

Two sight records of the Orange-banded Plane (*Lexias aeropa*) from the Iron Range area, and a note on larval foodplants

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Abstract

The Orange-banded Plane (*Lexias aeropa*) is a large nymphalid butterfly of New Guinea and adjacent islands. Its occurrence in Australia is evidenced by three specimens and two sightings from northern Cape York Peninsula including one sighting in the Iron Range area. We report two additional sightings from the Iron Range area, along with a record of larvae being raised on the tree *Calophyllum inophyllum* in Papua New Guinea by the late Harry Borch.

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The Orange-banded Plane (*Lexias aeropa* (L.)) (Fig. 1) is a large nymphalid butterfly of rainforests and adjacent habitats. It is also known as the Orange Nymph and Orange Archduke. The species was

originally reported only from New Guinea and nearby islands west to Pulau Taliabu, south-west to the Aru Islands and north-east to New Ireland, including all major islands in the Maluku



Figure 1. Female Orange-banded Plane (*Lexias aeropa eutychius*), above (A) and below (B).

Specimen from Harry Borch, April 1973, now in the collection of Graham Wood. It is labelled as being from Maprik (near Sepik River), Papua New Guinea, but was conceivably raised by Harry from a larva collected elsewhere. Photographs by Graham Wood.

Note that the subspecific identity of Australian *L. aeropa* has not been determined (Monteith & Kerr 1977), and also that females of ssp. *eutychius* have several colour morphs (Parsons 1999).

archipelago (Monteith & Kerr 1977; see also Parsons 1999). However, Monteith & Kerr (1977) collected three specimens, and saw one additional individual in Australia – all inland from Captain Billy Landing in what is now within the Jardine River National Park on Cape York Peninsula. The only additional record of the species in Australia is a sighting by John Young in 1993 from the Iron Range area (in Braby 2000; GB Monteith, pers. comm.). Sands & New (2002) recommended an Australian conservation status of Data Deficient for the species. Here, we document two additional sightings of the species, both from the Kutini-Payamu (Iron Range) National Park. These additions and all other published Australian records are summarised in Table 1. We also provide a brief note on food plants, along with a discussion of alternative explanations for the occurrence of the Orange-banded Plane in Australia.

Our first sighting was by Graham Wood on the top of Philip Hill, Kutini-Payamu (Iron Range) National Park, in April 1982, where Graham was studying hill-topping Orange Emperors (*Charaxes latona*). Philip Hill is 2.2 km south-south-west (almost south) of the Gordon Creek bridge in the national park. The hill was clad with regrowing or expanding rainforest, with some eucalypts present. The Orange-banded Plane was passing through (not hill-topping), landing for several minutes on a tree trunk where it was seen in good light. It is believed on the basis of size (smaller) to be a male. It obviously differed from all other Iron Range species including the Lurcher (*Yoma sabina*), Graham having already spent four years studying

butterflies in the Iron Range area and being familiar with all other species that regularly occur there. Monteith & Kerr's (1977) paper had been released and Graham was aware of its contents. In many years of study of butterflies at Iron Range and elsewhere on the Cape, this is the only time Graham has encountered the species.

The second sighting was by Don Franklin along the Chilli Beach Forest Walk in the mid-afternoon of 18 November 2015. As it flew through the coastal vine-thicket, its exceptionally large size and orange band against a darker background on the upperside of the wings were very evident. It landed on a branch about 2 m from Don for about 20 seconds, at which time the rounded nature of both the forewing and hindwing were striking. The underwing markings were pale yellow on a brown ground colour, matching depiction of the female in Braby (2000), (yellow-orange on orange-brown in the male), size also indicating that it was a female. When Don moved slightly in an attempt to photograph it, it flew off. It differed from a Lurcher, with which Don is also familiar, in having distinctly rounded wings (in the Lurcher these are somewhat angular in appearance with projections on both fore- and hind-wings), and in the colour and markings on the underside of the wings.

Monteith & Kerr (1977) reported the larval food plant of the Orange-banded Plane in New Guinea as *Calophyllum* sp. based on a single source (Fruhstorfer 1913 – not seen by us), a report reiterated by Braby (2000). Three other observers (two published) also report *Calophyllum* sp. as the food plant, as cited by Parsons (1999), all records

Table 1. Records of the Orange-banded Plane (*Lexias aeropa*) in Australia.

All locations are near the east coast of far northern Cape York Peninsula, Queensland.

| Date | Location | Details |
|---------------|--|---|
| 4-9 July 1975 | 15 km W of Captain Billy Creek; 11° 41.05'S, 142° 42.13'E | 1 female collected, Monteith & Kerr (1977), GB Monteith, pers. comm. |
| 10 July 1975 | Captain Billy Creek road crossing; 11° 36.95'S, 142° 48.55'E | 2 males collected, 1 female sighted, Monteith & Kerr (1977), GB Monteith, pers. comm. |
| April 1982 | Philip Hill, Kutini-Payamu (Iron Range) National Park; 12° 43.95'S, 143° 17.70'E | 1, probably a male, sight record, Graham Wood (this paper) |
| December 1993 | Iron Range area | J. Young, mentioned in Braby (2000), GB Monteith, pers. comm. |
| 18 Nov. 2015 | near Chilli Beach, Kutini-Payamu (Iron Range) National Park; 12° 37.78'S, 143° 25.64'E | 1, female, sight record, Don Franklin (this paper) |

being from Papua New Guinea. In addition and more specifically, the late Harry Borch reported (personal communication to G. Wood, 1978) successfully raising larvae on *Calophyllum inophyllum*.

Our records extend the months that the Orange-banded Plane has been recorded flying in Australia to include April and November (Table 1), and confirm occurrence of the species in the Kutini-Payamu (Iron Range) National Park. This is a second location for the species in Australia, the previous report from this location having not been independently published. Iron Range is 125 km south-south-east of Captain Billy Landing. We also provide, via the late Harry Borch, the first species-specific report of the larval food plant of the Orange-banded Plane.

The sparse record of the Orange-banded Plane in Australia generates intrigue about the status of the species here, and the observations reported for the first time in this paper raise an additional possible explanation. As background to discussion of these possibilities, Monteith & Kerr's (1977) records were 4.8 and 17.5 km away from the coast and in or next to rainforest, prompting them to suggest that the larval food plant might be *Calophyllum sil*, a species which grows in rainforests and along streams in far north Queensland. Wood's Philip Hill observation was 9.3 km from the coast. In contrast, Franklin's Chilli Beach observation was just 200 m from the beach and thus close to stands of *C. inophyllum* (Fig. 2), the larval food plant

reported by the late Harry Borch. *Calophyllum inophyllum* is known as Beach Calophyllum or Beach Laurel for its occurrence generally within reach of sea water (Fig. 2). Perusal of Australia's Virtual Herbarium (<http://avh.chah.org.au/>, data downloaded 28 & 29 Feb. 2016) suggests other possible larval food plants, showing that *Calophyllum* is represented by five species on the north of Cape York Peninsula, including (at least) *C. australianum*, *C. bicolor* and *C. sil* in the vicinity of Captain Billy Landing, and *C. australianum*, *C. inophyllum* and *C. sil* in the Iron Range area. It is possible that more than one *Calophyllum* species is utilised by the Orange-banded Plane.

Kikkawa *et al.* (1981) drew attention to the evidently-occasional occurrence of a number of lowland New Guinean butterflies on the northern Cape York Peninsula, the Orange-banded Plane among them. They argued that their occurrence in Australia is the result of sporadic dispersal from New Guinea, followed possibly by breeding in Australia but 'inevitably' by local extirpation due to the oft-harsher nature of the dry season south of Torres Strait. This is a plausible suggestion which is difficult to evaluate due to the paucity of observers on the Cape. On the other hand, lepidopterists have expended considerable effort surveying the rich and relatively-accessible rainforests of the Iron Range area, yet only three records of the Orange-banded Plane have resulted. However, the Chilli Beach portion of those forests is much less surveyed for butterflies than rainforests a little

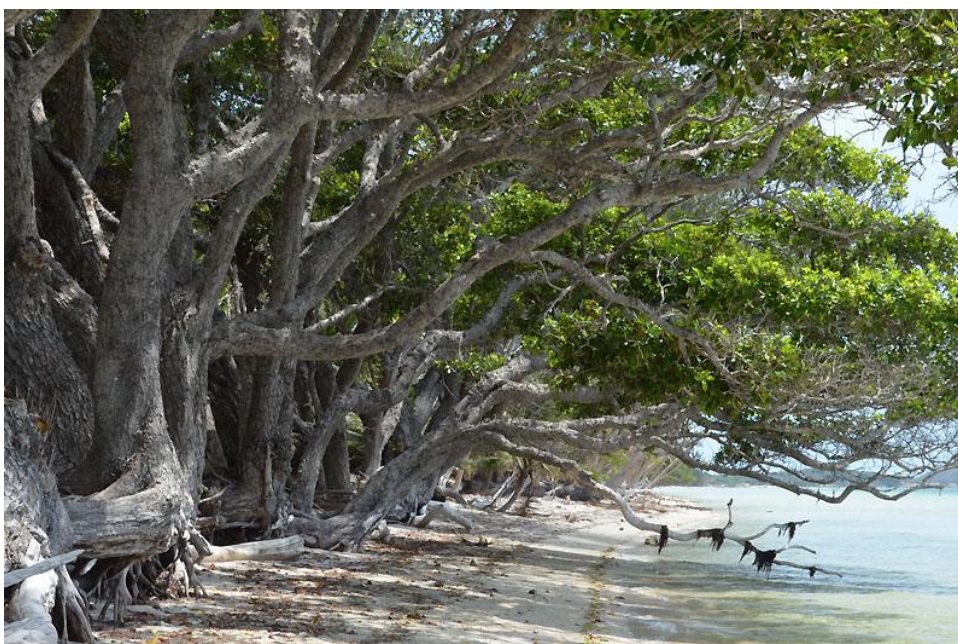


Figure 2. Beach Calophyllum (*Calophyllum inophyllum*) overhanging high-tide waters.

Photographed by Don Franklin at Chilli Beach, Kutini-Payamu (Iron Range) National Park, Cape York Peninsula, 16 Nov. 2015.

inland because frequent strong onshore winds and the lesser development of rainforest make it a less favourable environment for butterflies (G Wood, pers. obs.). Most beach areas on the north of Cape York Peninsula where *C. inophyllum* occurs are inaccessible. It is possible, therefore, that an undetected and potentially persistent breeding population of the Orange-banded Plane exists along the coast, with occasional dispersal inland, an alternative hypothesis to that of Kikkawa *et al.* (1981). This alternative generates a more specific target – the vicinity of beaches where *C. inophyllum* occurs – for the further searches for the species recommended by Sands & New (2002).

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