

# Neotropical Pterophoridae 10: The genus *Quadriptilia* nov. (Lepidoptera)

C. Gielis

**Abstract.** A new, neotropical genus in the Pterophoridae is described: *Quadriptilia* nov. gen. The differences from related genera are discussed. A checklist of the species in the genus is given, with an identification key to the species. Two new species are described: *Q. obscurodactyla* spec. nov. and *Q. rectangulodactyla* spec. nov.

**Samenvatting.** Neotropische Pterophoridae 10. Het geslacht *Quadriptilia* gen. nov. (Lepidoptera)

Een nieuw, neotropisch vedermottengeslacht *Quadriptilia* wordt beschreven. De verschillen met verwante geslachten worden besproken. Een soortenlijst en een determinatietafel van de soorten in het geslacht worden gegeven. Twee nieuw herkende soorten *Quadriptilia obscurodactyla* spec. nov. en *Q. rectangulodactyla* spec. nov. worden beschreven.

**Résumé.** Pterophoridae néotropicaux 10. Le genre *Quadriptilia* gen. nov. (Lepidoptera).

L'auteur décrit un nouveau genre de Pterophoridae néotropical, comprenant entre autres deux nouvelles espèces pour la science: *Quadriptilia obscurodactyla* spec. nov. et *Q. rectangulodactyla* spec. nov. Il le compare aux genres voisins et donne les caractéristiques qui permettent de les séparer, ainsi qu'une liste des espèces et une clef de détermination.

**Keywords:** Lepidoptera - Pterophoridae - neotropics - new genus - new species.

C. Gielis, Mr. Haafkensstraat 36, 4128 CJ Lexmond, The Netherlands.

Among *Platyptilia* species from South America, a peculiarly shaped large species is present: *philorectis* Meyrick, 1926. This species has an angulated, broad wing shape. This wing shape also occurs in two species which have not yet been described. The examination of the genitalia of *philorectis* shows a valve shape not previously encountered (Gielis 1993), consisting of a combination of an overriding cucullus and a wide, unlobed sacculus. This shape is also seen in *obscurodactyla* spec. nov. Of *rectangulodactyla* spec. nov., only females have been examined.

## Genus *Quadriptilia* nov.

Type-species: *Platyptilia philorectis* Meyrick, 1926.

**Diagnosis.** This genus is characterised by the large, rectangularly shaped wings. The valvae of the male genitalia with an overriding cucullus and an unlobed sacculus.

**Description.** Head with appressed scales. Palpi protruding, twice eye diameter. Antennae rather short, ciliated.

Fore wing cleft from 4/5. The apical and dorsal angles of both lobes almost

rectangular, giving a broad appearance to the wing.

Hind wing with a row of scales at the dorsum of the third lobe, condensed to a subterminal scale tooth. On the underside a double row of venous scales, with the costal row longer than the dorsal row.

Male genitalia. Valvae symmetrical. Cucullus overriding. Sacculus unlobed, slightly widened. Tegumen arched, bilobed. Uncus nearly as long as tegumen, stout. Vinculum arched, with a short and stout single pointed saccus. Juxta with two short and stout anellus arms. Aedeagus moderately curved. Cornutus formed of minute spiculae.

Female genitalia (*rectangulodactyla*). Ostium oblique, right lateral positioned. Antrum gradually narrowing and merging into the curled ductus bursae. In the ductus bursae a sclerite. Ductus seminalis originating near the bursa copulatrix. Bursa copulatrix vesicular. Signum double, in shape of small horns surrounded by minute spiculae. Lamina ante-vaginalis well developed, widely arched. Lamina post-vaginalis expressed as two small sclerotized arches above the lamina ante-vaginalis. Apophyses anteriores present, as long as papillae anales. Apophyses posteriores two and a half times the papillae anales.

Ecology. No host plant records are known.

Distribution. Andes region from Peru to Colombia. In the mountains at elevations of 1000 to 3200 m.

Etymology. The wing shape of the species in the genus is expressed in the name.

#### Checklist of species of *Quadriptilia* gen. nov.

*philorectis* (Meyrick, 1926) (*Platyptilia*) Peru

*obscurodactyla* spec. nov. Colombia

*rectangulodactyla* spec. nov. Peru

#### Key to the species of *Quadriptilia* gen. nov.

- |  |                                     |
|--|-------------------------------------|
| 1. -Forewings dark brown .....   | 2                                   |
| -Forewings white-grey .....  | <i>rectangulodactyla</i> spec. nov. |
| 2. -Colour of forewing uniformly dark brown with some darker expression of veins in terminal wing parts, mesothorax dark brown ..... | <i>obscurodactyla</i> spec. nov.    |
| -Forewing with ochreous costal markings, mesothorax bright ochreous-yellow .....   | <i>philorectis</i> (Meyrick).       |

#### *Quadriptilia philorectis* (Meyrick, 1926) (fig. 1)

*Platyptilia philorectis* Meyrick, 1926: 298.

Material. Holotype ♂: Peru, Andes, [19]20, genitalia BM 18853 (BMNH) [examined]. Peru: 1 without abdomen, Carabaya, La Oroja, R. Inambari, 3100 ft, ix.1905 (G. Ockenden) (BMNH) [examined].

Diagnosis. This species is characterized by its large size, the dark brown

colour and the ochreous-white mesothorax.

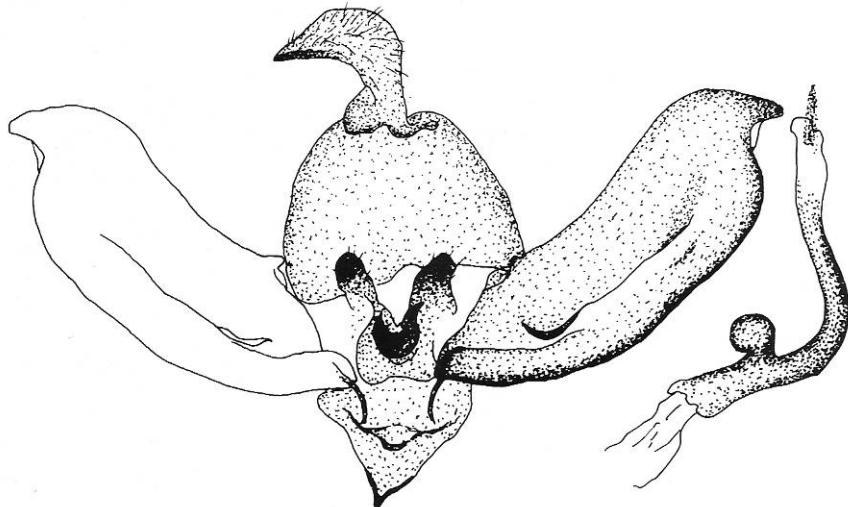


Fig. 1. *Quadriptilia philorectis* (Meyrick, 1926). Male genitalia. Holotype.

**Redescription.** Male. Wingspan 39-41 mm. Head with appressed scales, dark brown. Palpae protruding, slender, two and a half times eye-diameter. The basal segment pale brown; second segment dorsally pale brown, ventrally ochreous; third segment ochreous. Antennae grey-brown, shortly ciliated. Thorax and tegulae dark brown. Mesothorax ochreous-white. Abdomen dark brown. Hind legs ochreous, brown ringed at the base of the spur pairs. Spur pairs of equal length.

Fore wings cleft from 5/6, dark brown. A small spot before the base of the cleft. Costa of first lobe ochreous, with three small longitudinal brown spots. Fringes brown-grey. Underside dark-brown, markings of first lobe as above. Hind wings grey-brown. Fringes brown-grey. Along the dorsum of the third lobe a row of conspicuous black scales. Underside grey-brown. Venous scales in a double row of ferruginous scales; the dorsal row longer than the costal row.

Male genitalia (fig. 1). Valvae symmetrical. The cucullus overriding. Sacculus not lobated. Tegumen arched. Uncus stout, as long as tegumen. Vinculum expanding into the pointed saccus. Juxta broad. Anellus arms short and stout. Aedeagus curved, with a small cornutus of minute spiculae.

Female genitalia. Unknown.

Ecology. The moth flies in September. The hostplant is unknown.

Distribution. Peru.

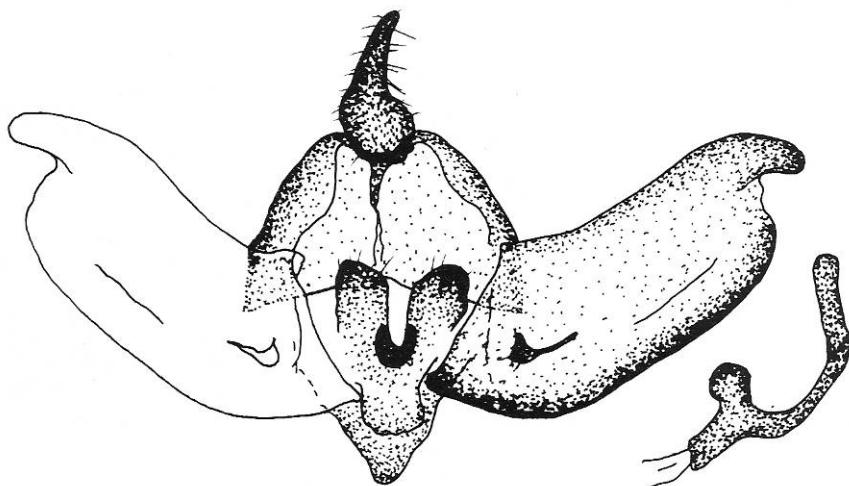


Fig. 2. *Quadriptilia obscurodactyla* spec. nov. Male genitalia. Holotype.

*Quadriptilia obscurodactyla* spec. nov. (fig. 2)

Material. Holotype ♂: Colomb[ia], West Cord., Rio Aguacatal, 2000 m, n.d. (Fassl), gent. CG 5069 (BMNH, ex coll. Paravicini). Paratypes: 1♂, Ecuador, Napo, Cosanga, 2150 m, 27.V.1976 (N. Venedictoff), gent. CG 3558 (AME); 1♂, Ecuador, Carchi, Rd Maldonado km 63.5, 2850 m, 16.I.1985 (N. Venedictoff) (CG); 1♂, Ecuador, Pichincha, Rd Quito/Chiriboga km 27, 3180 m, 20.III.1982 (N. Venedictoff) (AME).

Diagnosis. This species is characterized by the dark, brown-black colour, with two small costal spots in the first fore wing lobe.

Description. Male. Wingspan 32 mm. Head with appressed scales. Colour of head, thorax, tegulae, mesothorax, abdomen, fore- and hind wings dark brown-black. Palpae ferruginous, protruding, slightly longer than eye-diameter. The second segment distally gradually widening. Antennae grey-brown, shortly ciliated. Hind legs brown with two pairs of brown-white spurs of unequal length.

Fore wings cleft from 4/5. On the wings a diffuse white-grey scaling, condensed centrally in the first lobe into a wedge shape, with the top facing the apex. At the costa of the first lobe two small, grey-brown spots. Fringes grey-black. Underside as above.

Hind wings with dark grey fringes. On the dorsum of the third lobe a continuous row of conspicuous black fringe scales. Venous scales ferruginous,

in a double row; the costal row slightly longer than the dorsal row.  
Male genitalia (fig. 2). Valvae symmetrical. Cucullus overriding. Sacculus unlobed, wide. Tegumen arched, indented at top. Uncus stout, short. Vinculum expanding into the short blunt saccus. Juxta small. Anellus arms short and wide. Aedeagus curved, without noticeable cornutus.

Female genitalia. Unknown.

Ecology. The moth flies in January, March and May. Host plant unknown.

Distribution. Colombia: West Cordilla. Ecuador: Napo, Carchi, Pichincha.

Etymology. In the name the dark colour of the wing is expressed.

Remarks. The species resembles *philorectis* very much, but differs in the terminal margins of the fore wing, which are rather rounded than indented, the absence of pale markings at the fore wing and the dark mesothorax.

*Quadriptilia rectangulodactyla* spec. nov. (figs 3-4)

Material. Holotype ♀: Peru, Carabaya, Agualani, 9000 ft, vi.1905 (G. Ockenden), dry season, gent. CG 5012 (BMNH). Paratypes: 1 ♀, Peru, Carabaya, Agualani, 9000 ft, xii.1905 (G. Ockenden), wet season, prep. CG 5028 (BMNH).

Diagnosis. This species is characterized by the rectangular wing-shape.

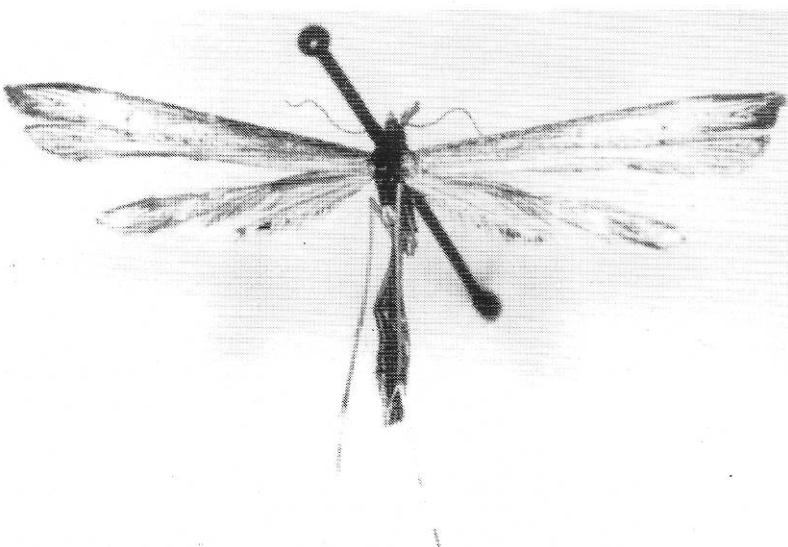


Fig. 3. *Quadriptilia rectangulodactyla* spec. nov. Holotype ♀ : Peru, Carabaya, Agualani, 9000 ft, vi.1905 (G. Ockenden), dry season.



Fig. 4. *Quadriptilia rectanguladactyla* spec. nov. Female genitalia. Holotype.

Description. Female (fig. 3). Wingspan 27 mm. Head covered with appressed and erect scales, mixed ferruginous-white and white. Palpae three times eye-diameter, ferruginous-white and white scaled; second segment very long and widened by the scales, third segment small. Antennae a little over half the winglength, with ill-defined pale and dark brown rings, shortly ciliated. Thorax and tegulae ferruginous-white. Mesothorax distally margined white. Abdomen pale brown, with a cream-white, narrow, dorsal line. Fore wings cleft from 4/5; colour grey-white, rectangular. Markings dark brown, consisting of two transverse spots well before the base of the cleft. A dark scaling along the veins, especially in the distal wing parts and a scaling along the costa. Fringes grey-brown. In the outer margin of the first lobe and in the second lobe near the apex two darker basal fringe segments. At the dorsum two small groups of dark scales at 1/2 and 3/4. Underside pale brown, near the first and in the first lobe cream-white with dark brown scales on the veins.

Hind wings cream-white mixed brown in the first and second lobe. Third lobe cream-white. Fringes grey-white. At the dorsum of the first lobe a small subapical scale-tooth, and between the wing base and the scale-tooth isolated dark scales. Underside cream-white mixed with ferruginous and dark brown scales. Venous scales ferruginous brown, in a double row; the costal row long and extending into the second lobe.

Male genitalia. Unknown.

Female genitalia (fig. 4). Antrum twice as long as wide, laterally positioned. Ductus bursae near antrum spiralled and extending into a slender tube leading to the vesicular bursa copulatrix. Signa in shape of a pair of very small horn-like structures, in a field of minute spiculae. Lamina ante-vaginalis in a large, broad sclerotized plate, laterally progressing into the apophyses anteriores. Lamina post-vaginalis linear, centrally with two small sclerotized plates, laterally merging into the lamina ante-vaginalis. Apophyses posteriores two and a half times longer than papillae anales. Apophyses anteriores as long as papillae anales.

Ecology. The moth flies in June and December. The biology is unknown.

Distribution. Peru: Carabaya.

Remarks. The species is closely related to the bigger and dark coloured species *obscurodactyla* spec. nov. and *philorectis*, from which it differs by the elongated shape and grey-white colour of the forewing.

Etymology. The species has been named to emphasize the rectangular wing shape.

#### Acknowledgements

I wish to thank Mr M. Shaffer (BMNH), British Museum of Natural History, London, Great Britain, and Dr J.Y. Miller, Allyn Museum of Entomology, Florida Museum of Natural History (AME), Sarasota, Florida for the opportunity to study the specimens mentioned in this manuscript and Mr

H.W. van der Wolf for correcting the text.

### References

- Gielis, C., 1993. Generic revision of the superfamily Pterophoroidea. - *Zool. Verh., Leiden* 290: 1-139, figs. 1-241.  
Meyrick, E., 1926. *Exotic Microlepidoptera* 3 (10): 289-320.
- 

### Inhoud:

Coenen, F.: <i>Leucoptera lotella</i> (Stainton, 1858): espèce nouvelle pour la faune belge (Lepidoptera: Lyonetiidae) . . . . .	161
Coutsis, J.G.: Butterflies from the Greek islands of Síros, Náxos and Santoríni (Lepidoptera : Hesperioidae & Papilioidea) . . . . .	157
De Prins, G.: Merkwaardige vlinderwaarnemingen in 1993 (Lepidoptera) . . . . .	117
De Prins, W.: <i>Phyllonorycter leucographella</i> (Zeller, 1850), een nieuwe soort voor de Belgische fauna (Lepidoptera: Gracillariidae) . . . . .	125
Garrevoet, T. & De Prins, G.: <i>Perizoma bifaciata</i> (Haworth, 1809): nieuw voor de provincie Antwerpen (Lepidoptera: Geometridae) . . . . .	143
Gielis, C.: Neotropical Pterophoridae 10: The genus <i>Quadriptilia</i> nov. (Lepidoptera) . . . . .	181
Kolev, Z.: <i>Spialia phlomidis</i> (Herrich-Schäffer, 1845) confirmed for Bulgaria (Lepidoptera: Hesperiidae) . . . . .	151
Tennent, W.J.: A critical note on the alleged occurrence in North Africa of certain Nymphaline butterflies - and the first published occurrence in Africa of <i>Inachis io</i> (Linnaeus, 1758) (Lepidoptera: Nymphalidae) . .	171
Tolman, T. & Bernhard, T.: Significant extensions to the known range of <i>Anthocharis damone</i> Boisduval, 1836 in Greece (Lepidoptera: Pieridae) . . . . .	177
Van den Abbeele, D.: Een eerste kennismaking met de Griekse dagvlinders in de lente (Lepidoptera : Hesperioidae & Papilioidea) . . . . .	165
Van de Weyer, G.: Aanvullingen bij de familie Calliphoridae (Diptera) van de Belgische fauna naar aanleiding van het verschijnen van de naamlijst van de Belgische Diptera . . . . .	145
Van Opstaele, M.: Waarnemingen van <i>Eupithecia</i> soorten in de periode 1983-1993 (Lepidoptera: Geometridae, Larentiinae) . . . . .	129
Boekbesprekingen . . . . .	124, 156, 163, 164

---

verantw. uitg.: W. De Prins, Diksmuidelaan 176, B-2600 Antwerpen (Belgium) Tel. 03/322.02.35