A note on *Macroglossum augarra* Rothschild, 1904 (Lepidoptera, Sphingidae)

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Abstract: The sphingid moth *Macroglossum augarra* Rothschild, 1904, is recorded from the D'Entrecasteaux Islands, Papua New Guinea, for the first time. It was seen in large numbers on the 1800 m summit of 'Oiatabu, Fergusson Island, in extreme weather conditions around dawn on several days. Two specimens were collected and deposited in the Natural History Museum (BMNH), London.

Beobachtung zu *Macroglossum augarra* Rothschild, 1904 (Lepidoptera, Sphingidae)

Zusammenfassung: Der Schwärmer *Macroglossum augarra* Rothschild, 1904 wird erstmals von den D'Entrecasteaux-Inseln, Papua-Neuguinea, gemeldet. Eine größere Zahl von Exemplaren wurde an mehreren Tagen auf dem Gipfel des 'Oiatabu, Fergusson Island, auf 1800 m Höhe unter extremen Wetterbedingungen in der Morgendämmerung beobachtet. Zwei Stücke konnten gefangen werden und sind in der Sammlung des Natural History Museums (BMNH), London, aufbewahrt.

Introduction

As part of the first author's decade-long study into the systematics and distribution of butterflies on the numerous islands of Milne Bay, eastern Papua New Guinea, the authors climbed several of the high mountains on the D'Entrecasteaux Islands and Louisiade Archipelago in 2015–2017. This included the c. 1800 m peak of 'Oiatabu (Mount Kilkerran) on Fergusson Island, the central of the three main islands of the D'Entrecasteaux. The summit of 'Oiatabu (Fig. 1) is a small, not particularly

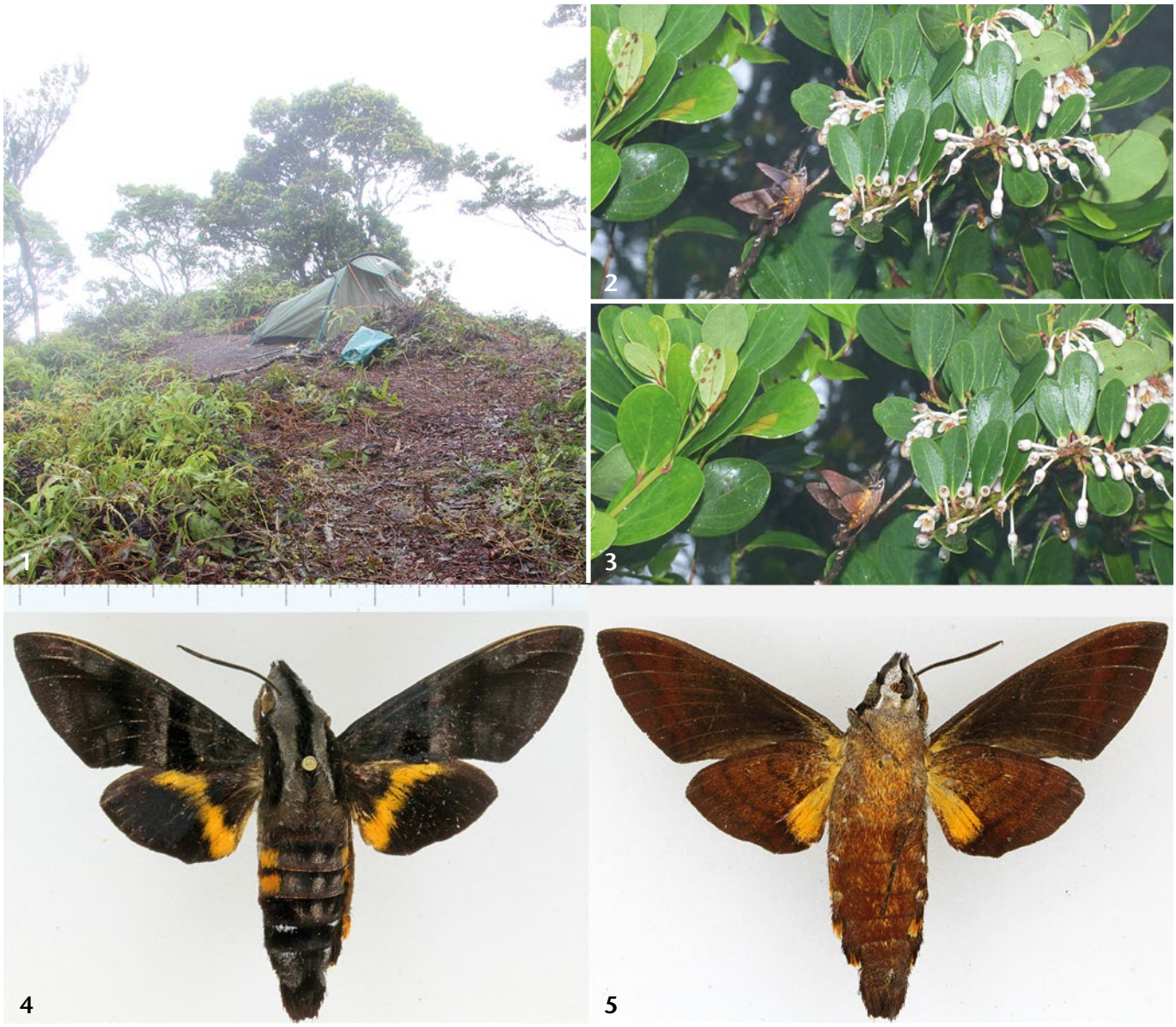

Fig. 1: Summit of 'Oiatabu (Mount Kilkerran), Fergusson Island, with tent. **Figs. 2, 3:** *Macroglossum augarra*, feeding at flowers of *Vaccinium acrobracteatum* (Ericaceae). **Figs. 4, 5:** *M. augarra* ♂, upperside, summit of 'Oiatabu, 1800 m, 9. x. 2016; upperside, underside.

flat area barely wide enough to pitch tents, with a sheer drop and magnificent view west to the Maybole Mountains of western Fergusson and the peaks of Goodenough island beyond. Reaching the summit in October 2016, we stayed there for six nights.

Early mornings were usually brutal, with gale-force winds from before dawn. Each morning, as it became light, flurries of leaves and small twigs blew wildly across the summit, and we soon realised that insects too were being buffeted by gusts, with apparently little control over their flight or direction. We believe most of these insects were large and robust beetles (Coleoptera), but also became aware that some of the insects being battered by the winds were almost certainly sphingid moths. At dusk, the same extreme conditions generally prevailed, but with fewer numbers of insects. The peak was sheltered on the eastern side by the tangled upper branches of trees, the roots of which were further down the steep slope. These stunted trees were all of the same species of Ericaceae, almost certainly *Vaccinium acrobracteatum* K. Schum., 1905 (Wayne Takeuchi, in litt. 2017), and on one low tree, 1–2 m above the ground, there was a spray of small white campanulate bell-like flowers; other sprays, still in bud, were present here and there.

Throughout our stay, the flowers were visited by a host of beetles and a few butterflies during the day, and around dawn we found that the occasional moth, which the first author immediately recognised as a species of *Macroglossum* (Sphingidae), also fed briefly, hovering for no more than a few seconds at individual flowers. Over the whole period of our stay on the summit we only managed to catch two *Macroglossum* specimens; one at a *Vaccinium* flower; the second netted — by some fluke — as it hurtled over the summit at dawn. We also photographed the moths feeding at the flowers, without doubt the first and only images of this species 'in life' (Figs. 2, 3).

The species was identified by Ian Kitching, Natural History Museum, London (BMNH), as *Macroglossum augarra* Rothschild, 1904 (Figs 4, 5). The holotype ♀ of *M. augarra* was taken in May 1903 at Owgarra, north of the head of the Aroa River, Papua New Guinea, by A. S. Meek. Until relatively recently, the BMNH had only three specimens of this species, all from the New Guinea mainland; subsequently, a fourth specimen, also in the BMNH, was collected by Chris Müller on 22. viii. 1998 from the Hans Meyer Range, New Ireland, in the Bismarck Archipelago — this specimen has a subtly different wing pattern and may represent a distinct subspecies. Our two specimens represent the fifth and sixth *M. augarra* in the BMNH.

Two things seemed remarkable. The first is that any moth would fly at all in such extreme conditions; secondly, that it was so common, especially in the dawn flight. Of course, it is not possible to say that every *Macroglossum* seen was this species, but we believe they probably were; all were of the same approximate size, and those we were able to observe closely at the flowers, albeit fleetingly, were of similar appearance. Conditions made any accurate count impossible, but we estimate we observed several dozen over the period we stayed there. We did not see — or at least did not notice — any moths of other genera in the mêlèe.

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