

A NOTE ON THE RECENT SIGHTING OF  
*Zosterops flava* JAVAN WHITE-EYE

by G. Allport and G.R Milton  
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ABSTRACT

A selection of sites on the north coast of West Java was surveyed for White-eyes *Zosterops* between March 1984 and December 1985. Javan White-eye *Zosterops flava* was recorded at Pulau Dua, Muara Gembong and Tanjung Sedari. White-eyes were not seen at Pulau Rambut, Muara Angke, or on the coast between Indramayu and Cirebon.

*Z. flava* was seen only once in mangrove, preferring relic stands of coastal forest. This favoured habitat is now much reduced and fragmented, and remains under further human pressure, thus *Z. flava* should be listed as threatened in Java.

INTRODUCTION

The Javan White-eye *Zosterop flava* (Horsfield) is a coastal bird and historical records associate this species with areas of mangrove and coastal forest. In his systematic review, Mees (1957) described its known distribution as a few localities along the north coast of West Java, and near Banjarmasin (South Kalimantan). The last reported sighting was by Hoogerwerf in 1953 (cited by Mees, op. cit) along a canal flowing into Banten Bay. Due to the absence of sightings during the following thirty years, and continuing conversion of these sites into brackish-water fish ponds (tambak), there was concern over its status.

Unconfirmed sightings of small groups (2-8) of *Z. flava* were made by G.R.M between 25-28 February 1984 in the small nature reserve Pulau Dua. The birds were noted in an area cleared during the 1940's (Hoogerwerf 1947) and now covered by low (2 m) herbs and shrubs (Milton and Marhadi 1986). If confirmed, the possibility was raised that this species may still occur more widely in relic but disjunct stands of coastal and mangrove forest. Small stands of such forest still exist on islands in Jakarta Bay such as Pulau Rambut (Soemadihardjo et. al 1977), Pulau Dua in Banten Bay (Milton and Marhadi 1986), Muara Angke (G.R.M pers. obs.), areas east of Jakarta such as Muara Gembong (Anon. 1983), and Muara Cimanuk near Indramayu (Anon. 1982). Therefore, to confirm its survival and in addition to identify holding areas along the north coast of West Java, these sites were examined between March 1987 and December 1985. Their locations are shown in Fig 1.

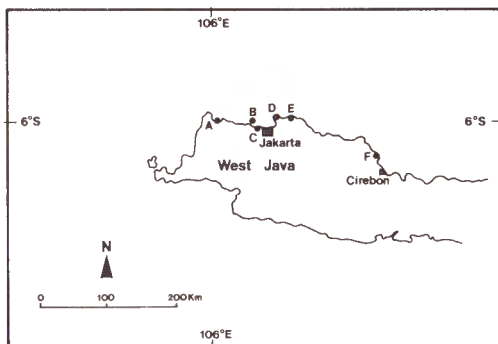


Fig 1. Location of survey areas :

- |                 |                                  |
|-----------------|----------------------------------|
| A. Pulau Dua    | D. Muara Sarakan, Tanjung Sedari |
| B. Pulau Rambut | E. Indramayu - Cirebon           |
| C. Muara Angke  |                                  |

## RESULTS OF OBSERVATIONS

### A. Pulau Dua, Banten Bay

A detailed description and map of the nature reserve Pulau Dua is provided in Milton and Marhadi (1985, 1986). The 1-2 km wide stretch of lowland bordering Banten Bay has been converted into tambak of traditional design noted in Soegiarto and Polunin (1981). In general, the ponds cover from 0.3 to 10 ha, are usually less than 1.5 m deep, and enclosing dykes are up to 2 m high. Vegetation on the dykes is varied (Schuster 1952), but species commonly encountered are *Avicennia marina*, *Pluchea indica*, *Opuntia vulgaris*, *Acanthus illicifolius*, *Suaeda maritima*, and *Scirpus* spp. The height of the dominant vegetation on the dykes ranges from ground level to approximately 6 m.

Seven additional visits were made to the reserve following the initial unconfirmed sighting. In early August 1984, single pairs and monospecific groups (up to eight birds) of probable *Z. flava* were frequently observed on the low herb/shrub covered areas and adjacent large trees, particularly *Erithrina variegata*.

On 6th August 1984, two mist nets were erected in the herb/shrub area. One bird was caught, examined and photographed (on file with the authors). A complete description was taken, which agreed well with Mees (1957). The bird was in active moult with the second primary in stage 3 growth (Snow 1967). This is included within the normal period of

moult determined by Mees (op. cit) from museum specimens, but, outside the main period of moult. Biometric measurements were noted and are provided below. All are in mm and are compared with mean measurements (in parentheses) provided by Mees (op. cit)

Wing (maximum chord)	52	(51.1)
Tail	30	(29.7)
Tarsus	14	(14.8)
Bill to feathers	9.4	( 8.6)
Bill to skull	12.2	(11.4)

Several characteristics were identified as being useful for the field identification of the species. The lemon-yellow rump contrasts sharply with the yellowish-green mantle, and the lower mandible was silvery blue-grey for the inner 7 mm with a black tip. These detailed observations of the birds on Pulau Dua both in the field and in the hand were sufficient to completely familiarise the observers with the species.

The species was not seen during a visit to the reserve in October 1984 but was seen again in February, March, April and June 1985. No individuals of this species were observed during repeated visits to the tambak surrounding the reserve, although small groups (3-5) of *Z. chloris*\* were noted foraging in dense areas of shrubbery.

#### B. Pulau Rambut, Jakarta Bay

The nature reserve at Pulau Rambut is a small coral island in Jakarta Bay, approximately 4 km from the mainland. Blower (1974) provides a succinct description of the island, whilst Kartawinata and Waluyo (1977) and Soemodihardjo et. al. (1977) provide a detailed description of the mangrove forests. Briefly, the island's main vegetation types consist of a dryland tall forest dominated by *Stercularia foetida* and *Chisochedron pentandrus*, dense secondary growth, *Scyphiphora hydrophyllaria*-*Lumnitzera racemosa* scrub, and mangrove forest dominated by *Rhizophora mucronata*.

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\* The occurrence of this species on the Javan mainland is surprising, since all previous records are confined to off-shore islands in this part of its range. All records of *Z. chloris* mentioned here remain unconfirmed, as no birds were caught, and further studies are now required with the collection of specimens.

Visits were made to the reserve during March and August 1984. Lengthy periods of observation were spent in all major and minor habitat types during both visits. However no White-eyes were recorded.

### C. Muara Angke, Jakarta Bay

Hoogerwerf and Siccama (1937, 1938) had already described the mainland bordering Jakarta Bay as being heavily modified through human activities. Although the rain forest had nearly disappeared, there was still extensive swamp forest and mangrove, and *Z. flava* was not uncommon. Since their report, much of the remaining swamp forest and mangrove has been converted to rice fields and tambak. However, a small piece of disturbed mangrove forest remains in the Muara Angke nature reserve (ca. 15 ha), situated at the mouth of the Angke River flowing into Jakarta Bay. The waterways are vegetated with *Avicennia* sp. and *Rhizophora* sp., while *Sonneratia* sp., *Acrosticum* sp., shrubs and grasses cover the drier areas. The reserve is bounded to the east by the city, and to the west by tambak of traditional design. There are examples however of recent establishment of ponds incorporating the "tambak-forest" system described by Alrasjid (1971). With this system, *Rhizophora* spp. are planted on rectangular platforms surrounded by a 4-5 m wide ditch where fish are cultured. Vegetation on the dykes is similar in species and structure to that observed at Banten Bay.

Visits were made to the area on five occasions, in March, August (twice) and October 1984, and in November 1985, and observations were made in the reserve, adjoining tambak, and narrow (5-10 m) seaward strip of mangrove. Although the area still retains a diverse avifauna, no White-eyes were recorded.

### D. Muara Gembong

Muara Gembong, on the eastern side of Jakarta Bay, is the northernmost part of the delta formed by the Citarum River. Bounded by two tributaries, Muara Gembong retains a disturbed relic piece of coastal forest and mangrove. A partial floral list of the area is tabulated in a government forestry report (Anon 1983). This piece of forest continues to be converted to the "tambak-forest" system of pond aquaculture and mangrove plantation. However, tree clearance far exceeds tree regeneration. Old tambak of traditional design lies landward of newly converted mangrove.

Historically, *Z. flava* has been recorded in this region (Hoogerwerf and Siccama 1937, 1938, Mees 1957). Between 16-19 March and 15-18 August 1984, observations were made throughout the region of Muara Gembong, including the relic

piece of coastal forest and mangrove, narrow seaward strips of mangrove, recently converted mangrove and "tambak-forest", and traditional tambak systems of pond aquaculture. On 16 August, approximately 20 *Z. flava* were observed with *Z. chloris* in several mixed species flocks within the relic forest area. Although *Z. chloris* was also noted in the tambak area, *Z. flava* was restricted to the relic forest area.

#### E. Muara Sarakan, Tanjung Sedari

Located east of Muara Gembong on the large alluvial plain north of Krawang, Muara Sarakan is an area converted to the "tambak-forest" system. Established for an extended period of time, the *Rhizophora* spp. in the plantations are up to 4 m high. It must be noted that there was no relic coastal forest in the area which was examined between 31 August and 5 September 1984. On the 3rd, a single group of at least 22 *Z. flava* was observed with two Flyeaters *Gerygone sulphurea* in a mangrove plantations 2-3 m high.

#### F. Coastal area between Indramayu and Cirebon

Similar to the rest of the north coast of West Java, the delta of the Cimanuk river north of Indramayu, and the coast between Indramayu and Cirebon, has been largely cleared of mangrove (Anon 1982, Manuputty 1984, G.R.M pers. obs.). Both traditional and "tambak-forest" system of pond aquaculture occur in this area.

Numerous spot-checks were made along this section of coast between September 1984 and December 1985 by G.R.M. during a study on the market netting of birds. No white-eyes were recorded.

### CONCLUSIONS

*Zosterops flava* still occurs along West Java's north coast in areas where it was historically recorded. The species appears to be more closely associated with the remaining pieces of coastal forest than with the mangrove. Although its status is difficult to ascertain because of the extent of coastal area to be examined, it should be listed as threatened in Java. This is due primarily to the few sightings in stands of coastal forest that are now disjunct. Moreover, its remaining traditional habitat is continuing to be radically altered by human activities. Former mangrove and coastal forests have largely been converted to tambak (Soemodihardjo et. al. 1977, Manuputty 1984) except for a narrow seaward strip varying in width

from 5 to 20 m. Some encouragement for the survival of this species in Java can be taken from its sighting in mangrove plantation. The species status' in Kalimantan is unknown, but the large areas of mangrove and coastal forest that still occur there (Wiroatmodjo et. al. 1980) may prove to be the principal refuge for this species.

(*Z. flava* has since been sighted at several localities along the south coast of Kalimantan. See Holmes and Burton, (1987) and Nash & Nash (1988) *Ed*)..

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ADDRESSES

G. Allport, School of Environmental Sciences, University of East Anglia, Norwich, NR4 7TJ, United Kingdom.

G.R. Milton, World Wildlife Fund, PO Box 133, Bogor 16001, West Java, Indonesia. Present address; Nesik Biological Research Inc., P.O. Box 487, Waverley Nova Scotia. BON 2S0. Canada.