuaries, mudflats and bays (Hancock and Kushlan 1984). On the breeding grounds in China and Korea, it is observed mainly to nest on uninhabited islands and forage in estuaries and bays (Lee Woo-shin *in litt.* 1998, Ding Changqing *et al.* 1999c). In Liaoning, birds feed on the coast during the breeding season (Huang Mupeng *et al.* 1989) but, after breeding, some birds remain on islands, and some move inland, feeding at saltpans during the day and roosting in forests on nearby hills (Huang Mupeng *et al.* 1989). In North Korea, birds were found foraging on tidal flats 7–8 km from breeding colonies (Chong and Morishita 1996).

Most records of wintering birds are also from coastal areas, especially estuaries and islands. In the Philippines the Chinese Egret occurs primarily on intertidal mudflats and freshwater coastal marshes (Scott 1989) or “along seashore above the tideline and in nearby fresh marshes” (Dickinson *et al.* 1991). At Puerto Aventura on Palawan, birds use mangroves as a high-tide roost, dispersing along the beach at low tide (Redman 1993). The birds on Mactan island, Cebu, in 1987 were on “sand flats” (Howes 1987b). In the Malay Peninsula, records have always been from mangrove-backed tidal mudflats and tide-flushed prawn-ponds in the mangrove zone (Wells 1999). Although almost exclusively associated with coastal areas, there are some instances of Chinese Egrets using agricultural land. Gast and King (1985) reported the species in rice-paddies along the Talavera river in Nueva Ecija, Luzon (although see Migration), and Rickett (in Iredale 1914) stated that it “frequents rice-fields, or the sides of inland ponds ... My collectors have never met with it on the coast”. Birds on Luzon in April 1983 were seen on a beach at the end of a runway, on large fishponds and in a planted rice-paddy (Gast and King 1985). The Batan bird of June 1985 was in carabao ponds (cattle wallows) above the beach (USNM label data). The bird at Sabang, Palawan, in February 1994, was “in a field” (Hornbuckle 1994). In the Red River delta, Vietnam, it is usually recorded foraging along the tideline of sandy beaches or on intertidal mudflats, but has also been observed feeding with other egret species in rice-fields (Pedersen *et al.* 1998). Migrant birds in Hong Kong in recent years have almost invariably been noted feeding on intertidal mudflats or rocky shores, suggesting a narrower feeding niche than Great *Casmerodius albus* and Little Egrets (Cheung Ho-Fai *in litt.* 1998).

**Foraging and food** Birds are active when feeding, following the receding tide and running after mobile prey with opened wings, and often feeding in the company of other heron species (Lansdown 1990). Hancock and Kushlan (1984) described the favoured hunting technique as running rapidly to and fro, with wings often half-spread and flapped or flicked, repeatedly stabbing its bill in the water. A single bird observed on Mindoro, Philippines, performed the technique of constantly “dancing” with quick, high steps and wings frequently extended or occasionally flapping, behaviour which may be a useful field character in recognising Chinese Egrets in mixed egret flocks (Gast and King 1985). Chinese Egret has also been observed to walk and occasionally run a short distance in mud before stabbing with the bill (*Suara Enggang* January–February 1999). Chinese Egrets in Brunei bay (just prior to northward migration) foraged exclusively along the muddy foreshore at the mangrove edge, running to catch small shrimps in the manner of Little Egret (Howes 1986). Birds roosting at high tide on fish-trap stakes were seen to catch shrimps from just below the surface by jumping feet-first into the water, wings held high (Howes 1986). In the Philippines, the species frequently feeds in mixed groups of egrets (notably Great and Little Egrets) but employs distinct foraging techniques, suggesting it may be the ecological equivalent of one of two New World species, Reddish Egret *Egretta rufescens* (Hancock and Elliott 1978, Hancock and Kushlan 1984, Gast and King 1985) or Snowy Egret *E. thula* (Murton 1972).

Food appears to be mainly small fish and shrimps, but crabs are also taken and probably insects on land (Hancock and Kushlan 1984). Stomachs of two birds collected in May at a freshwater pond by the sea in Liaoning, mainland China, contained small freshwater fish and fragments of other aquatic animals (Huang Mupeng *et al.* 1989). Stomachs of birds collected at Paksan, North Korea, in 1955 contained crabs (in May), grasshoppers (in September) and fish (Won 1963). At the Xinyang egretty, pellets of nestlings comprised mainly “loach” and other fish species, and frogs, but did not contain shrimps (Wen Zhenzhong and Liu Shunan 1997). Two birds observed in Sarawak in September were noted to be more exclusively fish-eating than Intermediate *Mesophoyx intermedia* and Little Egrets, and less sociable (Croxall 1969).

**Breeding** All confirmed breeding records since 1985 have been from offshore islands, often amongst or close to colonies of other species, including Little Egret, Great Cormorant

*Phalacrocorax carbo*, Horned Puffin *Fratercula corniculata* and Black-tailed Gull *Larus crassirostris* (Lansdown 1990). Simple disc-shaped nests of straw and creeping plants are built on trees, low bushes or rocks in North Korea and China (Won 1963, Huang Mupeng *et al.* 1989, Chong and Morishita 1996). On Haimao Dao and Xiaolongshan Dao (She Dao) islands in Liaoning, the highest nest found was only 23 cm from ground level (Wen Shisheng and Liu Mingyu 1998). Nests found at Dantuozi, Jinxian county, Liaoning, were built in branches less than one metre from the ground, or under trees (Huang Mupeng *et al.* 1989). However, Hancock and Kushlan (1984) reported the nest is usually placed 12–18 m above the ground near the tops of tall trees (possibly based on information relating to North Korea). Compact colonies were observed on Xiaolongshan Dao (She Dao), where 14 nests were found on a cliff-face of about 20 m<sup>2</sup>, and another 11 nests were found on a cliff-face of about 10 m<sup>2</sup>, with distances between nests were c. 14–76 cm (Huang Mupeng *et al.* 1989). When the species bred in Hong Kong, eggs were laid in the last week of April (HKBWS database). In North Korea breeding is said to take place in May (Hancock and Kushlan 1984). On Haimao Dao, one nest was found to contain a nestling already on 7 June 1990 (Pei Xiaoming *et al.* 1994). The individual collected at Batan in the Philippines in June had partly developed ovaries (USNM label data), but the date suggests that it was perhaps not destined to breed that year (oversummering non-breeding birds in Japan presumably show some seasonal sexual development). Birds acquire breeding plumage before and during the northward spring migration to the breeding grounds: the majority of birds seen on Mindoro, Luzon and Palawan from 1 April to 20 May 1983, for example, were in full nuptial plumage (Gast and King 1985). The normal clutch appears to be 3–5 eggs (Hancock and Kushlan 1984). In Liaoning most nests had four eggs (Huang Mupeng *et al.* 1989). However, more than 80% of nests on Sin-do (Shin-do), South Korea, had only two or three eggs (Won 1991), and of 30 nests in North Korea, over half had three eggs (Chong 1987). Huang Mupeng *et al.* (1989) reported incubation to be 24–26 days, while Chong (1987) recorded incubation periods of 30–35 days in North Korea; however, Hancock and Kushlan (1984) considered that reports of incubation periods of 30 days or more were exceptionally long and may be in error. In North Korea, most incubation is undertaken by females (Chong 1987). Of all eggs laid early in the season (May to June), 84% hatched, while those found in nests in late July were not fertile; nestlings remained in the nest for 36–40 days being fed mainly by the female parent, on fish and sometimes crabs (Chong 1987).

**Migration** In Liaoning, China, the species arrives in late April or early May and departs in late September or early October (Pei Xiaoming *et al.* 1994). In North Korea, it arrives in early May and departs from early September (Chong 1987), while in South Korea it usually arrives in April and departs in October (see Distribution). Migratory routes are not fully known. Of 381 chicks colour-banded on Sin-do (Shin-do) in South Korea in 1990 and 1991, only one was sighted again, in Singapore in October 1992 (Mundkur 1993). However, during southward migration birds concentrate in the northern part of Kyonggi province, and small numbers (fewer than 30) appear on almost every tidal mudflat area in the province (Park Jin-young *in litt.* 1999). The pattern of occurrence in Hong Kong strongly suggests coastal migration, with single birds or small groups travelling along the coast, rarely being recorded away from intertidal mudflats when in Deep Bay (G. J. Carey *in litt.* 2000). HKBWS records and observations based on close examination of bill pattern and plumage development suggest that birds rarely remain for longer than two days (G. J. Carey *in litt.* 2000). There therefore appears to be a continuous “trickle” migration along the coast with birds stopping off for only very short periods, at least as far south as Hong Kong. There are no winter records in Hong Kong, nor apparently in Guangdong. Records from Vietnam also support the view that the species moves along the south China coast, then following the Vietnamese coastline, which may constitute an important staging area for the species on passage (Eames *et al.* 1992). Birds may then move to the southern tip of the country, where sizeable counts have

been made in spring (Buckton *et al.* 1999), and from here it is a relatively short journey to its wintering grounds. It is likely that (at least some of) the birds wintering in the Philippines migrate via Taiwan and the Batanes islands.

Its winter quarters are poorly known, but appear to include the south and central Philippines, Sulawesi and Peninsular Malaysia (Lansdown 1990, Collar *et al.* 1994). None of the 381 chicks colour-ringed at the Sin-do (Shin-do) islet breeding colony in Korea (in an attempt to track migration routes and wintering grounds) has been relocated at roost sites on Palawan (Mundkur 1993, Redman 1993), suggesting that the egrets wintering on Palawan (or, at least, those moving through that island in spring) do not originate from that colony. Spring passage (March–May) accounts for many of the recent Philippine records (see Population above), and it is certain that the country is a major migration staging area. Similar spring congregations also occur in Taiwan (Redman 1993). The record from San Jose, well inland along the Talavera river in Nueva Ecija province, Luzon, was c.30 km downstream of Dalton Pass, the notorious focal point for migrating birds (Gast and King 1985). It is likely that, in common with many other species, this valley provides a trans-Luzon migration route. At Seria, Brunei, in 1986–1988, birds arrived in early October, numbers building until about 10 January, with most departing in February and March, and the few left in late March being in almost complete breeding dress (Mann 1988; see Remarks 4). In the Malay Peninsula, extreme dates of occurrence are 5 August and 4 May, but with very few records before the last week of September; a bird colour-ringed as a chick on Sin-do (Shin-do) islet in western Korea on 6 July 1990 was sighted on Ubin island, Singapore, on 17 October 1992 (Wells 1999).

**THREATS** It has been suggested that the Chinese Egret used to occur over a relatively wide area of eastern and South-East Asia, but was almost eradicated by trade in plumes and other forms of human persecution at the very end of the nineteenth century in China, and has never recovered (Iredale 1914, Murton 1972, King 1978–1979, Hancock and Kushlan 1984, del Hoyo *et al.* 1992), unlike the apparently more resilient, abundant and “ecologically flexible” Little Egret (Murton 1972). However, the evidence for this theory is inconclusive, although the species does appear to have declined in numbers since the nineteenth century (see Population).

**Habitat loss** Increased infrastructural development is thought to have hastened the decline of breeding colonies, and wetland reclamation threatens several important sites (Lansdown 1990, Collar *et al.* 1994). *Korea* Several Chinese Egret colonies are in or near the Demilitarised Zone (DMZ), which is vulnerable to rapid development and increased disturbance if the political situation changes in the Korean Peninsula (see equivalent section under Black-faced Spoonbill *Platalea minor*). Wetland reclamation policy in South Korea has included the construction of major facilities such as the Nakdong Barrage (Lansdown 1990), while construction of the Incheon International Airport in the mid-1990s reclaimed wetlands on Samsok and Yongjong islands: numbers of Chinese Egret on Samsok island showed a rapid decline from about 150 in 1993 to none in 1997 (Park *et al.* 1997). The Han and Imjin river estuaries face threats from urban expansion, changes in agricultural practices and dumping of construction materials; the intertidal zone on Kanghwa island faces reclamation related to the construction of an airport nearby; and the intertidal zone on Yongjong island faces reclamation for the construction of an airport, buildings and roadways (Yoo and Lee 1998). For further information see equivalent section under Baikal Teal *Anas formosa* and Spoon-billed Sandpiper *Eurynorhynchus pygmeus*. *Mainland China* Rapid development in the coastal provinces of mainland China threatens both the feeding sites of the species near to its nesting colonies and its main migratory feeding areas, through the conversion of tidal flats into farmland, aquacultural ponds or housing and industrial estates (see equivalent section under Spotted Greenshank *Tringa guttifer*). Hong Kong Lui *et al.* (1997) listed threats



to the remaining egrettries in Hong Kong (although it should be noted that the Chinese Egret no longer breeds in Hong Kong, and the chances of it re-establishing a population there are presumably low given the absence of breeding Chinese Egrets elsewhere in southern China); Yim Tso Ha, which once supported about two pairs of breeding Chinese Egrets, was comprised of rice-paddies until the 1960s, but a subsequent increase in road traffic and the reclamation of wetlands (natural and artificial) nearby led to declines in numbers of breeding ardeids, and no records of any breeding egret species have been made since 1995. Ping Shan, Ha Tsuen and Chuk Yuen egrettries in the Deep Bay area have been destroyed through development, and Nam Sang Wai is no longer suitable for this species, although it does remain a fishpond wetland (G. J. Carey *in litt.* 2000). *Vietnam* Intertidal areas along the coast of Vietnam are subject to increasing modification as aquacultural development expands, and much of the intertidal area of Cam Ranh bay and the Red River estuary has been converted into shrimp-ponds (Eames *et al.* 1992, J. C. Eames *in litt.* 1997, Pedersen *et al.* 1998; for further details see equivalent section under Black-faced Spoonbill). *Philippines* Unfortunately, the three municipal marine parks (Pamilacan and Balicasag in Bohol province, and Apo island in Negros province) do not protect localities from which the Chinese Egret is known. The cutting of mangroves for firewood in the Philippines could result in the loss of roost sites (B. Gee *in litt.* 1997) such as Puerto Aventura near Puerto Princesa on Palawan. Coastal water pollution will inevitably have an adverse effect on the prey items taken by the egret. The Agroforestry and Mangrove Forest Research Center at Tagpilan in Pagbilao bay, Luzon, is under threat from aquaculture and destruction for firewood (Scott 1989). *Malaysia* For threats to the coastal wetlands of Peninsular Malaysia, see the equivalent section under Milky Stork *Mycteria cinerea* and Lesser Adjutant *Leptoptilos javanicus*. At wintering sites in Sabah and Sarawak, threats to the species included mangrove clearance (including for aquaculture) and logging, drainage for cultivation that may affect the natural drainage and energy flow through mangrove forest, erosion of riverbanks by speedboats and large barges, and illegal clearance for small settlements (see Department of Wildlife and National Parks, Peninsular Malaysia 1987). *Singapore* Two sites in Singapore where the species was recorded in the past, Jurong and Serangoon, have been lost to land-filling (Wells 1999).

**Pollution** *Korea* Water pollution (presumably by both industrial and domestic waste) in southern Kanghwa island and Yongjong island in South Korea is a potential threat to waterbirds (Yoo and Lee 1998). *Mainland China* Water pollution is also severe in many of the coastal provinces of China (see equivalent section under Spotted Greenshank). *Philippines* The use of toxic chemicals in prawn-ponds is apparently a widespread practice, and the chemicals applied by prawn-pond farmers to kill *Tilapia mossambica* have apparently caused the death of several egrets on Palawan (BRT).

**Hunting and egg collection** *Korea* In 1939 local women were collecting eggs on Yob-do island in the belief that this improved the beauty of their skin (Austin 1948), but this practice has presumably now ceased. *Mainland China* The nests found at Dantuozui, Jinxian, Liaoning, in 1982 had been raided by egg-collectors (Huang Mupeng *et al.* 1989). Local people and fishermen also take eggs on the Changshan islands, Liaoning, setting fire to the island beforehand (Ding Changqing *et al.* undated). *Vietnam* One of the main threats to the Red River delta area in Vietnam (and most estuarine or coastal sites in Indochina) is intensive hunting (Pedersen *et al.* 1998; for further details see equivalent section under Black-faced Spoonbill). *Malaysia* Wells (1999) reported recent rumours of egret-killing at fish-cage rafts moored in the Kelang estuary, which could have involved this species.

**Disturbance** Human disturbance is a threat to the species at both its nesting colonies and on the intertidal mudflats used for feeding. In Russia, disturbance by holiday-makers is a potential threat at the nesting colony in Primorye (Yu. Nazarov *in litt.* 1997). Human disturbance at colonies in North Korea is thought to lead to increased predation of Chinese Egret chicks and eggs by Herring *Larus argentatus* and Black-tailed Gulls (Chong Jong-ryol

*in litt.* 1998). Disturbance of nesting birds by photographers and disturbance on the feeding grounds (including by tourists) appeared to be major factors in the rapid decline of the colony on Sin-do (Shin-do) islet in South Korea (Park Jin-young verbally 1995, Yoo and Lee 1998). One of the main threats to the Red River delta area in Vietnam (and most estuarine or coastal sites in Indochina) is disturbance by collectors of marine products (Pedersen *et al.* 1998; for further details see equivalent section under Black-faced Spoonbill).

**MEASURES TAKEN** *Legislation* The Chinese Egret is listed on Appendix I of the CMS (Bonn Convention, for which see Boere 1991). It is included in the Russian Red Data Book (Kolosov 1983), designated as natural monument no. 361 in South Korea (Lee Woo-shin *in litt.* 1998), a Nationally Protected Species (Second Class) in mainland China (Zheng Guangmei and Wang Qishan 1998) and has been protected as a Category II protected species in Taiwan since 1995 (SC).

*Protected areas* *Russia* Furugelm island, the recently discovered breeding site in Russia, is inside the Far Eastern Marine Reserve, and this colony is therefore adequately protected (Litvinenko and Shibaev 1999a). The species may also be afforded some protection by the “Khasanskiy” Nature Park on the lower Tumen river, established in 1997 (Yu. V. Shibaev *in litt.* 1997). *Korea* Several of the main Chinese Egret breeding sites in North Korea are officially protected, including Tok-do, Tegam-do (Taegam-do), Rapdo (Sonchonrap-do) and Mugido islands, and the feeding grounds on the Mundok plain are in a wetland sanctuary (Chong and Morishita 1996). In South Korea, the breeding grounds on Sin-do (Shin-do) islet are designated as a natural monument (Lee Woo-shin *in litt.* 1998). *Mainland China* This species has been recorded in a number of protected areas in China, several of which may be important for its conservation, including Changdao National Nature Reserve in Shandong, Yancheng Nature Reserve in Jiangsu and, pending confirmation of the identity of the birds, Momoge Nature Reserve in Jilin and Dong Dongting Hu Nature Reserve in Hunan (see Distribution). The nesting colony on Xiaolongshan Dao (She Dao) in Liaoning is protected in She Dao-Laotieshan Nature Reserve (Liu Donglai *et al.* 1996). *Hong Kong* The species is regularly recorded on migration at Mai Po Nature Reserve and other sites within the Inner Deep Bay Ramsar site. Yim Tso Ha is a Site of Special Scientific Interest and entry into the egretty is restricted; since 1967, a full-time Agricultural and Fisheries Department warden has been stationed there during the breeding season (April to September), although Chinese Egret long stopped breeding at this site and other egrets apparently because of the deterioration of habitat and increased disturbance (SC). *Vietnam* The species has been recorded at Xuan Thuy Nature Reserve in the Red River delta and Dat Mui Nature Reserve in the Mekong delta. Xuan Thuy has been established as a Ramsar site and nationally recognised reserve but conservation management is yet to be implemented (Nguyen Cu *in litt.* 1997, Pedersen *et al.* 1998; for more details on Xuan Thuy see equivalent section under Black-faced Spoonbill). *Philippines* The species winters at or near two CPPAP sites (Bataan Natural Park/Subic bay on Luzon; Batanes islands; see Appendix). It also occurs in St Paul’s Subterranean River National Park, Palawan, where it receives legal protection, and Olango island, which is a Ramsar site and a wildlife sanctuary. Tubbataha reefs is listed as a National Marine Park and the Tawitawi coastal area has been proposed for FPE funding (see Appendix). The Haribon Foundation is promoting the conservation of coastal areas around Getape on Bohol, close to known sites for the egret (BRT). All mangrove swamps (see Puerto Aventura records in Habitat) have been declared as forest reserves (Proclamation 2,152). The Agroforestry and Mangrove Forest Research Center at Tagpilan in Pagbilao bay, Luzon, includes 114 ha of protected mangrove, although this habitat (as at other sites from which the species is known, such as Inabanga on Bohol, Ragay Gulf on Luzon and Davao Gulf on Mindanao) is under threat (see Threats). *Malaysia/Thailand* In the Thai-Malay Peninsula, the only regular stop-over or wintering sites that are formally protected are Kalumpang on the Perak coast

and Libong island, Trang (Wells 1999). *Malaysia* Details of measures taken to protect the coastal wetlands of Peninsular Malaysia are in the equivalent section under Milky Stork and Lesser Adjutant. It is recorded from Samunsam Wildlife Sanctuary in Sarawak, and from in or near to several forests reserves in Sabah and Sarawak (see Department of Wildlife and National Parks, Peninsular Malaysia 1987), which presumably afford some protection to its mangrove habitat. *Singapore* None of the sites where this species currently winters in Singapore is legally protected (Lim Kim Seng *in litt.* 2000).

**MEASURES PROPOSED** *Protected areas and habitat management* The most important measure for the conservation of the Chinese Egret is the continued and improved protection of its breeding colonies and the intertidal flats used for feeding by both nesting and non-breeding birds. A review is needed of the key sites for its conservation (linked to the surveys outlined under Research below), to determine the degree of threat at each site and the measures for its protection that are already in place, and hence whether there is a need to upgrade the status of any reserves or to extend their boundaries to include additional areas, and whether some new protected areas need to be established. Some specific recommendations are given by county below. *Russia* Although Furugelm island, the recently discovered breeding site in Russia, is inside the Far Eastern Marine Reserve, the coastal lagoons and bays along the coast between the Tumen river mouth and Pos'yet bay (Possiet bay), where the birds from the colony feed, are not protected; there is an urgent need to extend the boundaries of the reserve to include this stretch of coastline (Litvinenko and Shibaev 1999a). *Korea* There is a need to ensure that the key nesting islands are protected from disturbance, and to address the many pressures on coastal wetlands (particularly in South Korea), principally from reclamation and other development (see equivalent section under Baikal Teal and Spoon-billed Sandpiper). Several Chinese Egret colonies are in or near to the DMZ, and if the political situation changes in Korea there will be a need for measures to prevent damage to these colonies through habitat loss and increased disturbance (see equivalent section under Black-faced Spoonbill). *Mainland China* Although several nesting colonies are inside protected areas, measures are required to address the problems of disturbance and egg collecting at these sites (see Threats). Improved protection is required at many coastal sites used by the species in eastern China (see equivalent section under, e.g., Black-faced Spoonbill, Spotted Greenshank and Saunders's Gull *Larus saundersi*). *Thailand* The area of mudflats and mangroves near Krabi, Thailand, should be incorporated within Hat Nopparat Tara National Park and protected from disturbance, overexploitation and habitat destruction (Parr 1988). *Vietnam* Thai Thuy, in the Red River delta, is proposed as a nature reserve (Le Trong Trai *in litt.* 1997), and Buckton *et al.* (1999) recommended that Bai Boi in the Mekong delta be given nature reserve status. *Philippines* It is increasingly apparent that the central Philippines are the major wintering area of Chinese Egret. Therefore, alleviation of threats to areas which the species uses is imperative. Once the most important localities are identified (see Research below), general recommendations, such as protecting mangrove areas and banning the use of toxic chemicals in prawn-ponds, can be turned into site-specific management interventions, and a network of environmentally stable sites for the species can steadily be established. *Malaysia* Details of measures proposed for the conservation of the coastal wetlands of Peninsular Malaysia are in the equivalent section under Milky Stork and Lesser Adjutant, and details of measures proposed for several of the localities where the species has been recorded in Sabah and Sarawak are outlined in Department of Wildlife and National Parks, Peninsular Malaysia (1987). Pulau Buiton on Sarawak is an extremely important unprotected site for waterbirds, including Chinese Egret, Lesser Adjutant and the near-threatened Asian Dowitcher *Limnodromus semipalmatus*; a shoreline reserve embracing the western and northern parts of the island has been urged (Edwards *et al.* 1986, Edwards and Parish 1988).

**Research** This species still lacks the detailed ecological study which identifies its feeding niche and explains how (or whether) it avoids competition with other egrets, particularly Little Egret. Intensive fieldwork in both summer and winter quarters is required to provide this missing information, with a strong emphasis on factors affecting breeding success. Moreover, a renewed programme of research to determine the species's migratory habitats (and to help identify key passage and wintering sites) is now urgently needed: satellite-tracking technology should be harnessed for this purpose. If it is true that the species has never recovered its numbers since the depredations of the plume trade a century ago, it is important to identify what factors might be inhibiting population growth. Only when all this information is available will it be possible to manage the environment optimally on behalf of the species.

Surveys are required in many parts of its range, to locate and census breeding colonies, and to improve understanding of the key migration and wintering sites. It is also important to investigate the movements of nesting birds from their colonies to their feeding grounds, in order to identify key feeding sites and provide the baseline data required to determine the likely impact of future coastal developments on the breeding population of the species. *Korea* Regular surveys are planned to study the distribution and population changes of this species on uninhabited islands in North Korea (Pak U-il *in litt.* 1998). *Mainland China* Further surveys are required on uninhabited offshore islands in Liaoning, Shandong and possibly further south, to locate and census nesting colonies; surveys could be conducted for this species together with several other birds that nest on offshore islets, notably the threatened Black-faced Spoonbill and Chinese Crested-tern *Sterna bernsteini* (see relevant accounts). Structured interviews with fishermen in coastal ports could be used to help locate offshore islands and remote coastal localities with breeding colonies of egrets and other birds. *Vietnam* A comprehensive survey of coastal wetlands is required during migration periods to determine the extent of passage through Vietnam (Eames *et al.* 1992) and other South-East Asian countries. *Philippines* Further surveys are still needed to confirm the winter status and distribution of the species, in particular, identifying the most important localities and assessing the threats they face.

**REMARKS** (1) The identification of this egret (particularly in winter plumage) is very difficult at any distance, and it is possible that some records in this account are mistaken; future observers are urged to document their records carefully (preferably with photograph evidence), particularly with respect to separation from the common and widespread Little Egret *Egretta garzetta* and Pacific Reef Egret *E. sacra*, so that in due course a clearer picture of the status of Chinese Egret can be built up. Records should be submitted to the competent national authorities and/or to BirdLife International. The identification of Chinese and Pacific Reef Egrets is discussed in detail by Poole *et al.* (1999). (2) Hume and Davison (1878) considered that a specimen collected on the Andaman islands was of this species, but their description appears to fit Pacific Reef Egret, and Chinese Egret was not listed as occurring in India by e.g. Ali and Ripley (1968–1998). Hume and Davison (1878) also reported that specimens possibly of this species had been collected at Kyaikkami (Amherst) and Mergui in Myanmar. (3) Referring to this species, Hancock and Kushlan (1984) reported that there were “colonies at several places along the 1,400 km coastline of the Sikhote-Alin between Vladivostock and the Amur estuary”, without giving their sources, but Dement’ev and Gladkov (1951–1954) only mentioned a single record in Russia with no evidence for breeding. (4) Smith (1977) referred to a bird on 20 May with the greenish legs “diagnostic of wintering Chinese Egrets”, perhaps indicating that some birds are very late in acquiring breeding plumage or, in the case of first-year birds, do not do so.