

Two New Species of *Gnathothlibus* Wallengren from Fiji and Samoa and a New Species of *Theretra* Hübner from New Guinea (Lepidoptera: Sphingidae)

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ABSTRACT. Two new species of hawk moths from Fiji and Samoa, respectively *Gnathothlibus fijiensis* n.sp., and *G. samoensis* n.sp., are described and figured, and distinguished from *G. vanuatuensis* Lachlan & Moulds, *G. saccoi* Lachlan & Moulds and *G. eras* (Boisduval). A new species of *Theretra*, *T. tabubilensis* n.sp. from Papua New Guinea is described and figured. The new species is distinguished from the sympatric *T. indistincta papuensis* Joicey & Talbot and *Theretra clotho celata* (Butler), and the lectotype of *T. i. papuensis* is designated.

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Three species of *Gnathothlibus* Wallengren, 1858 have been described from the southwestern Pacific region. *Gnathothlibus eras* (Boisduval, 1832) is reported, as a subspecies of *G. erotus* (Cramer, 1777), to occur from the Australian Region to Tahiti (D'Abbrera, 1987), *G. saccoi* Lachlan & Moulds, 2001 [= *G. malleti* Schmit, 2002 (Schmit, 2003)] and *G. vanuatuensis* Lachlan & Moulds, 2003 are known only from Vanuatu (Lachlan & Moulds, 2001, 2003; Schmit, 2002).

Two undescribed species of *Gnathothlibus*, both closely resembling *G. eras*, and both previously confused with it, have been collected. One was collected in Fiji on the main island of Viti Levu in April, 2008, the other was collected on the island of Upolu, Samoa, in November, 2008. They are described in the present work.

In the early 1990's the author also collected a large series of males and females of another sphingid genus *Theretra* Hübner, [1819], from the Tabubil area of the Western Province, Papua New Guinea. This collection could readily be classified into two species *Theretra indistincta* (Butler, 1877) and a closely related but undescribed species. The two

taxa are consistently distinct, no evidence of morphological intergradation was found despite several years of sampling and examination of large numbers of specimens. Evidently, sympatry has not resulted in hybridization.

Bibliographic information and notes on the generic diagnoses of *Gnathothlibus* and *Theretra* are given by D'Abbrera (1987).

Materials and methods

All specimens sampled at the various localities were collected using mercury vapour lights run from sunset to just before sunrise. The specimens were then deep frozen before being set for examination. All measurements are given in millimetres. This study was based on extensive material in the author's private collection, (RBLC), and material in the Australian Museum, Sydney, (AM). Some specimens have been deposited in the Natural History Museum, London, (BMNH). Wing venation is that used by D'Abbrera (1987). Morphological terminology used in this paper is based on that used by Kitching & Cadiou (2000).