

REVIEW OF THE NEOTROPICAL SPECIES OF THE FAMILY PTEROPHORIDAE, PART 3: ADDITIONS FROM CHILE, ECUADOR AND PARAGUAY (LEPIDOPTERA)

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Abstract: After the publication of parts 1 and 2 of this review, large numbers of specimens have become available. New faunistic and ecological information derived from this material is recorded. New species are recognized: *Stenoptilia melgarejiae*, *Hellinsia sapucayae*, *H. banosae*, *H. cosangae*, *H. llaviuco*, *H. sanlucasia*, *H. jannitae*, *H. podocarpa*, *H. bodneri*, *H. cajas*, *H. loja*, *H. paraguayae*, *H. ascensio*, *H. callefloridae*, *H. longeanellus*, *H. hamadryadis*, *H. tenera*, *H. caligo*, *H. cuenca*, *H. limariae*, *Adaina coquimboae*, *A. quieta*, *A. recta* and *A. sinuari*. Formerly unknown genital structures are described and illustrated in the case of *Hellinsia canari* Gielis, 2011 and *H. discors* (Meyrick, 1913). A new combination is recognized for *Picardia delospilus* (Meyrick, 1921). The genus *Chocophorus* Gielis & Matthews-Lott, 1994 is a junior synonym of *Singularia* Arenberger, 1988.

Key words: Lepidoptera, Pterophoridae, revision, new species, faunistics, ecology, Neotropics.

Revisión de las especies neotropicales de la familia Pterophoridae, parte 3: Adiciones de Chile, Ecuador y Paraguay (Lepidoptera)

Resumen: Después de la publicación de las partes 1 y 2 de esta revisión, se ha podido disponer de un gran número de especímenes. Se registra nueva información faunística y ecológica derivada de este material. Se reconocen especies nuevas: *Stenoptilia melgarejiae*, *Hellinsia sapucayae*, *H. banosae*, *H. cosangae*, *H. llaviuco*, *H. sanlucasia*, *H. jannitae*, *H. podocarpa*, *H. bodneri*, *H. cajas*, *H. loja*, *H. paraguayae*, *H. ascensio*, *H. callefloridae*, *H. longeanellus*, *H. hamadryadis*, *H. tenera*, *H. caligo*, *H. cuenca*, *H. limariae*, *Adaina coquimboae*, *A. quieta*, *A. recta* y *A. sinuari*. Se describen e ilustran las genitales de *Hellinsia canari* Gielis, 2011 y *H. discors* (Meyrick, 1913). Se reconoce una nueva combinación para *Picardia delospilus* (Meyrick, 1921). El género *Chocophorus* Gielis & Matthews-Lott, 1994 es un nuevo sinónimo de *Singularia* Arenberger, 1988.

Palabras clave: Lepidoptera, Pterophoridae, revisión, especies nuevas, faunística, ecología, Región Neotropical.

Taxonomy / Taxonomía: *Stenoptilia melgarejiae* sp.n., *Hellinsia sapucayae* sp.n., *H. banosae* sp.n., *H. cosangae* sp.n., *H. llaviuco* sp.n., *H. sanlucasia* sp.n., *H. jannitae* sp.n., *H. podocarpa* sp.n., *H. bodneri* sp.n., *H. cajas* sp.n., *H. loja* sp.n., *H. paraguayae* sp.n., *H. ascensio* sp.n., *H. callefloridae* sp.n., *H. longeanellus* sp.n., *H. hamadryadis* sp.n., *H. tenera* sp.n., *H. caligo* sp.n., *H. cuenca* sp.n., *H. limariae* sp.n., *Adaina coquimboae* sp.n., *A. quieta* sp.n., *A. recta* sp.n., *A. sinuari* sp.n.

Introduction

With the publication of the first two parts of the review of Neotropical Pterophoridae (Gielis, 2006, 2011), overwhelming amounts of material became available for further study. This third part of the review of the Neotropical Pterophoridae mainly contains information derived from specimens that have recently become available. In the preparation of this volume new species, and additional information on previously recorded species were met. The so far unknown males or females of known species are described and illustrated. New country records are mentioned.

The sequence of reproduction of species is in accordance with the checklists in the first and second part. The grouping code, as introduced for the genus *Hellinsia* Tutt, 1908 in the second part, is used.

Abbreviations

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

FB: Dr. Florian Bodner, Vienna, Austria.

ILTA: Instituto Miguel Lillo, San Martín de Tucumán, Argentina.

PUCE: Pontificia Universidad Católica del Ecuador, Quito, Ecuador.

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

Species examined

Platyptilia anniei Gielis, 1997

Platyptilia anniei Gielis, 1997: 40. Ecuador.

MATERIAL. 1 ♀, Ecuador, Zamora-Chinchipe, Reserva Biológica San Francisco, 03° 58.275'S 79° 04.726'W, 1842 m, e.l. *Baccharis latifolia* 16.X.2007 hatched 27.x.2007 (F. Bodner), sample ♂ 07/0609, gent CG 6641 (RMNH); 1 ♀, Ecuador, Zamora-Chinchipe, Reserva Biológica San Francisco, 03° 58.347'S 79° 04.354'W, 1897 m, e.l. *Baccharis latifolia* 26.x.2007 hatched 5.XI.2007 (F. Bodner), sample ♂ 07/0834 (RMNH).

ECOLOGY. Hostplant *Baccharis latifolia* (Ruiz & Pav.) Pers. (Asteraceae). First record of hostplant.

Stenoptilia karsholti Gielis, 1995

Stenoptilia karsholti Gielis, 1995: 146. Peru.

MATERIAL. 1 ♂, Argentina, Catamarca, El Manchado, 4000 m, I.1959 (R. Golbach), gent CG 3786 (ILTA). New for Argentina.

Stenoptilia melgarejoae Gielis sp. n.

Fig. 1, 25

MATERIAL. Holotype ♂, Paraguay, Gualra, Melgarejo, 14.IV.1994 (U. Drechsel), gent CG 6761 (CG).

DIAGNOSIS. The species has few external markings. In the male genitalia it resembles *S. zophodactylus* but differs in the

smaller membranous extensions of the tegumen, the long anellus arms, the more compact shape of tegumen and valves, and the shorter coecum and aedeagus length.

DESCRIPTION. Wingspan 17 mm. Head appressedly scaled, pale brown, with white line along rim of eye, with small conical frontal protrusion. Palps pale brown, tip of third segment white, second segment thickened with pronounced drooping scales, just over $1\frac{1}{2}$ x eye-diameter. Antennae pale brown, with longitudinal row of grey-white scales, shortly ciliated. Collar pale brown and white, pronounced, bifid scales. Thorax, tegulae, and abdomen pale brown. Mesothorax brown-white. Hind legs pale brown-white; with two pairs of asymmetrical spurs, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from $2/3$, pale brown. Markings brown: small spot at end of discus, large, but poorly visible spot at base of cleft, and in dorsal half of first lobe some longitudinally aligned dark scales. In both lobes a subterminal oblique white line. Fringes mostly missing in this specimen. Underside pale brown, with some darker scales on the main veins.

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

Male genitalia. Valves symmetrical, shaped like a bird's head. Saccus bilobed, basal segment $3\frac{1}{2}$ x times longer than distal part. Tegumen simple, with two small membranous projections on tip. Uncus medium long, tip not exceeding distal margin of tegumen. Juxta with long anellus arms, reaching just over half the tegumen length. Vinculum arched, small. Aedeagus strongly curved. Coecum pronounced, compact. Cornutus in a linear configuration.

Female genitalia. Unknown.

ECOLOGY. The moth flies in April. Hostplant unknown.

DISTRIBUTION. Paraguay: Gualra.

ETYMOLOGY. The species is named after the locality of collecting: Melgarejo

***Hellinsia sapucayae* Gielis sp. n.**

Fig. 2, 26, 47.

MATERIAL. Holotype ♂, Paraguay, Paraguari, Sapucay, 17-20.III.1995 (U. Drechsel), gent CG 6755 (CG). Paratype ♀, same locality, 28.IV.1996 (U. Drechsel), gent CG 6756 (CG).

DIAGNOSIS. Group: B03. Left saccular process straight, short, narrow, with widened base; saccular base with two short spines. Right saccular process a short rod, basally with small knob, and distally a short hook.

DESCRIPTION. Wingspan 15 mm. Head appressedly scaled, ochreous. Palps ochreous, protruding, $1\frac{1}{2}$ x eye-diameter. Antennae ochreous, ciliated. Collar pale ferruginous, with long bifid scales. Thorax, tegulae and abdomen pale ochreous. Hind legs pale ochreous, tibiae terminally with small pale brown linear group of scales; tarsal segments 4 and 5 pale brown; with two pairs of unequal spurs. Proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from just beyond middle, pale ochreous. Markings brown: spot at base of cleft; first lobe with costal spots beyond base of cleft, and at $3/4$, apical, at anal region, and poorly defined longitudinal group of scales central in lobe; second lobe spots are apical, mid-terminal, and at anal

angle. Fringes pale grey. Underside brown, towards tips of lobes turning ochreous.

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

Male genitalia. Valves asymmetrical. Left valve with saccular process straight, short, narrow, with widened base; saccular base with two short spines. Right valve with saccular process a short rod, basally with small knob, and distally a short hook. Uncus curved, narrow, medium length. Tegumen bilobed. Juxta with pair of asymmetrical anellus arms: a short and straight arm, and the other wider, longer and twisted. Vinculum arched. Aedeagus mildly curved, blunt tip. Cornuti as small longitudinal spiculation.

Female genitalia. Ostium left lateral positioned, flat. Antrum short, tapering, with pair of longitudinal sclerites. Ductus bursae twice length of antrum. Bursa copulatrix simple, vesicular, without signum. Ductus seminalis longitudinally vesicular, more than 3 x bursa copulatrix. Lamina antevaginalis shaped as simple, poorly sclerotized, rim. Apophyses anteriores absent. Apophyses posteriores $2\frac{1}{2}$ x papillae anales.

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

DISTRIBUTION. Paraguay: Paraguari.

ETYMOLOGY. The species is named after the town of Sapucay, the collecting locality.

***Hellinsia banosae* Gielis sp. n.**

Fig. 3, 27.

MATERIAL. Holotype ♂, Ecuador, Tungurahue, 20 km E Baños, San Francisco, $1^{\circ}24'39''\text{S}$ $78^{\circ}14'23''\text{W}$, 1290 m, 26.IX.2002 (C. & F.K. Gielis), gent CG 5965 (CG). Paratype: 1 ♂, same locality, 21.X.2002 (CG).

DIAGNOSIS. Group: B05. Left saccular process just under $1/3$ of valve length, strongly curved, and tip curved backwards. Right saccular process a blunt and broad rod, strongly curved towards tip of valve. The latter shape has, so far, not been met before.

DESCRIPTION. Wingspan 19-21 mm. Head appressedly scaled, pale brown, between base of antennae pale yellow. Palps pale yellow, protruding, $1\frac{1}{2}$ x eye-diameter. Antennae pale yellow-brown, ciliated. Thorax, tegulae, mesothorax and abdomen pale yellow-ochreous. Legs pale yellow-ochreous; fore and mid legs with longitudinal dark brown line on lateral femur. Hind legs with two pairs of spurs, lateral spurs longer than medial spurs, and proximal pair slightly longer than distal pair.

Fore wings cleft from $2/3$, pale yellow-ochreous. Markings black-brown: spot just before base of cleft; first lobe with costal spot just beyond base of cleft, at $3/4$ of costa, and at anal region; at anal region of second lobe; and scattered dark scales in costal and dorsal area of wing. Fringes pale yellow-ochreous. Underside pale brown at wing base, gradually turning pale yellow-ochreous towards wing tips.

Hind wings and fringes pale yellow-ochreous. Underside pale brown at wing base, gradually turning pale yellow-ochreous towards wing tips. Venous scales dark ferruginous, in double row, costal row longer.

Male genitalia. Left valve slightly longer than right valve. Left saccular process just under 1/3 of valve length, strongly curved, and tip curved backwards. Right saccular process a blunt and broad rod, strongly curved towards tip of valve. Uncus slender, moderately long. Tegumen bilobed. Juxta rather narrow. Anellus arms almost straight, rather slender, asymmetrical. Vinculum narrow, arched. Aedeagus straight. No cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in September and October, at an altitude of approximately 1300 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Tungurahue.

ETYMOLOGY. The species is named after the town of Baños, close to the locality of collecting.

***Hellinsia cosangae* Gielis sp. n.**

Fig. 4, 28.

MATERIAL. Holotype ♂, Ecuador, Napo, 15 km SE Cosanga, Cocodrilo, 0°38'56"S 77°47'34"W, 1850 m, 25.X.2002 (C. & F.K. Gielis), gent CG 5966 (CG).

DIAGNOSIS. Group: B05. Left valve with sacculus just under 1/3 of valve length, mildly curved, without obvious other spikes or processes. Right valve with narrow saccular ridge, as a rod.

DESCRIPTION. Wingspan 19 mm. Head appressedly scaled, face and crown pale ferruginous, between base of antennae ochreous-white, collar ferruginous with erect, bifid scales. Palps pale ferruginous-ochreous, tip of third segment greyish, protruding, as long as eye-diameter. Antennae with covering scales basally pale ferruginous and distally gradually turning brown, ciliated. Thorax, tegulae, mesothorax, abdomen and hind legs pale ferruginous-ochreous. Hind legs with two pairs of asymmetrical spurs, medial spurs longer than lateral spurs and proximal spurs longer than distal spurs; at base of distal spur pair a small grey scale bristle.

Fore wings cleft from 3/5, pale ferruginous-ochreous. Markings dark grey-brown: diffuse scaling along costa, ending in distinct longitudinal spot above base of cleft; small dot just before base of cleft; first lobe with costal spots at middle, 3/4, at apex, at anal region, and some scattered scales in centre; second lobe with spots at apex, mid-termen and at anal region, terminal half of lobe gradually darkening grey. Fringes at termen of first lobe, at apex and anal region of second lobe grey; in cleft and at dorsum bright pale ferruginous-ochreous. Underside grey-brown.

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

Male genitalia. Valves asymmetrical, left valve shorter than right valve. Left valve with sacculus just under 1/3 of valve length, mildly curved, without obvious other spikes or processes. Right valve with narrow saccular ridge, as a rod. Uncus slender, moderately long. Tegumen bilobed. Juxta stout, with asymmetrical, slender and straight anellus arms. Vinculum narrow, with central widening. Aedeagus almost straight, without obvious cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in October, at an altitude of 1850 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Napo.

ETYMOLOGY. The species is named after the village near the collecting site: Cosanga.

***Hellinsia canari* Gielis, 2011**

Fig. 48.

Hellinsia canari Gielis, 2011: 617. Ecuador.

MATERIAL. 1♀, Paraguay, Paraguari, Sapucay, 28.I.1991 (U. Drechsel), prep CG 2483 (CG). 60 specimens: Paraguay, from Departments: Caaguazu, Gualra, and Paraguari; moths collected in January to September, November, and December. New for Paraguay.

DIAGNOSIS. Group: B07 (Gielis, 2011).

DESCRIPTION. Female genitalia. Ostium left lateral positioned, excavated. Antrum curved, short. Ductus bursae short. Bursa copulatrix vesicular, without signum. Ductus seminalis long, 2 x length of bursa copulatrix, terminal vesicular, with three long sclerites which are curled in vesicular parts. Lamina ante-vaginalis broad, "U"-shaped, centrally with four small processes. Apophyses anteriores absent. Apophyses posteriores 2 x papillae anales.

DISTRIBUTION. Ecuador; Paraguay: Caaguazu, Paraguari, Gualra.

REMARKS. Female genitalia illustrated for the first time.

***Hellinsia llaviuco* Gielis sp. n.**

Fig. 5, 29.

MATERIAL. Holotype ♂, Ecuador, Azuay, PN Cajas, Laguna Llaviuco, 2°50'38"S 79°8'35"W, 3225 m, 5.X.2002 (C. & F.K. Gielis), gent CG 6720 (CG).

DIAGNOSIS. Group: B08. Left saccular process transverse, rather wide, process with two short and narrow spiny processes; one pointed towards valve base, and the other to the apex of valve. Right saccular process double; basally a small sharp tipped knob, distally a narrow, slightly waved spine.

DESCRIPTION. Wingspan 22 mm. Head beige-brown, collar and face brown. Palps 1 1/3 x eye-diameter, beige-brown, protruding, terminal segment ventrally dark brown. Antennae dark beige-brown, pectinate. Thorax and tegulae beige-brown, caudally gradually darker brown. Abdomen pale beige-brown, gradually darkening towards ninth segment; dorsally with pale brown lateral, longitudinal line. Legs beige-brown. Hind legs with two pairs of asymmetrical spurs; lateral spurs shorter than medial spurs, and proximal pair longer than distal pair.

Fore wings cleft from 2/3, pale beige-brown. Markings dark brown: small longitudinal spot in centre of cell; costal spot just before base of cleft; oblique spot at base of cleft, reaching from costal spot just beyond base of cleft, around base of cleft and resolving into second lobe; first lobe with costal spots at 2/3 and 4/5, and spot at anal region; second lobe gradually darkening from 1/3 towards apex. Fringes grey, dark grey at dark wing spots. Underside dark brown, in first lobe gradually bright ochreous with markings as above.

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

Male genitalia. Left valve longer and rounder than right valve. Left saccular process transverse, rather wide, process

with two short and narrow spiny processes; one pointed towards valve base, the other to the apex of valve. Right saccular process double; basally a small sharp tipped knob, distally a narrow, slightly waved spine. Uncus moderately long, curved. Tegumen bilobed. Juxta rather rounded in shape, with asymmetrical anellus arms. Vinculum arched. Aedeagus narrow, straight. No cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in October, at an altitude of 3225 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Azuay.

ETYMOLOGY. The species is named after the lake: Laguna Llaviuco, in the National Park Cajas in Ecuador.

***Hellinsia santlucasia* Gielis sp. n.**

Fig. 6, 30, 49.

MATERIAL. Holotype ♂, Ecuador, Loja, 60 km N Loja, 5 km N San Lucas, 3°40'56"S 79°16'9"W, 2965 m, 10.X.2002 (C. & F.K. Gielis), gent CG 6738 (CG). Paratype: 1 ♀, same locality and date, gent CG 6742 (CG).

DIAGNOSIS. Group B08. Left valve with short, strongly curved saccular process, with in its basal half two short processes. Right valve with saccular process in shape of a small knob and a narrow rod.

DESCRIPTION. Wingspan 28-29 mm. Head appressedly scaled, face and above pale ferruginous, between base of antennae pale ochreous. Palps pale ferruginous, protruding, as long as eye-diameter. Antennae ciliated. Thorax pale ferruginous. Tegulae, mesothorax and abdomen pale ferruginous-ochreous. Hind leg from coxa to tarsal segments gradually turning from pale ochreous to pale grey; tarsal segments pale grey-ochreous, first segment very long; with two pairs of asymmetrical spurs, lateral spur shorter than medial spur and proximal pair shorter than distal pair.

Fore wings cleft from 2/3, ochreous, with indistinct dash from wing base into centre of first lobe of very pale ferruginous scales; markings dark grey: small spot in discus; small oblique spot before base of cleft; first lobe with small spot at middle of costa, a larger spot at 3/4 of costa, a spot at apex, and a larger one at anal region; second lobe with gradual darkening towards apex. Fringes grey-ochreous, at termen grey. Underside dark grey-brown, towards termen gradually more ochreous tinged.

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

Male genitalia. Left valve larger and more rounded than right valve. Left valve with short, strongly curved saccular process, with two short processes in its basal half. Right valve with saccular process in shape of a small knob and a narrow rod. Uncus short, slender, curved. Tegumen bilobed. Juxta with asymmetrical anellus arms, length 3/4 of tegumen. Vinculum simple, mildly arched. Aedeagus mildly waved, with small sclerotized ridge.

Female genitalia. Ostium left lateral positioned, slightly oblique. Antrum as long as wide, with some sclerotized ridges parally to ostium. Ductus bursae short. Ductus seminalis short, vesicular. Bursa copulatrix 2 x ductus seminalis, vesicular, without signum. Apophyses anteriores absent. Apophyses posteriores 1½ x papilla anales.

ECOLOGY. The moth flies in October, at an altitude of 2965 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Loja.

ETYMOLOGY. The species is named after the village near its collecting site: San Lucas.

***Hellinsia discors* (Meyrick, 1913)**

Fig. 50.

Pterophorus discors Meyrick, 1913: 112. British Guyana.

DIAGNOSIS. Group: C01. (Gielis, 2011)

DESCRIPTION. Female genitalia. Ostium left lateral. Antrum curved to abdominal base, gradually progressing into ductus bursae and bursa copulatrix. Gradually widening, without apparent boundaries between anatomical parts. No signum. Apophyses anteriores absent. Apophyses posteriores 3 x papillae anales.

REMARKS. Female genitalia illustrated for the first time.

***Hellinsia jannitae* Gielis sp. n.**

Fig. 7, 31, 51.

MATERIAL. Holotype ♂, Chile, Coquimbo (IV), Limari, 30 km NE Combarbala, 31° 03'S 70° 53'W, 1600 m, 17.XI.2000 (C. & F.K. Gielis), gent CG 4814 (CG). Paratypes: 8 ♀♀, same locality and date; 1 ♂, 6 ♀♀, Chile, Coquimbo, (IV), Elqui, 14 km S Vicuña, 30° 07'S 70° 42'W, 1400 m, 14.XI.2000 (C. & F.K. Gielis) (CG); 1 ♂, 6 ♀♀, Chile, Coquimbo (IV), Limari, 40 km NE Ovalle, Monumento Natural Pichasca, 30° 21'S 70° 51'W, 13.XI.2000 (C. & F.K. Gielis), gent CG 4813 (CG); 1 ♀, Chile, Coquimbo (IV), Limari, 34 km SW Ovalle, Termas de Socos, 30° 43'S 71° 29'W, 16.XI.2000 (C. & F.K. Gielis) (CG); 1 ♂, 1 ♀, Chile, Coquimbo (IV), Elqui, 21 km SE Coquimbo, 30° 07'S 71° 10'W, 15.XI.2000 (C. & F.K. Gielis) (CG); 2 ♀♀, Chile, Valparaíso (V), Quillota, 15 km S Ocoa, P.N. la Campana, 32° 54'S 71° 06'W, 21.XI.2000 (C. & F.K. Gielis), gent CG 4812 (CG); 1 ♀, Chile, Valparaíso (V), Petorca, 24 km NNW Cabildo, 32° 13'S 71° 07'W, 800 m, 19.XI.2000 (C. & F.K. Gielis) (CG).

DIAGNOSIS. Group: C01. Valves asymmetrical. Left valve with large semi-circular saccular process, just over 1/3 of valve length. Right valve with sclerotized ridge along saccular margin, no obvious process. The species resembles in wing shape *H. siskaellus* Gielis and *H. betsiae* Gielis, but differing from the former by less developed markings in both lobes, and from the latter by the distinct oblique line before base of cleft.

DESCRIPTION. Wingspan 16-24 mm. Head appressedly scaled pale grey with scattered pale brown scales. Palps pale brown, protruding, 1½x eye-diameter. Antennae ringed pale grey and pale brown, pectinate in distal half. Thorax, tegulae, mesothorax and abdomen pale grey, with scattered pale brown scales. Hind legs pale grey, towards base of spurs and distal end of tarsal segments pale brown; at base of spurs with small scale brushes; two pairs of unequal spurs, distal pair shorter than proximal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from 2/3, pale brown-grey. Markings pale brown: dense scaling at costa, and diffuse scaling at dorsum; oblique spot at base of cleft, progressing into rounded spot at costa of first lobe; first lobe with small mid-costal and apical spot; second lobe with spots at apex, mid-termen and at anal angle. Fringes pale grey-brown; at termen

of first lobe with continuous row of basal dark scales; around apex of second lobe dark grey. Underside brown, paler in both lobes, and with oblique markings as above.

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

Male genitalia. Valves asymmetrical. Left valve with large semi-circular saccular process, just over $\frac{1}{3}$ of valve length. Right valve with sclerotized ridge along saccular margin, no obvious process. Uncus short. Tegumen bilobed. Juxta wide, with rather short, asymmetrical anellus arms. Vinculum heart-shaped. Aedeagus curved, slender. No cornutus.

Female genitalia. Ostium left lateral positioned, flat. Antrum 2 x longer than wide. Ductus bursae short. Vesica seminalis 2 x length bursa copulatrix, slender. Bursa copulatrix simple vesicular. Apophyses anteriores absent. Apophyses posteriores $1\frac{1}{2}$ x papillae anales.

ECOLOGY. The moth flies in November. Hostplant unknown.

DISTRIBUTION. Chile: Coquimbo, Valparaíso.

ETYMOLOGY. The species is named after Mrs. Jannita Bakker, a good friend.

***Hellinsia podocarpa* Gielis sp. n.**

Fig. 8, 32.

MATERIAL. Holotype ♂, Ecuador, Loja, 10 km SE Loja, PN Podocarpus, Cajanuma Ranger Station, 4°6'58"S 79°10'19"W, 2850 m, 7.X.2002 (C. & F.K. Gielis), gent CG 6737 (CG). Paratypes: 1 ♂, same locality and date (CG); 1 ♂, Ecuador, Zamora-Chinchipe, 22 km E Loja, PN Podocarpus, San Francisco Ranger Stt, 2200 m, 9.X.2002 (C. & F.K. Gielis) (CG); 1 ♂, Ecuador, Napo, 10 km SSE Cosanga, 0°37'13"S 77°49'29"W, 2180 m, 23.X.2002 (C. & F.K. Gielis) (CG).

DIAGNOSIS. Group: C03. Left valve with saccular process just over $\frac{1}{3}$ of valve length, and basal part almost rectangular with four small processes, and a moderately curved longer process towards tip of valve. Right valve with narrow longitudinal process, terminally steeply curved, and creating a small hook.

DESCRIPTION. Wingspan 22-26 mm. Head appressedly scaled; Collar and face ferruginous, between base of antennae and crown milky white. Palps pale ochreous, terminally on second segment with pale brown ring, protruding, as long as eye-diameter. Antennae pale ochreous-brown, shortly ciliated. Thorax, tegulae, mesothorax and abdomen pale ochreous-brown; on dorsum of abdomen scattered pale brown scales creating indistinct longitudinal lines. Hind legs pale ochreous-brown, at base of spur pairs mixed black-brown scales; with two asymmetrical spur pairs, medial spurs longer than lateral spurs, and proximal pair longer than distal pair.

Fore wings cleft from approximately $\frac{2}{3}$, pale ochreous-brown. Markings dark brown: spot in centre of discus; rounded spot just before base of cleft; costal spot at base of cleft; first lobe with costal spots in middle, $\frac{3}{4}$, at apex, and in anal region; second lobe with spots at apex, mid-termen, at anal region and just before anal region, subterminal region in some specimens diffusely darkened; scattered dark scales on wing. Fringes pale ochreous-brown, with dark patches at anal spot in first lobe and apical in second lobe. Underside brown, gradually turning pale ochreous-brown towards apices.

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

Male genitalia. Valves asymmetrical, left valve longer and wider. Left valve with saccular process just over $\frac{1}{3}$ of valve length, and basal part almost rectangular with four small processes, and moderately curved longer process towards tip of valve. Right valve with narrow longitudinal process, terminally steeply curved, and creating a small hook. Uncus slender, curved, moderately long. Tegumen bilobed. Juxta blunt and wide, progressing into short, asymmetrical anellus arms. Vinculum arched, rather wide. Aedeagus straight. No obvious cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in October, at an altitude between 2000 and 2850 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Loja, Napo, Zamora-Chinchipe.

ETYMOLOGY. The species is named after one of the localities of collecting: Parque Nacional Podocarpus.

***Hellinsia bodneri* Gielis sp. n.**

Fig. 9, 33, 52.

MATERIAL. Holotype ♂: Ecuador, Zamora-Chinchipe, Reserva Biológica San Francisco, 03° 58.341'S 79° 04.535'W, 1907 m, e.l. *Ageratina dendroides* 14.III.2009 hatched 30.IV.2009 (F. Bodner), sample ♂ 09/2945, gent CG 6695 (CG). Paratypes: 1 ♀, same locality, 03°5 8.508'S 79° 04.724'W, 1877 m, e.l. *Ageratina dendroides* 5.IX.2007 hatched 1.XI.2007 (F. Bodner), sample ♂ 07/0407, gent CG 6640 (D.L. Matthews-Lott); 1 ♀, same locality, 03° 58.453'S 79° 04.762'W, 1806 m, e.l. *Ageratina dendroides* 8.III.2009 hatched 29.III.2009 (F. Bodner), sample ♂ 09/2784, gent CG 6695 (PUCE); 1 ♀, same locality, 03° 58.484'S 79° 04. 491'W, 1877 m, e.l. *Ageratina dendroides* 12.III.2009 hatched 16.IV.2009 (F. Bodner), sample ♂ 09/2869, gent CG 6695 (CG).

DIAGNOSIS. Group: C05. The species resembles *Hellinsia aguilerai* Gielis and *H. montezepa* Arenberger. In the former female genitalia closely resemble the present species, but the ductus bursae lacks sclerites, the bursa copulatrix ends widely, and the color of the moth is distinct with brownish tinge and misses the pronounced central and longitudinal stripe in first fore wing lobe. In the latter the wing pattern is very uniform, in contrast to the present species, missing the spot before base of cleft, brown color elements on fore wing, and spot in the center of first fore wing lobe; in male genitalia the left saccular process is shorter and less curved basally with more curved tip-segment, left valve is shorter, anellus arms slightly differ in shape, and right saccular process is divided in two parts instead of single slender rod.

DESCRIPTION. Male, female. Wingspan 23-27 mm. Head appressedly scaled, dark brown. Palps protruding, second segment mottled grey-brown and pale grey, third segment dark brown and short, just longer than eye-diameter. Antennae dark brown, ciliated. Frontal half of thorax and tegulae dark brown, rostral half dark grey-brown. First abdominal segment ferruginous-brown, other segments dark grey-brown with a ferruginous tinge. Hind legs dark brown, pale brown before base of spur pairs and on first tarsal segment. Spur pairs of unequal length, and lateral spurs shorter than medial spurs.

Fore wings cleft from 2/3, dark brown with ferruginous dash in dorsal wing half from base to around base of cleft; before base of cleft oblique ochreous spot, basally margined dark brown mixed with ferruginous scales, and extending to costa of first lobe; in second lobe two narrow, faint, longitudinal ochreous lines. Fringes dark grey, around apices of both lobes blackish. Underside brown, with markings as above.

Hind wings and fringes pale grey-brown, the third lobe paler than the first and second. Underside grey-brown. Venous scales dark black-brown, in double row, costal row longer.

Male genitalia. Valves asymmetrical. Left valve rounded, longer and wider than right valve. Saccular process double curved, half as long as valve length. Right valve elongate. Saccular process rod-like, with small protrusion just before tip. Uncus narrow and short. Tegumen bilobed. Juxta wide, tapering towards tip, with two asymmetrical, slender anellus arms. Vinculum arched, narrow. Aedeagus slightly curved, with delicate sclerotized ridges. No apparent cornuti.

Female genitalia. Ostium excavated. Antrum double funnel shaped, with basally two longitudinal sclerites. Ductus bursae very short. Bursa copulatrix vesicular, short, without signum. Ductus seminalis long, 2½ x bursa copulatrix, with twisted, and widened tip. Apophyses anteriores absent. Apophyses posteriores 3-4 x papillae anales. Papillae anales with basal sclerotized ribbon.

ECOLOGY. The moth flies in March, April and November, at an altitude of 1800 – 1900 meters. The hostplant is *Ageratina dendroides* (Spreng.) R.M. King & H. Rob. (Asteraceae).

DISTRIBUTION. Ecuador: Zamora-Chinchipec.

ETYMOLOGY. The species is named after the collector and breeder of this species, to honour his field work in southern Ecuador, dr. Florian Bodner.

***Hellinsia cajas* Gielis sp. n.**

Fig. 10, 34.

MATERIAL. Holotype ♂. Ecuador, Azuay, PN Cajas, Laguna Llaviuco, 2°50'38"S 79°8'35"W, 3225 m, 5.X.2002 (C. & F.K. Gielis), gent CG 6721 (CG).

DIAGNOSIS. Group: C05. Left saccular process rather wide, gradually tapering, with waved appearance, tip bent outwards. Right valve with sacculus blunt, centrally positioned in valve. These shapes differentiate the species from other species in this group.

DESCRIPTION. Wingspan 23 mm. Head appressedly scaled. Face and frons dark ferruginous-brown, between base of antennae ochreous-grey. Palps as long as eye-diameter, slightly curved up, ochreous-grey with faint pale brown ring at termen of second lobe, third lobe short. Antennae longitudinally scaled ochreous-grey and dark brown, shortly ciliated. Collar with erect grey-brown scales. Thorax, tegulae, mesothorax and abdomen pale brown-ochreous. Legs ochreous-white. Hind legs with two pairs of asymmetrical spurs, lateral spurs shorter than medial spurs, and proximal pair longer than distal pair.

Fore wings cleft from 2/3, ochreous-white. Markings brown: dash from wing base to just before base of cleft, gradually increasing in numbers of scales and ending obliquely; costal dash above base of cleft; in first lobe cen-

trally longitudinal group of scales, spot at dorsum at 1/5, and spot at anal region; second lobe with faint dash from base of cleft to anal area; some scattered scales at dorsum near base of cleft. Fringes pale grey-ochreous, with greyish patches from apex of first lobe to anal region; first lobe in middle of dorsum; and second lobe in terminal half of costa. Underside pale grey-brown, with ochreous costal line.

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

Male genitalia. Left valve with small pronounced but blunt tip, wider than right valve. Saccular process 7/12 of valve length, basally extended to anellus; distal part waved in shape, tip bent out ventrally. Right valve with pronounced longer and more acute tip. Saccular process centrally positioned, blunt and rather short. Uncus tapering, moderately long. Juxta blunt, with asymmetrical anellus arms. Vinculum arched. Aedeagus almost straight, acute tipped. No cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in October, at an altitude of 3225 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Azuay.

ETYMOLOGY. The species is named after the park of its occurrence: Parque Nacional Cajas, in Ecuador.

***Hellinsia loja* Gielis sp. n.**

Fig. 11, 35.

MATERIAL. Holotype ♂, Ecuador, Loja, 10 km SE Loja, PN Podocarpus, Cajanuma Ranger Stt., 4°6'58"S 79°10'19"W, 2850 m, 7.X.2002 (C. & F.K. Gielis), gent CG 6723 (CG).

DIAGNOSIS. Group: C05. Left saccular process curved, just under 2/3 of valve length. Right valve with single narrow rod shape.

DESCRIPTION. Wingspan 29 mm. Head appressedly scaled, ochreous-brown, between base of antennae pale ochreous-yellow. Collar pale brown. Palps pale yellow-ochreous, slender, protruding, as long as eye-diameter. Antennae pale ochreous, ciliated. Thorax, tegulae, mesothorax and abdomen pale ochreous. Legs pale yellow. Hind legs with two pairs of asymmetrical spurs, lateral spurs shorter than medial spurs, and proximal pair longer than distal pair.

Fore wings cleft from 2/3, pale ochreous-yellow. Markings brown: a poor defined pale brown dash along costa from wing base to middle of first lobe; dash from middle of cell to base of cleft; diffuse scattered scales along basal part of dorsum. Fringes pale grey. Underside basally brown, towards termen gradually turning ochreous.

Hind wings and fringes very pale ochreous-yellow. Underside as fore wing. Venous scales ferruginous-orange, in double row, costal row longer.

Male genitalia. Left valve slightly longer and wider than right valve. Left saccular process curved, just under 2/3 of valve length. Right valve with single narrow rod shape. Uncus rather short, curved. Tegumen bilobed. Juxta broad, with pair of asymmetrical anellus arms. Vinculum arched, rather broad. Aedeagus slightly curved, terminal half gradually narrowing. No cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in October, at an altitude of 2850 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Loja.

ETYMOLOGY. The species is named after the province of Loja, the collecting locality of this species

***Hellinsia paraguariae* Gielis sp. n.**

Fig. 12, 36.

MATERIAL. Holotype ♂, Paraguay, Paraguari, Sapucay, 8.III.1997 (U. Drechsel), gent CG 6758 (CG). Paratype ♂, Paraguay, Gualra, Melgarejo, 14.IV.1994 (U. Drechsel), gent CG 6762 (CG).

DIAGNOSIS. Group: C05. Sacculus in left valve just over 1/3 of valve length, slender, curved, base wide and with three small processes. Sacculus in right valve rod with acute tip, and knob-like widened at 2/5.

DESCRIPTION. Wingspan 15 mm. Head appressedly scaled, pale ferruginous; between base of antennae white. Palps pale ferruginous, protruding, 1½ x eye-diameter. Antennae pale ferruginous, with dorsally longitudinal row of white scales, ciliated. Collar pale ferruginous, with long, erect, bifid scales. Thorax, tegulae, and abdomen pale ferruginous-white. Hind legs grey-white, with two pairs of unequal spurs; proximal pair longer than distal pair and medial spurs longer than lateral spurs.

Fore wings cleft from 2/3, pale ochreous. Markings brown: spot at base of cleft; first lobe with costal spots at middle and 3/4, apically and at anal region; second lobe with spots apically mid-terminal, at anal angle, and dorsally just before anal region. Fringes ochreous-grey. Underside brown, towards apices gradually turning ochreous; spots as above but less distinctly marked.

Hind wings and fringes in first and second lobe pale ferruginous-ochreous; third lobe ochreous. Underside as in fore wing. Venous scales ferruginous, in double row, costal row longer.

Male genitalia. Valves asymmetrical. Left valve sacculus just over 1/3 of valve length, slender, curved, base wide and with three small processes. Right valve sacculus as rod with acute tip, and knob-like widened at 2/5. Uncus short, slender, curved. Tegumen bilobed. Juxta with relatively short asymmetrical anellus arms. Vinculum arched, centrally slightly widened. Aedeagus straight, tip acute. No cornuti.

Female genitalia. Unknown.

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

DISTRIBUTION. Paraguay: Paraguari, Gualra.

ETYMOLOGY. The species is named after the province of collecting: Paraguari.

***Hellinsia ascensio* Gielis sp. n.**

Fig. 13, 37.

MATERIAL. Holotype ♂, Ecuador, Napo, 15 km SE Cosanga, Cocodrilo, 0°38'56"S 77°47'34"W, 1850 m, 30.IX.2002 (C. & F.K. Gielis), gent CG 6402 (CG).

DIAGNOSIS. Group: C09. Left valve with saccular spine, slightly curved near tip, of between 1/3 and 2/3 of valve

length, basally with sclerotized ridge. Right valve with saccular processes: basally small knob, terminally small hook.

DESCRIPTION. Wingspan 15 mm. Head appressedly scaled, crown and face pale ferruginous, between base of antennae shining white. Palps pale ferruginous, slender, protruding, as long as eye-diameter. Antennae pectinate. Thorax, tegulae, mesothorax and abdomen pale ochreous. Hind legs pale ochreous, terminal half of femur and tarsal segments pale grey-brown; with two asymmetrical pairs of spurs, spurs pale ochreous with basally broad and at tip narrow pale grey-brown band, medial spurs longer than lateral spurs and proximal pair longer than distal pair.

Fore wings cleft from 2/3, ochreous-white. Markings dark brown: longitudinal costal spot well before and just beyond base of cleft; oblique spot before base of cleft; first lobe with costal spot at 3/4, apex and anal region; second lobe with spots at apex, mid-termen and anal angle, and a longitudinal dash from termen between apex and mid-terminal spot, progressing 1/3 of length of second lobe; at 2/3 of dorsum. Diffuse pale brown scales along costa, apically in first lobe, and less intense apically in second lobe. Fringes pale ferruginous in cleft and along second lobe; brown patches at termen, and basally from anal spot in first lobe, and at apex of second lobe. Underside dark brown at wing base, gradually turning pale ferruginous towards wing tips; markings as above.

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

Male genitalia. Valves asymmetrical, left valve longer and rounder than right valve. Left valve with saccular spine, slightly curved near tip, of between 1/3 and 2/3 of valve length, basally with sclerotized ridge. Right valve with saccular processes: basally small knob, terminally small hook. Uncus curved, 2/3 of tegumen. Tegumen bilobed. Juxta blunt, Anellus arms asymmetrical. Vinculum waved, narrow. Aedeagus mildly curved, with oblique tip; no apparent cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in September, at an altitude of 1580 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Napo.

ETYMOLOGY. The name of the species *ascensio* (=ascending), refers to the rising winds from the Amazon forests, causing heavy rains along the eastern margins of the Andean mountains.

***Hellinsia callefloridae* Gielis sp. n.**

Fig. 14, 38, 53.

MATERIAL. Holotype ♂, Paraguay, Gualra, Calle Florida, 27.VIII.1994 (U. Drechsel), gent CG 6772 (CG). Paratypes: 3 ♀♀, Paraguay, Paraguari, Sapucay, 25-31.I.1997, 1-3.IV.1994, 12.VIII.1995 (U. Drechsel) (CG); 1 ♀, Paraguay, Central, Asuncion, Botanical Gardens, 30.V.1996 (U. Drechsel) (CG); 1 ♀, Paraguay, Gualra, Melgarejo, 23.IV.1994 (U. Drechsel), gent CG 6778 (CG).

DIAGNOSIS. Group: C09. Left valve with sacculus originating beyond middle of valve; sacculus over 1/3 of valve length, curved, basally widened. Right valve with saccular process from middle; curved rod, with spine in middle, and near tip of

valve separate spine. Species resembles *H. glochinias* Meyrick in wing pattern, but differs in the male genitalia by the structures in the right valve, and in female genitalia by the extended sclerotized patches of apophyses posteriores and the trapezoid shaped antrum.

DESCRIPTION. Wingspan 19-22 mm. Head appressedly scaled, pale ferruginous, between base of antennae white. Palps grey-white, slender, protruding, as long as eye-diameter. Antennae white-ochreous, segments terminally pale ferruginous, ciliated. Collar pale ferruginous, with long, erect, bifid scales. Thorax, tegulae and abdomen pale ferruginous; mesothorax and abdomen dorsally grey-white, with central narrow brown line on abdominal segments. Hind legs white-ochreous, with pale ferruginous scale tuft at 2/5 of tibiae, and two pairs of asymmetrical spurs. Proximal spur pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from 3/5, pale ferruginous-ochreous. Markings brown: basally and parallel to dorsum longitudinal spot; spot in discus; triangular spot at base of cleft extending along dorsum of first lobe; first lobe with longitudinal spot just beyond base of cleft, costally at 2/3, apically, and at anal region; second lobe with spots apically and at anal region. Fringes grey, but for ochreous patches at anal angle of first lobe and at apex and anal angle of second lobe. Underside brown, gradually turning ochreous towards tip of lobes.

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

Variation.—The species shows considerable variation in the wing colour, the holotype being the pale form, whereas the other specimens show a range to dark brown. Wing pattern consistent.

Male genitalia. Valves asymmetrical. Left valve with sacculus originating beyond middle of valve; sacculus over 1/3 of valve length, curved, basally widened. Right valve with saccular process from middle; curved rod, with spine in middle and a separate spine near tip of valve. Uncus moderate, slender. Tegumen bilobed. Juxta basally wide, with pair of small, asymmetrical anellus arms. Vinculum arched, narrow. Aedeagus straight, rather narrow. No cornuti.

Female genitalia. Ostium oblique, centrally positioned. Antrum trapezoid, abruptly progressing into ductus bursae. Ductus bursae gradually progressing into vesicular bursa copulatrix. No obvious ductus seminalis. No signa. Lamina ante-vaginalis large triangular plate, covering ostium. Apophyses anteriores absent. Apophyses posteriores 4 x papillae anales, distal half in shape of sclerotized plate, proximal half slender.

ECOLOGY. The moth flies in January, April, May and August. Hostplant unknown.

DISTRIBUTION. Paraguay: Central, Gualra, Paraguari.

ETYMOLOGY. The species is named after the collecting site of the holotype: Calle Florida, in Paraguay.

***Hellinsia longeanellus* Gielis sp. n.**

Fig. 15, 39, 54.

MATERIAL. Holotype ♂: Paraguay, alto Paraguay, 60 km S Chovoreka, 5.VI.1996 (U. Drechsel), gent CG 6757 (CG). Paratypes: 1 ♂, same locality, 16.V.1995 (U. Drechsel), gent CG 6753 (CG); 1 ♀, Paraguay, Paraguari, Sapucay, 23.III.

1996, 1.V.1994 (U. Drechsel), gent CG 6754, 6767 (CG); 2 ♂♂, Paraguay, Gualra, Melgarejo, 27.V.1994, 28.XI.1994 (U. Drechsel) (CG); 1 ♂, 1 ♀, Paraguay, Gualra, Calle Florida, 9.IX.1994 (♂), 15.IX.1994 (♀) (U. Drechsel) (CG); 1 ♂, Paraguay, Caazapa, 10 km NNW Taval, 15-20.X.1995 (U. Drechsel) (CG); 1 ♂, Paraguay, Caaguazu, Tres Corrajes, 17-20.XI.1997 (U. Drechsel) (CG).

DIAGNOSIS. Group: D01. Left valve with long and curved saccular spine, extending beyond tip of valve. Right valve without saccular process. Species closely resembles *H. mon-teverde* Gielis, but differs in less distinct wing pattern, male genitalia with very long anellus arms, vinculum shape, and aedeagus with numerous minute spines shaping a cornutus.

DESCRIPTION. Wingspan 15-18 mm. Head appressedly scaled, grey-brown, between base of antennae white. Palps grey-brown, mildly curved, as long as eye-diameter. Antennae greyish, segments terminally grey-brown, ciliated. Thorax and abdomen pale grey-brown, tegulae and mesothorax grey-white. Hind legs grey-white, with two pairs of unequal spurs, at spur base small brush of scales; proximal spurs longer than distal spurs and medial spurs longer than lateral spurs.

Fore wings cleft from just beyond middle, pale ochreous-brown. Markings brown: scattered scales at end of discal cell; spot around base of cleft; first lobe with large costal spot at 1/3, smaller spot at 2/3, apical and at anal region; second lobe small spots mid-terminal, and at anal angle. Fringes pale ochreous, with brown patches at base of cleft, at anal angle of both lobes, and second lobe at mid-termen. Underside brown, gradually turning ochreous in lobes, with spots as above.

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

Male genitalia. Valves asymmetrical. Left valve with long and curved saccular spine, extending beyond tip of valve. Right valve without saccular process. Uncus slender, curved. Tegumen bilobed. Juxta basally blunt, with long, slender, asymmetrical anellus arms. Vinculum mildly arched. Aedeagus almost straight, with field of minute spiculation.

Female genitalia. Ostium centrally positioned. Ostium flat. Antrum gradually funneling towards ductus bursae, shorter than wide, with pair of longitudinal sclerites. Ductus bursae as long as antrum. Bursa copulatrix with narrow top half and vesicular ending. Ductus seminalis long, slender, 2 x bursa copulatrix. Lamina ante-vaginalis as narrow ridge, with lateral short apophyses anteriores. Apophyses posteriores 1½ x papillae anales.

ECOLOGY. The moth flies in March, May, June, September, October and November. Hostplant unknown.

DISTRIBUTION. Paraguay: Paraguari, Gualra, Caazapa, Caaguazu.

ETYMOLOGY. The name, *longeanellus*, reflects the (*longe* = long) long anellus arms of the species.

***Hellinsia hamadryadis* Gielis sp. n.**

Fig. 16, 40.

MATERIAL. Holotype ♂, Ecuador, Napo, 15 km SE Cosanga, Cocodrilo, 0°38'56"S 77°47'34"W, 1850 m, 25.X.2002 (C. & F.K. Gielis), gent CG 6731 (CG).

DIAGNOSIS. Group: D03. Left valve with wavy saccular process, longer than 2/3 of valve length. Right valve with small hooked saccular process.

DESCRIPTION. Wingspan 22mm. Head appressedly scaled, face and crown pale brown mixed with white scales, white between base of antennae and along collar. Collar ferruginous-brown, with erect, bifid scales. Palps pale ochreous-white, slightly curved, protruding 1½ x eye-diameter. Antennae pale grey-brown and grey-brown scaled, ciliated. Thorax, tegulae, mesothorax and abdomen mixed ochreous-brown and pale brown. Hind legs broken off.

Fore wings cleft from 5/9, milky white, rather slender. Markings brown: large dorsal spot up to 1/3 of dorsum and reaching up to half wing width; longitudinal spot in discus, gradually progressing to base of cleft where it widens into costal half of oblique double spot just before base of cleft; first lobe with continuation of oblique spot towards costa and stretching as wedge towards anal angle, between base of cleft and costa longitudinal slightly darker line, costal spot at 3/4, apically and at anal angle; second lobe completely brown, darker at anal angle. Fringes dark brown-grey, along dorsum up to 1/4 of second lobe ochreous. Underside brown, ochreous before base of cleft and in first lobe.

Hind wings and fringes pale brown-grey. Underside brown, first lobe ochreous. Venous scales bright ferruginous-orange, in double row, costal row longer.

Male genitalia. Valves asymmetrical, Left valve wider. Left valve with wavy saccular process, longer than 2/3 of valve length. Right valve with small hooked saccular process. Uncus curved, 2/3 of tegumen. Tegumen bilobed. Juxta simple, with two almost identical anellus arms. Vinculum narrow, with little central widening. Aedeagus straight, tip blunt; no apparent cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in October, at an altitude of 1850 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Napo.

ETYMOLOGY. The name *hamadryadis* (=wood nymph) refers to the locality of collecting, the rainforest, and the slender wings with the whitish and brown pattern.

***Hellinsia cervicalis* (Meyrick, 1932)**

Pterophorus cervicalis Meyrick, 1932: 251. Bolivia.

MATERIAL. 1♂, Paraguay, Gualra, Calle Florida, 27-31. XII.1997 (U. Drechsel), gent CG 6760 (CG). **New for Paraguay.**

DIAGNOSIS. Group: E05 (Gielis, 2011).

***Hellinsia tenera* Gielis sp. n.**

Fig. 17, 41, 55.

MATERIAL. Holotype ♂. Paraguay, Paraguari, Sapucay, 3.II.1996 (U. Drechsel) (CG). Paratypes: 4 ♂♂, 4 ♀♀, same locality, 4-8.II.1995, 9-18.IV.1993, 16.IV.1994, 12.VIII.1995, 19.VIII.1994, 5.XI.1991, 13.XII.1996 (U. Drechsel), gent CG 6775 (♂), 2479 (♀), 6779 (♀) (CG); 1 ♂, Paraguay, Gualra, Tacuarita, 14.I.1994 (U. Drechsel) (CG).

DIAGNOSIS. Group: H02. Left valve with saccular process strongly angulated at base, and terminally acutely narrowing

into delicate tip. Right valve with saccular process shaped as knob with two minute spines.

DESCRIPTION. Wingspan 13-16 mm. Head appressedly scaled, pale ferruginous, between base of antennae grey-white. Palps ferruginous-ochreous, slender, 2/3 of eye-diameter. Antennae ochreous-ferruginous, distal half of segments pale ferruginous, ciliated. Proximal half of thorax and abdomen ochreous, distal half of thorax, tegulae and mesothorax ferruginous. Hind legs pale ochreous, with two pairs of unequal spurs, proximal pair longer than distal pair, and medial spurs longer than lateral spurs.

Fore wings cleft from 3/5, ochreous; ferruginous dorsally at wing base, around spot at base of cleft, and in first lobe dorso-basally. Markings brown: spot in discus; spot just before base of cleft; first lobe with costal spots just beyond base of cleft and smaller one in middle, apical spot, and along dorsum just beyond base of cleft; second lobe with apical spot and at anal angle. Fringes dark grey. Underside grey-brown, along costa and in terminal half of lobes more ochreous tinged.

Hind wings and fringes brown-grey. Underside grey-brown. Venous scales ferruginous-black, in single row, basal part of row with numerous scales.

Male genitalia. Valves asymmetrical. Left valve with saccular process strongly angulated at base, and terminally acutely narrowing into delicate tip. Right valve with saccular process shaped as knob with two minute spines. Uncus moderately long, rather wide. Tegumen bilobed. Juxta with pair of almost symmetrical anellus arms. Vinculum narrow, strongly arched. Aedeagus slightly curved. No cornutus.

Female genitalia. Ostium left of centre positioned, rounded. Antrum short, as long as wide, with pair of longitudinal sclerites. bursa copulatrix originating from antrum, simple, vesicular. No signum. Ductus seminalis half length of bursa copulatrix, vesicular. Apophyses anteriores absent. Apophyses posteriores 3 x papillae anales.

ECOLOGY. The moth flies in January, February, April, August, November, and December. Hostplant unknown.

DISTRIBUTION. Paraguay: Paraguari, Gualra.

ETYMOLOGY. The Latin *tenera* (*tener* = slender) reflects the sudden thinning of the tip of the left saccular process.

***Hellinsia caligo* Gielis sp. n.**

Fig. 18, 42.

MATERIAL. Holotype ♂, Ecuador, Tungurahue, 20 km E Baños, San Francisco, 1°24'39"S 78°14'23"W, 1290 m, 26. IX.2002 (C. & F.K. Gielis), gent CG 6725 (CG).

DIAGNOSIS. Group: I08. Left valve with sacculus 5/8 of valve length, mildly curved, at 1/3 strongly and abruptly widened, with acute tip. Right valve with saccular process poorly sclerotized, basally wide with 60° tip, distally blunt rod.

DESCRIPTION. Wingspan 16,5 mm. Head appressedly scaled, crown and face pale ochreous, between base of antennae white. Collar very pale ochreous, with erect, bifid scales. Antennae pale ochreous, ciliated. Thorax, tegulae, mesothorax and abdomen pale ochreous-white, abdomen dorso-laterally with pale ochreous line. Hind legs whitish, at base of spurs some grey-brown scales; with two pairs of spurs, medial spurs longer than lateral spurs, and proximal pair

shorter than distal pair; spurs whitish with pale grey-brown ring basally and at tip.

Fore wings cleft from middle, pale grey-white. Markings pale grey-brown: diffuse scaling along costa from base to just beyond base of cleft; small spot in discus; at dorsum scattered scales at 1/4, and well developed spot in middle between wing base and base of cleft; oblique spot just before base of cleft, best expressed and extended at dorsal half; first lobe with costal line just beyond base of cleft, in middle and just before apex, dorsum with dash just beyond base of cleft which reaches costal line and at 4/5; second lobe with longitudinal spot at 1/3, small spot at 2/3 and at apex. Fringes pale grey-brown; darker tinged in terminal 1/3 of cleft and at mid dorsum of second lobe. Underside with diffuse dark brown scales, less intense at terminal half of lobes.

Hind wings and fringes very pale brown-grey. Underside as in fore wing. Venous scales dark ferruginous-brown, in double row, costal row longer.

Male genitalia. Valves asymmetrical, left valve longer and wider than right valve. Left valve with sacculus 5/8 of valve length, mildly curved, at 1/3 strongly and abruptly widened, with acute tip. Right valve with saccular process poorly sclerotized, basally wide with 60° tip, distally blunt rod. Uncus as long as tegumen, slender. Tegumen bilobed. Juxta wide; anellus arms gradually narrowing, acutely tipped, slightly asymmetrical. Vinculum narrow, arched. Aedeagus straight, with widened and spatulate tip; no apparent cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in September, at an altitude of 1290 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Tungurahue.

ETYMOLOGY. The name *caligo* (= thick fog) refers to the dense clouds, formed in the lower parts of the rain forest, which are pushed up the Andean mountains.

***Hellinsia cuenca* Gielis sp. n.**

Fig. 19, 43.

MATERIAL. Holotype ♂, Ecuador, Azuay, PN Cajas, Laguna Llaviuco, 2°50'38"S 79°8'35"W, 3225 m, 5.X.2002 (C. & F.K. Gielis), gent CG 6724 (CG).

DIAGNOSIS. Group: K08. Left sacculus with pair of pronounced spines. Right valve with small, triangular knob, and short rod.

DESCRIPTION. Wingspan 20 mm. Head appressedly scaled, ochreous-brown. Between base of antennae ochreous. Palps ochreous-white, protruding, as long as eye-diameter. Antennae with longitudinally arranged ochreous and brown scales, pectinate. Thorax, tegulae, mesothorax and abdomen pale ochreous-brown; rostral half of thorax and tegulae darker tinged. Legs pale ochreous-brown. Hind legs with two pairs of spurs, lateral spurs shorter than medial spurs, proximal pair slightly longer than distal pair.

Fore wings cleft from 5/9, pale ochreous-brown. Markings brown: small spot in centre of cell; spot just before base of cleft; first lobe with costal spot just beyond base of cleft; second lobe with dashes at apex and anal region; and diffusely scattered scales along costa and in dorsal part of first lobe. Fringes dark grey, paler in basal half of cleft and dorsum. Underside brown, with pale costal streak.

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

Male genitalia. Left valve slightly longer and wider than right valve. Left sacculus with pair of pronounced spines. Right valve with small, triangular knob, and short rod. Uncus moderate, curved. Tegumen bilobed. Juxta rather slender, with asymmetrical anellus arms. Vinculum rather broad, curved. Aedeagus curved, blunt tip. No cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in October, at an altitude of 3225 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Azuay.

ETYMOLOGY. The species is named after the city of Cuenca, situated near the collecting locality of this species.

***Hellinsia limariae* Gielis sp. n.**

Fig. 20, 44.

MATERIAL. Holotype ♂, Chile, Coquimbo (IV), Limari, 15 km NW Combarbala, 12.XI.2000 (C. & F.K. Gielis), gent CG 6789 (CG).

DIAGNOSIS. Group L03. Left valve with sacculus at base two small spines, wide basal half splitting into small, ventral vesicular process, and dorsal curved spine as long as basal wide part. Right valve with long rod ending in strongly curved, rather small hook.

DESCRIPTION. Wingspan 20 mm. Head appressedly scaled, face and collar ochreous-white, between base of antennae white. Palps 1½ x eye-diameter, slender, protruding, grey-white. Antennae basally faintly ringed: ochreous-white and pale brown; shortly ciliated. Thorax, tegulae, mesothorax and abdomen ochreous-white. Abdomen with row of small black dots centrally on dorsum, and at distal end of segments. Hind legs pale grey-white, towards base of spurs and distal half of tarsal segments pale grey; with two pairs of spurs of equal length, medial spurs longer than lateral spurs, pale grey-white with dark tip.

Fore wings cleft from 2/5, pale grey-white, costal half with faint ochreous tinge. Markings dark brown: faint costal streak before base of cleft; poorly defined scales at end of cell, small and oblique spot at base of cleft, and between these spots some scattered scales; first lobe with costal spot just beyond base of cleft and at 2/3, some scattered scales basally and in middle of lobe; second lobe with sparse dark scales, and minimal indication of spots apically, mid-terminally and at anal angle. Fringes pale ochreous-grey, slightly darker in cleft. Underside gradually changing from brown at wing base to pale brown-grey at apices.

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

Male genitalia. Valves asymmetrical, left valve wider than right valve. Left valve with sacculus at base with two small spines, wide basal half splitting into small, ventral vesicular process, and dorsal curved spine as long as basal wide part. Right valve with long rod ending in strongly curved, rather small hook. Uncus slender. Tegumen bilobed. Juxta blunt, with asymmetrical anellus arms. Vinculum arched. Aedeagus lost in preparation.

Female genitalia. Unknown.

ECOLOGY. The moth flies in November. Hostplant unknown.

DISTRIBUTION. Chile: Coquimbo.

ETYMOLOGY. The species is named after the district of its discovery: Limari, in the province of Coquimbo, Chile.

***Picardia delospilus* (Meyrick, 1921) comb. n.**

Pterophorus delospilus Meyrick, 1921: 421. Peru.

REMARKS.-After the review of the Afrotropical fauna (Gielis, 2011) it became clear that the present species, based on the morphology of the male genitalia and the wing pattern, has to be transferred to the genus *Picardia* Gibeaux, 1994.

***Adaina ambrosiae* (Murtfeldt, 1880)**

Pterophorus ambrosiae Murtfeldt, 1880: 236. USA (Fl).

Pterophorus participatus Möschler, 1890: 346. Puerto Rico.

MATERIAL. 1 ♂, Paraguay, Gualra, Melgarejo, 23.IV.1994 (U. Drechsel), gent CG 6771 (CG). New for Paraguay.

***Adaina coquimboae* Gielis sp. n.**

Fig. 21, 45, 56.

MATERIAL. Holotype ♂, Chile, Coquimbo (IV), Elqui, 21 km SE Coquimbo, 30° 07'S 71° 10'W, 15.XI.2000 (C. & F.K. Gielis), gent CG 6794 (CG). Paratypes: 16 ♂♂, 9 ♀♀, Same locality and date (CG); 6 ♂♂, 1 ♀, Chile, Valparaíso (V), Petorca, 8 km N Pedegua, 18 km NNW Cabildo, 32° 17'S 71° 10'W, 9.XI.2000 (C. & F.K. Gielis), gent CG 6795 (♀) (CG); 5 ♂♂, 3 ♀♀, Chile, Coquimbo (IV), Choapa, 25 km N Il-lapel, 31° 25'S 71° 06'W, 11.XI.2000 (C. & F.K. Gielis) (CG); 1 ♂, Chile, Coquimbo (IV), Limari, 40 km NE Ovalle, Monumento Natural Pichasca, 30° 21'S 70° 51'W, 13.XI.2000 (C. & F.K. Gielis) (CG).

DIAGNOSIS. The species is characterized by the small wing-span; distinct spots on fore wings: at base of cleft, two large ones at costa of first lobe, apically at both lobes and indistinct spots at dorsum of both lobes; medium sized, straight saccular process in left valve, and in right valve saccular process in shape of small hook.

DESCRIPTION. Wingspan 9-12 mm. Head appressedly scaled, grey-brown, between base of antennae pale ochreous-brown. Palps slender, protruding, ochreous-brown, as long as eye-diameter. Antennae faintly ringed pale ochreous-brown and pale brown, basal half ciliated, terminal half pectinate. Thorax, tegulae, mesothorax and abdomen pale ochreous-brown. Hind legs bone-white; with two unequal pairs of spurs, medial spurs shorter than lateral spurs, and proximal pair longer than distal pair.

Fore wings cleft from 3/5, pale ochreous-brown. Markings black-brown: diffuse scaling along costa of wing; oblique at base of cleft; first lobe at 1/5 and 3/5 of costa, apical, and two indistinct spots at dorsum; second lobe apical and two indistinct at dorsum. Fringes pale ochreous-brown. Underside brown, turning paler towards apices of both lobes; distinct costal spot at 1/5 of first lobe, and indistinct markings as above.

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

Male genitalia. Valves asymmetrical. Left valve with straight saccular spine, with length of just over half valve

length. Right valve with small saccular hook. Uncus curved, rather long. Tegumen bilobed. Juxta broad, with two asymmetrical anellus arms. Vinculum arched, medium width. Aedeagus mildly curved, blunt tip. No cornutus.

Female genitalia. Ostium left laterally positioned. Ostium flat. Antrum gradually narrowing, with pair of longitudinal sclerites. Ductus bursae narrow, as long as antrum. Bursa copulatrix vesicular. Proximal margin of 8th sternite with narrow sclerotized margin. Apophyses anteriores rather blunt and short, 1/3 of papillae anales. Apophyses posteriores just under 3x papillae anales.

ECOLOGY. The moth flies in November. Hostplant unknown.

DISTRIBUTION. Chile: Coquimbo, Valparaíso.

ETYMOLOGY. The species is named after the province where it occurred in abundance: Coquimbo.

***Adaina everdinae* Gielis, 1991**

Adaina everdinae Gielis, 1991: 75. Argentina.

MATERIAL. 1 ♂, Ecuador, Zamora-Chinchipe, 22 km E Loja, PN Podocarpus, San Francisco Ranger Station, 2200 m, 9.X.2002 (C. & F.K. Gielis), gent CG 6733 (CG). New for Ecuador.

***Adaina invida* (Meyrick, 1908)**

Marasmarcha invida Meyrick, 1908: 493. Brazil (SP).

MATERIAL. 1 ♀, Paraguay, Gualra, Melgarejo, 23.IV.1994 (U. Drechsel), prep CG 6883 (CG). New for Paraguay.

***Adaina quieta* Gielis sp. n.**

Fig. 22, 46, 57.

MATERIAL. Holotype ♂, Paraguay, Paraguari, Sapucay, 25-31.I.1997 (U. Drechsel), gent CG 6764 (CG). Paratypes: 3 ♂♂, 3 ♀♀, same locality, 25-31.I.1997, 8.III.1997, 1-3.IV.1994, 5-8.IV.1996, 1.v.1994 (U. Drechsel), gent 6768 (♀), (CG); 1 ♂, 1 ♀, Paraguay, Alto Paraguay, 60 km S Cerro Chovoreka, 16.V.1995 (U. Drechsel) (CG); 1 ♀, Paraguay, Gualra, Melgarejo, 28.VII.1994 (U. Drechsel) (CG).

DIAGNOSIS. The species belongs to the group: *Adaina scale-siae* and *A. ambrosiae*, and can hardly be separated from these species in external characteristics. In the male genitalia left valve with curved saccular process, in contrast to the compact sacculus in the other species of the group. In the female genitalia the main difference is the presence of a well-developed lamina ante-vaginalis, centrally with short, bifid extension.

DESCRIPTION. Wingspan 14-15 mm. Head appressedly scaled, pale ferruginous, between base of antennae pale brown-ochreous. Palps grey-brown, second segment with lateral longitudinal brown line; protruding, slender, as long as eye-diameter. Antennae ochreous-brown, ciliated. Thorax, tegulae, mesothorax and abdomen ochreous-grey; abdomen with dark black-grey scales around segment 5. Hind legs ochreous, with dark scales terminally on tibiae and tarsal segments; with two unequal pairs of spurs, proximal pair longer than distal pair, and median spurs longer than lateral spurs.

Fore wings cleft from just beyond middle, grey-ochreous. Markings black-grey: spot in discus; faint spot at costa and dorsum just before base of cleft; longitudinal spot at base of cleft; first lobe with costal spots, large beyond base of cleft, smaller at 3/4 and 4/5, small apical dot and at anal region; second lobe small spots apically, at mid-termen and at

anal angle; and diffusely scattered scales on entire wing. Fringes ochreous-brown, with dark brown to black-brown patches: two at termen of first lobe, costally on second lobe and three at termen of second lobe. Underside brown.

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

Male genitalia. Valves asymmetrical. Left valve elongate, with slender, curved saccular process of just over 1/3 of valve length, originating from middle of valve. Right valve with ribbon-like saccular and cucullar process, which fuse and extend near tip of valve. Uncus straight, slender, short. Tegumen bilobed. Juxta blunt, with pair of asymmetrical anellus arms. Vinculum moderately wide, slightly waved. Aedeagus almost straight, simple. No cornutus.

Female genitalia. Ostium positioned left from midline, with pair of sclerotized extensions: left acute, right bifid. Antrum as long as wide, simple. Ductus bursae 2 x antrum, longitudinally with numerous wavy ridges. Bursa copulatrix vesicular, no signum. Lamina ante-vaginalis "V"-shaped, wide, with centrally small bifid extension. Anterior apophyses absent. Posterior apophyses 1½ x papillae anales.

ECOLOGY. The moth flies in January, March, April, May, and July. Hostplant unknown.

DISTRIBUTION. Paraguay: Paraguari, Gualra, Alto Paraguay.

ETYMOLOGY. The name *quieta* (= quiet, dormant), reflects the situation of this species "hidden" in a group of specimens, pre-identified as *A. scalesiae* and *A. ambrosiae*.

***Adaina recta* Gielis sp. n.**

Fig. 23, 58.

MATERIAL. Holotype ♀. Paraguay, Paraguari, Sapucay, 25-31.I.1997 (U. Drechsel), gent CG 6774 (CG).

DIAGNOSIS. The species is characterized by a poorly developed spot at base of cleft, a well-developed costal spot, and particularly in female genitalia by well-developed, straight apophyses anteriores, which are as long as papillae anales.

DESCRIPTION. Wingspan 13 mm. Head appressedly scaled, pale brown, between base of antennae white-ochreous. Palps ochreous, protruding, slender, as long as eye-diameter. Antennae pale brown-ochreous, ciliated. Collar pale brown, with long, bifid, erect scales. Thorax ochreous, tegulae and abdomen pale ochreous. Abdomen dorsally with narrow, longitudinal brown line.

Fore wings cleft from just beyond middle, pale ochreous. Markings brown: scattered scales along costa and dorsum; ill-defined spot around base of cleft; first lobe with well-developed costal spot just beyond base of cleft, and spots at dorsum of first lobe subapically and at anal region; second lobe with spots apically, at mid-termen, and at anal angle. Fringes ochreous, at terminal area of first lobe grey. Underside brown, gradually turning ochreous in both lobes; markings as above.

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

Male genitalia. Unknown.

Female genitalia. Ostium left laterally positioned, almost flat. Antrum 1½ x longer than wide, with pair of longi-

tudinal, rather slender, sclerites. Ductus bursae very short, progressing into vesicular bursa copulatrix. No apparent ductus seminalis. No signum. Apophyses anteriores straight, stout rods, as long as papillae anales. Apophyses posteriores over 3 x papillae anales, with tip angulated.

ECOLOGY. The moth flies in January. Hostplant unknown.

DISTRIBUTION. Paraguay: Paraguari.

ETYMOLOGY. The name *recta* (= straight) reflects the presence of stout and straight apophyses anteriores.

***Adaina scalesiae* B. Landry, Roque & Matthews, 2004**

Adaina scalesiae B. Landry, Roque & Matthews, 2004: 294. Ecuador: Galapagos Islands.

MATERIAL. 1 ♂, Ecuador, Tungurahue, 20 km E Baños, San Francisco, 1290 m, 26.IX.2002 (C. & F.K. Gielis), gent CG 6732 (CG). New for continental South America.

***Adaina sinuari* Gielis sp. n.**

Fig. 24, 59.

MATERIAL. Holotype ♀, Ecuador, Loja, 10 km S Loja, P. N. Podocarpus, Cajanuma Ranger Station, 4°6'58"S 79°10'19"W, 2850 m, 8.X.2002 (C. & F.K. Gielis), gent CG 6735 (CG). Paratype ♀, same locality, 7.X.2002 (CG).

DIAGNOSIS. The species is characterized by the bright yellow colour, with densely scattered brown scales; in the female genitalia very large sinuate shaped apophyses anteriores are present, not seen in any other Neotropical species of *Adaina*.

DESCRIPTION. Wingspan 13-14 mm. Head appressedly scaled, crown and face pale brown, between base of antennae pale yellow. Palps pale yellow-white, protruding, 2 x eye-diameter. Antennae pale yellow-white, shortly ciliated. Collar pale brown, with long erect, bifid scales. Thorax, Tegulae, mesothorax and abdomen pale yellow. Abdomen dorsally with narrow, longitudinal, pale brown line. Hind legs pale yellow-white, with laterally on tibiae a narrow brown row of scales; with two pairs of spurs of unequal length, medial spurs longer than lateral spurs, and proximal pair longer than distal pair. Spurs pale yellow-white, densely but scatteredly covered with brown scales.

Fore wings cleft from just beyond middle; bright yellow. Markings brown: densely scaled along both costa and dorsum; spot at base of cleft; in first lobe costal spots just beyond base of cleft, and at 2/3, along basal half of dorsum row of scales, and small spot at 2/3, in central parts of first lobe diffuse scaling; second lobe scattered scales in centre, and spots at anal angle, middle of termen, and apex. Fringes brown-grey; in first lobe ochreous tinged at 2/3 of dorsum. Underside dark brown.

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

Male genitalia. Unknown.

Female genitalia. Ostium left laterally positioned; rounded. Antrum little longer than wide, with two longitudinal sclerites. Ductus bursae shorter than antrum. Bursa copulatrix gradually widening, vesicular; without signum. Ductus seminalis longer than bursa copulatrix, vesicular. Apophyses anteriores well-developed, wide and long, sinuate in shape, 1½ x – 2 x papillae anales. Apophyses posteriores 3½ x papillae anales.

ECOLOGY. The moth flies in October, at an altitude of 2850 meters. Hostplant unknown.

DISTRIBUTION. Ecuador: Loja.

ETYMOLOGY. The name *sinuari* (= bending itself) refers to the curved apophyses anteriores.

Singularia Arenberger, 1988

Singularia Arenberger, 1988: 87. Type species: *Alucita walsinghamsi* Fernald, 1898, by original designation and monotypy.

Chocophorus Gielis & Matthews-Lott, 1994: 161. Type species: *Alucita leptochorda* Meyrick, 1913, by original designation. **Syn. n.**

After studying specimens of the Nearctic *Singularia walsinghamsi* and the Neotropical species of the genus *Chocophorus* it became evident that these species belong to the same genus. The senior name of the genus reads: *Singularia* Arenberger, 1988.

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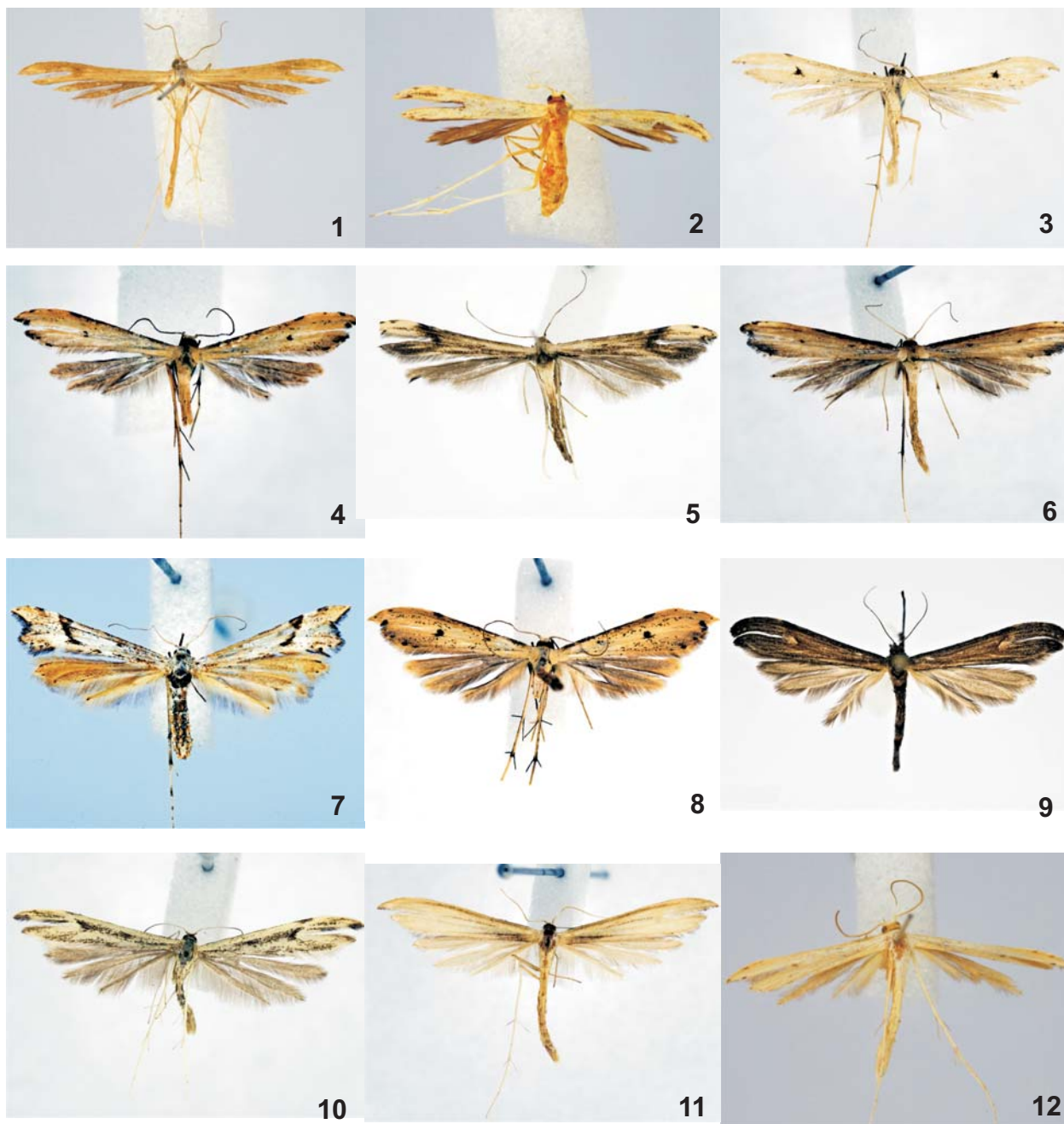


Fig. 1-12. Imago: 1. *Stenoptilia melgarejoae* Gielis, sp. n. Holotype. Paraguay, Gualra, Melgarejo, 14.IV.1994 (U. Drechsel), gent CG 6761 (CG). 2. *Hellinsia sapucayae* Gielis, sp. n. Holotype. Paraguay, Paraguari, Sapucay, 17-20.III.1995 (U. Drechsel), gent CG 6755 (CG). 3. *Hellinsia banosae* Gielis, sp. n. Paratype. Ecuador, Tungurahue, 20 km E Baños, San Francisco, 1°24'39"S 78°14'23"W, 1290 m, 21.X.2002 (C. & F.K. Gielis) (CG). 4. *Hellinsia cosangae* Gielis, sp. n. Holotype. Ecuador, Napo, 15 km SE Cosanga, Cocodrilo, 0°38'56"S 77°47'34"W, 1850 m, 25.X.2002 (C. & F.K. Gielis), gent CG 5966 (CG). 5. *Hellinsia llaviuco* Gielis, sp. n. Holotype. Ecuador, Azuay, PN Cajas, Laguna Llaviuco, 2°50'38"S 79°8'35"W, 3225 m, 5.X.2002 (C. & F.K. Gielis), gent CG 6720 (CG). 6. *Hellinsia sanlucasia* Gielis, sp. n. Holotype. Ecuador, Loja, 60 km N Loja, 5 km N San Lucas, 3°40'56"S 79°16'9"W, 2965 m, 10.X.2002 (C. & F.K. Gielis), gent CG 6738 (CG). 7. *Hellinsia jannitae* Gielis, sp. n. Paratype. Chile, Coquimbo (IV), Limari, 30 km NE Combarbala, 31° 03' S 70° 53' W, 1600 m, 17.XI.2000 (C. & F.K. Gielis) (CG). 8. *Hellinsia podocarpa* Gielis, sp. n. Holotype. Ecuador, Loja, 10 km SE Lopja, PN Podocarpus, Cajanuma Ranger Station, 4°6'58"S 79°10'19"W, 2850 m, 7.X.2002 (C. & F.K. Gielis), gent CG 6737 (CG). 9. *Hellinsia bodneri* Gielis, sp. n. Holotype. Ecuador, Zamora-Chinchipe, Reserva Biológica San Francisco, 03° 58.341'S 79° 04.535'W, 1907 m, e.l. *Ageratina dendroides* 14.III.2009 hatched 30.IV.2009 (F. Bodner), sample ? 09/2945, gent CG 6695 (CG). 10. *Hellinsia cajas* Gielis, sp. n. Holotype. Ecuador, Azuay, PN Cajas, Laguna Llaviuco, 2°50'38"S 79°8'35"W, 3225 m, 5.X.2002 (C. & F.K. Gielis), gent CG 6721 (CG). 11. *Hellinsia loja* Gielis, sp. n. Holotype. Ecuador, Loja, 10 km SE Loja, PN Podocarpus, Cajanuma Ranger Stt., 4°6'58"S 79°10'19"W, 2850 m, 7.X.2002 (C. & F.K. Gielis), gent CG 6723 (CG). 12. *Hellinsia paraguayariae* Gielis, sp. n. Holotype. Paraguay, Paraguari, Sapucay, 8.III.1997 (U. Drechsel), gent CG 6758 (CG).

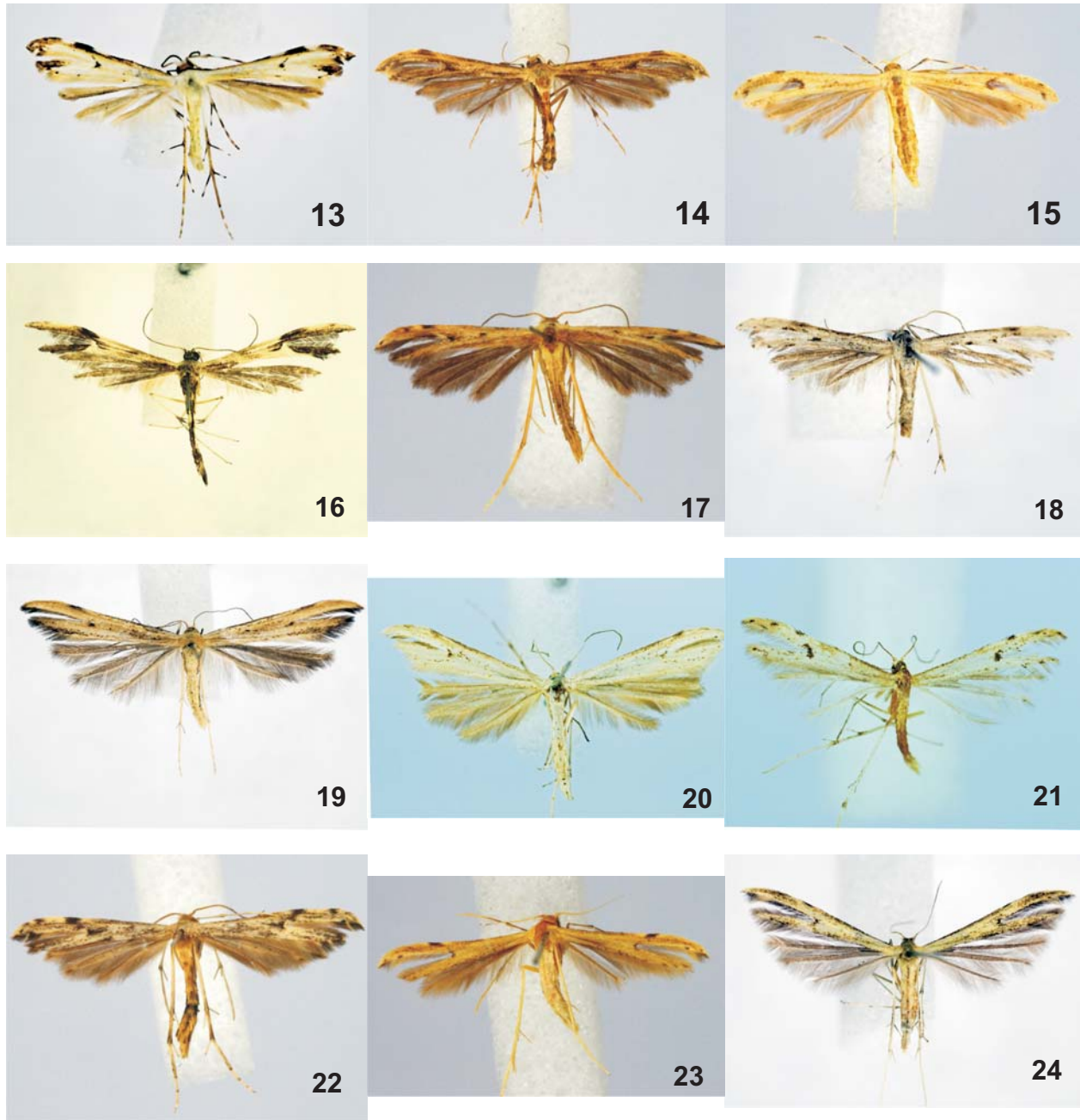


Fig. 13-24. Imago: **13.** *Hellinsia ascensio* Gielis, sp. n. Holotype. Ecuador, Napo, 15 km SE Cosanga, Cocodrilo, 0°38'56"S 77°47'34"W, 1850 m, 30.IX.2002 (C. & F.K. Gielis), gent CG 6402 (CG). **14.** *Hellinsia callefloridae* Gielis, sp. n. Holotype. Paraguay, Gualra, Calle Florida, 27.VIII.1994 (U. Drechsel), gent CG 6772 (CG). **15.** *Hellinsia longeanellus* Gielis, sp. n. Paratype. Paraguay, Paraguari, Sapucay, 23.III.1996 (U. Drechsel), gent CG 6754 (CG). **16.** *Hellinsia hamadryadis* Gielis, sp. n. Holotype. Ecuador, Napo, 15 km SE Cosanga, Cocodrilo, 0°38'56"S 77°47'34"W, 1850 m, 25.X.2002 (C. & F.K. Gielis), gent CG 6731 (CG). **17.** *Hellinsia tenena* Gielis, sp. n. Paratype. Paraguay, Paraguari, Sapucay, 3.II.1996 (U. Drechsel) (CG). **18.** *Hellinsia caligo* Gielis sp. n. Holotype. Ecuador, Tungurahue, 20 km E Baños, San Francisco, 1°24'39"S 78°14'23"W, 1290 m, 26.IX.2002 (C. & F.K. Gielis), gent CG 6725 (CG). **19.** *Hellinsia cuenca* Gielis, sp. n. Holotype. Ecuador, Azuay, PN Cajas, Laguna Llaviuco, 2°50'38"S 79°8'35"W, 3225 m, 5.X.2002 (C. & F.K. Gielis), gent CG 6724 (CG). **20.** *Hellinsia limariae* Gielis, sp. n. Holotype. Chile, Coquimbo (VI), Limari, 15 km NW Combarbala, 12.XI.2000 (C. & F.K. Gielis), gent CG 6789 (CG). **21.** *Adaina coquimboae* Gielis, sp. n. Holotype. Chile, Coquimbo (IV), Elqui, 21 km SE Coquimbo, 30° 07'S 71° 10'W, 15.XI.2000 (C. & F.K. Gielis), gent CG 6794 (CG). **22.** *Adaina quieta* Gielis, sp. n. Holotype. Paraguay, Paraguari, Sapucay, 25-31.I.1997 (U. Drechsel), gent CG 6764 (CG). **23.** *Adaina recta* Gielis, sp. n. Holotype. Paraguay, Paraguari, Sapucay, 25-31.I.1997 (U. Drechsel), gent CG 6774 (CG). **24.** *Adaina sinuari* Gielis, sp. n. Paratype. Ecuador, Loja, 10 km S Loja, P. N. Podocarpus, Cajanuma Ranger Station, 4°6'58"S 79°10'19"W, 2850 m, 7.X.2002 (C. & F.K. Gielis) (CG).

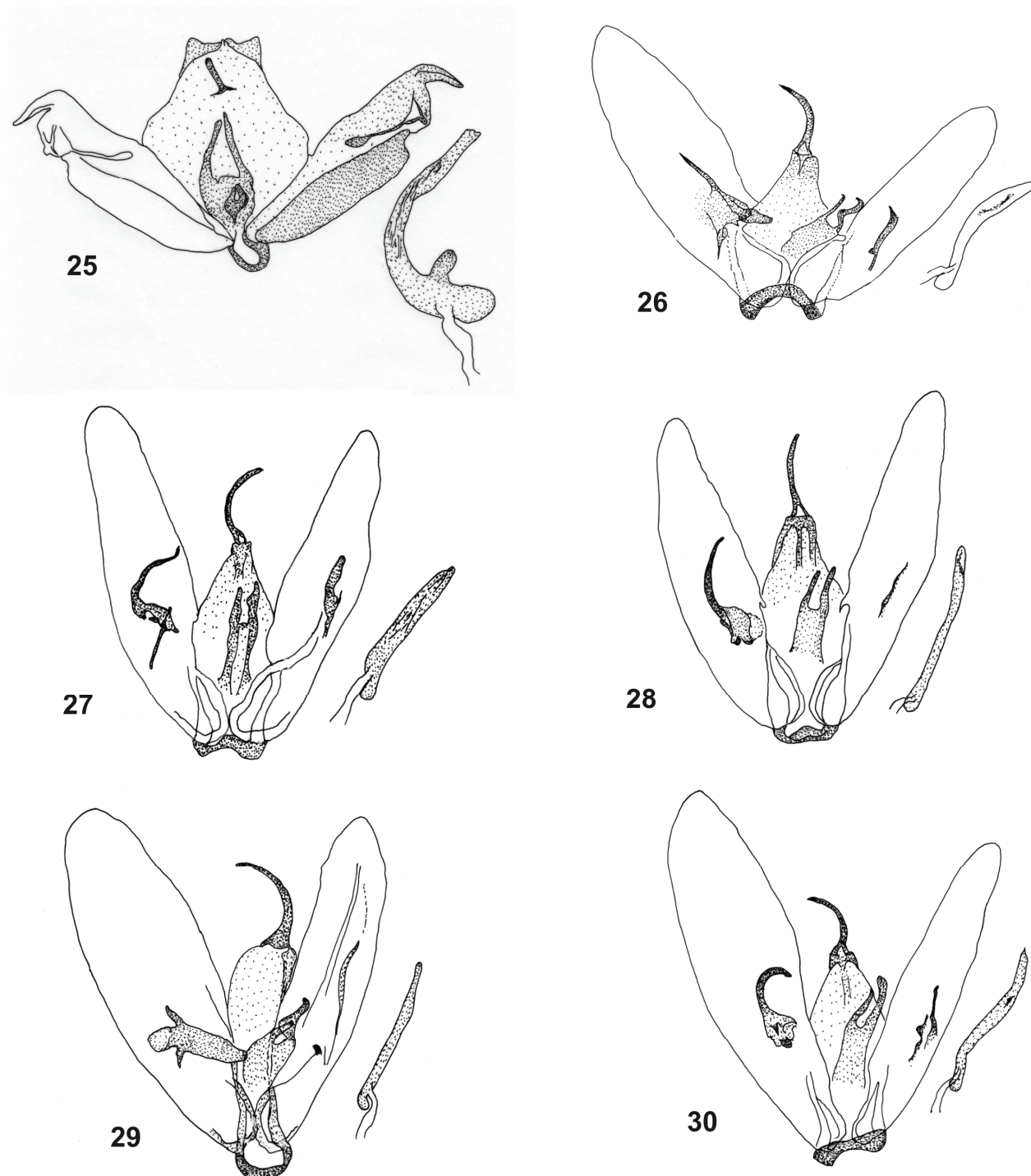


Fig. 25-30 Male genitalia: **25.** *Stenoptilia melgarejoae* Gielis, sp. n. Holotype. Paraguay, Gualra, Melgarejo, 14.IV.1994 (U. Drechsel), gent CG 6761 (CG). **26.** *Hellinsia sapucayae* Gielis, sp. n. Holotype. Paraguay, Paraguari, Sapucay, 17-20.III.1995 (U. Drechsel), gent CG 6755 (CG). **27.** *Hellinsia banosae* Gielis, sp. n. Holotype. Ecuador, Tungurahue, 20 km E Baños, San Francisco, 1°24'39"S 78°14'23"W, 1290 m, 26.IX.2002 (C. & F.K. Gielis), gent CG 5965 (CG). **28.** *Hellinsia cosangae* Gielis, sp. n. Holotype. Ecuador, Napo, 15 km SE Cosanga, Cocodrilo, 0°38'56"S 77°47'34"W, 1850 m, 25.X.2002 (C. & F.K. Gielis), gent CG 5966 (CG). **29.** *Hellinsia llaviuco* Gielis, sp. n. Holotype. Ecuador, Azuay, PN Cajas, Laguna Llaviuco, 2°50'38"S 79°8'35"W, 3225 m, 5.X.2002 (C. & F.K. Gielis), gent CG 6720 (CG). **30.** *Hellinsia sanlucasia* Gielis, sp. n. Holotype. Ecuador, Loja, 60 km N Loja, 5 km N San Lucas, 3°40'56"S 79°16'9"W, 2965 m, 10.X.2002 (C. & F.K. Gielis), gent CG 6738 (CG)

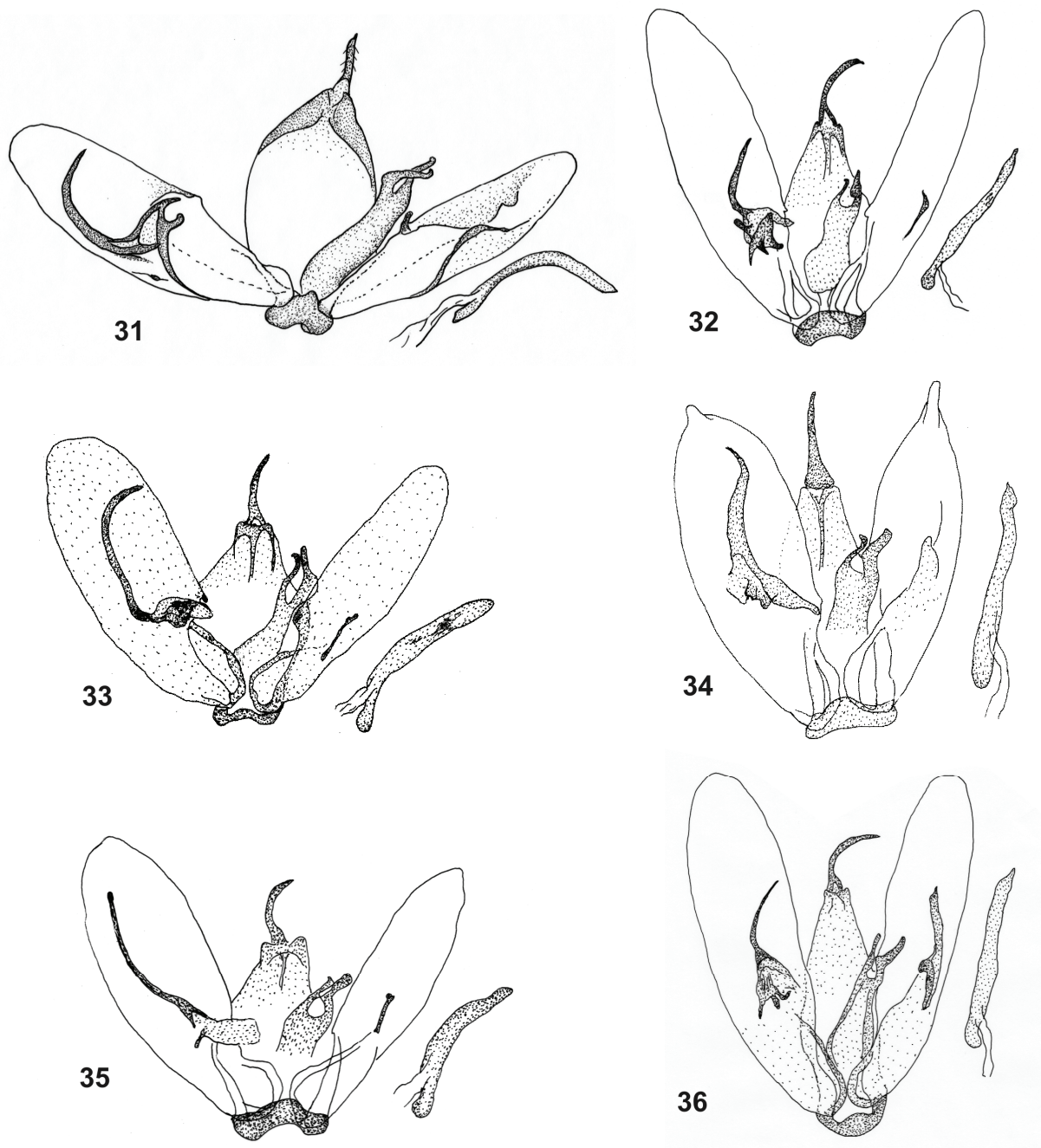


Fig. 31-36. Male genitalia: **31.** *Hellinsia jannitae* Gielis, sp. n. Holotype. Chile, Coquimbo (IV), Limari, 30 km NE Combarbala, 31° 03'S 70° 53'W, 1600 m, 17.XI.2000 (C. & F.K. Gielis), gent CG 4814 (CG). **32.** *Hellinsia podocarpa* Gielis, sp. n. Holotype. Ecuador, Loja, 10 km SE Lopja, PN Podocarpus, Cajanuma Ranger Station, 4°6'58"S 79°10'19"W, 2850 m, 7.X.2002 (C. & F.K. Gielis), gent CG 6737 (CG). **33.** *Hellinsia bodneri* Gielis, sp. n. Holotype. Ecuador, Zamora-Chinchipe, Reserva Biológica San Francisco, 03° 58.341'S 79° 04.535'W, 1907 m, e.l. *Ageratina dendroides* 14.III.2009 hatched 30.IV.2009 (F. Bodner), sample ♂ 09/2945, gent CG 6695 (CG). **34.** *Hellinsia cajas* Gielis, sp. n. Holotype. Ecuador, Azuay, PN Cajas, Laguna Llaviuco, 2°50'38"S 79°8'35"W, 3225 m, 5.X.2002 (C. & F.K. Gielis), gent CG 6721 (CG). **35.** *Hellinsia loja* Gielis, sp. n. Holotype. Ecuador, Loja, 10 km SE Loja, PN Podocarpus, Cajanuma Ranger Stt., 4°6'58"S 79°10'19"W, 2850 m, 7.X.2002 (C. & F.K. Gielis), gent CG 6723 (CG). **36.** *Hellinsia paraguayae* Gielis, sp. n. Holotype. Paraguay, Paraguari, Sapucay, 8.III.1997 (U. Drechsel), gent CG 6758 (CG).

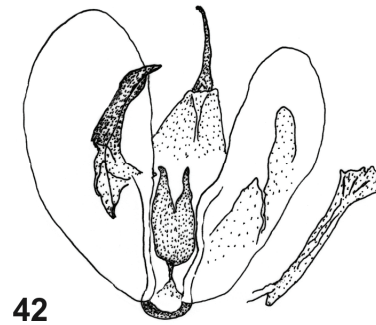
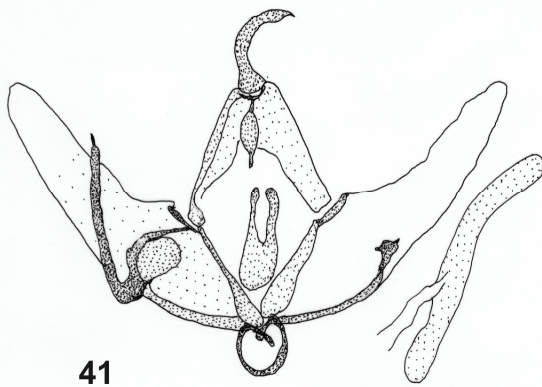
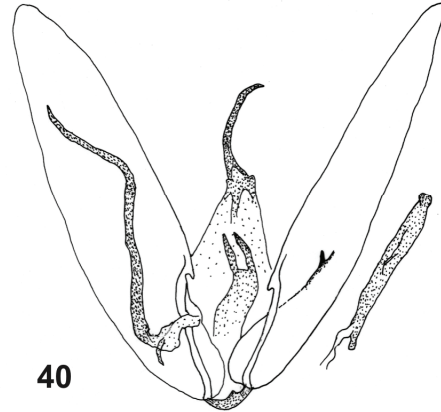
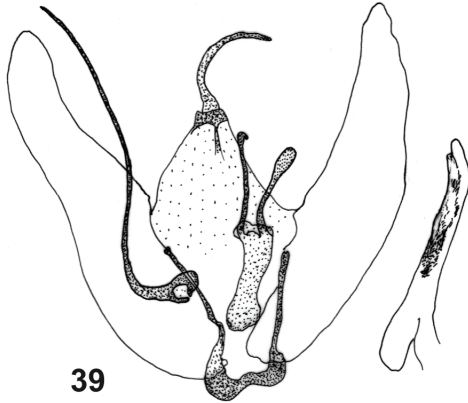
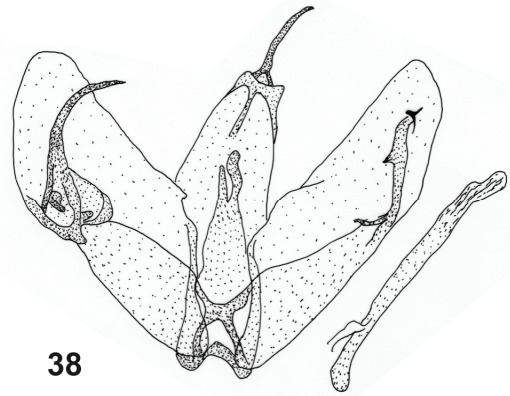
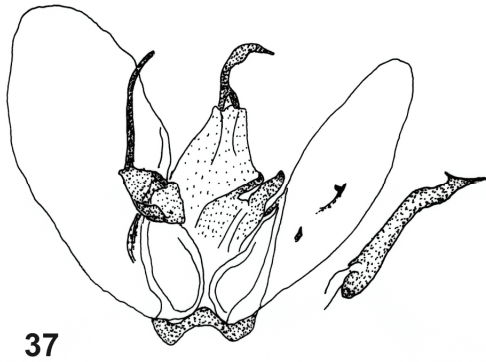


Fig. 37-42. Male genitalia: **37.** *Hellinsia ascensio* Gielis, sp. n. Holotype. Ecuador, Napo, 15 km SE Cosanga, Cocodrilo, , 0°38'56"S 77°47'34"W, 1850 m, 30.IX.2002 (C. & F.K. Gielis), gent CG 6402 (CG). **38.** *Hellinsia callefloridae* Gielis, sp. n. Holotype. Paraguay, Gualra, Calle Florida, 27.VIII.1994 (U. Drechsel), gent CG 6772 (CG). **39.** *Hellinsia longeanellus* Gielis, sp. n. Paratype. Paraguay, Alto Paraguay, 60 km S Chovoreka, 16.V.1995 (U. Drechsel), gent CG 6753 (CG). **40.** *Hellinsia hamadryadis* Gielis, sp. n. Holotype. Ecuador, Napo, 15 km SE Cosanga, Cocodrilo, , 0°38'56"S 77°47'34"W, 1850 m, 25.X.2002 (C. & F.K. Gielis), gent CG 6731 (CG). **41.** *Hellinsia tenera* Gielis, sp. n. Paratype. Paraguay, Paraguari, Sapucay, 4-8.II.1995 (U. Drechsel), gent CG 6775 (CG). **42.** *Hellinsia caligo* Gielis sp. n. Holotype. Ecuador, Tungurahue, 20 km E Baños, San Francisco, 1°24'39"S 78°14'23"W, 1290 m, 26.IX.2002 (C. & F.K. Gielis), gent CG 6725 (CG).

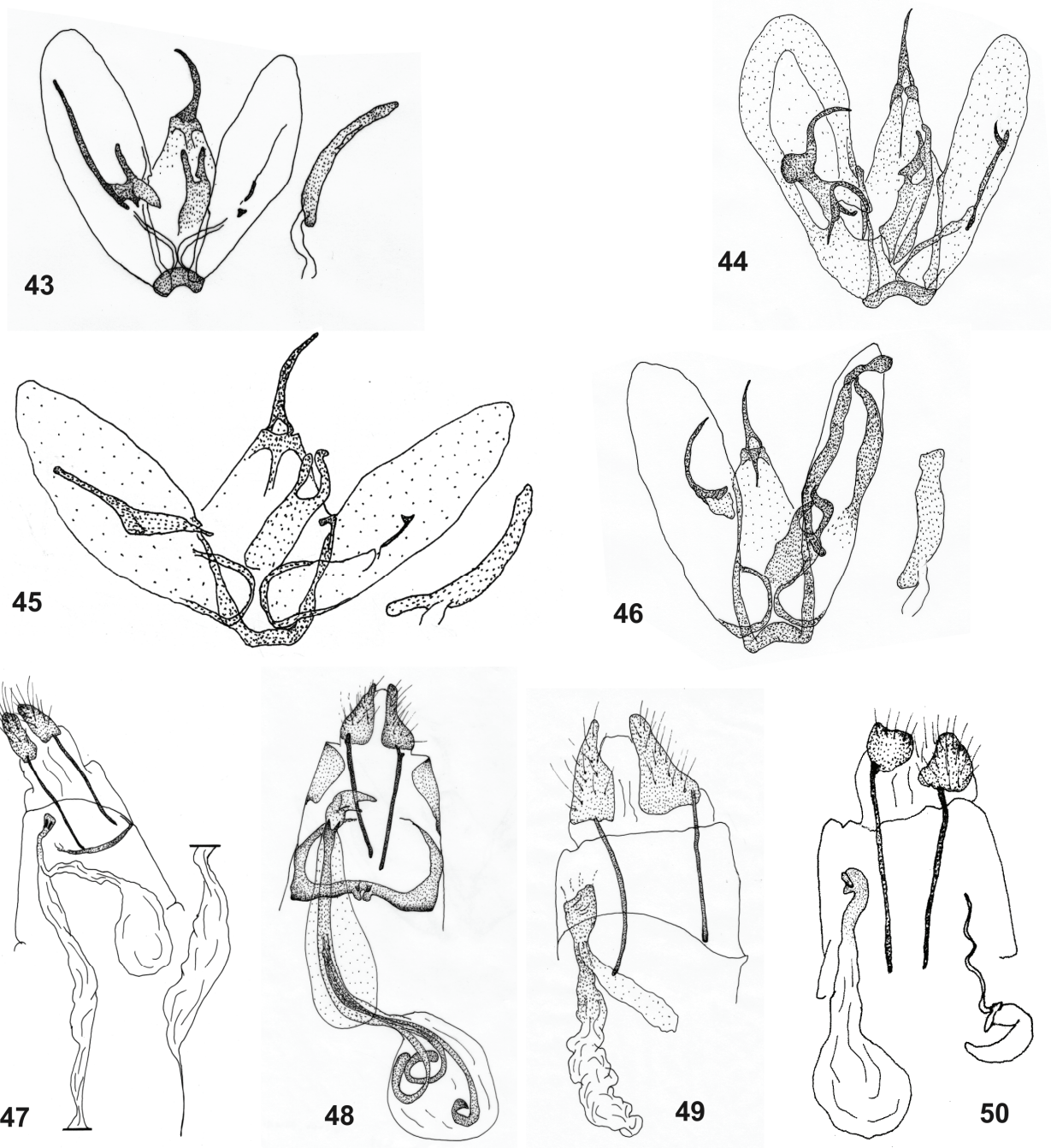


Fig. 43-46. Male genitalia: 43. *Hellinsia cuenca* Gielis, sp. n. Holotype. Ecuador, Azuay, PN Cajas, Laguna Llaviuco, 2°50'38"S 79°8'35"W, 3225 m, 5.X.2002 (C. & F.K. Gielis), gent CG 6724 (CG). 44. *Hellinsia limariae* Gielis, sp. n. Holotype. Chile, Coquimbo (VI), Limari, 15 km NW Combarbala, 12.XI.2000 (C. & F.K. Gielis), gent CG 6789 (CG). 45. *Adaina coquimboae* Gielis, sp. n. Holotype. Chile, Coquimbo (IV), Elqui, 21 km SE Coquimbo, 30° 07'S 71° 10'W, 15.XI.2000 (C. & F.K. Gielis), gent CG 6794 (CG). 46. *Adaina quieta* Gielis, sp. n. Holotype. Paraguay, Paraguari, Sapucay, 25-31.I.1997 (U. Drechsel), gent CG 6764 (CG).

Fig. 47-50. Female genitalia: 47. *Hellinsia sapucayae* Gielis, sp. n. Paratype. Paraguay, Paraguari, Sapucay, 28.IV.1996 (U. Drechsel), gent CG 6756 (CG). 48. *Hellinsia canari* Gielis. Paraguay, Paraguari, Sapucay, 28.I.1991 (U. Drechsel), prep CG 2483 (CG). 49. *Hellinsia sanlucasia* Gielis, sp. n. Paratype. Ecuador, Loja, 60 km N Loja, 5 km N San Lucas, 3°40'56"S 79°16'9"W, 2965 m, 10.X.2002 (C. & F.K. Gielis), gent CG 6742 (CG). 50. *Hellinsia discors* (Meyrick). Paralectotype. British Guyana, Mallali, II.(19)13 (Parish), gent CG 6436 (BMNH).

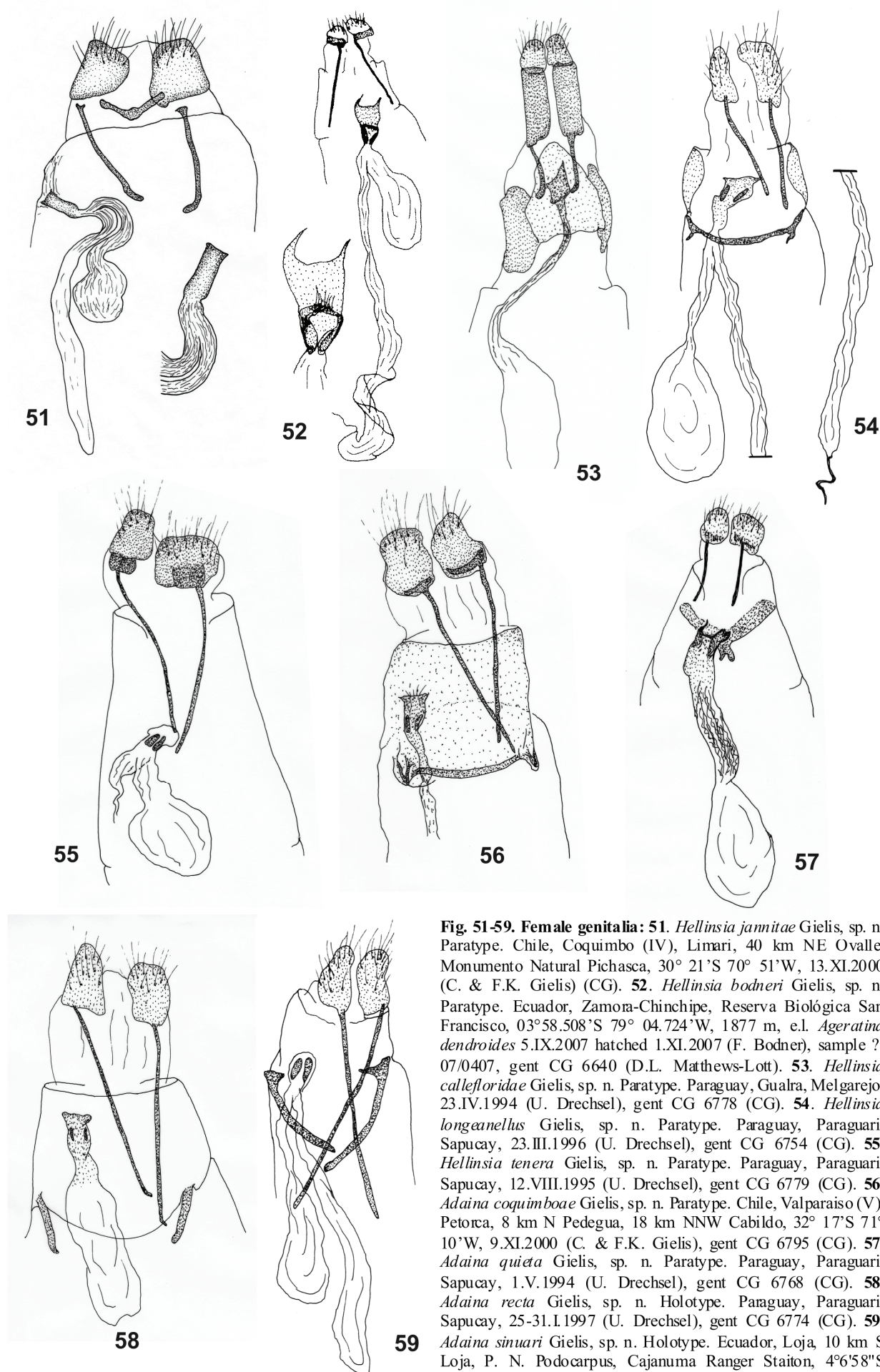


Fig. 51-59. Female genitalia: 51. *Hellinsia jannitae* Gielis, sp. n. Paratype. Chile, Coquimbo (IV), Limari, 40 km NE Ovalle, Monumento Natural Pichasca, 30° 21' S 70° 51' W, 13.XI.2000 (C. & F.K. Gielis) (CG). 52. *Hellinsia bodneri* Gielis, sp. n. Paratype. Ecuador, Zamora-Chinchipe, Reserva Biológica San Francisco, 03° 58.508' S 79° 04.724' W, 1877 m, e.l. *Ageratina dendroides* 5.IX.2007 hatched 1.XI.2007 (F. Bodner), sample ? 07/0407, gent CG 6640 (D.L. Matthews-Lott). 53. *Hellinsia callefloridae* Gielis, sp. n. Paratype. Paraguay, Gualra, Melgarejo, 23.IV.1994 (U. Drechsel), gent CG 6778 (CG). 54. *Hellinsia longeanellus* Gielis, sp. n. Paratype. Paraguay, Paraguari, Sapucay, 23.III.1996 (U. Drechsel), gent CG 6754 (CG). 55. *Hellinsia tenera* Gielis, sp. n. Paratype. Paraguay, Paraguari, Sapucay, 12.VIII.1995 (U. Drechsel), gent CG 6779 (CG). 56. *Adaina coquimboae* Gielis, sp. n. Paratype. Chile, Valparaíso (V), Petorca, 8 km N Pedegua, 18 km NNW Cabildo, 32° 17' S 71° 10' W, 9.XI.2000 (C. & F.K. Gielis), gent CG 6795 (CG). 57. *Adaina queta* Gielis, sp. n. Paratype. Paraguay, Paraguari, Sapucay, 1.V.1994 (U. Drechsel), gent CG 6768 (CG). 58. *Adaina recta* Gielis, sp. n. Holotype. Paraguay, Paraguari, Sapucay, 25-31.I.1997 (U. Drechsel), gent CG 6774 (CG). 59. *Adaina sinuari* Gielis, sp. n. Holotype. Ecuador, Loja, 10 km S Loja, P. N. Podocarpus, Cajanuma Ranger Station, 4° 6' 58" S 79° 10' 19" W, 2850 m, 8.X.2002 (C. & F.K. Gielis), gent CG 6735 (CG).