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Two new species of plume moths of the genus *Hellinsia* Tutt, 1905 (Lepidoptera, Pterophoridae) from Paraguay


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Abstract

The plume moths (Lepidoptera, Pterophoridae) fauna of Paraguay is studied quite well, which is proved by a series of publications (Gielis, 2003, 2006, 2012, 2013; Ustjuzhanin *et al.*, 2016). However, we have found two species of the genus *Hellinsia*, new to science, in the supplementary materials provided to us by Ulf Drechsel (Asunción).

Key words: biodiversity, Lepidoptera, Pterophoridae, *Hellinsia*, plume moths, Paraguay, new species.

Introduction

The plume moths (Lepidoptera, Pterophoridae) fauna of Paraguay is studied quite well, which is proved by a series of publications (Gielis, 2003, 2006, 2012, 2013; Ustjuzhanin *et al.*, 2016). However, we have found two species of the genus *Hellinsia*, new to science, in the supplementary materials provided to us by Ulf Drechsel (Asunción).

Material and methods

We used Wild MBR-1 microscope and Canon DS126291 camera to prepare images; the holotypes are deposited in ZISP part of the paratypes and the other examined specimens are kept in the collections of ZISP and CUK.

Abbreviations

ZISP: Zoological Institute, St. Petersburg, Russia.

CUK: The collection by P. Ustjuzhanin and V. Kovtunovich (Novosibirsk and Moscow, Russia).

***Hellinsia ulfi* Ustjuzhanin & Kovtunovich sp. nov.**

<http://zoobank.org/urn:lsid:zoobank.org:act:E44F7921-B453-4DEC-A271-969CED7BD4DE>

Figs 1–2.

Type material: **Holotype**, male, (ZISP, gen.pr. Nr. 1985), **PARAGUAY**, Dep. Pte. Hayes Laguna Capitan, S 22°32' W 59°40', 27–29. V. 2017, U. Drechsel.



Figure 1. *Hellinsia ulfi* Ustjuzhanin & Kovtunovich sp. nov. Adult, male, holotype.

DESCRIPTION. External characters. Head yellow, with ocher collar, thorax and tegulae with yellowish scales. Labial palpi light-brown, thin, straight, slightly shorter than longitudinal eye diameter. Antennae greyish-brown, scape noticeably thickened. Wingspan 15 mm. Fore wings pale-yellow. Small oblique brown spot at cleft base. Fringe inside cleft yellow, only distally brown on both lobes. Narrow brown spot on second lobe apically from outside. Hind wings of the same color as fore wings. Hind legs pale-yellow.

Male genitalia. Valves narrow, elongated, asymmetric. As base of left valve – small straight harpe slightly narrowing apically. Saccular process on right valve narrow, located at its base, slightly extended distally. Anellus arms of different length, right one longer and wider than left one. Saccus arched. Uncus thin, arched, apically acute. Aedeagus smoothly curved in medium part, 2.5 times shorter than valve in length, with needle-like cornutus distally.

Diagnosis. In the male genitalia, in the elongated narrow valves and the saccular process on the left valve, the new species is close to *Hellinsia villagrani* Gielis, 2013, but differs in the structure of the saccular process on the right valve, in the unequal anellus arms and in the special color of wings in the adults.

Flight period. May.

Distribution. Paraguay.

Etymology. The species is named after the Paraguay entomologist Mr. Ulf Drechsel (Asunción), who has been providing us during several years with Pterophoridae specimens for examination.



Figure 2. *Hellinsia ulfi* Ustjuzhanin & Kovtunovich sp. nov. Male genitalia, holotype (ZISP, gen.pr. Nr.1985).

Hellinsia iraida Ustjuzhanin & Kovtunovich sp. nov.

<http://zoobank.org/urn:lsid:zoobank.org:act:8B0658A1-4C95-4881-8F86-3FB5D8FA939B>

Figs 3–5.

Holotype, male, (ZISP, gen.pr. Nr. 1986), **PARAGUAY**, Dep. Alto Parana Estancia Dimas S 25°33' W 55°13', 17–21. XI. 2011 U. Drechsel; **Paratypes**: 2 females (ZISP, gen.pr. Nr. 1987; CUK, gen.pr. Nr. 370), **PARAGUAY**, Dep. Alto Parana, Estancia Dimas S 25°33' W 55°13', 11–16. XI. 2011 U. Drechsel; 1 female (CUK), **PARAGUAY**, Dep. Alto Parana, Estancia Dimas S 25°33' W 55°13', 04–10. XI. 2011 U. Drechsel.

DESCRIPTION. External characters. Head, thorax and tegulae yellowish-grey. Labial palpi light, short, almost twice shorter than longitudinal eye diameter. Antennae cross-striped, with alternating brown and white segments, scape noticeably thickened. Wingspan 17–18 mm, holotype – 17 mm. Fore wings light-grey. Costal margin of fore wing interspersed with tiny brown scales, with distinct dark-brown spot above cleft base. Wide brown spot at cleft base. Fringe inside cleft pale-yellow, only apically on both lobes brown. Hind wings of the same color as fore wings. Hind legs white with portions of dark scales at spur bases.

Male genitalia. Valves asymmetric. Arched harpe with small apical spike in medium part of left valve. Saccular process on right valve curved as hook, bluntly oval apically, located distally in valve. Anellus arms narrow, quite short, of equal length. Saccus arched. Uncus quite thick, poorly curved, apically acute. Aedeagus long, wavy, slightly shorter than valve in length, with long needle-like cornutus medially.

Female genitalia. Papillae anales narrow-triangle, posterior apophyses slightly wavy. Antrum wide, goblet-like. Ductus long, extended at its confluence to antrum, sclerotized, then becomes thin and membranous. Bursa copulatrix wide, oval.



Figure 3. *Hellinsia iraida* Ustjuzhanin & Kovtunovich **sp. nov.** Adult, male, holotype.



Figure 4. *Hellinsia iraida* Ustjuzhanin & Kovtunovich **sp. nov.** Male genitalia, holotype (ZISP, gen.pr. Nr.1986).



Figure 5. *Hellinsia iraida* Ustjuzhanin & Kovtunovich **sp. nov.** Female genitalia, paratype (ZISP, gen.pr. Nr.1987).

Diagnosis. In the male genitalia, in the position of the saccular process on both valves, the new species is similar to *Hellinsia canari* Gielis, 2011, but the saccular process on the left valve in the new species is extended distally and acute only apically, while in *H. canari* it is basally wide and gradually narrowing to the sharp end. The saccular process on the right valve in the new species is bent as a hook, while in *H. canari* it is only slightly tilted and apically bluntly extended. Additionally, the aedeagus in the new species is significantly longer than that of *H. canari*.

Flight period. November.

Distribution. Paraguay.

Etymology. The species is named after the friend and ally of the first author, Iraida Zakhosheva (Ryazan region), a geologist and a member of the complex Trans-Baikal expedition in 1994.

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