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The White-throated Kingfisher (*Halcyon smyrnensis*) in Northern Sumatra

The White-throated Kingfisher (*Halcyon smyrnensis*) is widely distributed in southern Asia (King and Dickinson, 1975). The species is characteristic of open and semi-open habitats near water, and it is common in many areas, including much of West Malaysia (Glenister, 1955). It has been generally supposed, however, to be absent from Sumatra (Delacour, 1947; Gibson-Hill, 1949; Peters, —; Van Strien, 1977). This supposition is no longer valid.

I saw several individuals of the species during a brief visit to the province of North Sumatra in early 1979. Mr. and Mrs. Graham Smith showed me 4 individuals in the Goodyear rubber plantation near Permatang Siantar on February 8. I saw another individual near the village of Ambarita on Samosir Island in Lake Toba on February 10. Still another was offered for sale by a roadside bird dealer along the highway from Berastagi to Medan on February 14. It was said to have been captured nearby, at Namorambe, approximately 25 km from Medan.

The birds were easy to identify. The appearance of the species is unmistakable, and its voice is also distinctive. I was familiar with the species, having studied it in both southern India and Malaysia.

The individuals in the plantation near Siantar were sitting on telegraph wires along a strip of clearing by a railroad track. The individual on Samosir was in second growth scrub on a rocky headland in the lake. The captive individual was caught in a rice field. These are all habitats in which the species would be expected to occur on the continent.

The various individuals were scattered over an area of several hundred km^2. This would suggest that the population of the species in North Sumatra

is quite considerable.

Given the lack of earlier records, the population may be assumed to be the result of a recent invasion. There is no evidence to indicate a precise date, but Mr. and Mrs. Smith found the birds in the plantation in 1970, while Van Strien failed to see them during an earlier visit to the same general area in 197– (pers. comms.).

Invaders may be successful in occupying new regions because they move into "vacant" niches, often newly created ones. Perhaps the White-throated Kingfishers of Sumatra are an example. Most of Sumatra must have been heavily forested in historical times. Now the forest is being cleared at a rapid rate, due to the spread of both subsistence farming and commercial plantations. None of the other resident kingfishers of the island (with the partial exception of *Halcyon chloris*) seems to be able to settle in open or semi-open habitats in significant numbers. Thus, the invading White-throated Kingfishers probably moved into an environment that was new for Sumatra, and partly free of close competitors, but not very different in most respects from that of the original point of departure (presumably somewhere in the Malay Peninsula). It is not surprising that the invaders have survived. It will be interesting to see if they continue to spread.

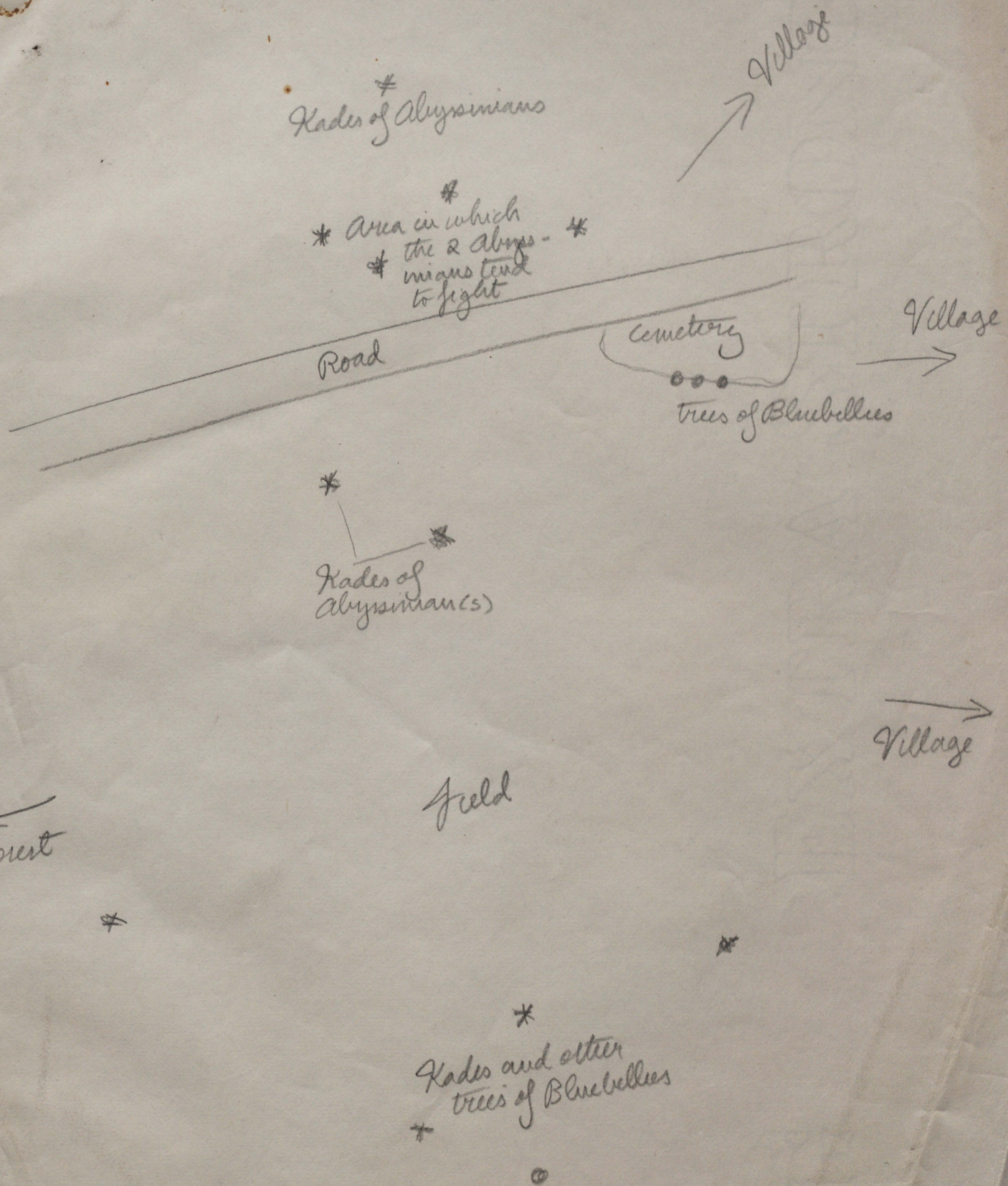
Appearance subspecies

The occupation of the new area does not seem to have entailed any major ecological shift by the new occupants. In these circumstances,

The invasion probably was natural. Kingfishers are not popular cage birds (the dealer near Medan was remarkably optimistic), and *Halcyon* spp. are seldom kept in zoos. The Sumatran population is very unlikely to have been founded by escapes from captivity.

Rough Sketch - Bluebelly & Abyssinian areas Ossouye, Nov. 8-10

Casamance, Senegal



Note: 8:10 ~~A.M.~~ Capthurring Oct. 14th.

A hornbill just flew by (looked like the black one) ~~and~~ over the houses (betw. front row + pump). Roller that was on cucurucho chased it, vocalizing loudly. Did not attack it, just flew behind and over it abt. 2 mts. distant. Hornbill did not react but went on flying non-stop, (w/out gliding). Roller chased it just beyond the houses and turned back to its perch, w/out vocalizing. Both birds were fairly high.

Vox = Rattle

Roller = Bluebelly

Note 9:05 A.M.

Three rollers on perch; sitting quietly

then 2 nudged 1; looked like grooming, but bird 1 had to jump to position b; stayed there while 2 looked down. Then 1 went hopping around to position c and attacked bird 3. Bird 3 retributed and both flew off chasing eachother. Shortly after, bird 2 flew off in same direction. Happened fairly fast. Ten mts. later had not returned.

7:02 - one bird in usual have (farthest off)

7:07 - gone; scared off by a man.

7:25 - no birds still (from 7:07); not in beach either

7:45 - still no birds

7:55 - one bird moved in, same place; flew from nearby palm on same side. (At 8:00 workers start arriving)

8:02 - bird same place; another flew in direction of beach

8:05 - bird still there.

8:15 - single bird is gone.

8:30 - no birds; the people are not working near.

8:45 - one roller on nearby palm

Bluebellus. Annexe Hotel Aubert. Oct. 15, 1970.

Casamance, Senegal

A

Nesting Incidents

p. 40 Green Woodhoopoe With "food" in bill, visits hole being excavated by Redbilled Hornbills

p. 49. Blackbill chases 1 (out of 3) Rufous-crowned Roller, Coracias naevia. (Blackbill has young in nest; but roller is not in nesting tree)

p. 49. Rufous crowned Rollers attack crows.

p. 50. Redbilled Hoopoe supplants Hoopoe.

p. 80 Squirrel going in and out of Yellowbill hole.

p. 80 Yellowbill attacks green turaco?

p. 82. Bluebelly attacks Gymnogenys.

p. 115. Sen attacks hawk

NOTE: It is remarkable that there are not more fights between Sen and Bluebelly, Because they use different kinds (sizes) of nest holes?

NOTE: Significance of peaceful relations with drongoes. Ind. shrikes

p. 148. Streptopelia dove nesting in crown of palms.

p. 149. Mal-Sen Dispute?

p. 157. Bluebelly chases and attacks Streptopelia

p. 161 Bluebelly attacks Passer griseus.

p. 165. Blue bellies fight with Turdoides (reinwardi). Why?

NOTE: Are there more redwinged attacks in W. Africa than in the regions of southern Asia that we have visited because trees are comparatively scarce.

p. 169. Blue bellies ignore corvals.

p. 174. Blue belly attack on Black-billed Hornbill

p. 175. Blue belly supplants Purpur.

p. 179. Blue belly chases Gymnogenys.

NOTE. Why are Psittacula parrots ignored, both in W. Africa and in India? Because they are so gregarious?

General Comments Kingfishers

Basic Repertory of Sounds: Single — (Doublet, Triplet, Quadruplet) — Chatter (incl. Twitters, Yelps, and perhaps Whistles) — Rattles

Does this Basic Repertory differ from that of Coracias?

Halcyon spp. all (?) have Songs. Ceryle (and Alcedo ?) do(es) not.

Halcyon is the most Coracias-like of the Kingfishers

H. senegalensis is more like smyrnensis, in behavior, than either is like malimbicus.

The relatively melodious "Whistles" of some Halcyon spp. are surprising. Is this quality an adaptation to forest conditions? If so, how?

What is the significance of the fact that senegalensis and malimbicus look similar but sound very different? Is this only character displacement?

The 2 most gregarious of "typical" Coraciiformes, Ceryle rudis and Coracias cyanogaster, show very different trends in display behavior. Tendency to "de-ritualization" in cyanogaster. A proliferation of vocalizations in rudis. Why? Possibly because the roller is comparatively sluggish, and therefore can rely upon intention movements, while the kingfisher is excessively mobile and needs more emphatic signals of more conspicuous significance. (There is also, of course, a difference in average size of groups.)

B.

Phoeniculus purpureus would seem to fit into this roller-kingfisher scheme very well. (Perhaps even parallel or convergent to Ceryle rudis?)

Is the absence of song in Ceryle functionally related to the development of sexual dimorphism in color???

Doubtless the generally bright coloration of ♀♀ is correlated with hole-nesting. (And independent hunting?)

Halcyon spp. are improved Coracias; 82.

Increased terrestriality probably has evolved several times in the genus Halcyon, 86.

Migratory and sedentary Halcyon may have different pairing strategies; 87

No jabbering during fights; 149.

(1) December 13, 1978
New Delhi Zoo

Area rather thick green scrub, small-medium trees, by water (small canal or ditch). Find mixed flock. Includes at least 12 babblers (certainly Turdoides, probably striatus), 4 Common Grey Hornbills (Tockus bicostris), and 1 Tree Pie (Dendrocitta vagabunda)

Babblers noisy. Tree Pie apparently silent. Hornbills quiet (only a few "Kow" type notes)

Hornbills apparently in lead. Closely followed by, and associated with, babblers.

Coraciiformes

RIJKSMUSEUM VAN NATUURLIJKE HISTORIE
RAAMSTEEG 2, LEIDEN, NEDERLAND — TELEFOON 071-14 38 44
CORRESPONDENTIE-ADRES: POSTBUS 9517, 2300 RA LEIDEN

Dr. M. H. Moynihan
Smithsonian Tropical Research Institute
Box 2072
Balboa

Panama Kanaal Zone

Leiden, June 12th 1979.

Dear Dr. Moynihan,

There is very little I can tell you about Halcyon smyrnensis in addition to the information contained in my last letter, but it seems indeed clear to me that in both Sumatra and Java the species is a new colonist.

In the large collections made in Deli in the early years of this century (1912-1915) by Dr. P.L. de Bussy (published 1919, by de Beaufort & de Bussy, Bijdr. Dierk. 21: 229-276; more unpublished material in our collection) there is no mention of H. smyrnensis, although nine species of Alcedinidae were collected. Yet, Baron van Lynden, Thirty years later, called it the commonest kingfisher in the same region. Surely this indicates, yes practically proves, recent colonization.

In the article mentioned above, de Bussy makes an interesting remark in the discussion of H. chloris, of which I give here a free translation: "This species is very common everywhere along the coast.... for many years I have never seen it far from the coast, such in strong contrast to its behaviour in Java, where for example near Buitenzorg, not to mention many other places, it is numerous. In 1915, however, to my surprise, I discovered it in the Highlands in the neighbourhood of Kaban Djahé, hence far into the interior. This distribution is peculiar as the species does not appear to occur in the intervening country". From this it would appear that in the Bussy's time H. chloris did not occur in the cultivated lowlands (where indeed it is common in Java). This may be connected with the fact that colonization of Deli by tobacco planters began only about 1860 or 1870, in what previously was heavy forest. Open cultivated country must have been a new habitat in Deli, that in the Bussy's time had not yet been colonized by H. chloris, and this may possibly have given H. smyrnensis its opportunity. You will realize that this is only speculation, as I have no personal experience in Deli. Did you see H. chloris there?

West Java is ornithologically so well-known, that I am sure that if H. smyrnensis ever occurred there as more than a rare straggler, it would have been recorded. Even now there is only this single case of breeding known so that the species can hardly be said to be established in Java. Its appearance is even more recent than in Sumatra. In this case the explanation suggested above for Sumatra, that there was an open niche available, is invalid as in Java H. chloris is common in cultivated country.

→ p. 2

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Leiden,

Conclusion: H. smyrnensis colonized eastern Sumatra (Deli) about sixty years ago, following forest clearing and other human activities, In Java there is even now no evidence that it has actually settled and further developments must be awaited. You could ask Wells how the species H. chloris and H. smyrnensis interact in Malaya.

Yours sincerely,

G. F. Mees

G. F. Mees

May 18, 1979

Dr. G.F. Mees
Rijksmuseum van Natuurlijke
Historie
Raamsteeg 2
Postbus 9517,2300 RA
Leiden, Nederland

Dear Dr. Mees:

Thank you for your letter of May 2nd with the information on Halcyon smyrnensis in Sumatra and Java. It was very helpful indeed.

One of the subjects in which I am ~~most~~ interested is competition among species (with all the behavioral interactions involved). I wonder, therefore, how the relations between smyrnensis and other Halcyon kingfishers, especially chloris, will eventually evolve (or settle down) in Sumatra. In this context, it would be useful to know if the Sumatran smyrnensis are relatively recent invaders or a relict of some earlier, Pleistocene or post-Pleistocene, expansion. Do you know of any data that would be relevant to this question?

Yours sincerely,

/S/

Martin H. Moynihan
Senior Scientist

Ret. orig. letter to Dr. M

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RAAMSTEEG 2, LEIDEN, NEDERLAND — TELEFOON 071-14 38 44
CORRESPONDENTIE-ADRES: POSTBUS 9517, 2300 RA LEIDEN

Dr. M.H. Moynihan
Smithsonian Tropical Research Institute
Box 2072
Balboa

Panama Canal Zone

Leiden, May 2nd 1979.

Dear Dr. Moynihan,

Documentation of the occurrence of Halcyon smyrnensis in Sumatra and Java has been published mainly in "Ardea" as follows:

A.C.V. van Bemmel & A.J.H. van Lynden (1949): Halcyon smyrnensis fusca (Bodd.) occurring in Sumatra. Ardea 36: 276.

A. Hoogerwerf (1950). Mededeling over Halcyon smyrnensis van Sumatra en Java (with postscript by G.C.A. Junge). Ardea 37: 184-185.

K.H. Voous (1951). Halcyon smyrnensis fusca in Sumatra. Ardea 39: 235-236.

A.J.H. van Lynden (1951). Het nestelen van Halcyon smyrnensis op Sumatra's Oostkust. Ardea 39: 236-237.

A. Hoogerwerf (1953). Merkwaardige en zeldzame vogels in Kebun Raya Indonesia te Bogor. Madjallah Ilmu Alam Indonesia (= Natuurk. Tijdschr. Ned. Ind.) 109: 63-80 (description and sketch of H. smyrnensis, made in October 1942, on p. 74-75).

S. Somadikarta (1973). The White-breasted Kingfisher Halcyon smyrnensis in Java. Ardea 61: 186-187

For ~~the~~ case you do not have "Ardea" at hand, I summarize here the contents of these notes. Early in 1949 Baron van Lynden found H. smyrnensis fairly common in the neighbourhood of Tebing Tinggi, Deli, Sumatra; two specimens were forwarded to the Buitenzorg Museum (now Museum Zoologicum Bogoriense, Bogor, Indonesia). Following this, Hoogerwerf and Junge drew attention to a specimen from Deli received in 1921 here in Leiden, but unfortunately without date or more exact locality, and Hoogerwerf mentioned that in October 1942 he had observed an individual in the famous Plantentuin, Buitenzorg (botanical gardens Buitenzorg= Bogor). Next, van Lynden described a nest from Lima Poeloeh, N.E. Sumatra and called H. smyrnensis by far the commonest kingfisher in that area. Finally Somadikarta reported a specimen caught from its nest at Ciapus (formerly spelled Tjiapoes) near Bogor/Buitenzorg in July 1972, the second record and the first breeding record for Java.

I trust that this is the information which you required,

Yours sincerely,

G Mees

G.F. Mees.

Collared Kingfisher - Halcyon chloris

[illegible] evident

Palauan name: Tengadiok The Kingfisher commonly seen in Palau.

Adult Bring: 9½ in. ~~Typical Kingfisher.~~ White underparts, dark bluish uppersparts. Crown cap greenish-blue. ~~[illegible]~~ The Micronesian Kingfisher, ~~[illegible]~~ Lingayen ~~[illegible]~~ crown and is slightly smaller.

Distribution: All islands in the Palau Archipelago, as well as the Southwest Islands of Sonsorol, Pulo Anna, Merir, and Tobi. Occur along coastlines, in mangrove forest, in residential areas, along edges of broken forest, and in savanna of Babeldaob. Most common along coastlines and in mangrove forests. In the high limestone islands it ~~[illegible]~~ coastline along shallow water, generally near a beach. Common in the level interior of Angaur and Peleliu. Does not occur in deep forest as does the Micronesian Kingfisher. Range outside Palau: S Africa and India to Australia and the W Pacific.

Voice: Vocal, uttering loud, rasping calls. Much variation, but the typical call is a series of loud, two-syllable notes, followed by quieter, drawn out, grating notes, ~~[illegible]~~ "che-ker che-ker che-ker, che-kreee kreek kreek". The first portion contains high clear notes, unlike the Micronesian Kingfisher, whose call is always raspy. On occasion the Collared Kingfisher will voice a rasping call nearly identical to that of the Micronesian Kingfisher.

Habits: Bold and conspicuous. Perch on an exposed branch overhanging the water, along the edge of a clearing, or in the top of ~~a~~ an open tree. Pairs are territorial. Flight direct, wings-set fairly rapid. Harrasses and sometimes kill small shorebirds or chicks by diving down and hitting the victim with beak. In turn, the Kingfisher is scolded by white-eyes and other small birds. Feeds on insects, small fish, shrimp, crabs, and other crustacea. At low tide the Kingfisher frequents ~~the~~ tidal flats, feeding in small pools. Nests in the cavity of a tree or in termite nests, which are hollowed out by the Kingfisher. Believed to nest throughout the year.

Record and return

Micronesian Kingfisher - Halcyon cinnamomina

Status: Resident

Related forms: Palau, Ponape, Truk, Ponelimafech

Identification: [illegible] Although common, the Micronesian Kingfisher is seldom seen. Top of head [illegible] cinnamon, underpart white, and underparts bluish-green. A very few individuals have a white, [illegible] crown. The much more conspicuous Collared Kingfisher has a dark green [illegible] instead of rusty brown.

Distribution: [illegible] Palau, and the high limestone islands in between. Occurs in d[illegible] and [illegible] forest near villages. Not found in mangrove and only rare [illegible] the outer reefs. Common on Babeldaob and the high limestone islands. [illegible] only occurs on the raised portion of the island. Range outside [illegible] and Eastern Caroline Islands of Micronesia.

Voice: [illegible] calls sporadically throughout the day. Also calls in the night, especially just after dusk. Call loud and rasping, beginning with a rapid set of notes, and ending with a quieter, drawn out series, "che-che-che, che-kre-k, kreek, kreek, [illegible] kreek, kreek, kreek". The call of the Collared Kingfisher is confusingly similar, but certain notes in the first portion of the call are [illegible] clear. The notes of the Micronesian Kingfisher are always harsh, never clear.

Habits: Secluded [illegible] because of its inaccessable forest habitat and [illegible] retiring habits. Once [illegible] approached to within a few meters before [illegible] flight. [illegible] for hours in the same place, usually within dense forest [illegible] or an exposed branch along the forest edge. When feeding, [illegible] the prey, and return to its perch before eating the catch. Feeds largely on insects, and rarely, if ever, on fish. Seldom seen flying above the forest canopy or outside the forest. Territorial, [illegible] birds remaining in the same area throughout the year. Nest probably placed in the cavity of a tree.