



<http://dx.doi.org/10.11646/zootaxa.3774.5.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:41806FD6-9D31-4CEF-8F26-3D1200BBA01E>

## A preliminary study of the genus *Nymphicula* Snellen from Australia, New Guinea and the south Pacific (Lepidoptera: Pyraloidea: Crambidae: Acentropinae)

DAVID AGASSIZ

The Natural History Museum, London SW7 5BD. E-mail: david.agassiz@gmail.com

### Abstract

The species of *Nymphicula* occurring in Australia and south Pacific islands are described and illustrated. 22 new species are described: *N. adelphalis*, *N. christinae*, *N. conjunctalis*, *N. edwardsi*, *N. hamptoni*, *N. ochrepunctalis*, *N. torresalis*, *N. beni*, *N. irianalis*, *N. michaeli*, *N. monticola*, *N. nokensis*, *N. plumbilinealis*, *N. submarginalis*, *N. susannae*, *N. tariensis*, *N. xanthocostalis*, *N. fionae*, *N. insulalis*, *N. lactealis*, *N. lifuensis*, *N. cheesmanae*. A replacement name is proposed for *Cataclysta dialitha* Tams: *Nymphicula samoensis*.

**Key words:** Lepidoptera, Acentropinae, *Nymphicula*, new species

### Introduction

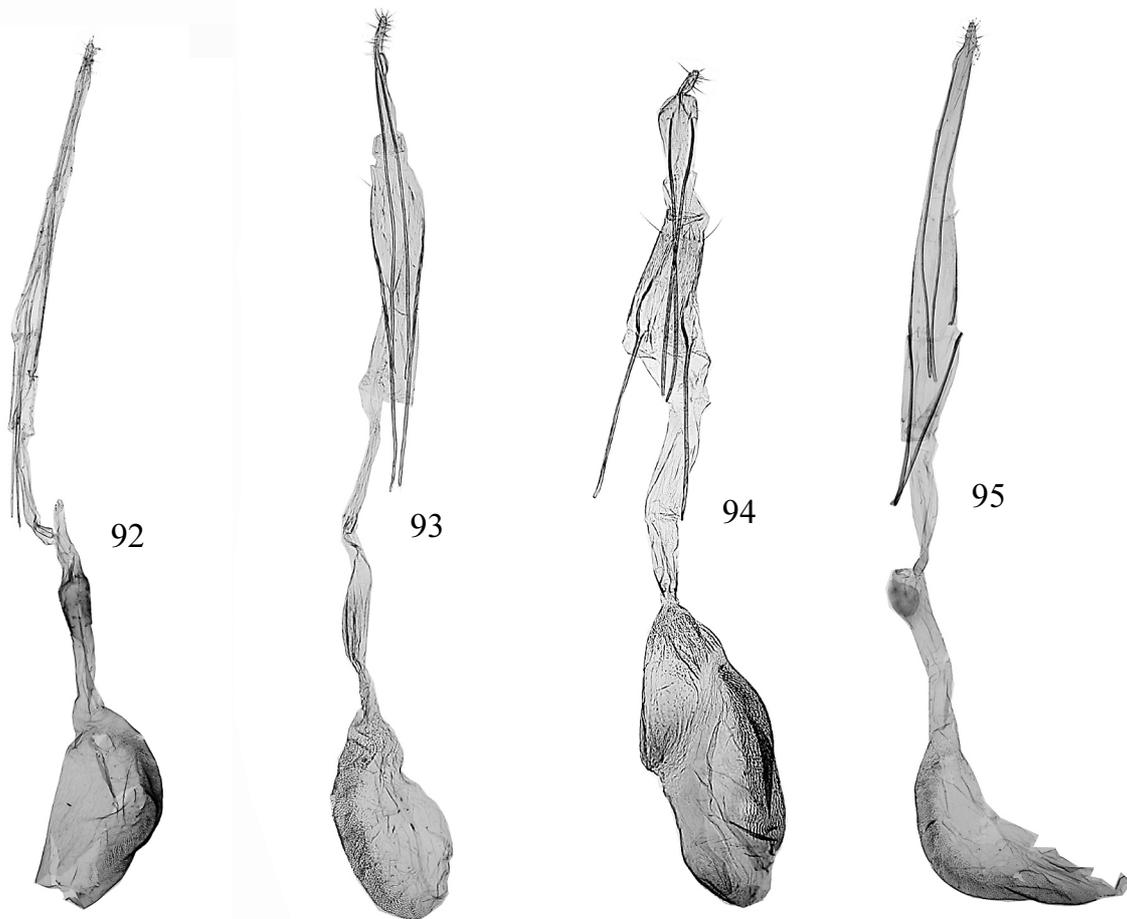
These attractive small moths were much neglected until recent decades. Yoshiyasu (1980) correctly raised the genus from the synonymy of *Cataclysta* in a most interesting paper where he described the life history of a couple of species known in Japan. Unlike most Acentropinae, the larvae of *Nymphicula* are terrestrial, (those whose life history is known feed on *Jungermannia*), but in common with many aquatic species they are case-bearing. On account of this habit Yoshiyasu suggested that *Nymphicula* has developed from aquatic or semi-aquatic ancestors. Further studies on the life history are being undertaken in Australia by John Hawking (pers. comm.).

Four species were found to be present in Japan by Yoshiyasu (1980). Speidel (1984) accepted these species alone from the Palaearctic region, but introduced synonymies. He correctly placed *minuta* Yoshiyasu as a synonym of *mesorhina* (Meyrick), but since he had very little material to study he placed *junctalis* (Hampson) in the synonymy of *patnalis* (Felder & Rogenhofer) along with *bombayensis* (Swinhoe & Cotes) and *nigristriata* (Hampson). A study of type material in the British Museum (Natural History) has shown that all these four species are distinct, and none of them is conspecific with the species described by Yoshiyasu as *junctalis*. Agassiz (2002) named this latter species *yoshiyasui*.

Further papers by Yoshiyasu (1987 & 1997) described a species from Thailand, and made mention of another, and two new species from the Philippines. Speidel (1998) described a further three species of *Nymphicula* from the Philippines and in this paper restored the species mentioned above: *junctalis*, *bombayensis* and *nigristriata* to full specific status. Speidel & Mey (1999) listed 22 species from the Oriental region. Speidel (2003) added a further four species from the Philippines and Mey (2009) added two more from Sabah. Agassiz (2012) listed three species from Africa, one of which was newly described.

I collected some specimens in Papua New Guinea in November 1984. Although there was a superficial resemblance closer examination showed that I had taken three different species, only one of which was described. A second visit in January 1986 yielded a further two undescribed species. Other projects have delayed preparation of this paper.

Since then I have carefully examined the collections of the Natural History Museum (BMNH), the Australian National Insect Collection (ANIC), the Royal Scottish Museum, the Hope Entomological collections at Oxford,



**FIGURES 92–95.** Female genitalia: 92. *N. lifuensis*, 93. *N. cheesmanae*, 94 *N. australis*, 95. *N. cyanolitha*.

### Acknowledgements

I am very grateful to the custodians of all the Museums listed for loan of material to study, to the Government of Papua New Guinea for permission to collect specimens. The late Michael Shaffer and Kevin Tuck of the Natural History Museum gave much advice and assistance, as also have Shen-Horn Yen, Yutaka Yoshiyasu and Wolfgang Speidel to whom thanks are extended.

### References

- Agassiz, D.J.L. (2012) The Acentropinae (Lepidoptera: Pyraloidea: Crambidae) of Africa. *Zootaxa*, 3494, 1–73.
- Felder, R. & Rogenhofer, A.F. (1874) Atlas der Heterocera. In: *Reise der Österreichischen Fregatte Novara um die Erde, in den Jahren 1857, 1858, 1859 unter den Befehl des Commodore B. von Wüllerstorff-Urbair. Zoologischer Theil*, 2, pl. 136 fig. 10.
- Hampson, G.F. (1917) Descriptions of new Pyralidae of the subfamilies Hydrocampinae, Scopariinae, &c. *Annals and Magazine of natural History*, 19, 361–376, 457–473.
- Maes, K.V.N. (1985) A comparative study of the tympanal organs in Pyralidae (Lepidoptera). I. Description, terminology, preparation technique. *Nota lepidopterologica*, 8, 341–350.
- Mey, W. (2009) New aquatic moths from high elevations of Mt. Kinabalu in northern Borneo (Lepidoptera: Pyraloidea, Acentropinae). *Entomologische Zeitschrift – Stuttgart*, 119, 99–107.
- Meyrick, E. (1886) VIII – Descriptions of Lepidoptera from the South Pacific. *Transactions of the entomological Society of London*, 34 (3), 189–296.  
<http://dx.doi.org/10.1111/j.1365-2311.1886.tb01626.x>

- Speidel, W. (1984) Revision der Acentropinae des palaearktischen Faunengebietes (Lepidoptera, Crambidae). *Neue entomologische Nachrichten*, 12, 1–157.
- Speidel, W. (1998) The genus *Nymphicula* Snellen, [1880] in the Philippines (Lepidoptera: Crambidae: Acentropinae). *Esperiana*, 6, 533–546.
- Speidel, W. (2003) New Species of Aquatic Moths from the Philippines (Lepidoptera: Crambidae). *Insecta Koreana*, 20, 7–49.
- Speidel, W. & Mey, W. (1999) Catalogue of the oriental Acentropinae (Lepidoptera, Crambidae). *Tijdschrift voor Entomologie*, 142, 125–142.  
<http://dx.doi.org/10.1163/22119434-99900025>
- Tams, W.H.T. (1935) Lepidoptera: Heterocera (exclusive of Geometridae and the Microlepidoptera), *Insects of Samoa and other Samoan terrestrial arthropods*, 3, 169–290.
- Yoshiyasu, Y. (1980) A systematic study of the genus *Nymphicula* of Japan. *Tyo Ga* 31, 1–28.
- Yoshiyasu, Y. (1987) The Acentropinae of Thailand, with descriptions of a new genus and six new species. *Microlepidoptera of Thailand*, 1, 133–187.
- Yoshiyasu, Y. (1997) Descriptions of three *Nymphicula* species from the Philippines (Lepidoptera, Crambidae). *Esakia*, 37, 161–172.