Introduction

The discovery of the genus *Roscidotoga* Hoare, 2000, the most recently named genus in the Nepticulidae, was one of the big surprises during the study of the large diversity of Australian Nepticulidae for RJBH’s thesis. The genus is sister to the other endemic Australian genus, *Pectinivalva* Scoble, 1982, and together these genera form the subfamily *Pectinivalvinae*. Monophyly of this subfamily was clearly demonstrated by morphology (Hoare 2000) and is also supported by the analysis of nuclear and mitochondrial DNA (Van Nieukerken et al. in prep.). The three known species of *Roscidotoga* were collected in rainforests in Tasmania, New South Wales and southern Queensland. All feed on members of the angiosperm order Oxalidales, in contrast to the sister genus *Pectinivalva*, which is almost completely monophagos on Myrtaceae and has its largest diversity in the dry and seasonal eucalypt forests. The area of northern New South Wales and southern Queensland has some of the best preserved and largest subtropical rainforests of Australia, and species of this genus were particularly expected in that region. To search for these and other Nepticulidae, two of us (RJBH and CVDB) organised a collecting expedition in the winter of 2000 (early July). In Lamington National Park they indeed found mines of possible *Roscidotoga* on black wattle *Callicoma serratifolia* Andrews (Cunoniaceae) and yellow carabeen *Sloanea woollsii* F. Muell. (Elaeocarpaceae), the latter were also found in Border Ranges National Park (NSW). Unfortunately rearing of the larvae failed, although some dead pupae reared from *Sloanea* appeared to contain full-grown adults and study of their genitalia showed they belonged to *Roscidotoga*. The senior author visited the Lamington National Park in August 2004 on the occasion of the International Congress of Entomology in Brisbane, and was able to find larvae again of both species, and more specimens were found a week later together with RJBH. Two reared males allow us now to describe this species and supplement the original description of the genus (Hoare 2000).
Material and methods

For most methods we refer to Hoare (2000). Rearing was carried out in the Netherlands. The pupae were kept with some moss in small plastic containers with lids, in a breeding cabinet with artificial TL light and temperatures regulated to imitate the climate of the original locality.

Genitalia preparations and preparations of larvae and pupae were essentially carried out as in the previous paper, but we did not slit the abdominal pelt, and as stains we used chlorazol black for females and sometimes male abdomens, and haemaluin according to Mayer for males and larvae, for some larvae phenosaffrinan.

Measurements of genitalia and larvae were obtained from digital images, using AxioVision, 20× objective for male genitalia and usually 10× for females. DNA was extracted from caterpillars or from dry adult abdomens. DNA extraction from larvae was usually destructive; from abdomens and some larvae the non-destructive protocol by Knölke et al. (2005) was followed, allowing the preparation of the genitalia or larval skin as well. Details of methods are presented by Van Nieukerken et al. (2011), we provide here the COI DNA barcode for two species, details can be found on the Barcode of Life webpages (http://www.barcodinglife.com/views/login.php) under the project “Pectinivalvinae Public records”.

Photographs of moths, leafmines and microscope slides (genitalia, larvae, pupae) were taken with a Zeiss AxioCam (HR or MR5) digital camera attached respectively to a Zeiss Stemi SV11 stereomicroscope and a Zeiss Axioskop H, using Carl Zeiss AxioVision software (version 4). Manipulation of photographs, using Adobe Photoshop® was kept to a minimum: disturbing conspicuous shades, protruding parts of pins, dust and air bubbles in slides were removed or obscured.

Hostplants were identified with Harden et al. (2006) or Williams et al. (1984).

Roscidotoga lamingtonia sp. n.
Figs 1–18, 20, 22, 23, 26


Australia (Queensland): Leafmines from EvN samples 2004082 and 2004097 (type locality) (RMNH, ANIC), 1 larva from 2004082, destructively extracted for DNA (RMNH.INS.11835); Australia (New South Wales): Leafmines studied from Border Ranges NP.