REVIEW OF THE NEOTROPICAL SPECIES OF THE FAMILY PTEROPHORIDAE, PART 4: ADDITIONS FROM ARGENTINA, BOLIVIA, CHILE AND URUGUAY (LEPIDOTERA)

Cees Gielis

Naturalis Biodiversity Center, P.O. Box 9517, 2300 RA Leiden, The Netherlands - Pterophoridae@gmail.com.

Abstract: After the publication of parts 1, 2 and 3 of this review, new faunistic and ecological information, mainly based on material from Argentina, Bolivia, Chile and Uruguay, is recorded. New species are recognized: *Postplatyptilia willinki*, *Hellinsia villagrani*, *H. yalae*, *H. taurina*, *H. catamarcae*, *H. chalupi*, *H. molinerii*, *H. cordobae*, *H. navarroi*, *H. boliviana*, *H. forsteri*, *H. uruguayensis*, *H. giorgisi*, *H. tacanasensis* and *Adaina santacruzae*.

Key words: Lepidoptera, Pterophoridae, revision, new species, faunistics, ecology, Neotropics, Argentina, Bolivia, Chile, Uruguay.

Revisión de las especies neotropicales de la familia Pterophoridae, parte 4: Adiciones de Argentina, Bolivia, Chile y Uruguay (Lepidoptera)

Resumen: Después de la publicación de las partes 1, 2 y 3 de esta revisión, se ha podido disponer de nueva información faunística y ecológica basada en material de Argentina, Bolivia, Chile y Uruguay. Se reconocen especies nuevas: Postplatyptilia willinki, Hellinsia villagrani, H. yalae, H.taurina, H. catamarcae, H. chalupi, H. molinerii, H. cordobae, H. navarroi, H. boliviana, H. forsteri, H. uruguayensis, H. giorgisi, H. tacanasensis y Adaina santacruzae.

Palabras clave: Lepidoptera, Pterophoridae, revisión, especies nuevas, faunística, ecología, Región Neotropical, Argentina, Bolivia, Chile, Uruguay.

Taxonomy/Taxonomía: Postplatyptilia willinki sp.n., Hellinsia villagrani sp.n., H. yalae sp. n., H. taurina sp. n., H. catamarcae sp. n., H. chalupi sp. n., H. molinerii sp. n., H. cordobae sp. n., H. navarroi sp.n., H. boliviana sp. n., H. forsteri sp. n., H. uruguayensis sp. n., H. giorgisi sp. n., H. tacanasensis sp. n., and Adaina santacruzae sp. n.

Introduction

After the publication of the first three parts of the review of Neotropical Pterophoridae (Gielis, 2006, 2011, 2012), numerous specimens are still available for further study. This fourth part of the review of the Neotropical Pterophoridae mainly contains information derived from Argentinian, Bolivian, Chilean and Uruguayan specimens. The sequence of reproduction of species is in accordance with the checklists in the first and second part. The grouping code for the genus *Hellinsia* Tutt, 1908, as introduced in the second part (Gielis, 2011), is used, and is mentioned in the species text.

Abbreviations

ao = And others.

CG = Dr. Cees Gielis, Lexmond, The Netherlands. Collection CG is part of the collection of Naturalis Biodiversity Center (formerly: Rijksmuseum van Natuurlijke Historie, RMNH).

gent = Genital preparation.

Hac. = Hacienda (=farm).

ILTA = Instituto Miguel Lillo, San Martin de Tucuman, Argentina. MHNG = Muséum d'Histoire Naturelle de Genève, Switzerland.

NEENA = Netherlands Entomological Expedition to Northern Argentina (C. Gielis, J.C. Koster, R.T.A. Schouten, H.W. van der Wolf).

RMNH = Naturalis Biodiversity Center (formerly: Rijksmuseum van Natuurlijke Historie), Leiden, The Netherlands.

sta = Collecting station.

UASC = Museo de Historia Natural "Noel Kempff Mercado", Santa Cruz de la Sierra, Bolivia.

USNM = U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.

ZMUC = Zoological Museum, University of Copenhagen, Denmark.

ZSM = Zoologische Staatssammlung München, Munich, Germany.

Species examined

Stenoptilodes brevipennis (Zeller, 1874)

Platyptilia brevipennis Zeller, 1874: 442. - Peru. Platyptilia crenulata Barnes & McDunnough, 1913: 185. - USA (Fl).

Stenoptilodes amrishi Makhan, 1994: 354. - Surinam.

Platyptilia taprobanes auct., not Felder & Rogenhofer, 1875.

MATERIAL. $1\,\,^{\circ}$, Bolivia, Sta Cruz, S of Concepcion, near Hac. San Sebastian, Chiquitano forest edge, 16.34385 S 62.00263W, 550 m, 13.II.2012 (B. Landry, ao), gent CG 6880 (MNHG); $2\,^{\circ}$, S. Bolivia, P.N. Tariquia, Alarachi, 1100 m, 7.II.2009 (J. Wojtusiak), gent CG 6891 (Wojtusiak). New for Bolivia.

Postplatyptilia willinki Gielis, sp. n.

Fig. 1, 16, 31.

MATERIAL. Holotype ♂, Chile, Petorca, Quebrada Aguas Claras, 5.IV.2001 (A. Ugarte Peña), gent CG 6858 (CG). Paratype ♀, Argentina, Catamarca, 9 km SE Andragala, 1100 m, 11.XII.1995 (NEENA, sta 27), gent CG 6855 (CG).

DIAGNOSIS. The species is characterized by the uniformly coloured fore wings, not met in other species in this genus, in the male grey with small pale costal dot at base of cleft, and in

the female uniformly brown-grey with pale second lobe and dorsal parts of wing.

DESCRIPTION.

Male. Wingspan 21-22 mm. Head appressedly scaled, dark brown-grey, between base of antennae pale grey. Frons extended dome-shape, half eye-diameter. Palps protruding, 2x eye-diameter, pale grey, mid-segment thicke-ned with scales. Antennae partly present, grey-brown, shortly ciliated. Thorax cranially dark grey, caudally pale grey, separated by ochreous-grey transverse line; tegulae ochreous-grey; and mesothorax pale grey, caudally paler. Legs ochreous-grey; hind leg with two pairs of ochreous-grey spurs, medial spurs slightly longer than lateral spurs. Fore wings cleft from 7/9, dark grey, with pale costal spot at base of cleft. Fringes dark grey. Underside grey-brown, in tip of lobes scattered white scales. Hind wings and fringes grey-brown. Underside grey-brown. Venous scales in double row, ferruginous, costal row longer.

Female. Colour of head, cranial half of thorax greybrown; tegulae, mesothorax and abdomen paler, ochreousbrown; abdomen lateral with white line. Fore wings uniformly ochreous-grey with pale second lobe and dorsal parts of wing; underside pale ochreous-grey, whitish at tips of both lobes. Hind wings pale brown-grey; underside pale ochreous-grey, tips of lobes whitish.

Male genitalia. Symmetrical. Valve elongate, ventral and dorsal margins almost parallel. Saccular fold up to tip of valve. At tip of valve small vesicular process. Tegumen simple. Uncus slender, ½ tegumen length. Juxta with two long and slender anellus arms. Vinculum slender, extended, with acute tip. Aedeagus strongly curved, coecum short. No cornuti.

Female genitalia. Ostium centrally positioned, deeply excavated. Antrum ellipsoid, almost 3x longer than wide. Ductus bursae 2x antrum, with central slender sclerites. Bursa copulatrix vesicular, with pair of horn-like signa, of ½ bursa length. Apophyses anteriores absent. Apophyses posteriores 3x papillae anales.

ECOLOGY. The moth flies in April and December. Hostplant unknown.

DISTRIBUTION. Chile: Petorca. Argentina: Catamarca.

ETYMOLOGY. The species is named after the late Prof. Dr. Abraham Willink, an excellent Hymenopterist, for his promotion of entomology in these parts of the Neotropical region, and his hospitality to support the field work of a group of Dutch entomologists, in 1995 and 1996, in Northern Argentina.

Lioptilodes albistriolatus (Zeller, 1871)

Mimeseoptilus albistriolatus Zeller, 1871: 469. - Colombia.
Lioptilus parvus Walsingham, 1880: 55. - USA (Cal).
Stenoptilia insperata Meyrick, 1921: 422. - Peru.
Stenoptilia trigonometra Meyrick, 1931: 277. - Paraguay.
Stenoptilia partiseca Meyrick, 1931: 380. - Argentina.
MATERIAL. 2 ♂♂, Bolivia, Sta Cruz, S of Concepcion, Hac.
San Sebastian, Centro de Invest Chiquitos, 16.35971S
62.00013 W, 500 m, 11.II.2012 (B. Landry, ao) (MHNG); 2
♀♀, Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian,
Centro de Invest Chiquitos, 16.35971S 62.00013 W, 500 m,
12.II.2012 (B. Landry, ao) (MHNG); 1 ♂, Bolivia, Sta Cruz,
S of Concepcion, nr Hac. San Sebastian, Chiquitano forest

edge, 16.34385 S 62.00263 W, 550 m, 13.II.2012 (B. Landry, ao) (MNHG); $2 \circlearrowleft \circlearrowleft$, Bolivia, Sta Cruz, S of Buena Vista, creek with bamboo, 17.52626 S 63.66307 W, 340 m, 20.II.2012 (B. Landry, ao) (MHNG); $1 \circlearrowleft$, Bolivia, Sta Cruz, S of Buena Vista, Flora y Fauna Hotel, 17.49911 S 63.65254 W, 385 m, 21.II.2012 (B. Landry, ao) (MHNG). New for Bolivia.

Michaelophorus dentiger (Meyrick, 1916)

Oxyptilus dentiger Meyrick, 1916: 557. - British Guyana. MATERIAL. 1 , Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Invest Chiquitos, 16.35971S 62.00013 W, 500 m, 11.II.2012 (B. Landry, ao) (MHNG); 1 ∂, 1 ♀, Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Invest Chiquitos, 16.35971S 62.00013 W, 500 m, 12.II.2012 (B. Landry, ao) (MHNG); $2 \circlearrowleft \circlearrowleft$, $2 \circlearrowleft \circlearrowleft$, Bolivia, Sta Cruz, S of Concepcion, 1 km Hac. San Sebastian, 16.33940 S 61.99823W, 545 m, 14.II.2012 (B. Landry, ao) (MNHG); 1 \circlearrowleft , Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Invest Chiquitos, 16.35971S 62.00013 W, 500 m, 15.II.2012 (B. Landry, ao), gent CG 6878 (MHNG); 1 ♀, Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, gallery forest, 16.37410S 62.00204 W, 500 m, 16.II.2012 (B. Landry, ao) (MHNG); 1 ♀, Bolivia, Sta Cruz, S of Concepcion, outside Hac. San Sebastian, campo sujo, 16.39o97S 61,99791 W, 535 m, 18.II.2012 (B. Landry, ao) (MHNG); 1 \circlearrowleft , Bolivia, Sta Cruz, S of Buena Vista, Flora Y Fauna Hotel, 17.49911 S 63.65254 W, 385 m, 21.II.2012 (B. Landry, ao) (MHNG). New for Bolivia.

Sphenarches nanellus (Walker, 1864)

Oxyptilus nanellus Walker, 1864: 933. - Brazil (Am).

MATERIAL. 1 ♀, Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Invest Chiquitos, 16.35971S 62.00013 W, 500 m, 12.II.2012 (B. Landry, ao) (MHNG). 1 ♀, Belize, Hidden Valley, Mountain Pine Ridge, 15.I.1998 (H. Hendriksen), gent CG 4871 (ZMUC). 1 ♂, Paraguay, Presidente Hayes, Laguna Capitan, 27.I.1996 (U. Drechsel), gent CG 2722 (CG). New for Belize, Bolivia and Paraguay.

Exelastis pumilio (Zeller, 1873)

Mimeseoptilus pumilio Zeller, 1873: 324. - USA (Tx).

Marasmarcha liophanes Meyrick, 1886: 19. - Réunion Island.

Mimaesoptilus gilvidorsis Hedemann, 1896: 8 (not Zeller, 1877). - Virgin Islands, St. Croix.

MATERIAL. $1 \circlearrowleft$, Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Invest Chiquitos, 16.35971S 62.00013 W, 500 m, 11.II.2012 (B. Landry, ao) (MHNG); $2 \circlearrowleft$, Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Invest Chiquitos, 16.35971S 62.00013 W, 500 m, 12.II.2012 (B. Landry, ao) (MHNG); $1 \circlearrowleft$, $1 \circlearrowleft$, Bolivia, Sta Cruz, S of Concepcion, nr Hac. San Sebastian, Chiquitano forest edge, 16.34385 S 62.00263W, 550 m, 13.II.2012 (B. Landry, ao) (MNHG); $2 \circlearrowleft$, Bolivia, Sta Cruz, S of Concepcion, 1 km Hac. San Sebastian, 16.33940 S 61.99823W, 545 m, 14.II.2012 (B. Landry, ao) (MNHG). New for Bolivia.

Hellinsia spiculibursa Gielis, 1996

Hellinsia spiculibursa Gielis, 1996: 100. - Venezuela.

DIAGNOSIS. Group *Hellinsia ochracealis* (Walker, 1864) (Gielis, 2011).

MATERIAL. 1 ♀, Bolivia, Incachaca, Cochabamba, no date (J. Steinbach), gent CG 6892 (USNM). New for Bolivia.

Hellinsia villagrani Gielis sp. n.

Fig. 1, 17.

MATERIAL. Holotype ♂, Argentina, Salta, P.N. el Rey, 100 km NNE Metan, 850 m, 22-23.I.1996 (NEENA, sta 48), gent CG 48 (CG).

DIAGNOSIS. Group B03. The grouping of the present species is difficult. The saccular process in the left valve is less than $\frac{1}{3}$ of the valve length. The saccular process in the right valve gives rise to discussion. The length is less than $\frac{1}{3}$ of valve length, and the distal part is strongly curved. This curve is just under $\frac{1}{2}$ the valve's width. The sacculus is curved and not straight. For this reason the above mentioned grouping is chosen. The combination of saccular shapes is uniquely found in this species.

DESCRIPTION. Male. Wingspan 13 mm. Head appressedly scaled, dark grey-brown, between base of antennae ochreous. Palps ochreous, slender, protruding, as long as eyediameter; tip of third segment dark brown. Antennae greybrown, shortly ciliated. Thorax, tegulae, mesothorax and abdomen straw-yellow; abdominal segments 2, 3 and 4 dorso-distally with small patch of black scales. Hind legs gradually turning from basally dark brown to ochreous in tarsal segments. Two pairs of spurs of unequal length, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from 4/7, straw-yellow. Markings dark brown: costal scales from base to just before base of cleft, large spot around base of cleft, costa of first lobe with longitudinal spot at ½ and small spot at ¾, second lobe diffusely darkened by numerous scales. Fringes pale grey-brown. Underside brown.

Hind wings and fringes grey-brown. Underside brown, in lobes grey-brown. Venous scales black, in double row, costal row longer.

Male genitalia. Asymmetrical. Left valve elongate, slightly widened at saccular process; saccular process minimally curved, less than ½ of valve length. Right valve slender and a little longer than left valve; saccular process less than ⅓ of valve length, with strongly curved tip, just under half width of valve. Tegumen bilobed, slender. Uncus well developed, curved. Juxta stout, with blunt pair of anellus arms. Vinculum arched, well developed. Aedeagus mildly curved, with acute tip. Cornutus "S"-shaped, in delicately sclerotized field near tip.

Female. Unknown.

ECOLOGY. The moth flies in January. Hostplant unknown.

DISTRIBUTION. Argentina: Salta.

ETYMOLOGY. The species is named after Ms Maria Elvira (Perla) Villagrán, who accompanied us during our field work in Northern Argentina, to memorize her help and nice company.

Hellinsia canari Gielis, 2011

Hellinsia canari Gielis, 2011: 617. - Ecuador.

DIAGNOSIS. Group B07 (Gielis, 2011).

MATERIAL. 1 \circlearrowleft , Argentina, Jujuy, 8 km W Yala, 15 km NW S.S. de Jujuy, 1500 m, 8.I.1996 (NEENA, sta. 36), gent CG 6839 (CG). New for Argentina.

Hellinsia oxyntes (Meyrick, 1908)

Pterophorus oxyntes Meyrick, 1908: 498. - Brazil (SP).

DIAGNOSIS. Group B07 (Gielis, 2011).

MATERIAL. 1 &, Bolivia, Sta Cruz, S of Concepcion, outside Hac. San Sebastian, campo sujo, 16.39097S 61.99791 W, 535 m, 18.II.2012 (B. Landry, ao), gent CG 6884 (MHNG). New for Bolivia.

Hellinsia yalae Gielis, sp. n.

Fig. 3, 18, 32.

MATERIAL. Holotype ♂, Argentina, Jujuy, Yala, 15 km NW S.S. de Jujuy, 1500 m, 13.XI.1995 (NEENA, sta 11), gent CG 6872 (CG). Paratypes: 2 ♀♀, Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 28.I.1996 (NEENA, sta 56), gent prep 2900 (CG).

DIAGNOSIS. Group B07. Left valve with saccular process strongly curved, shorter than $\frac{1}{3}$ of valve length. Right valve with large club-like saccular process; in dorsal margin two smaller spiny processes. The latter configuration is not met in any other species so far. The fore wing has very distinct spot at base of cleft.

DESCRIPTION. Wingspan 18-19 mm. Head appressedly scaled, grey-brown, between base of antennae pale ochreous. Palps protruding, 1½x eye-diameter, basal segment pale ochreous, second and third segment dark brown with pale ochreous tip. Antennae shortly ciliated, faintly ringed pale ochreous and pale grey-brown. Thorax, tegulae, mesothorax and abdomen pale ochreous. At dorsum of abdomen at segment 1 central brown spot; segment 2 distal spot; segments 4-7 wider brown markings. Legs: fore- and mid legs pale ochreous, with dark brown longitudinal lines on femur and tibia, and dark brown scale brush at base of spurs; hind legs pale ochreous, with dark brown scale brushes at base of spurs, two pairs of unequal spurs, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from ½, pale ochreous. Markings dark brown: large spot at base of cleft; diffuse dark scales in costal and dorsal area of wing; first lobe with longitudinal costal spot just beyond base of cleft, and smaller spots at costa at ½ and ¾, spot at tip of lobe and at anal region; second lobe with spots at tip of lobe, mid-termen, at anal region and at dorsum just beyond base of cleft. Fringes pale grey-brown, at tip of lobes and anal angle of first lobe dark grey. Underside dark brown, costal spot just beyond base of cleft well expressed.

Hind wings and fringes grey-brown. Underside dark brown. Venous scales black, in double row, costal row longer.

Male genitalia. Asymmetrical. Left valve with saccular process strongly curved, shorter than ½ of valve length. Right valve with large club-like saccular process, in dorsal margin with two smaller spiny processes. Uncus curved, slender, ¾ of tegumen. Tegumen bilobed. Juxta rather slender, with a pair of short, blunt, asymmetrical anellus arms. Vinculum arched, normal width. Aedeagus almost straight, without cornuti.

Female genitalia. Ostium left lateral positioned. Ostium smoothly curved. Antrum as long as wide, small. Ductus bursae short. Bursa copulatrix vesicular, gradually widening, in terminal part with delicate spiculation . Vesica seminalis vesicular, shorter than bursa copulatrix. Apophyses anteriores short, extending from "T"-shaped sclerotized ridge which is part of lamina ante-vaginalis, which has in centre a bridge-

like connection. Apophyses posteriores just over 2x papillae anales.

ECOLOGY. The moth flies in November and January, at altitudes of 1500-1650 meters. Hostplant unknown.

DISTRIBUTION. Argentina: Salta, Jujuy.

ETYMOLOGY. The species is named after one of the collecting localities: Yala, in the province of Jujuy, Argentina.

Hellinsia taurina Gielis sp. n.

Fig. 4, 19, 33.

MATERIAL. Holotype \circlearrowleft , Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 11.I.1996 (NEENA, sta 41), gent CG 2873 (CG). Paratypes: $1 \circlearrowleft$, $1 \circlearrowleft$, same locality and date, gent CG 2868 (\circlearrowleft) (CG).

DIAGNOSIS. Group C03. Left valve with saccular spine just under ²/₃ of valve length, mildly curved, with small spiny process near base. Right valve with slender saccular process, which shows small hooked extension near tip.

DESCRIPTION. Wingspan 30-32 mm. Head appressedly scaled pale brown, between base of antennae pale ochreous. Palps protruding, slender, 3x eye-diameter, pale ochreous, third segment gradually turning into pale brown. Antennae pale ochreous, shortly ciliated. Thorax, tegulae, mesothorax and abdomen pale ochreous; abdomen on mid-dorsum with faint, pale brown line. Legs pale ochreous; fore- and mid-leg with small scale brush at base of spurs; hind leg with pair of asymmetrical spurs, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

For wings cleft from ²/₃, pale ochreous. Along costal half colour more intense, in dorsal half paler; in second lobe veins darker than ground colour. Fringes pale ochreous. Underside as above, in basal part of wing mixed with pale brown scales.

Hind wings and fringes pale ochreous-grey. Underside pale ochreous. Venous scales dark ferruginous, in double row, costal row longer.

Male genitalia. Asymmetrical. Left valve with saccular spine just under ¾ of valve length, mildly curved, with small spiny process near base. Right valve with slender saccular process, which shows small hooked extension near tip. Uncus ¾ of tegumen, arched, slender. Tegumen bilobed. Juxta rather slender, with pair of asymmetrical anellus arms. Vinculum arched. Aedeagus mildly curved, vesicular tip; cornutus in shape of delicate sclerotized ridges.

Female genitalia. Ostium left lateral positioned; margin serrate. Antrum funnel-shaped, in basal half with two sclerites, top half with delicate sclerotisations. Ductus bursae as long as antrum. Bursa copulatrix vesicular, with delicate spiculation. Vesica seminalis 3x length of bursa copulatrix, vesicular. Lamina ante-vaginalis as sclerotized ridge, laterally with apophyses anteriores, which are as long as papillae anales. Apophyses posteriores just over 2x the papillae anales.

ECOLOGY. The moth flies in January, at an altitude of 1650 meters. Hostplant unknown.

DISTRIBUTION. Argentina: Salta

ETYMOLOGY. The name *taurina* (=of the bull) refers to the collection locality: Quebrada del Toro, which means the Gorge of the Bull.

Hellinsia catamarcae Gielis sp. n.

Fig. 5, 20, 34.

MATERIAL. Holotype ♂, Argentina, Catamarca, 8 km N Rio Potrero, 2 km S La Bandarita, 30 km NE Andalgala, 1650 m, 17.I.1996 (NEENA, sta 45), gent CG 6835 (CG). Paratypes: 4 ♂♂, same locality and date (CG); 1 ♂, Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 16-17. XII.1995 (NEENA, sta 28) (CG); 1 ♂, 1 ♀, Argentina, Jujuy, PN Calilegua, Aguada del Tigre, 1600 m, 7.I.1996 (NEENA, sta 35, gent CG 6869 (♀) (CG).

DIAGNOSIS. Group C05. Left valve with saccular process between $\frac{1}{3}$ and $\frac{2}{3}$ of valve length, slightly curved, with small spine at $\frac{1}{3}$ of length. Right valve with straight rod-like saccular process.

DESCRIPTION. Wingspan 25-29 mm. Head appressedly scaled, pale ochreous-white. Collar dark brown. Palps pale ochreous-white, protruding, rather slender, $1\frac{1}{2}$ x eyediameter. Antennae: medial part of first segment pale brown, ringed pale grey-brown and grey-white, shortly ciliated. Thorax grey-brown. Tegulae brown-grey. Mesothorax grey-brown, with lateral dark grey line. Abdomen ochreous-brown, caudal part of segments 3 to 8 with dorsal brush of scales, and segments 3 and 4 with lateral grey brushes of scales. Legs grey-brown, gradually paler towards tarsal segments. Mid legs with distinct scale brush in middle and terminally of tibiae. Hind legs with two pairs of unequal spurs, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from ½3, pale ochreous-brown. Markings black-brown: intense costal scaling from wing base to just before base of cleft; small discal spot; spot just before base of cleft; first lobe with costal spots in middle and at 4/7, and a spot at anal region; second lobe and dorsal field of wing with diffuse dark scales, prominent in second lobe. Fringes pale grey-brown, darker in apical area of both lobes. Underside brown, along costa narrow ochreous line.

Hind wings and fringes pale grey-brown. Underside pale brown. Venous scales in double row, black, costal row longer.

Male genitalia. Asymmetrical, left valve wider and longer than right valve. Left valve with saccular process between ½ and ½ of valve length, slightly curved, with small spine at ⅓ of length. Right valve with straight rod-like saccular process. Tegumen bilobed. Uncus rather slender, curved, ⅔ of tegumen length. Juxta vesicular, with pair of small setose processes and a pair of asymmetrical, long anellus arms. Vinculum arched. Aedeagus mildly curved, blunt tip. Cornutus in shape of ill-defined sclerotized central region.

Female genitalia. Ostium centrally positioned, wide, bulged out. Antrum funnel-shaped, as long as wide, with arched sclerites at bottom, and lateral longitudinally lobed. Ductus bursae as long as antrum, with two small transverse sclerites. Bursa copulatrix vesicular, rather slender. Lamina ante-vaginalis curved inwards, with poorly sclerotized rim. Apophyses anteriores slender, Bursa copulatrix vesicular, rather slender. Apophyses anteriores slender, just over 2x papillae anales. Apophyses posteriores $2\frac{1}{2}x$ papillae anales

ECOLOGY. The moth flies in January and December, at altitudes of 800 -1600 meters. Hostplant unknown.

DISTRIBUTION: Argentina: Catamarca, Tucuman, Jujuy,

ETYMOLOGY. The species is named after the province where a small series of this species was collected: Catamarca.

Hellinsia chalupi Gielis sp. n.

Fig. 6, 21.

MATERIAL. Holotype &, Argentina, Tucuman, Alto de San Agustin, 14 km NW Tucuman, 1025 m, 2.II.1996 (NEENA, sta 60) (CG). Paratypes: 4 & &, Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 16-17.XII.1995 (NEENA, sta 28) (CG); 1 &, Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 11.I.1996 (NEENA, sta 41), gent CG 6844 (CG); 1 &, Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 28.I.1996 (NEENA, sta 56) (CG).

DIAGNOSIS. Group C05. Left valve with curved, slender saccular spine, just under ½ of valve length. Right valve with short rod-like saccular spine. The species resembles in the genital structure *H. molinerii* and *H. catamarcae*, but differs in the uniformly grey-white fore wings, with minimal pattern.

DESCRIPTION. Wingspan 15-17 mm. Head appressedly scaled, grey-brown, between base of antennae grey-white. Palps grey-white, slender, protruding, as long as eye-diameter. Antennae grey-white, shortly ciliated. Thorax, tegulae, mesothorax and abdomen pale grey-white; abdomen dorsally with three narrow pale brown, longitudinal lines. Legs pale grey-white; femur of first and second leg with dark brown, longitudinal lines; hind legs with two pairs of unequal spurs, proximal pair longer than distal pair, and medial spur longer than lateral spur.

Fore wings cleft from 3/7, grey-white. Markings pale grey: spot at base of cleft, apical spots in both lobes, and spot at anal angle of first lobe. Fringes pale grey. Underside pale brown, mixed with grey-white scales.

Hind wings and fringes pale brown-grey. Underside pale brown-grey. Venous scales in double row, dorsal row short and only present in basal part of wing, ferruginous.

Male genitalia. Asymmetrical. Left valve with curved, slender saccular spine, just under ½ of valve length. Right valve with short rod-like saccular spine. Uncus as long as tegumen, slender, curved. Tegumen bilobed. Juxta blunt, with asymmetrical pair of anellus arms. Vinculum narrow, arched. Aedeagus mildly arched, with cornutus in shape of sclerotized ridges.

Female genitalia. Unknown.

ECOLOGY. The moth flies in December till early February, in altitudes from 800 to 1700 meters. Hostplant unknown.

DISTRIBUTION. Argentina: Tucuman, Salta.

ETYMOLOGY. The species is named after Mrs Dr. Adriana Chalup, to honour her for the informative discussions and pleasant company during our field work.

Hellinsia molinerii Gielis sp. n.

Fig. 7, 22, 35.

MATERIAL. Holotype \Im , Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 15.XI.1995 (NEENA, sta 13), gent CG 6852 (CG). Paratypes: $5\Im\Im$, $9\Im$, Same locality and date, gent CG 6852(\Im), 6859(\Im) (CG); $1\Im$, $1\Im$,

same locality, 17-18.XII.1995 (NEENA, sta 28) (CG); 1 ♀, Argentina, Jujuy, Yala, 15 km NW S.S. de Jujuy, 1500 m, 13.XI.1995 (NEENA, sta 11) (CG); 1 ♂, Argentina, Jujuy, PN Calilegua, La Abre de las Cañas, 1700 m, 6.I.1996 (NEENA, sta 34) (CG); 1 ♂, Argentina, Salta, 2 km NW Campo Quijano, 31 km WSW Salta, 1600 m, 30.I.1996 (NEENA, sta 58), gent CG 2810 (CG).

DIAGNOSIS. Group C05. In male genitalia left valve with saccular process basally strongly curved, and length just over half valve length; right valve with rod-like saccular process, shorter than half valve length. The species has a bright shining white colour. It resembles *Hellinsia argutus* (Meyrick, 1926), but differs by the shorter saccular process, and on the fore wing by the presence of an indistinct pale ochreous costal band.

DESCRIPTION. Wingspan 20-23 mm. Head appressedly scaled, pale ochreous-brown, between base of antennae shining white. Palps white, slender, protruding, $1\frac{1}{2}$ x eyediameter. Antennae pale ochreous-white, shortly ciliated, terminal half some pectination. Thorax, tegulae, mesothorax and abdomen shining white. On abdomen an ochreous-brown, mid-dorsal, longitudinal line. Legs shining white. Hind legs with two pairs of spurs of unequal length; proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from 4/9, shining white. Markings: pale ochreous, occasionally poorly expressed, costal band; brown spots: in first lobe at 3/5 of costa narrow and longitudinal spot, small spot at anal region; second lobe with large longitudinal dash from centre of lobe towards costa at ½, at tip of lobe and mid-terminal. Fringes shining white, at costa of first lobe ochreous-brown. Underside basal half of wing pale brown, towards tips of lobes gradually white; spots as above, well-demarcated, brown.

Hind wings and fringes shining white. Underside basally pale ochreous, terminally gradually turning shining white. Venous scales in single row, pale ochreous-white.

Male genitalia. Asymmetrical. Left valve with saccular process, basally strongly curved, with length just over half valve length. Right valve with slender rod-like saccular process, at less than half of valve length. Uncus very slender, ²/₃ of tegumen length. Tegumen bilobed. Juxta rather short, with anellus arms slender, asymmetrical. Vinculum slender, arched. Aedeagus almost straight, with vesicular tip. No cornutus.

Female genitalia. Ostium centrally positioned, extended and with ragged edge. Antrum 3x longer than wide, with pair of longitudinal, slender sclerites. Vesica seminalis direct from antrum base. Ductus bursae as part of the vesicular bursa copulatrix. Signum as a pair of speculate plates, stretched and narrow. Apophyses anteriores very small. Apophyses posteriores 2x papillae anales.

ECOLOGY. The moth flies in November, December, and January, at altitudes 800-1700 meters. Hostplant unknown.

DISTRIBUTION. Argentina: Tucuman, Salta, Jujuy.

ETYMOLOGY. The species is named after Dr. Carlos Molineri, to memorise him for his company and the discussions on biogeography. At the time of our field work, a student with great interest in Ephemeroptera, a field in which he has proven his knowledge.

Hellinsia paraguariae Gielis, 2012

Hellinsia paraguariae Gielis, 2012: 111.- Paraguay.

DIAGNOSIS. Group C05 (Gielis, 2011 & 2012).

MATERIAL. 1 &, S. Bolivia, P.N. Tariquia, Sidras, 980 m, 6.II.2009 (J. Wojtusiak), gent CG 6889 (Wojtusiak). New for Bolivia.

Hellinsia cordobae Gielis sp. n.

Fig. 8, 23.

MATERIAL. Holotype &, Argentina, Cordoba, Huerta Grande, 1000 m, 7-14.III.1958 (H. Förster), gent CG 5652 (ZSM).

DIAGNOSIS. Group C07. Left valve with saccular process between ½ and ½ of valve length, mildly curved outward, broad based. Right valve with strongly hooked saccular process, terminally wider than basal half, giving it a club-like appearance.

DESCRIPTION. Male. Wingspan 15 mm. Head appressedly scaled, pale ochreous-brown; narrow white rim around eye. Palps strongly curved up, pale ochreous-brown, 2x eye-diameter. Antennae (on left side only 3 segments present) shortly ciliated. Thorax and tegulae pale brown-ochreous. Abdomen pale brown-ochreous, with three dorsal, narrow, pale brown, longitudinal lines. Fore- and mid-legs medial pale brown longitudinal lines; legs otherwise pale ochreous. Hind legs with spurs of unequal length, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from just under ½, pale brown-ochreous. Markings brown: discal spot, spot before base of cleft, along costa of wing indistinct dash; first lobe at costa with longitudinal spot just beyond base of cleft, costal spot at ½, apex, and in middle of dorsum; second lobe with small spots at apex and anal angle. Fringes grey-brown, at costa of first lobe and anal spot on second lobe brown-ochreous. Underside grey-brown, along costa, especially in first lobe, pale ochreous; longitudinal dash in first lobe well expressed.

Hind wings and fringes brown-grey. Underside greybrown. Venous scales black, in double row, costal row longer than dorsal row.

Male genitalia. Asymmetrical. Left valve with saccular process between ½ and ⅔ of valve length, mildly curved outward, broad based. Right valve with strongly hooked saccular process, terminally wider than basal half, giving it a club-like appearance. Uncus well developed, as long as tegumen, strongly curved. Tegumen bilobed. Vinculum strongly arched, narrow. Aedeagus strongly curved; no cornutus.

Female. Unknown.

ECOLOGY. The moth flies in March, at an altitude of 1000 meters. Hostplant unknown.

DISTRIBUTION. Argentina: Cordoba.

ETYMOLOGY. The species is named after the province of occurrence, Cordoba in Argentina.

Hellinsia navarroi Gielis sp. n.

Fig. 9, 24.

MATERIAL. Holotype ♂, Argentina, Jujuy, 3 km NE Caimancito, 23 km ENE Calilegua, 500 m, 26.XI.1995 (NEENA, sta 18), gent CG 6828 (CG).

DIAGNOSIS. Group C07. Sacculus in left valve just over ½, rather slender and basally a serrate edge. In *H. tetraonipennis* (Walsingham) edges smooth. Right valve with saccular process long and slightly club-shaped.

DESCRIPTION. Male. Wingspan 14 mm. Head appressedly scaled, pale grey-brown, between base of antennae pale brown-yellow. Palps pale brown-yellow, protruding, 1½ x eye-diameter. Antennae ringed pale brown-yellow and pale brown, shortly ciliated, in middle part pectinate. Thorax pale brown; tegulae pale brown-yellow; mesothorax brownish; and abdomen pale brown-yellow with faint longitudinal brown lines. Hind legs pale grey-yellow, proximal femur and at base of first spur pair grey-yellow. Two spur pairs of unequal length, proximal pair longer than distal pair and medial spurs longer than lateral spurs.

Fore wings cleft from 7/13, pale brown-yellow. Markings brown: small discal spot, spot just before base of cleft and extending with faint dash into first lobe, costa of first lobe with longitudinal spot at 1/3 and small spot at 2/3, dorsum of first lobe with spots at 2/3 and 5/6, second lobe with spots at anal angle and subapical. Fringes pale grey, with darker patches at apex of both lobes and in first lobe at dorsal spot. Underside grey-brown, mixed with white scales in lobes; markings as above but less distinct.

Hind wings and fringes pale grey-brown. Underside grey-brown, mixed with some white scales near apices. Venous scales ferruginous-orange, in double row, costal row longer.

Male genitalia. Asymmetrical. Left valve diamond shaped. Sacculus just over ½, rather slender and basally a serrate edge, positioned in distal half of valve. Right valve with saccular process long and slightly club-shaped. Tegumen bilobed. Uncus rather stout, short, ⅓ of tegumen. Juxta short and wide, with anellus arms slender and as long as juxta. Vinculum with long extended process, 2x longer than basal width. Aedeagus "S"-shaped. No cornutus.

Female. Unknown.

ECOLOGY. The moth flies in November. Hostplant unknown.

DISTRIBUTION. Argentina: Jujuy.

ETYMOLOGY. The species is named after Dr. Fernando R. Navarro, to memorise his kind help, friendship and guidance during our collecting trips in Northern Argentina.

Hellinsia argutus (Meyrick, 1926)

Pterophorus argutus Meyrick, 1926: 299. - Colombia.
Pterophorus chionophanes Meyrick, 1930: 569. - Peru.
Oidaematophorus chionoptila T.B. Fletcher, 1940: 83. - Colombia.
DIAGNOSIS. Group D01 (Gielis, 2011).

MATERIAL. 2 \bigcirc Argentina, Jujuy, Yala, 15 km NW S.S. de Jujuy, 1500 m, 13.XI.1995 (NEENA, sta 11) (CG); 1 \bigcirc Argentina, Jujuy, P.N. Calilegua, La Abra las Cañas, 1700 m, 6.I.1996 (NEENA, sta 34 (CG); 2 \bigcirc Argentina, Jujuy, P.N. Calilegua, Agua del Tigre, 1600 m, 7.I.1996 (NEENA, sta 35, gent CG 6860 (CG). New for Argentina.

Hellinsia boliviana Gielis sp. n.

Fig. 10, 25.

MATERIAL. Holotype ♂, Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Investigacion Chiquitos,

16.35971 S 62.00013 W, 500 m, 12.II.2012 (B. Landry, M. Nuss, A. Valdivia), gent CG 6882 (UASC).

DIAGNOSIS. Group D06. Left valve with almost straight saccular spine, just over \(^{2}\straigma\) of valve length. Right valve with almost straight spine just over \(^{1}\straigma\) valve length.

DESCRIPTION. Male. Wingspan 19 mm. Head appressedly scaled, brown, between base of antennae ochreous-brown. Palps ochreous-brown, third segment laterally pale brown, protruding, just over eye-diameter. Antennae ochreous-brown, pectinate. Collar pale brown. Thorax, tegulae, and mesothorax ochreous-brown; abdomen ochreous-brown with mid-dorsal and lateral brown longitudinal lines, on segments 2, 4, 5 and 7 ochreous-brown patches. Legs grey-white. Hind legs with two pairs of spurs, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from 3/5, pale ochreous-brown. Markings dark brown: narrow costal line from base to middle of first lobe; dorsal dash in basal ½ of wing; longitudinal dash from discus to base of cleft, and progressing into spot just before base of cleft; first lobe with diffuse darkening in dorsal half of lobe, small costal spot at ¾, and small spots at apex and anal region; second lobe diffuse longitudinal lines from center to apex, and a shorter one towards the anal region, spots at apex and mid-termen. Fringes of first lobe pale ochreous-brown, in cleft dark grey with ochreous-brown base; second lobe around apex ochreous-brown, in cleft and at dorsum dark grey with pale ochreous-brown base. Underside brown, paler in lobes, with dark spots as above.

Hind wings and fringes brown-grey; fringes at dorsum of third lobe with basal dark grey line. Underside brown. Venous scales in single ferruginous row.

Male genitalia. Asymmetrical. Left valve with almost straight saccular spine, just over ½ of valve length. Right valve with almost straight spine just over ½ valve length. Uncus as long as tegumen, stout, straight. Tegumen simple. Juxta wide and rounded, with pair of thick, rounded anellus arms. Vinculum narrow, arched. Aedeagus with conical tip, straight; without cornutus.

Female. Unknown

ECOLOGY. The moth flies in February. Hostplant unknown.

DISTRIBUTION. Bolivia: Santa Cruz.

ETYMOLOGY. The species is named after the country of its occurrence: Bolivia.

Hellinsia forsteri Gielis sp. n.

Fig. 11, 26.

MATERIAL. Holotype ♂, Bolivia, Sarampiuni, San Carlos, 1000 m, 13.IX.1950 (W. Forster), gent CG 5663 (ZSM).

DIAGNOSIS. Group D08. Left valve with curved saccular spine just over ½ of valve length. Right valve with saccular process basally with small hook, and distally with slender spine.

DESCRIPTION. Male. Wingspan 18 mm. Head appressedly scaled, pale brown, between base of antennae white-ochreous. Palps pale brown, second and third segment with lateral white-ochreous line, curved up, as long as eye-diameter. Antennae shortly ciliated, with longitudinal rows of white-ochreous and pale brown scales. Collar ferruginous-brown.

Thorax, tegulae, mesothorax and abdomen pale brown-ochreous.

Fore wings cleft from ½3, pale brown-ochreous. Markings brown: dash parallel to dorsum; two small spots just before base of cleft; first lobe with large costal dash just beyond base of cleft and at 3/5 and 4/5, spot at anal region; second lobe with two longitudinal dashes along veins and small spot at apex. Fringes pale brown-grey, at termen blackish. Underside brown.

Hind wings and fringes grey-brown. Underside brown. Venous scales black, in double row, costal row longer.

Male genitalia. Asymmetrical. Left valve with curved saccular spine just over ½ of valve length. Right valve with saccular process basally with small hook, and distally with slender spine. Uncus ½ of tegumen, straight. Tegumen bilobed. Juxta very well developed, with relative small anellus arms. Vinculum moderate, arched. Aedeagus mildly curved, with narrow and tipped base, near tip with cornutus in shape of sclerotized ridge.

Female. Unknown.

ECOLOGY. The moth flies in September, at an altitude of 1000 meters. Hostplant unknown.

DISTRIBUTION. Bolivia: Sarampiuni.

ETYMOLOGY. The species is named after Dr. W. Forster, to honour his field work in the Neotropical region.

Hellinsia uruguayensis Gielis sp. n.

Fig. 12, 27.

MATERIAL. Holotype ♂, Uruguay, Canelones, Brio, Parque del Plata, 20.X.1971 (M.S. Moratorio), gent CG 6809 (USNM).

DIAGNOSIS. Group E02. Left valve with saccular spine with basal twist, and extending over valve tip. Right valve with small saccular hub. The species differs from *H. papallacta* Gielis, 2011 by the thickened distal part of the uncus, left saccular spine basal loop flattened, right saccular spine more extended in shape, and in first fore wing lobe a poorly developed central linear spot, with presence of costal spots.

DESCRIPTION. Male. Wingspan 22 mm. Head appressedly scaled brown, between base of antennae brown-grey. Palps brown, 1½ x eye-diameter, third segment very short. Antennae shortly ciliated, faintly ringed pale brown and ochreousbrown. Collar dark brown. Thorax ochreous-brown, tegulae mixed with some pale brown scales, mesothorax whitishbrown. Mid leg ochreous-brown, with scale brush around base of spurs; hind leg pale brown-white, with two pairs of asymmetrical spurs, spurs dark tipped, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from $\frac{7}{3}$, dark grey-brown. Markings dark brown: ill-defined spot at base of cleft; first lobe with faint central linear spot, costal spots at base of cleft, at $\frac{3}{7}$ and $\frac{4}{7}$, and spot at anal region; second lobe with two broad longitudinal dashes, tip of lobe dark brown. Fringes in cleft grey-brown; termen of first lobe black-brown, interrupted by narrow ochreous-brown line near anal angle; second lobe terminal black-brown, interrupted by narrow ochreous-brown band at $\frac{1}{3}$ and $\frac{2}{3}$, between these bands outer fringes ochreous-brown. Underside dark brown.

Hind wings and fringes grey-brown. Underside dark brown. Venous scales black, in double row, costal row longer.

Male genitalia. Asymmetrical. Left valve wide, with saccular spine with basal twist, and extending over valve tip. Right valve narrow, with small saccular hub. Uncus half the tegumen length, rather narrow, widening in distal half, and acute tip. Tegumen bilobed. Juxta rather narrow, with two, rather long anellus arms. Vinculum narrow, arched. Aedeagus almost straight, coecum tapering. Cornuti in shape of some sclerotized ridges at ½ of length.

Female. Unknown.

ECOLOGY. The moth flies in October. Hostplant unknown.

DISTRIBUTION. Uruguay: Canelones.

ETYMOLOGY. The species is named after the country of its occurrence: Uruguay.

Hellinsia cervicalis Meyrick, 1932

Pterophorus cervicalis Meyrick, 1932: 251. - Bolivia.

DIAGNOSIS. Group E05 (Gielis, 2011).

MATERIAL. 1 &, Argentina, Jujuy, PN Calilegua, Mesada las Colmenas, 1150 m, 5.I.1996 (NEENA, sta. 33), gent CG 6868 (CG). New for Argentina.

Hellinsia giorgisi Gielis sp. n.

Fig. 13, 28, 36.

MATERIAL. Holotype &, Argentina, Jujuy, PN Calilegua, 1 km N Mesada las Colmenas, 1100 m, 25.I.1996 (NEENA, sta 50) (CG). Paratypes: 1° , same locality and date (CG); 1° , Argentina, Jujuy, Yala, 15 km NW S.S. de Jujuy, 13.XI.1995 (NEENA, sta 11) (CG); $2 \circlearrowleft \circlearrowleft$, $2 \circlearrowleft \circlearrowleft$, Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 16-17.XII.1995 (NEENA, sta 28), gent CG 6871 ($\stackrel{\wedge}{\bigcirc}$) (CG); 2 ♀♀, Argentina, Tucuman, San Javier, 16 km WNW Tucuman, 1010 m, 18.XII.1995 (NEENA, sta 29) Gent CG 6837 (CG); 2 ♂♂, Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 11.I.1996 (NEENA, sta 41), gent CG 6836 (CG); 1 \(\sigma\), Argentina, Salta, 2 km S Amfiteatro, 45 km NNE Cafayate, 1325 m, 12.I.1996 (NEENA, sta 42) (CG); 1 ♂, Argentina, Tucuman, 7 km SSW Tapia, 21 km N San Miguel de Tucuman, 700 m, 7.II.1996 (NEENA, sta 64), gent CG 6870 (CG); ! \(\delta\), Argentina, Tucuman, Cerro San Javier, 17.II.1959 (J.F.G. Clarke), gent CG 6810 (USNM).

DIAGNOSIS. Group F02. Left valve with saccular process with strong basal semi-circular twist, and tip with club-like widening. Right valve with short saccular process, with minimal hooked ending.

DESCRIPTION. Wingspan 17-24 mm. Head appressedly scaled, brown. Collar dark brown. Palps protruding, brown, 1½ x eye-diameter, third segment short. Antennae shortly ciliated, ringed: basal half of segments pale brown, distal half dark brown. Thorax and tegulae pale brown; mesothorax and abdomen dark brown; abdominal segments 7 and 8 with dorsal dark brown scale bristle. Legs ochreousbrown; mid leg with scale bristles at base of the two spur pairs; hind leg with small scale brush at base of distal spur pair; hind leg with two pairs of spurs of unequal length, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from ²/₃, ochreous-brown. Markings dark brown: longitudinally arranged scales along costa, from cell to base of cleft, in centre of first lobe, and in dorsal half of second lobe. Fringes grey-brown. Underside dark brown.

Hind wings and fringes brown-grey. Underside dark brown. Venous scales black, in double row, costal row longer.

Male genitalia. Asymmetrical. Left valve with saccular process with strong basal semi-circular twist, and tip with club-like widening. Right valve with short saccular process, with minimal hooked ending. Uncus slender, short, half tegumen length. Tegumen bilobed. Juxta slender, ½ tegumen, with pair of slender, asymmetrical anellus arms. Vinculum narrow, arched. Aedeagus, minimally curved; no cornuti.

Female genitalia. Ostium left lateral positioned, semicircular, consisting of numerous small spiculae. Antrum centrally extending beyond ostium, 2x longer than wide, tip rounded. Ductus bursae as long as antrum. Bursa copulatrix vesicular, with signum. Vesica seminalis 6x longer than bursa copulatrix. Apophyses anteriores ½ papilla anales, at base of speculated plates. Apophyses posteriores just over 2x papillae anales.

ECOLOGY. The moth flies in December, January and February, at altitudes of 700-1650 meters. Hostplant unknown.

DISTRIBUTION. Argentina: Jujuy, Salta, Tucuman.

ETYMOLOGY. The species is named after Mr. Pablo A. Giorgis, head guard of the National Parque Calilegua, to honour his help and advice, and his support of our field work.

Hellinsia glaphyrotes (Meyrick, 1908)

Pterophorus glaphyrotes Meyrick, 1908: 497. - Brazil & Argentina. DIAGNOSIS. Group I01 (Gielis, 2011).

MATERIAL. 1 \circlearrowleft , Bolivia, Sta Cruz, S of Buena Vista, creek with bamboo, 17.52626 S 63.66307 W, 340 m, 20.II.2012 (B. Landry, ao), gent CG 6881 (MHNG). New for Bolivia.

Hellinsia praenigratus (Meyrick, 1921)

Pterophorus praenigratus Meyrick, 1921: 421. - Peru.

DIAGNOSIS. Group J03 (Gielis, 2011).

MATERIAL. 1 \circlearrowleft , Argentina, Jujuy, Yala, 15 km NW S.S. de Jujuy, 1500 m, 13.XI.1995 (NEENA, sta. 11), gent CG 6827 (CG). New for Argentina.

Hellinsia obscuricilia Arenberger & Wojtusiak, 2001 *Hellinsia obscuricilia* Arenberger & Wojtusiak, 2001: 70. - Vene-

Iellinsia obscuricilia Arenberger & Wojtusiak, 2001: 70. - Venezuela.

DIAGNOSIS. Group J03 (Gielis, 2011).

MATERIAL. 3 & A., Bolivia, Yungas, Coroico, 1900 m, 14-19.V.1950 (W. Forster), gent CG 5665 (ZSM, CG). New for Bolivia.

Hellinsia tacanasensis Gielis, sp. n.

Fig. 14, 29, 37.

MATERIAL. Holotype ♂, Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 15.XI.1995 (NEENA, sta 13), gent CG 6853 (CG). Paratypes: 1 ♀, same locality, 16-17.XII.1995 (NEENA, sta 28), gent CG 28 (CG); 1 without abdomen, Argentina, Salta, 5 km NW Aguas Blancas, 53 km NNW Orán, 500 m, 24.XI.1995 (NEENA, sta 16) (CG).

DIAGNOSIS. Group J10. Left valve with saccular process originating from basal plate, mildly curved, as long as basal

plate. Right valve with saccular process basally a narrow rod, and second long part with angulated end and club-like tip.

DESCRIPTION. Wingspan 14-16 mm. Head appressedly scaled, dark brown, between base of antennae brown-ochreous. Palps protruding, length just over eye-diameter, dark brown with numerous brown-ochreous scales. Antennae shortly ciliated, ringed dark brown and brown-ochreous. Thorax, tegulae and abdomen dark brown; abdomen dorsally with brown-ochreous spot at segments 2 and 3; mesothorax brown-ochreous. Legs dark brown; mid legs with scale brushes at base of both spur pairs; tarsal segments 2-5 of hind legs brown-ochreous, terminally narrow dark brown ring; hind legs spurs brown-ochreous with dark brown tips, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from 5/8, dark brown. Markings blackish: more or less linear arranged scales along costal and dorsal margin of cell, oblique spot just before base of cleft, longitudinally arranged scales in centre of both lobes; a brown-ochreous patch at middle of dorsum, first lobe small dashes at anal angle, tip of lobe, and at ³/₄ of costa, second lobe with dash at anal angle. Fringes dark brown next to brown-ochreous spots and dashes, on remaining wing parts brown-ochreous. Underside dark brown.

Hind wing and fringes dark brown. Underside dark brown. Venous scales black, in double row, costal row longer.

Male genitalia. Asymmetrical. Left valve with saccular process originating from basal plate, mildly curved, as long as basal plate. Right valve with saccular process basally a narrow rod, and second long part with angulated end and clublike tip. Uncus ½ of tegumen, mildly curved, slender. Tegumen bilobed. Juxta stout, with pair of asymmetrical anellus arms. Vinculum rather wide, curved. Aedeagus with minor twist, tip delicately setose. No cornutus.

Female genitalia. Ostium just left of centre, mildly excavated. Antrum funnel-shaped, as long as wide, with pair of longitudinal sclerites. Ductus bursae very short, immediately progressing into vesicular bursa copulatrix, no signum. Vesica seminalis from bursa copulatrix, long, slender, with vesicular ending. Lamina ante-vaginalis narrow ribbon-like, with pair of very small apophyses anteriores. Apophyses posteriores slender, $3\frac{1}{2}$ x papillae anales.

ECOLOGY. The moth flies in November and December, at an altitude of 500-800 meters. Hostplant unknown.

DISTRIBUTION. Argentina: Salta, Tucuman.

ETYMOLOGY. The species is named after the collecting site of the holotype, near the village of Tacanas, in the province Tucuman, Argentina.

Emmelina buscki (Barnes & Lindsey, 1921)

Adaina buscki Barnes & Lindsey, 1921: 370. - USA (FI). MATERIAL. 1 \circlearrowleft , Bolivia, Sta Cruz, S of Buena Vista, creek with bamboo, 17.52626 S 63.66307 W, 340 m, 20.II.2012 (B. Landry, ao), gent CG 6879 (MHNG). New for Bolivia.

Emmelina jason (Meyrick, 1930)

Fig. 38

Pterophorus jason Meyrick, 1930: 568. - Brazil (MG).

MATERIAL. 1 Å, Argentina, Jujuy, PN Calilegua, Aguada del Tigre, 1600 m, 7.I.1996 (NEENA, sta 35), gent CG 6854 ((CG); 1 Å, Argentina, Jujuy, PN Calilegua, 1 km N Mesada las Colmenas, 1100 m, 25.I.1996 (NEENA, sta 50), gent CG

6851 (CG); $1 \circlearrowleft$, $1 \circlearrowleft$, Argentina, Jujuy, PN Calilegua, Mesada las Colmenas, 1150 m, 21-23-XI.1995 (NEENA, sta 15), 5.I.1996 (NEENA, sta 33), gent CG 2882 (\updownarrow) (CG). New for Argentina.

Female genitalia. Ostium left positioned, excavated and oblique. Antrum slightly longer than wide, with rounded base. Ductus bursae and vesica seminalis direct from antrum. Ductus bursae gradually widening, and progressing into vesicular bursa copulatrix. No signum. Vesica seminalis slender, $1\frac{1}{2}$ x ductus bursae and bursa copulatrix. Apophyses anteriores absent. Apophyses posteriores approximately 2x papillae anales. Lamina ante- and post-vaginalis not significantly sclerotized.

REMARKS. Female genitalia illustrated for the first time.

Adaina everdinae Gielis, 1991

Adaina everdinae Gielis, 1991: 75. - Argentina.

MATERIAL. 1 \circlearrowleft , Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Invest Chiquitos, 16.35971S 62.00013 W, 500 m, 12.II.2012 (B. Landry, ao) (MHNG); 2 \circlearrowleft \circlearrowleft 1 \hookrightarrow , Bolivia, Sta Cruz, S of Concepcion, 1 km Hac. San Sebastian, 16.33940 S 61.99823W, 545 m, 14.II.2012 (B. Landry, ao), gent CG 6887 (MNHG, CG). New for Bolivia.

Adaina quieta Gielis, 2012

Adaina quieta Gielis, 2012: 115.- Paraguay.

MATERIAL. 2 & &, Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Invest Chiquitos, 16.35971S 62.00013 W, 500 m, 11.II.2012 (B. Landry, ao), gent CG 6886 (MHNG, CG). New for Bolivia.

Adaina santacruzae Gielis sp. n.

Fig. 15, 30.

MATERIAL. Holotype &, Bolivia, Sta Cruz, S of Buena Vista, creek with bamboo, 17.52626 S 63.66307 W, 340 m, 20.II.2012 (B. Landry, M. Nuss, A. Valvidia), gent CG 6885 (UASC).

DIAGNOSIS. The species belongs to the *Adaina ambrosiae*-complex. It differs from other species in this complex by the saccular processes in the right valve. In the other species the saccular process has a ventral and dorsal (cucullar) part, however in the present species only a ventral saccular part is present. In addition the saccular process in the left valve is more complex in structure, with a ventrally positioned terminal spine.

DESCRIPTION. Male. Wingspan 12 mm. Head appressedly scaled, pale brown, between base of antennae broadly ochreous-brown. Palps ochreous-brown, curved up, just over eyediameter. Antennae pale brown, pectinate. Thorax, tegulae, mesothorax and abdomen ochreous-brown; dorsally on abdomen at distal margin of segments 5 and 8 black transverse marking. Legs ochreous-brown; hind legs with two pairs of unequal spurs, proximal spurs longer than distal spurs, and medial spurs longer than lateral spurs.

Fore wings cleft from just under ²/₃, ochreous-brown. Markings black-brown: dash along costa up to just before base of cleft, ">"-shaped spot around base of cleft, basodorsal of spot at base of cleft an indistinct spot; first lobe with large costal spot just beyond base of cleft and smaller in middle, at ³/₄, apex, and at anal region; second lobe with spots at apex and mid-termen. Fringes at costa, in cleft and at wing

dorsum ochreous-brown; termen at first lobe black, at midtermen ochreous-brown; second lobe around apex, along termen, and around anal region black, terminal and around anal region basally ochreous-brown, and in mid-termen ochreous-brown. Underside ochreous-brown, with dense dark brown scaling in basal half of wing, and less intense in lobes.

Hind wings and fringes grey-brown. Underside ochreous-brown, with dense dark brown scaling in basal wing parts, and scattered dark scales in first and second lobe. Venous scales black, in double row, costal row longer.

Male genitalia. Asymmetrical. Left valve with saccular process in middle; broad, with curved distal part; on distal part ventro-apical directed spine, and in mid-section ventro-basical process. Right valve with large club-like, slightly curved, process, almost reaching tip of valve. Uncus ½ tegumen length, slender. Tegumen bilobed. Juxta almost rectangular, wide, with pair of short anellus arms. Vinculum broad, arched. Aedeagus almost straight, basally forked. Cornuti in shape of two sclerotized ridges at ¾, and thread-like sclerotisation near tip.

Female. Unknown.

ECOLOGY. The moth flies in February. Hostplant unknown.

DISTRIBUTION. Bolivia: Santa Cruz.

ETYMOLOGY. The species is named after the province of occurrence: Santa Cruz, in Bolivia.

Adaina simplicius (Grossbeck, 1917) Pterophorus simplicius Grossbeck, 1917: 136. - USA (Fl). Adaina naiadopa Meyrick 1931: 277. - Paraguay.

MATERIAL. 2 ♀♀, S Bolivia, P.N. Tariquia, Alarachi, 1100 m, 7.II.2009 (J. Wojtusiak), gent CG 6888 (Wojtusiak). New for Bolivia.

Acknowledgements

I wish to express my thanks for the help, loans of specimens, advice, and donation of specimens to the following persons: Mrs. Dr. Alma Solis, Washington, U.S.A (USNM); Dr. A. Hausmann, Munich, Germany (ZSM); Dr. B. Landry, Geneva, Switzerland (MHNG); Prof. Dr. A. Willink (†), Tucuman, Argentina (ILTA); Prof. Dr. J. Wojtusiak (†), Cracow, Poland. A special word of thanks goes to Hugo W. van der Wolf, for his critical reading of the text and linguistic help.

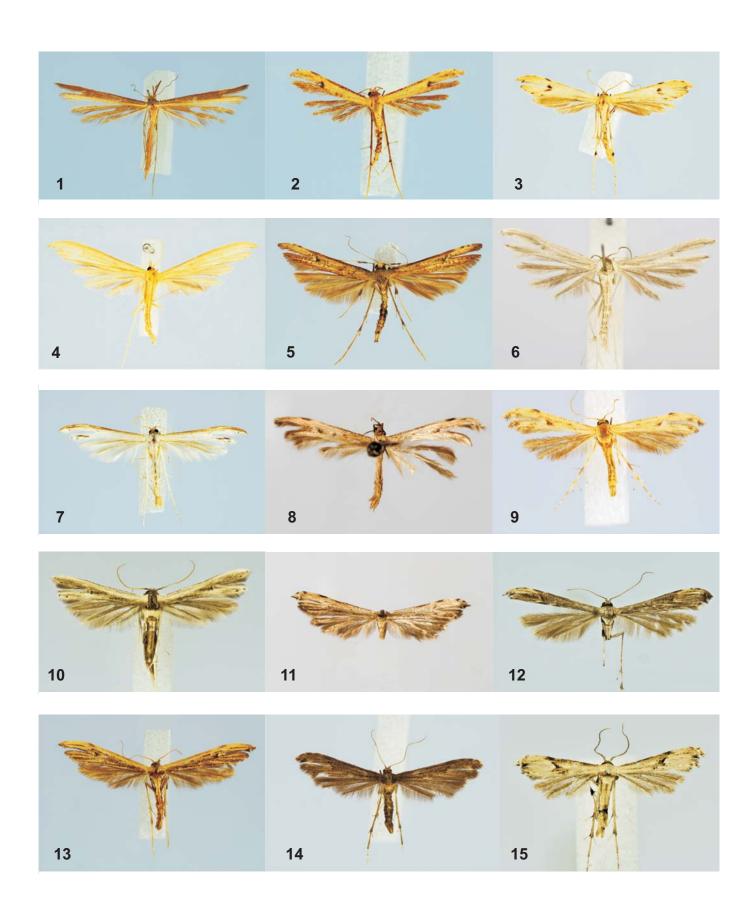
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▶ Fig. 1-15. Imago. 1. Postplatyptilia willinki Gielis, sp. n. Paratype. Argentina, Catamarca, 9 km SE Andragala, 1100 m, 11.xii.1995 (NEENA 27), gent CG 6855 (CG). 2. Hellinsia villagrani Gielis sp. n. Holotype. Argentina, Salta, P.N. el Rey, 100 km NNE Metan, 850 m, 22-23.i.1996 (NEENA, sta 48), gent CG 48 (CG). 3. Hellinsia yalae Gielis, sp. n. Holotype. Argentina, Jujuy, Yala, 15 km NW S.S. de Jujuy, 1500 m, 13.XI.1995 (NEENA, sta 11), gent CG 6872 (CG). 4. Hellinsia taurina Gielis sp. n. Paratype. Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 11.I.1996 (NEENA, sta 41) (CG). 5. Hellinsia catamarcae Gielis sp. n. Holotype. Argentina, Catamarca, 8 km N Rio Potrero, 2 km S La Bandarita, 30 km NE Andalgala, 1650 m, 17.i.1996 (NEENA, sta 45), gent CG 6835 (CG). 6. Hellinsia chalupi Gielis sp. n. Holotype. Argentina, Tucuman, Alto de San Agustin, 14 km NW Tucuman, 1025 m, 2.II.1996 (NEENA, sta 60) (CG). 7. Hellinsia molinerii Gielis sp. n. Holotype. Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 15.xi.1995 (NEENA, sta 13), gent CG 6852 (CG). 8. Hellinsia cordobae Gielis sp. n. Holotype. Argentina, Cordoba, Huerta Grande, 1000 m, 7-14.III.1958 (H. Förster), gent CG 5652 (ZSM). 9. Hellinsia navarroi Gielis sp. n. Holotype. Argentina, Jujuy, 3 km NE Caimancito, 23 km ENE Calilegua, 500 m, 26.xi.1995 (NEENA, sta 18), gent CG 6828 (CG). 10. Hellinsia boliviana Gielis sp. n. Holotype. Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Investigación Chiquitos, 16.35971 S 62.00013 W, 500 m, 12.II.2012 (B. Landry, M. Nuss, A. Valdivia), gent CG 6882 (UASC). 11. Hellinsia forsteri Gielis sp. n. Holotype. Bolivia, Sarampiuni, San Carlos, 1000 m, 13.IX.1950 (W. Forster), gent CG 5663 (ZSM). 12. Hellinsia uruguayensis Gielis sp. n. Holotype. Uruguay, Canelones, Brio, Parque del Plata, 20.X.1971 (M.S. Moratorio), gent CG 6809 (USNM). 13. Hellinsia giorgisi Gielis sp. n. Paratype. Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 16-17.XII.1995 (NEENA, sta 28) (CG). 14. Hellinsia tacanasensis Gielis sp. n. Holotype. Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 15.XI.1995 (NEENA, sta 13), gent CG 6853 (CG). 15. Adaina santacruzae Gielis sp. n. Holotype. Bolivia, Sta Cruz, S of Buena Vista, creek with bamboo, 17.52626 S 63.66307 W, 340 m, 20.II.2012 (B. Landry, M. Nuss, A. Valvidia), gent CG 6885 (UASC).



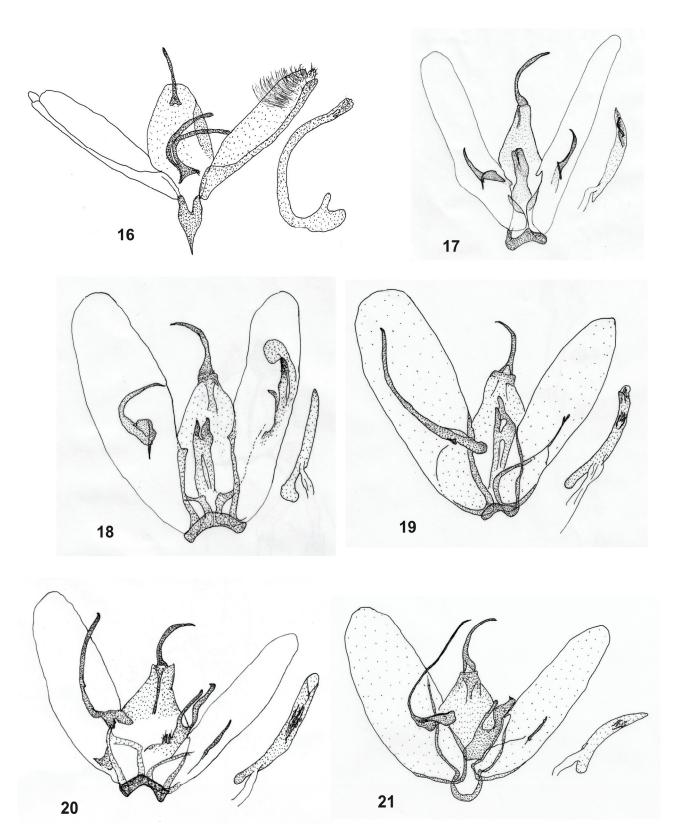


Fig. 16-21. Male genitalia. 16. *Postplatyptilia willinki* Gielis, sp. n. Holotype. Chile, Petorca, Quebrada Aguas Claras, 5.iv.2001 (A Ugarte Peña), gent CG 6858 (CG). **17.** *Hellinsia villagrani* Gielis sp. n. Holotype. Argentina, Salta, P.N. el Rey, 100 km NNE Metan, 850 m, 22-23.i.1996 (NEENA, sta 48), gent CG 48 (CG). **18.** *Hellinsia yalae* Gielis, sp. n. Holotype. Argentina, Jujuy, Yala, 15 km NW S.S. de Jujuy, 1500 m, 13.XI.1995 (NEENA, sta 11), gent CG 6872 (CG). **19.** *Hellinsia taurina* Gielis sp. n. Holotype. Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 11.I.1996 (NEENA, sta 41), gent CG 2873 (CG). **20.** *Hellinsia catamarcae* Gielis sp. n. Holotype. Argentina, Catamarca, 8 km N Rio Potrero, 2 km S La Bandarita, 30 km NE Andalgala, 1650 m, 17.i.1996 (NEENA, sta 45), gent CG 6835 (CG). **21.** *Hellinsia chalupi* Gielis sp. n. Paratype. Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 11.I.1996 (NEENA, sta 41), gent CG 6844 (CG).

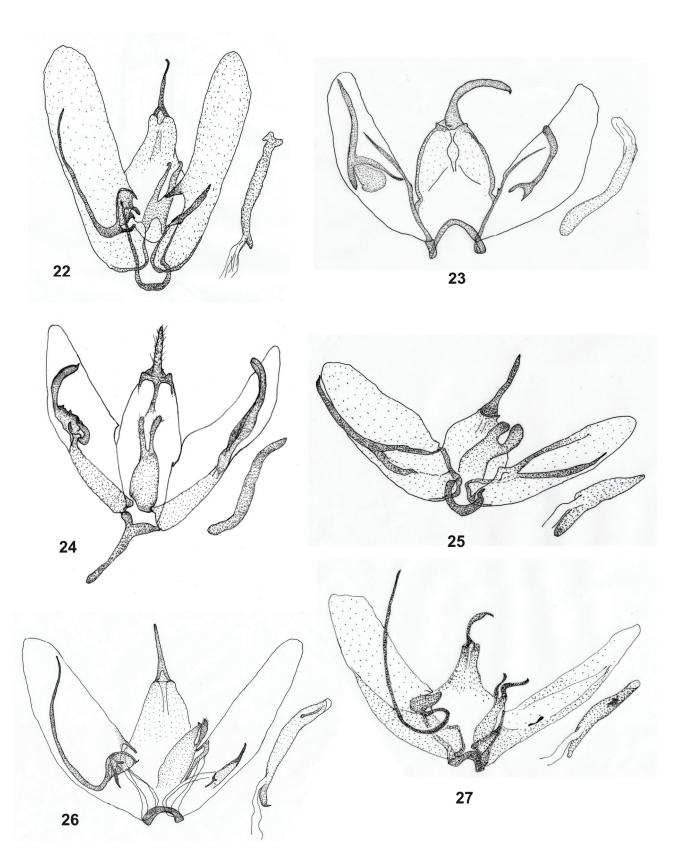


Fig. 22-27. Male genitalia. 22. *Hellinsia molinerii* Gielis sp. n. Holotype. Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 15.xi.1995 (NEENA, sta 13), gent CG 6852 (CG). 23. *Hellinsia cordobae* Gielis sp. n. Holotype. Argentina, Cordoba, Huerta Grande, 1000 m, 7-14.III.1958 (H. Förster), gent CG 5652 (ZSM). 24. *Hellinsia navarroi* Gielis sp. n. Holotype. Argentina, Jujuy, 3 km NE Caimancito, 23 km ENE Calilegua, 500 m, 26.xi.1995 (NEENA, sta 18), gent CG 6828 (CG). 25. *Hellinsia boliviana* Gielis sp. n. Holotype. Bolivia, Sta Cruz, S of Concepcion, Hac. San Sebastian, Centro de Investigacion Chiquitos, 16.35971 S 62.00013 W, 500 m, 12.II.2012 (B. Landry, M. Nuss, A. Valdivia), gent CG 6882 (UASC). 26. *Hellinsia forsteri* Gielis sp. n. Holotype. Bolivia, Sarampiuni, San Carlos, 1000 m, 13.IX.1950 (W. Forster), gent CG 5663 (ZSM). 27. *Hellinsia uruguayensis* Gielis sp. n. Holotype. Uruguay, Canelones, Brio, Parque del Plata, 20.X.1971 (M.S. Moratorio), gent CG 6809 (USNM).

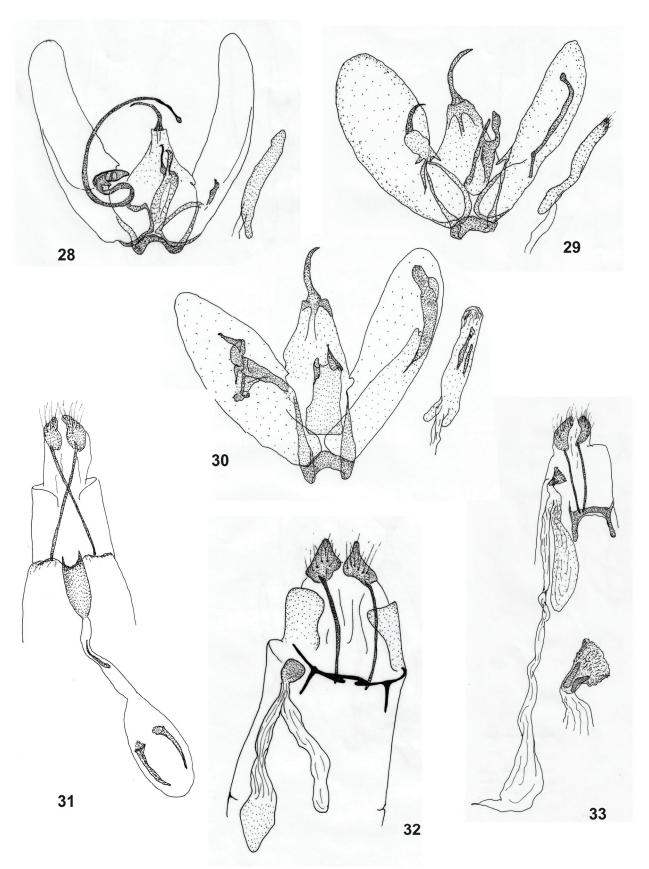


Fig. 28-30. Male genitalia. 28. Hellinsia giorgisi Gielis sp. n. Paratype. Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 11.I.1996 (NEENA, sta 41), gent CG 6836 (CG). 29. Hellinsia tacanasensis Gielis sp. n. Holotype. Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 15.XI.1995 (NEENA, sta 13), gent CG 6853 (CG). 30. Adaina santacruzae Gielis sp. n. Holotype. Bolivia, Sta Cruz, S of Buena Vista, creek with bamboo, 17.52626 S 63.66307 W, 340 m, 20.II.2012 (B. Landry, M. Nuss, A. Valvidia), gent CG 6885 (UASC). Fig. 31-33. Female genitalia. 31. Postplatyptilia willinki Gielis, sp. n. Paratype. Argentina, Catamarca, 9 km SE Andragala, 1100 m, 11.xii.1995 (NEENA 27), gent CG 6855 (CG). 32. Hellinsia yalae Gielis, sp. n. Paratype, Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 28.I.1996 (NEENA, sta 56), gent prep 2900 (CG). 33. Hellinsia taurinaGielis sp. n. Paratype. Argentina, Salta, Quebrada del Toro, 6 km NW Campo Quijano, 30 km W Salta, 1650 m, 11.I.1996 (NEENA, sta 41), gent CG 2868 (CG).

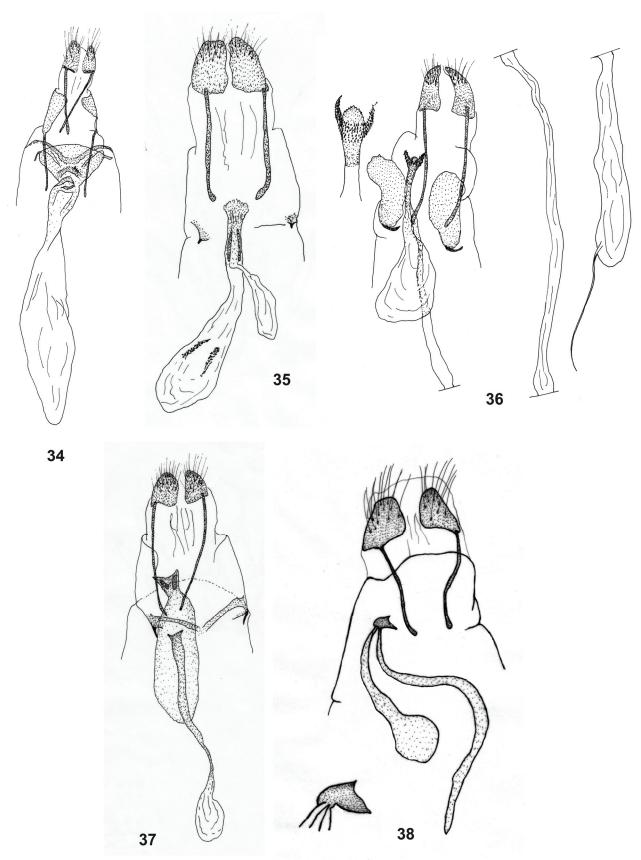


Fig. 34-38. Female genitalia. 34. *Hellinsia catamarcae* Gielis sp. n. Paratype. Argentina, Jujuy, PN Calilegua, Aguada del Tigre, 1600 m, 7.i.1996 (NEENA, sta 35, gent CG 6869 (CG). **35**. *Hellinsia molinerii* Gielis sp. n. Paratype. Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 15.xi.1995 (NEENA, sta 13), gent CG 6859 (CG). **36**. *Hellinsia giorgisi* Gielis sp. n. Paratype. Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 16-17.XII.1995 (NEENA, sta 28), gent CG 6871 (CG). **37**. *Hellinsia tacanasensis* Gielis sp. n. Holotype. Argentina, Tucuman, 11 km S Tacanas, 28 km WSW Trancas, 800 m, 16-17.XII.1995 (NEENA, sta 28), gent CG 6873 (CG). **38**. *Emmelina jason* (Meyrick, 1930). Argentina, Jujuy, PN Calilegua, Mesada las Colmenas, 1150 m, 5.i.1996 (NEENA, sta 33), gent CG 2882 (CG).