

**Systematic and distributional data on Neotropical Euliini: *Gravitcornutia*
RAZOWSKI & BECKER (Lepidoptera: Tortricidae)**

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ABSTRACT. 21 Brazilian species of *Gravitcornutia* were treated of which 13 (*Gravitcornutia latiloba* sp. n., *G. sodalicia* sp. n., *G. nasifera* sp. n., *G. recta* sp. n., *G. camacae* sp. n., *G. rhomboidea* sp. n., *G. strigulata* sp. n., *G. caracae* sp. n., *G. minima* sp. n., *G. bertioga* sp. n., *G. basiceramea* sp. n., *G. cearae* sp. n., *G. constricta* sp. n.) are described as new.

KEY WORDS: Lepidoptera, Tortricidae, *Gravitcornutia*, new taxa, Neotropic.

INTRODUCTION

The Euliini genus *Gravitcornutia* was described in 2001 from Brazil and originally included 15 species. Then two species were found in Ecuador (RAZOWSKI & PELZ, 2003). Despite the new material include only further Brazilian species we suppose this genus is widely distributed in the region but little known chiefly because of its rather small-sized representatives and insufficient investigations. In this paper we include the data on 21 species. Now, the number of known species sounds 31.

The inclusion of the following 14 new species has not added much to the characteristics of the genus. However, a discovery of six females allowed us to suppose that their genitalia are rather little differentiated.

The types of the newly described species are preserved in the Becker Collection, Camacan and finally shall be deposited in one of the Brazilian Museums. Some spare specimens are kindly donated to the Institute of Systematics and Evolution of Animals, PAS, Cracow.

Note. The numbers given in descriptions of the labial palpi indicate the proportion of their total length to the horizontal diameter of eye. The numbers cited in the labels of the type material are the entry numbers of the specimens in the register book of the above mentioned collection. Abbreviation: GS - genitalia slide.

Acknowledgements

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SYSTEMATICS

***Gravitcornutia artificiosa* RAZOWSKI & BECKER, 2001**

(Fig. 32)

Material examined

One male from the Federal District (Planaltina, 1400 m, 24. II. 1984) and one from the type locality. 3 specimens from Minas Gerais (Serra do Cipó 1400 m, 17-19. IV. 1991) and a pair from the Province of Rio de Janeiro (Nova Friburgo 800 m, 27. I. 1993).

Remarks

This species was described from Teresópolis, Rio de Janeiro (1000 m, 15. I. 1985) and Campos de Jordao, São Paulo (1500 m, 8. I. 1983).

Description

Female genitalia (Fig. 25). Cup-shaped part of sterigma distinctly expanding posteriorly; posterior lobes broadly connected medially; sclerite of antrum weak; corpus bursae densely spined.

***Gravicornutia nigribasana* RAZOWSKI & BECKER, 2003**

(Fig. 29)

Description

Female genitalia (Fig. 21). Lobes of sterigma rhomb-shaped medially separated from one the other by a distinct incision; cup-shaped part of sterigma shorter than the lobe; ductus bursae sclerotized medially.

Material examined

Two males and one female from Morro do Chapéu, Bahia (1400 m, 23-24. IV. 1991); one pair from Bahia (Jeque 600-750 m, 11-22. XI. 1995).

Remarks

This species was described from Nova Lima, Minas Gerais. The female was unknown to date.

***Gravicornutia goianica* RAZOWSKI & BECKER, 2001**

(Fig. 44)

Description

Female genitalia (Fig. 23). Cup-shaped part of sterigma weakly expanding posteriorly, with two parallel, uniformly broad, rounded apically lobes; proximal part of ductus bursae sclerotized, incised anteriorly; corpus bursae spiny.

Material examined

One female from the type locality as the holotype (Goias, 500 m, 13-13.X. 1984). Genitalia of female were unknown to date. One specimen from Federal District (Planaltina 1400 m, 24. II. 1984).

Remarks

Described from Rio de Janeiro and São Paulo; certainly widely distributed in this part of the country.

***Gravicornutia latiloba* sp. n.**

Diagnosis

Very closely related with *goianica* but *latiloba* with broad, slightly broadening posteriorly lobes of sterigma and larger incision of sclerite of ductus bursae.

Description

Wing span 10 mm. Head grey, labial palpus 1.1, paler, whitish dorsally; thorax grey-black. Forewing slender, not expanding terminally, costa slightly convex basally; termen weakly oblique. Ground colour white, marginal dots blackish. Markings: Basal blotch black, median fascia grey with black spots, grey posteriorly; subapical blotch weak, grey marked black, subterminal marking blackish consisting of some fused spots; cilia whitish with blackish interruptions. Hindwing pale brownish grey, whiter basally; cilia concolorous with middle of wing.

Male not known.

Female genitalia (Fig. 22). Cup-shaped sterigma strong, expanding posteriorly with broad, smooth posterior lobes; sclerite of ductus bursae deeply incised proximally; corpus bursae spiny.

Material examined

Holotype female: "Brasil: MT[Mato Grosso], Chapada Guimaraes, 25. V. 1989, V. O. BECKER Col; Col. BECKER 75741", GS 307. Paratype an identically labelled female.

Etymology

The name refers to the lobes of the sterigma; Latin: latus - broad.

***Gravicornutia sodalicia* sp. n.**

(Fig. 30)

Diagnosis

This species is similar to *latiloba* and *nasifera* but *sodalicia* without basal blotch of forewing, cream head, and very broad lobes of the sterigma.

Description

Wing span 14 mm. Head and thorax creamish, labial palpus 1.3. Forewing slightly expanding terminally; costa weakly convex; termen somewhat oblique, not concave. Ground colour cream in basal third slightly mixed ochreous; dots ochreous, at costa grey-brown.

Markings grey with black edges consisting of posterior trace of basal blotch, median fascia interrupted medially, subapical triangle and row of terminal spots. Cilia blackish grey. Hindwing grey, creamer basally; cilia grey-white.

Male not known.

Female genitalia (Fig. 24). Cup-shaped part of sterigma short, lobes large, strongly expanding terminad; sclerite in ductus bursae and weak sclerites in corpus bursae posteriorly.

Material examined

Holotype female: "Brasil: BA[hia], Camaca 400-700 m, 21- 30. IX. 1991, V.O. BECKER Col; Col. BECKER 84408"; GS 269.

Etymology

The name points to the similarly coloured group of species; Latin: sodalis - a companion.

***Gravitcornutia nasifera* sp. n.**

(Fig. 31)

Diagnosis

This species is externally similar to *latiloba* but *nasifera* with triangular subtornal blotch but is closer to *goianica* from which it differs in having large terminal process of aedeagus and longer bifurcation of dorsal lobe of transtilla.

Description

Wing span 13 mm. Head grey, labial palpus over 1; thorax blackish. Forewing slender; costa convex gradually; termen weakly oblique, straight. Ground colour white; suffusions indistinct grey; some grey and blackish dots present. Markings black-grey: basal blotch dark, distinct; median fascia interrupted postmedially with differentiated subtornal triangle, grey posteriorly; subapical blotch small greyer than terminal marking in which two white median dots. Cilia whitish, blackish in apex fourth and subtornally. Hindwing brownish cream; cilia paler.

Male genitalia (Figs 1, 2). Uncus moderate, rather broad; caudal edge of valva slightly oblique, ventral corner with minute spine; terminal processes of the end of median part of transtilla fairly large; aedeagus rather broad with large ventro-terminal process; cornutus about half the length of aedeagus.

Female not known.

Material examined

Holotype male: "Brasil: SC[Santa Catarina], São Joaquim, 1400 m, 23-24. I. 1983, V. O. BECKER Col; Col. BECKER 52289"; GS 304.

Etymology

The specific epithet refers to the process of aedeagus; Latin: nasus - nose; ferro - I carry.

***Gravicornutia recta* sp. n.**

(Fig. 33)

Diagnosis

G. recta is somewhat similar to *artificiosa* but *recta* differs from it and the congeners by straight proximal edge of median forewing fascia on whitish ground colour and presence of the lateral tips of the lobes of sterigma.

Description

Wing span 14 mm. Head cream grey; labial palpus ca 1.5, creamer posteriorly; thorax blackish. Forewing hardly expanding terminally; costa convex at base; termen straight, weakly oblique. Ground colour whitish, suffusions and strigulae blackish. Markings grey with black marks; basal blotch weakly convex; median fascia ill-defined medially; subapical blotch strongly reduced; termen marked blackish. Cilia whitish with blackish scaling. Hindwing brownish grey, pale basally, with indistinct darker strigulae; cilia grey-white.

Male not known.

Female genitalia (Fig. 26). Cup-shaped part of sterigma expanding in distal half; lobes large with lateral apical processes and broad median concavity; ductus bursae short.

Material examined

Holotype female: "Brasil: S[anta]C[atarina], Lauro Mueller 800 m, 3. II. 1983, V.O. BECKER Col; Col. BECKER 87818"; GS 301.

Etymology

The name refers to simple forewing pattern; Latin: recta - simple.

Gravicornutia camacae sp. n.

(Fig. 34)

Diagnosis

Closely related with *G. major* RAZOWSKI & BECKER, 2001 from the state of Rio de Janeiro but this species with broad distal part of transtilla and dentate transverse plate of posterior portion of aedeagus, laterally.

Description

Wing span 10.5 mm. Head cream, labial palpus over 1; thorax brownish cream. Forewing slender, yellowish cream; strigulae and dots brownish yellow, dense along costa and subcostally. Markings brownish represented by costal third of median fascia. Cilia concolorous with ground colour. Hindwing brown cream, cilia similar.

Male genitalia (Figs 5, 6). Uncus moderately broad; valva rounded dorso-caudally; saculus long with minute terminal spine; median part of transtilla large with two latero-terminal processes; aedeagus armed with dentate lateral plate situated subterminally; cornutus long.

Female not known.

Etymology

The name refers to the type locality.

Material examined

Holotype male: "Brasil: BA[hia], 400 - 700 m, 21 - 30. X. 1991, V. O. BECKER Col; Col. BECKER 84403"; GS 345.

Gravicornutia major RAZOWSKI & BECKER, 2001**Material examined**

One male from the State of Rio de Janeiro (Itatiaia 2100 m, 26. I. 1993).

Remarks

G. major was described from Nova Friburgo (1000 m), same state. The present specimen characterizes with broad cornutus.

***Gravicornutia rhomboidea* sp. n.**

(Fig. 35)

Diagnosis

This species is externally similar to *nigribasana* but *rhomboidea* forewing basal blotch with convex posterior edge; this species is close to *major* as one can judge on shapes of transtilla and valva but *rhomboidea* with rhomb-shaped dorsal part of transtilla.

Description

Wing span 13 mm. Head brownish grey, labial palpus 1.5, browner; thorax darker than head, brown proximally. Forewing somewhat expanding terminad; costa straight except for base; termen rather straight, weakly oblique. Ground colour white sprinkled and suffused brownish. Markings black-brown consisting of basal blotch with convex posterior edge: costal trace of median fascia, weak subapical blotch and small blotch before mid-dorsum; brownish terminal suffusion marked with remnants of subterminal mark. Cilia worn, basal line brown. Hindwing cream, brownish on periphery; cilia brownish cream.

Male genitalia (Figs 7, 8). Uncus very slender; socius well developed; valva tapering terminad; sacculus with minute terminal spine; dorsal part of transtilla rhomb-shaped; aedeagus simple; coecum penis broad; cornutus rather moderate, bent.

Female not known.

Material examined

Holotype male: "Brasil: S[ã]o P[aulo], Campos do Jordao 1500 m, 8. I. 1983, V.O. BECKER Col; Col. BECKER 51532"; GS 298.

Etymology

This name refers to the shape of sterigma lobes; Latin: rhombus: rhomb.

***Gravicornutia strigulata* sp. n.**

(Fig. 36)

Diagnosis

Closely related with *G. tristis* RAZOWSKI & BECKER, 2001 from the state of São Paulo but variegate markings, broad, triangular dorsal part of transtilla, and strongly curved cornutus.

Description

Wing span 14 mm. Head creamish, labial palpus over 2.5; thorax darker than head with base of tegula brown. Forewing broad, expanding terminad; costa uniformly convex; termen straight. Ground colour whitish in major part mixed greyish, strigulated brown; veins brownish. Markings dark brown consisting of costal part of median fascia, subdivided subapical blotch, blotch extending from postapical part of termen, and dorso-submedian blotch. Cilia whitish. Hindwing cream with weak brownish admixture especially in distal area; cilia cream.

Male genitalia (Figs 9, 10). Uncus slightly expanding terminally; valva narrowing medially; sacculus broad basally, somewhat expanding terminally where sharp tipped; median part of transtilla broad, tapering terminad, concave apically between pair of tips; median part of vinculum elongate, slender; aedeagus rather short; coecum penis broad; cornutus curved.

Female not known.

Material examined

Holotype male: "Brasil: R[io de] J[aneiro], Itatiaya 2100 m, 26. I. 1993, V.O. BECKER Col; Col. BECKER 86506"; GS 434.

Etymology

The name refers to forewing markings; Latin: strigulata - strigulated.

Gravitcornutia caracae sp. n.

(Fig. 37)

Diagnosis

Externally this species resembles *C. umbrosa* RAZOWSKI & BECKER, 2001 but *caracae* with distinct forewing terminal marking, simple aedeagus, rather straight cornutus and broader dorsal part of transtilla (similar to *G. cinnamomea* RAZOWSKI & BECKER, 2001).

Description

Wing span 11 mm. Head whitish, labial palpus over 1, thorax whitish with brownish admixture. Forewing almost uniformly broad throughout, termen weakly oblique, rather straight. Ground colour brownish white, suffusions brownish, costal strigulae darker. Markings brownish, indistinct, in form of slender postbasal fascia, broader (especially at dorsum) median fascia, and distinct terminal marking. Cilia brownish. Hindwing brownish cream, browner in apex area; cilia creamish.

Male genitalia (Figs 11, 12). Uncus slender, long; socius moderate, long hairy; vinculum large; valva slender with weak oblique fold; sacculus broadening terminally, with small apical spine; dorsal part of transtilla broad with a pair of latero-terminal tips and weak median concavity; aedeagus moderate, without any spiny convexity; cornutus slender, almost as long as aedeagus.

Female not known.

Material examined

Holotype male: "Braçsil: M[inas]G[er]ais], Caraca 1300 m, 25. X. 1994, V.O. BECKER Col.; Col BECKER 93544"; GS 428.

Etymology

The name refers to the type locality.

***Gravicornutia cinnamomea* RAZOWSKI & BECKER, 2001**

Material examined

Two males from Provine of Santa Catarina (São Joaquim, 1400 m, 2. II. 1993).

Remarks

This species was described from Santa Catarina and São Paulo from the altitudes of 750 - 1400 m.

***Gravicornutia umbrosa* RAZOWSKI & BECKER, 2001**

Material examined

One male from the state of São Paulo (Jacupiranga 800 m, 8. II. 1993).

Remarks

G. umbrosa was described from Santa Catarina from the altitude of 1400 m.

***Gravicornutia minima* sp. n.**

(Fig. 38)

Diagnosis

Colouration of this species resembles *basiceramea* but base of forewing in the latter is pale and in *minima* brown. The new species differs from all its congeners in strong bifurcation of transtilla.

Description

Wing span ca 8 mm. Head and thorax dark brown, labial palpus 1.3, paler posteriorly. Forewing slender; costa almost straight; termen weakly oblique, straight. Ground colour ochreous yellow in form of antemedian interfascia and a suffused postmedian interfascia terminating at tornus. Remaining parts of wing dark brown, terminal area sparsely pale scaled. Cilia brown. Hindwing dark brown, cilia paler.

Male genitalia (Figs 13, 14). Uncus fairly slender; gnathos large; valva slender with caudal edge obliquely straight; sacculus long with minute terminal spine; median part of transtilla large bifurcate terminally; aedeagus moderate with lateral prominences at base of coecum penis similar to *G. umbrosa* RAZOWSKI & BROWN, 2001 from Santa Catarina.

Etymology

The name refers to the colour of forewing base; Greek: ceramea - [colour of] brick or clay.

***Gravicornutia bertioga* sp. n.**

(Fig. 39)

Diagnosis

G. bertioga is related with *cerata* and *ochrata* but base of valva of *bertioga* broad and end of dorsal part of transtilla short, forceps like.

Description

Wing span 9 mm. Head and thorax cream; labial palpus over 1. Forewing slender; costa straight from beyond base; termen moderately oblique, rather straight. Ground colour yellowish cream. Markings yellow-brown with browner edges consisting of basal blotch represented by postbasal fascia, median fascia almost interrupted subcostally, and subapical spot connected with tornal spot by an indistinct line. Cilia paler than wing. Hindwing pale brownish cream, cilia paler.

Male genitalia (Figs 15, 16). Uncus moderate; valva broad basally, tapering terminally; disc with postmedian fold terminating at the end of sacculus; sacculus convex, weakly sclerotized towards middle, terminating in a minute spine; dorsal process of transtilla broad with a forceps like termination; aedeagus rather broad; cornutus slender.

Female not known.

Material examined

Holotype male: "Brasil: SP[São Paulo], Bertioga 5 m, 7-9. X. 1996, V.O. BECKER Col; Col. BECKER 99871"; GS 334.

Etymology

The name refers to the type locality.

***Gravicornutia basiceramea* sp. n.**

(Fig. 40)

Diagnosis

Close to *G. ochrata* RAZOWSKI & BECKER, 2001 from State of Rio de Janeiro (similar valva, transtilla, and vinculum) but this species distinct by bicolorous forewing and broad bifurcation of transtilla.

Description

Wing span ca 12 mm. Head and thorax brown-yellow; labial palpus 1.5, paler. Forewing slender; costa almost straight; termen somewhat oblique, straight. Basal half of wing brownish yellow with a few browner dots and brown suffusion of base of costa; median area brown, with distinct proximal edge perpendicular to dorsum; distal third of wing with ochreous brownish with brown strigulae. Cilia brownish. Hindwing brown; cilia similar.

Male genitalia (Figs 17, 18). Uncus fairly broad; valva long, slender with short caudal edge; sacculus with small terminal spine; median part of transtilla broad with widely separated terminal processes; aedeagus moderately long; cornutus fused of two spines.

Female not known.

Material examined

Holotype male: "Brasil: BA[hia], 400 - 700 m, 21 - 30. X. 1991, V. O. BECKER Col; Col. BECKER 84403"; GS 332.

Etymology

The name refers to the colouration of forewing base; Greek: ceramea: keramos, [colour of] brick or clay.

***Gravicornutia cearae* sp. n.**

(Fig. 41)

Diagnosis

In the colouration *G. cearae* resembles *basiceramea* but proximal edge of median fascia of *cearae* strongly concave; this species is distinct by a shallow posterior concavity of the sterigma.

Description

Wing span 10 mm. Head and thorax grey cream, thorax browner proximally. Forewing not expanding terminad; costa weakly convex; termen moderately oblique, convex. Ground colour creamish suffused pale ferruginous especially in basal area; strigulation browner than suffusion. Markings blackish, in some parts mixed grey; basal blotch rudimentary; median fascia strongly concave medially followed by a diffuse fascia, subapical blotch and terminal marking. Cilia worn, remnants blackish grey. Hindwing grey; cilia whiter.

Male not known.

Female genitalia (Fig. 27). Sterigma forming a cup which somewhat expands posteriorly, with rather weak median concavity between lobes; ductus bursae sclerotized proximally.

Material examined

Holotype female: "Brasil: CE[ara], Guaramiranga 1000 m, 9. I. 1994, V.O. BECKER Col, Col. BECKER 92159"; GS 360.

Etymology

This name refers to the state of Ceara.

***Gravicornutia constricta* sp. n.**

(Fig. 42)

Diagnosis

This species is very similar and close to *G. teresopolitana* RAZOWSKI & BECKER, 2001 from the state of Rio de Janeiro, *constricta* with valva narrowing medially, dorsal process

of transtilla with distinct postmedian neck and long bifurcation, and cornutus rather slender consisting of two fused spines.

Description

Wing span ca 12 mm. Head and thorax grey cream, head dark scaled, labial palpus ca 1.5. Forewing not expanding posteriorly; costa convex; termen weakly oblique. Ground colour whitish slightly tinged cream grey, dotted grey and brownish. Markings grey dotted blackish along edges, consisting of basal blotch and median fascia interrupted medially. Cilia concolorous with ground colour. Hindwing brownish cream with greyer, weak strigulation; cilia cream grey.

Male genitalia (Figs 19, 20). Uncus moderate, rather slender; valva long gently constricted postmedially; sacculus somewhat concave near middle, fairly broad caudally where a few weak folds present; aedeagus broad; cornutus consisting of two fused parts.

Female not known.

Material examined

Holotype male: "Brasil: M[inas] G[erais], Caraca, 1300 m, 4. III. 1993, V. O. BECKER Col; Coll. BECKER 85400"; GS 456.

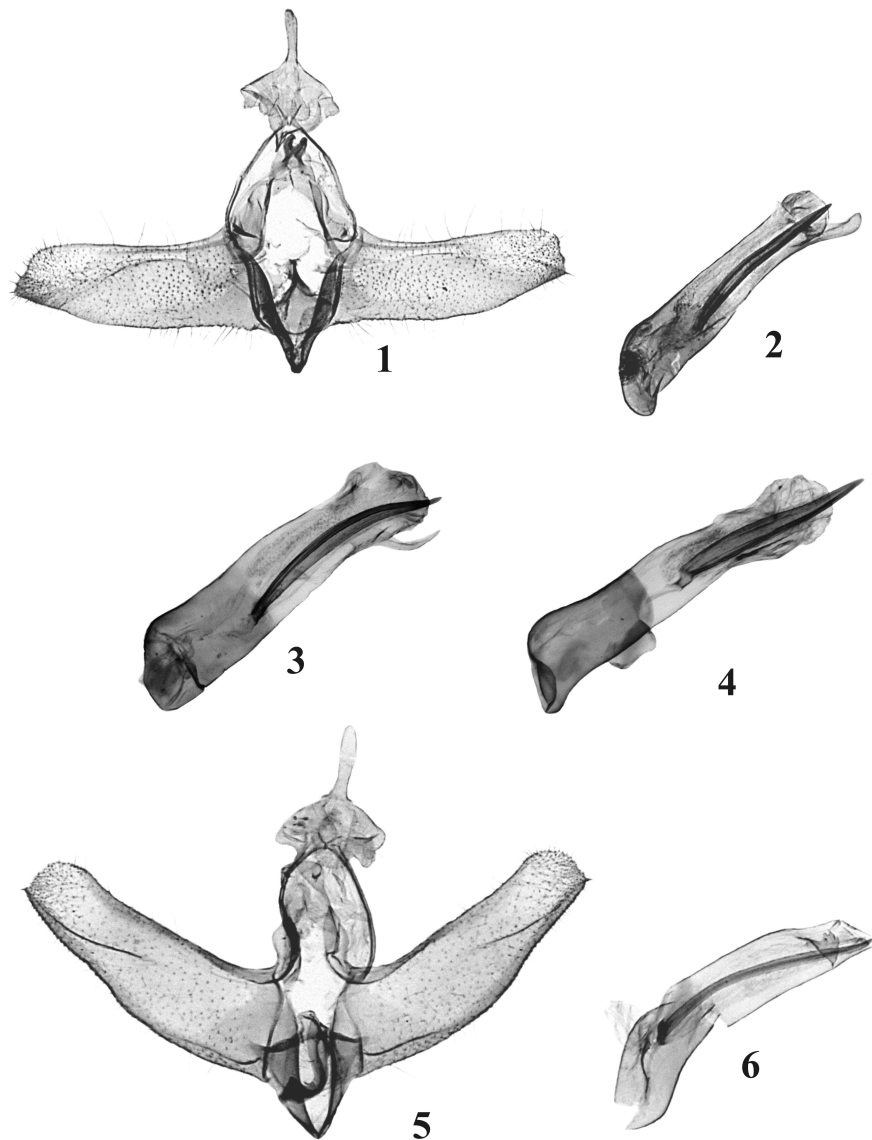
Etymology

The specific name refers to the constriction of valva.

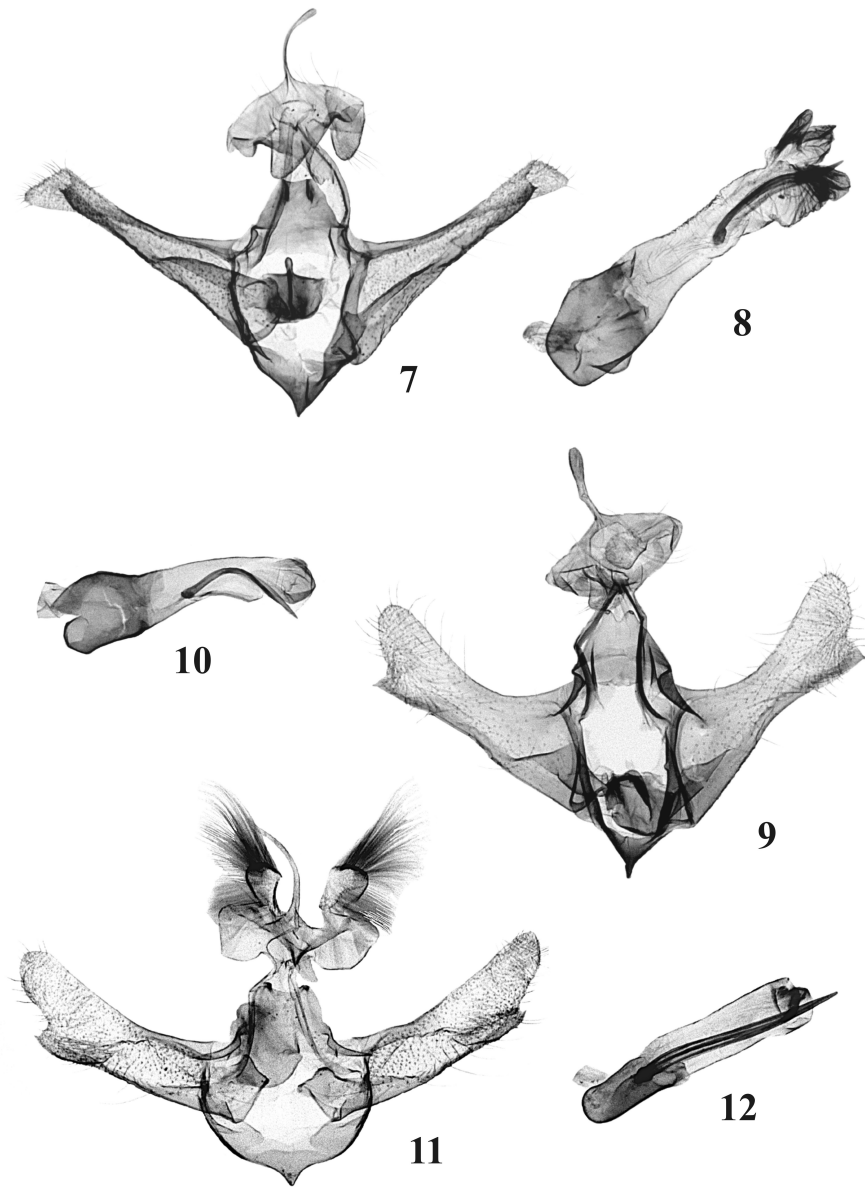
***Gravitcornutia sterigmaspis* RAZOWSKI & BECKER, 2001**

Material examined

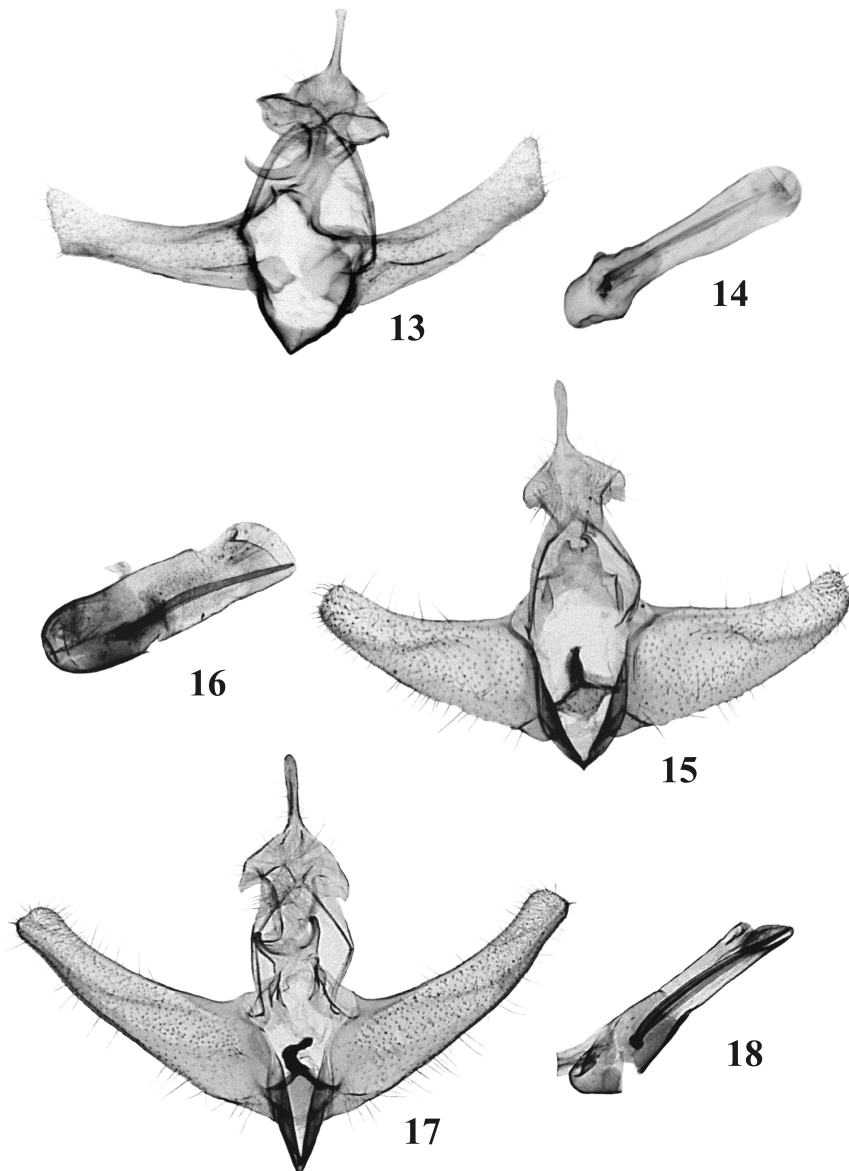
One female from the type locality (Goias, Alto Paraiso, 1400 m, 3. X.1985).



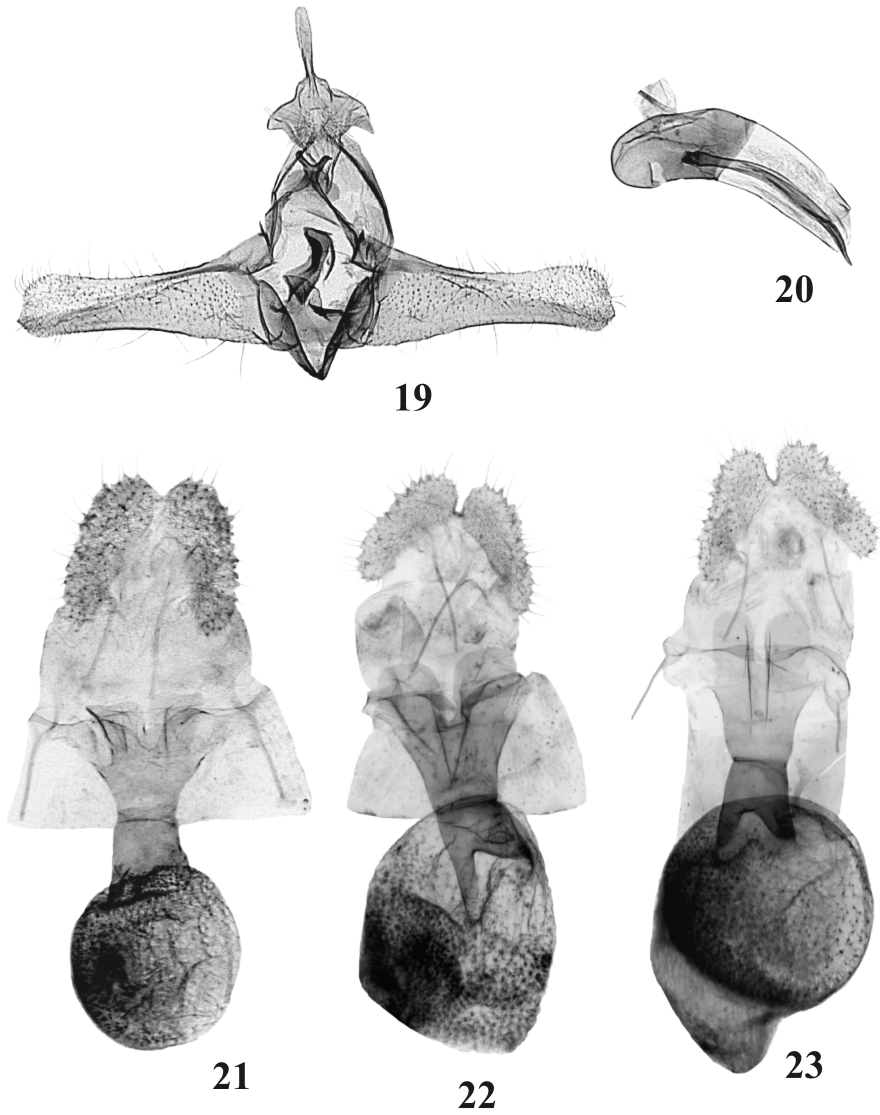
Figs 1-6. Male genitalia. 1, 2 – *Gravicornutia nasifera* sp. n., holotype, 3 – *Garavicornutia atrificiosa* RAZOWSKI & BECKER, Teresópolis, Rio de Janeiro, 4 – same species, Nova Friburgo, Rio de Janeiro, 5, 6 – *Gravicornutia camacae* sp. n., holotype.



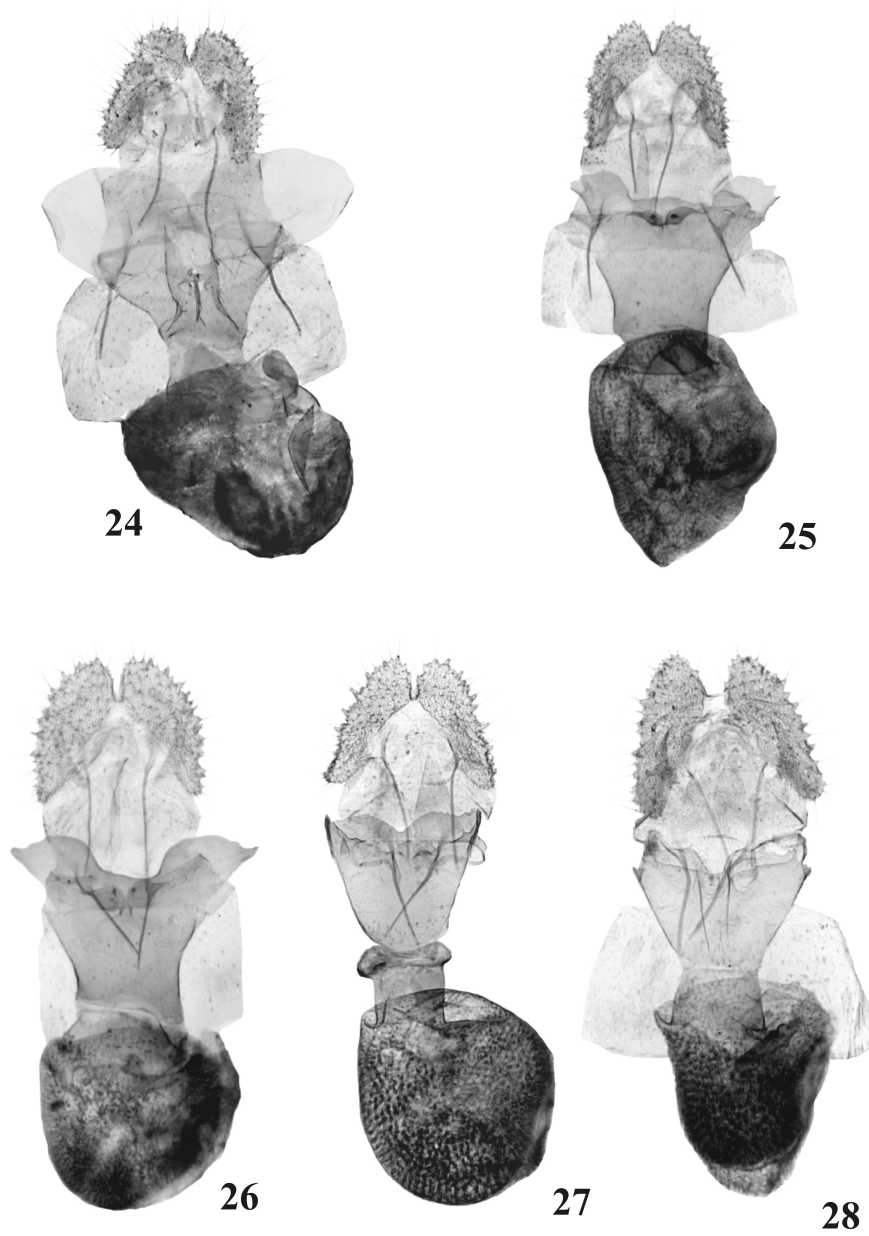
Figs 7-12. Male genitalia. 7, 8 – *Gravicornutia rhomboidea* sp. n., holotype, 9, 10 – *Gravicornutia strigulata* sp. n., holotype, 11, 12 – *Gravicornutia caracae* sp. n., holotype.



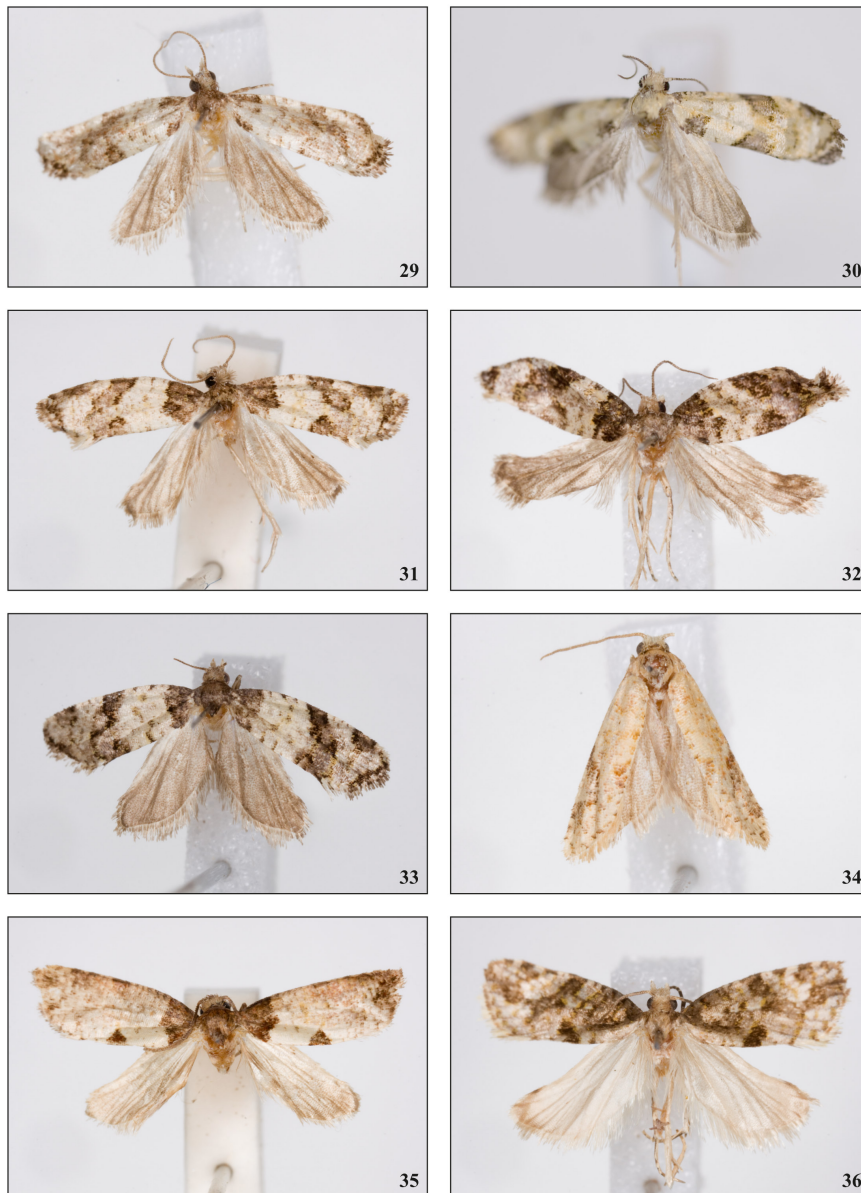
Figs 13-18. Male genitalia. 13, 14 – *Gravicornutia minima* sp. n., holotype, 15, 16 – *Gravicornutia bertioga* sp. n., holotype, 17, 18 – *Gravicornutia basiceramea* sp. n., holotype.



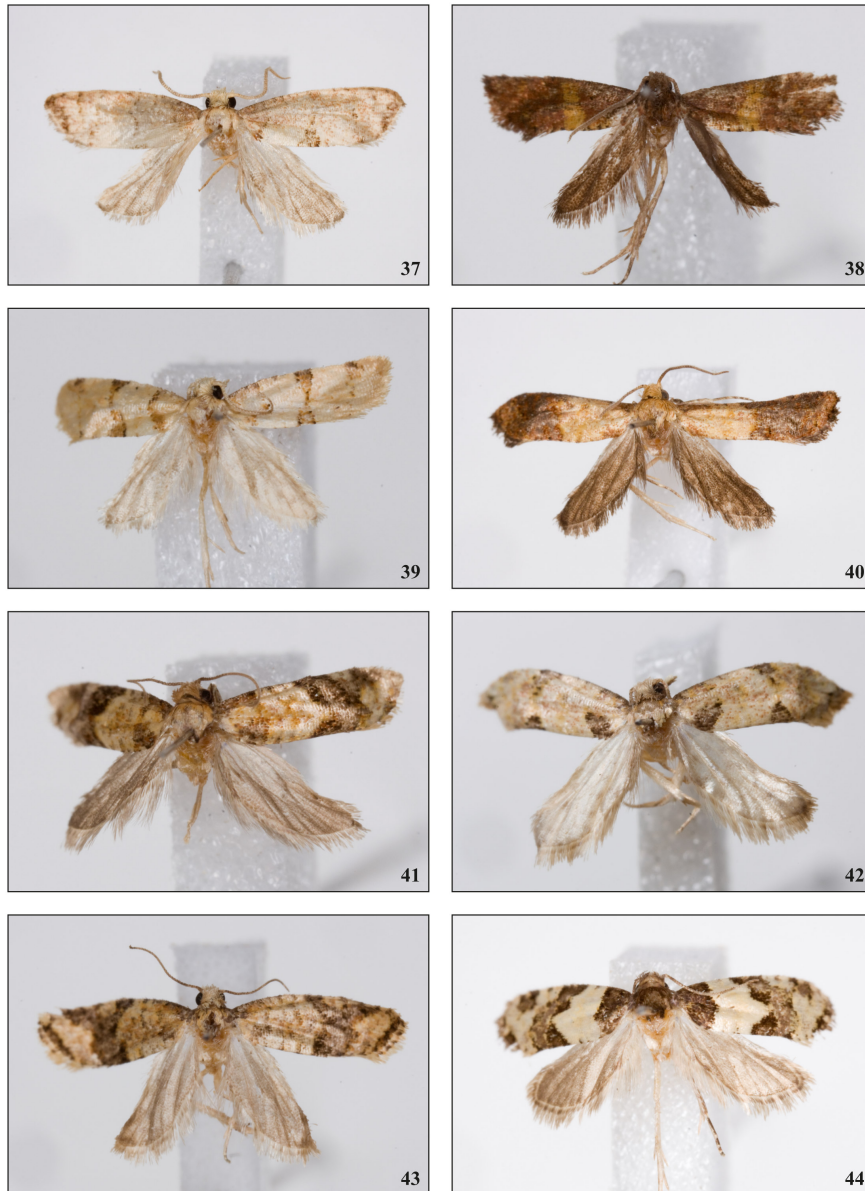
Figs 19-23. Male and female genitalia. 19, 20 – *Gravitcornutia constricta* sp. n., holotype, 21 – *Gravitcornutia nigribasana* RAZOWSKI & BECKER, São Joaquim, Santa Catarina, 22 – *Gravitcornutia latiloba* sp. n., holotype, 23 – *Gravitcornutia goianica* RAZOWSKI & BECKER, Goiás, Goiás.



Figs 24-28. Female genitalia. 24 – *Gravitcornutia sodalicia* sp. n., holotype, 25 – *Gravitcornutia artificiosa* RAZOWSKI & BECKER, Nova Friburgo, Rio de Janeiro, 26 – *Gravitcornutia recta* sp. n., holotype, 27 – *Gravitcornutia cearae* sp. n., holotype, 28 – *Gravitcornutia bahiana* sp. n., holotype.



Figs 29-36. Adults. 29 – *Gravitcornutia nigribasana* sp. n., holotype, 30 – *Gravitcornutia sodalicia* RAZOWSKI & BECKER, Morro do Chapéu, Rio de Janeiro, 31 – *Gravitcornutia nasifera* sp. n., holotype, 32 – *Gravitcornutia artificiosa* RAZOWSKI & BECKER, Nova Friburgo, holotype, 33 – *Gravitcornutia recta* sp. n., holotype, 34 – *Gravitcornutia camacae* sp. n., holotype, 35 – *Gravitcornutia rhomboidea* sp. n., holotype, 36 – *Gravitcornutia strigulata* sp. n., holotype.



Figs 37-44. Adults. 37 – *Gravicornutia caracae* sp. n., holotype, 38 – *Gravicornutia minima* sp. n., holotype, 39 – *Gravicornutia bertioga* sp. n., holotype, 40 – *Gravicornutia basiceramea* sp. n., holotype, 41 – *Gravicornutia cearae* sp. n., holotype, 42 – *Gravicornutia constricta* sp. n., holotype, 43 – *Gravicornutia bahiana* sp. n., holotype, 44 – *Gravicornutia goianica* RAZOWSKI & BECKER, Goias, Goias.

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