Threatened Birds of Asia:

The BirdLife International Red Data Book

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SILVERY KINGFISHER

Alcedo argentata

Critical □ —	
Endangered □ —	
Vulnerable ■ A1c; A2c;	C 1



This species qualifies as Vulnerable because it has a small population which is undergoing a rapid decline as a result of the loss and decline in quality of its forested lowland stream habitats.

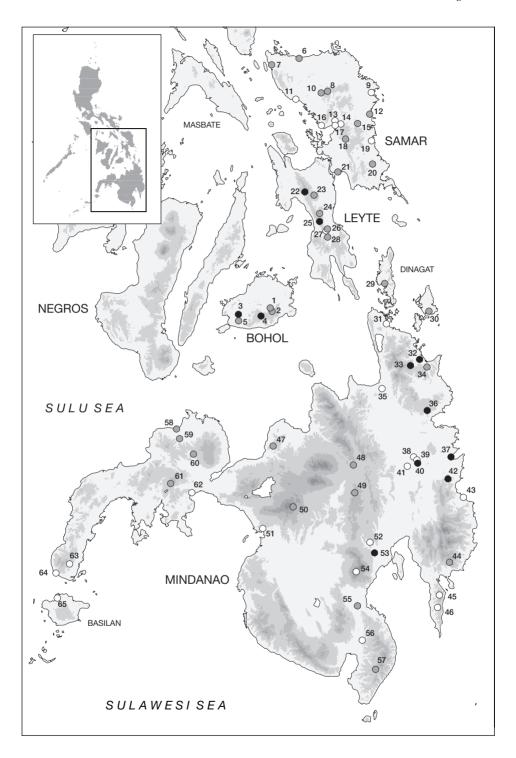
DISTRIBUTION The Silvery Kingfisher is endemic to the Philippines in two distinctive races, *flumenicola* on Samar, Leyte and Bohol, and nominate *argentatus* on Dinagat, Siargao, Mindanao and Basilan (Dickinson *et al.* 1991; see Remarks 1). The appearance of the species in a list of birds observed in 1977–1978 at Balinsasayao, Negros (Alcala and Carumbana 1980), is assumed to be in error, as is the listing of the race *argentata* for Negros, Panay and Cebu (in Forshaw 1983, Fry and Fry 1992). Records otherwise are as follows:

■ PHILIPPINES Samar Catarman at the Samar Institute of Technology and Makiwalo, May 1959 (four specimens in PNM); San Isidro, April 1957 (15 specimens in FMNH); Mt Capoto-an at 400–600 m, May 1957 (25 specimens in AMNH, ANSP, DMNH, FMNH, UPLB, USNM, ZMH; also Rand and Rabor 1960); Cadapnan, Bantayan, Oras, May 1948 (two specimens in PNM); Matuguinao, including San Isidro, at 100–400 m, April 1957 (13 specimens in AMNH, FMNH, UPLB; also Rand and Rabor 1960); Calbayog, with no date (de Elera 1895); Taft, May 1969 (male in DMNH); Bonga, June 1896 (male in AMNH; hence Ogilvie Grant 1897); Loquilocon, May and June 1924 (Baud 1976); San Rafael (one specimen at "Camp IV, 300 m"), Taft, May 1970 (three males in DMNH, PNM); Catbalogan, April 1888 (female in BMNH) and July and August 1892 (eight specimens in CM, USNM); Paranas (now Wright), July 1896 (male in BMNH), with a mention also in de Elera (1895); Buluan, Calbiga, April 1969 (two specimens in PNM); Borongan, with no date (de Elera 1895), specifically at Tagaslian, June 1948 (seven specimens in PNM); Mt Nabaluto, April 1970 (two specimens in PNM), specifically at Borak, 210 m, Llorente, May 1970 (eight specimens in DMNH); Basulood, Basey, April 1969 (male in PNM);

Leyte Danau Lake (Imelda Lake), Ormoc, June 1992 (Scotwin 1992); Mt Lobi at Tambis, Burauen, May 1964 (two specimens in FMNH; also Parkes 1973); Mt Kabalanti-an at Paniniklan, Mahaplag, 250–300 m, June 1964 (male in UPLB); Mt Pangasugan, Naybay, in 1988 (R. E. Fernandez verbally 1996) and July or August 1993 (Curio 1993); Balinsasayao at Abuyog, July 1961 (Parkes 1973, male in AMNH); Helosig, midway between Baybay and Abuyog, May 1937 (Rabor 1938); Santa Cruz, Mahaplag, June and July 1964 (eight specimens in AMNH, DMNH, FMNH; also Parkes 1973);

The distribution of Silvery Kingfisher Alcedo argentata (map opposite; sequence not as in text): (1) Canlangit; (2) Danicop; (3) Balilihan; (4) Rajah Sikatuna National Park; (5) Badiang; (6) Catarman; (7) San Isidro; (8) Mt Capoto-an; (9) Cadapnan; (10) Matuguinao; (11) Calbayog; (12) Taft; (13) Bonga; (14) Loquilocon; (15) San Rafael; (16) Catbalogan; (17) Paranas; (18) Buluan; (19) Borongan; (20) Mt Nabaluto; (21) Basulood; (22) Danau Lake; (23) Mt Lobi; (24) Mt Kabalanti-an; (25) Mt Pangasugan; (26) Balinsasayao; (27) Helosig; (28) Santa Cruz; (29) Dinagat; (30) Osmeña; (31) Placer; (32) Madrid del Carmen; (33) Malibho; (34) Sibahay; (35) Butuan; (36) Diatagon; (37) Bislig; (38) Lake Dagun; (39) Bunauan; (40) Agusan Marsh; (41) Mulita river; (42) Mt Tingoy; (43) Cateel river; (44) Mt Mayo; (45) Tumadgo Point; (46) Agustin Peninsula; (47) Tu-od; (48) Cabanglasan; (49) River Bubunaon; (50) Mt Piapayungan; (51) Bugasan; (52) Davao; (53) Malagos; (54) Mt Apo; (55) Kibawalan; (56) Gogong; (57) Mt Tuduk; (58) Sigayan; (59) Matam; (60) Dapiak; (61) Mt Sugarloaf; (62) Bucong; (63) Zamboanga; (64) Ayala; (65) Isabela.

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



Bohol Badiang, Guindulman, 700–750 m, Canlangit, 200–250 m, and Danicop, 300–350 m in Sierra Bullones, all in May 1955 (three specimens in FMNH; also Rand and Rabor 1960); Balilihan, 150 m, March 1982 (two males in PNM); Rajah Sikatuna National Park, March 1997 (I. Mauro and others per F. Verbelen in litt. 1997);

Dinagat without specified locality (although this island is the type locality), June 1877 (Tweeddale 1878a), and apparently still fairly widespread in 1972 (duPont and Rabor 1973b); *Siargao* apparently fairly widespread in 1972, with birds being taken at **Osmeña**, Dapa, April 1972 (three specimens in DMNH; duPont and Rabor 1973b);

Mindanao (eastern) Placer, July 1877 (Tweeddale 1877b); Malibho on the Cubason River at Puyat Logging Company concession, San Vincente, Carmen, May 1993 (female in CMNH); Madrid del Carmen, Surigao del Sur, 1993 (A. C. Diesmos and R. E. Fernandez verbally 1996); on the Agusan River at Butuan, 1907 and August 1929, and Bunauan, 1909 (McGregor 1909, 1910c: three specimens in MCZ) and below Lake Dagun, May 1904 (male in USNM): Sibahay. Lanuza, 0-300 m, May 1963 (17 specimens in DMNH, FMNH, UPLB, USNM, ZMH); Diatagon, Mt Diwata Range, Lianga Bay Logging Company Nursery, Lianga, Surigao del Sur, December 1988 (BRT); Bislig at the PICOP concession, along Road 5, 1983–1997 (Clarke 1983, Sargeant 1989, Evans et al. 1993a, Hornbuckle 1994, many observers in litt. 1987–1997); Agusan Marsh, Loreto, Agusan del Sur, around 1990 (Canete et al. 1991); "Mulita river", August 1921 (two specimens in MCZ; see Remarks 2); Mt Tingoy (1.1 km east and 1 km south of the peak) above Magsim Creek, PICOP Road SJA, Boston, May 1994 (specimen in CMNH); Cateel river, October 1906 (male in USNM); Mt Mayo at Limot, April 1949 and June 1965 (two males in PNM, USNM); Tumadgo Point (in two cases qualified as "Sigaboy"), March and April 1930 (six specimens in AMNH, DMNH), and, more generally, "Agustin Peninsula", 1927–1928 (Hachisuka 1941); (central) Tu-od, Misamis Oriental, September 1951 (two specimens in ZMC); Cabanglasan, Bukidnon, October 1951 (specimen in ZMC); River Bubunaon, Bukidnon, November 1951 (specimen in ZMC); Mt Piapayungan at Pagayawan, Lumba-Bayabao, 1,120-1,350 m, May 1970 (two specimens in USNM); Bugasan, Parang, Cotabato, 15 m, December 1946 (two males in FMNH, PNM); Mt Apo at Sibulan, March 1882 (Kutter 1883) and on the Mapugbu or Mapugba River, May 1905 (female in BMNH; also Ogilvie-Grant 1906); Malagos, Calinan, Davao City, March 1990 (Greensmith 1990), February 1995 ((P. A. J. Morris in litt. 1996); Gogong (village apparently no longer extant), January 1930 (male in DMNH); Davao, May 1889 (female in RMNH), September 1910 (male in BMNH); Kibawalan, Malalag, 360-670 m, November 1963 and May 1964 (two specimens in USNM) and November 1966 (female in UPLB); Mt Tuduk at Datal-Bukay at 30-300 m, Tugal and Kulambog (three sites, Tugal labelled at 330-940 m), May 1966 (12 specimens in FMNH, UPLB, USNM); (western) Dapiak or Dabiak at Labao, Diway, Dapitan and Dybiway, Katipunan, April and May 1952 (12 specimens in FMNH, MCZ, PNM); Matam, Katipunan, Zamboanga del Norte, May 1952 (three specimens in FMNH; also Forshaw 1983); Sigayan, Katipunan, 600-750 m, May 1950 (four specimens in FMNH, MCZ); Mt Sugarloaf at Tandasag Hill, Diak, Midsalip, May 1969 (three specimens in AMNH, FMNH); Bucong, Pagadian, June 1948 (male in FMNH); Ayala, July and August 1891 (three specimens in CM, USNM); Zamboanga, April–May 1878 (Tweeddale 1878h; male in MNHN);

Basilan **Isabela**, September 1891 (male in USNM), otherwise localities unspecified (Bourns and Worcester 1894, McGregor 1909–1910), including in August 1926 (Kuroda 1927).

There is a reliable recent local report from Dalwangan at the foot of Mt Kitanglad, Mindanao (D. Allen *in litt*. 1997). An untraced locality is Paric, apparently on Samar (de Elera 1895).

POPULATION The true status of this species is very hard to judge. F. S. Bourns and D. C. Worcester (in McGregor 1909–1910) described it as "extremely rare" on Basilan, at least in the part they surveyed, but made no comment on its abundance in Mindanao, which suggests

that they might have found it somewhat commoner. Although Hachisuka (1931–1935) also called it rare, he reported that a large series was procured in Cotabato province in 1930, and partially clarified this seeming contradiction by indicating that the race *flumenicola* was rare but that nominate argentata was common locally (Hachisuka 1933); later he judged that it is a question of the observer becoming familiar with its habits (Hachisuka 1936). Likewise 16 specimens were procured in northern Mindanao in three months or less, 1907 (McGregor 1909), 22 on Samar in the course of one month, May 1957 (see Distribution), while on Leyte in May 1937 the species was "often met with" (Rabor 1938). Although no specimen was procured in 1972, the species was then "not really rare" on Dinagat (duPont and Rabor 1973b). It has been regarded as a common bird on lowland forest streams throughout Mindanao (T. H. Fisher verbally 1997), and it is certainly very shy and inconspicuous and thus doubtless underrecorded (D. Allen verbally 1997). Nevertheless, the amount of lowland forest with clear streams cannot now be great anywhere in the Philippines; the number of sites at which the species has been recorded under Distribution since 1980 is only around 10 (although some records will inevitably have been missed), so the extent to which the species (a) has declined owing to habitat loss, (b) persists in degraded habitat, and (c) is simply overlooked in ornithological fieldwork is very uncertain.

ECOLOGY *Habitat* This species is strictly tied to aquatic habitats and is invariably found on forested streams, even creeks in "highlands" (Steere 1894, Ogilvie Grant 1897, McGregor 1909–1910, Hachisuka 1931–1935, Rabor 1938, Forshaw 1983, Fry and Fry 1992). On Bohol in 1955 it was found "along both large and small streams, provided the banks were well wooded either with original forest or second growth" (Rand and Rabor 1960). On Dinagat and Siargao it was found along streams inside patches of remnant dipterocarp and mixed dipterocarp and secondary forests, usually singly and often perching on low branches of bushes along streams or on rocks in or by streams (Rabor 1938, duPont and Rabor 1973b). On Mindanao recorded habitat includes selectively logged-over lowland rainforest near streams at 500 m (BRT), thick secondary forest (FMNH, PNM label data), early second growth (CMNH register data), even streamside vegetation inside a coconut plantation near forest edge (A. C. Diesmos and R. E. Fernandez verbally 1996). Apart from one record at 1,120–1,350 m, the highest elevation from the extensive specimen evidence is below 1,000 m, at 940 m, and it may be that the lack of records from some good forested areas (e.g. Lake Sebu) indicates that they are too high for the species.

Food The species eats fish (Ogilvie Grant 1897), insects (MNHN label data), "butter and dragon flies" (BMNH label data) and small crabs (Hachisuka 1931–1935). Forshaw (1983) recorded food as small fishes and small crabs, with insects and their larvae assumed also to be taken. Feeding habits are probably like those of the Eurasian Kingfisher *Alcedo atthis* (Fry and Fry 1992).

Breeding A male, April, had testes slightly enlarged, and two males and five females, May, had active gonads (AMNH, FMNH, USNM label data). However, the large sample is very heavily biased towards April—May, with, for example, apparently no specimens this century being taken in January/February. As evidence of a more extended breeding period, two immature birds were taken in the first half of March (specimens in PNM); moreover, two sets of two young, full-sized except for shorter bills, were taken in late April and early May (specimens in FMNH; also Rand and Rabor 1960), hence are assumed to have been hatched from eggs laid in February—March (Rand and Rabor 1960, Forshaw 1983); there are four May immatures in AMNH and one in ANSP, with a further July "juvenile" in USNM. A nest was located in a riverside bank at PICOP Road 5 in February 1997 (P. A. J. Morris verbally 1997).

Migration There appears to be no evidence of movements (as also judged by Forshaw 1983).

THREATS Forest destruction, particularly if the species prefers lowland tracts, seems likely to have contributed to a steep decline (Collar *et al.* 1994). Water quality may be highly significant in determining its presence or absence: rivers with a high siltation load (common wherever trees are cleared) appear not to hold the species (G. C. L. Dutson *in litt.* 1996). The deliberate conflagration of forests—associated with insurgency—is a problem, particularly on the Zamboanga Peninsula (D. Allen verbally 1997). At Bislig good primary forest is being clear-felled (under the PICOP logging concession) and the land planted with exotic trees for paper production (B. Gee *in litt.* 1997; also Caufield 1983). It is not clear what proportion of forest has been lost on Samar and Leyte, where mining applications are a severe potential threat (NADM), but the situation is thought to be similar to that on Bohol, which currently retains a mere 4% forest cover (T. M. Brooks verbally 1997). Certainly PEWG (1996), using 1989 DENR statistics, credited Samar and Leyte with possessing as little as 433 km² of old-growth dipterocarp, but other sources of information put forest cover considerably higher (see Threats *Habitat loss* for Samar and Leyte under Philippine Eagle *Pithecophaga jefferyi*).

MEASURES TAKEN The Silvery Kingfisher is known, at least historically, from three "key sites" (Siargao Island; Agusan Marsh and Mt Apo on Mindanao; see Appendix) which receive legal protection under the NIPAS process. The species is also protected within Rajah Sikatuna National Park, Bohol. Northern Dinagat Island ("key site": Kambinlio/Redondo) has been selected as a priority for FPE funding (see Appendix).

MEASURES PROPOSED Apart from the areas targeted for conservation above, the species is known from seven "key sites" (Mt Cabalantian/Capoto-an on Samar; Mt Lobi range on Leyte; Mt Diwata range, Mt Dapiak, Mt Sugarloaf, Mt Piapayungan and Mt Mayo on Mindanao; Central Basilan; see Appendix) which deserve further survey and designation, at least in part, under the NIPAS process. Several other threatened species rely on forests within these IBAs and any conservation strategy should take into account the requirements of as many of these as possible (see account under Blue-capped Kingfisher *Actenoides hombroni*). Specialist fieldwork on the kingfishers of the Philippines might help elucidate the status of this and three other particularly problematic species, Philippine Kingfisher *Ceyx melanurus*, Blue-capped Kingfisher and Rufous-lored Kingfisher *Todiramphus winchelli* (see relevant accounts). Those lowland species dependent, if only seasonally, on streams are likely to suffer additional problems if deforestation causes turbidity and adjacent agriculture increases pollution levels, and these factors require investigation.

REMARKS (1) The two races of Silvery Kingfisher are fairly distinct, and there is a case for giving them species status: the situation is similar to that of the two slightly more distinct Philippine broadbills (see relevant accounts), whose respective ranges exactly match those of the two races of Silvery Kingfisher. (2) According to MCZ label data the specimens from "Mulita River" were collected only six days apart from specimens from the Agusan River at Butuan, all material attributed to Governor W. C. Forbes. The only identifiable "Mulita River" rises south of Mt Piapayungan; however, it is here assumed that the watercourse in question is a tributary of the Agusan River, possible candidates being Muli Creek at 8°07'N 125°50'E and Malihao Creek at 8°26'N 125°50'E.