Revision of the genus Hermonassa Walker, 1865 (Lepidoptera, Noctuidae, Noctuinae). I. The anthracina and dispila species groups, with descriptions of four new species

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Revision of the genus *Hermonassa* Walker, 1865 (Lepidoptera, Noctuidae, Noctuinae). I. The *anthracina* and *dispila* species groups, with descriptions of four new species

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Abstract: Four new species of the genus *Hermonassa* from Pakistan (*H. moorei* sp. n., *H. tathabaya* sp. n. and *H. ayubia* sp. n.) and Nepal (*H. kalamantra* sp. n.) are described and compared with their relatives of the *H. anthracina* and *H. dispila* species groups. The specific status of *Hermonassa shizukoae* Sugi, 1995 is re-instated (stat. rev.). The species treatments are illustrated with 32 colour images and 24 genitalia figures.

Keywords: Noctuoidea - new status - Palearctic - Pakistan - Nepal.

INTRODUCTION

The genus *Hermonassa* Walker, 1865, is one of the giant Noctuinae clades. It is a strictly Palaearctic group, with all known species occurring in the Himalayan-Sino-Pacific subregion in the wide sense, including the northern parts of Indochina, Taiwan, and temperate Pacific Asian territories (Manchuria, Korea, Russian Far East, and Japan. The overwhelming majority of the species were described after the regular use of the genitalia studies. The first few species were described by the famous lepidopterists of the nineteenth and early twentieth centuries F. Walker (1865), F. Moore (1867, 1881, 1882, 1883), A.G. Butler (1878, 1881), J.H. Leech (1900), G.F. Hampson (1911) and W. Warren (1909-1913). The adoption of genitalia preparation techniques and the treatment of the vast material collected in the Himalayan region in the wide sense demonstrated the existence of numerous hidden species with often confusingly similar external appearances. Fundamental work in the exploration of the diversity of the genus was made by Boursin (1967, 1968a, b) and his work was followed by others (in alphabetic order): Chen (1985, 1989, 1991, 1992, 1993, 1999), Han & Li (2007), Hreblay & Plante (1995a, b, 1996), Hreblay & Ronkay (1997, 1998), Hreblay, Peregovits & Ronkay (1999), Owada (1985), Plante (1994) and Sugi (1995). As a result of their discoveries, the genus comprises more than 90 described species and we expect this number to increase markedly in forthcoming studies.

Despite great interest about the genus, only regional monographs and species descriptions have been published so far; no attempt toward a synthetic taxonomic revision has been made. However, the regional works available clearly show, the intense allopatric speciation within the main lineages, the surprising species richness in diversity hotspots in the Himalayan-Sino-Tibetan area, as well as the fragmentation of *Hermonassa* s.l. All these facts demand a thorough taxonomic revision of the genus.

The present paper contains the first results of this ongoing revision, including the descriptions of four new species in the closely related *H. anthracina* and *H. dispila* species groups.

ABBREVIATIONS

GYP	genitalia slide prepared by Péter Gyulai
HNHM	Hungarian Natural History Museum, Budapest
IC ENTO	specimen identity code of the entomological collections of the MHNG
KST	genitalia slide prepared by Sándor T. Kovács
MHNG	Muséum d'histoire naturelle, Geneva, Switzerland
MNHU	Museum für Naturkunde, Humboldt-Universität, Berlin, Germany
NHM UK	Natural History Museum (formerly British Museum, Natural History), London, United Kingdom
NHMW	Naturhistorisches Museum, Vienna, Austria
NIAES	National Institute of Agro-Environmental Sciences, Tsukuba, Japan (NARO)
PL	genitalia slide prepared by Jacques Plante

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RL genitalia slide prepared by László Ronkay
ZFMK Zoologisches Forschungsmuseum Alexander Koenig, Bonn (AKM)
ZSM Zoological Museum of the Bavarian State (Zoologische Staatssammlung), Munich, Germany

SYSTEMATIC PART

Genus ***Hermonassa*** Walker, 1865

Hermonassa Walker, 1865: 631, type species *Hermonassa consignata* Walker, 1865 by monotypy.

The *anthracina* group

The species group includes two allopatric species, the Sino-Tibetan *H. anthracina* Boursin, 1967 and the southern Himalayan *H. kalamantra* sp. n. The members of this species group are externally similar to the overwhelming majority of the taxa of the *H. dispila* Boursin, 1967 species group but are distinguished from them by their somewhat narrower and more elongated forewings (with somewhat larger wingspan, 27-33 mm vs 25-30 mm, respectively), and the darker, more blackish-grey suffused thorax and forewing ground colour.

The species group is characterised by certain features of the strongly autapomorphic copulatory organs of both sexes. The most conspicuous autapomorphy of the male clasping apparatus is the heavily sclerotised and laterally or proximo-laterally projecting, cristate-folded saccular lobe, fitting well in the hole between the last abdominal sternite and the postero-lateral lobe of the also heavily sclerotised antrum of the female abdomen. Other diagnostic features of the male genitalia are the relatively short and apically strongly dilated, spatulate uncus, the deltoidal juxta, the very long and ventrally broadly rounded, heavily sclerotised vinculum, the bilobate valva and the apically dilated and rounded clasper (= "harpe" in the former works dealing with the genus) (males), the rather bull-head-shaped and heavily sclerotised antrum and the strongly sclerotised quadrangular plates of the ductus bursae (females). The above-mentioned apomorphic features strictly distinguish the *anthracina* species group from the morphologically more heterogeneous *dispila* species group which have much less developed (or fully reduced) saccular extensions, longer and thinner claspers, much weaker vinculum and saccus and a differently shaped vesica with stronger subbasal cornutus in males, much weaker sclerotised, cup-shaped (calyciform) or lyriform antrum and the usually well-developed signa of the corpus bursae in the females.

Hermonassa anthracina Boursin, 1967

Plate 1 figs 1-4; genitalia Figs 1-2

Hermonassa anthracina Boursin, 1967: 26, pl. 1, fig. 4; gen. fig. pl. 3, fig. 4.

Type locality: China, Yunnan, Li-kiang, 3400 m.

Type material examined: Holotype, in coll. ZFMK, male, [China] "Li-kiang ca 4000 m | Prov. Nord-Yuennan | 27.7.1935. H. Höne" (yellow label); "Holotypus" (red label); Hermonassa anthracina Brsn. ♂| Holotype | Boursin det." (coll. ZFMK). – Paratypes, China, numerous specimens from the same area, 2000-4000 m altitudes, July-September 1935, IC ENTO 25445, 25446, 25473, 25474, slide Nos RL12614m, RL12616m (males), RL12615f, RL12617f (females) (coll. ZFMK and coll. Plante, MNHG).

Additional material examined: China, Yunnan. 1 male, W. Sichuan, road Yajiang-Litang, 3600 m, 29°59'N, 100°52'E, 15.VII.2009, leg. Floriani & Saldaitis, slide No. KST882m (coll. G. Ronkay, NHMW).

Diagnosis: The species is externally very similar to its allopatric twin species, *H. kalamantra*. Specific differences are found in details of the genitalia structures. In males, the main differences can be found in the shape and size of uncus, juxta, clasper, and saccular lobe; in females, in the shape and size of the antrum and the sclerotised plates of the ductus bursae. A detailed comparison of the two species is given in the diagnosis of *H. kalamantra*.

Distribution: Sino-Tibetan. The species is known from the SE frontier of the Tibetan plateau (Sichuan, Yunnan).

Remarks: The type series is mixed, the paratypes from Nepal and northern India representing in fact the southern Himalayan sister species *H. kalamantra* sp. n.

Hermonassa kalamantra sp. n.

Plate 1 figs 5-8; genitalia Figs 3-6

Holotype: Male, Nepal, Annapurna Himal, Mesokantu pass, 4200 m, 28°44'N, 83°47.5'E, 12-13.VII.1995, leg. G. Csorba, Gy.M. László & G. Ronkay, slide No. KST875m (coll. MHNG).

Paratypes

Nepal, West Nepal: 1 female, 21 km N of Dailekh, 3400 m, 1-2.VIII.1996, leg. M. Hreblay & B. Szin, IC ENTO 25507 (coll. MHNG).

Nepal, Annapurna Himal: 5 specimens, Nangethanti, 2500 m, 83°43'E, 28°23'N, 4.X.1994, leg. G. Csorba & L. Ronkay, slide No. KST996m (male) (coll. G. Ronkay, NHMW and HNHM). – 2 specimens, Bhaleodar, 2400 m, 8.X.1994, Csorba & Ronkay (coll. G. Ronkay, NHMW). – 1 male, 1 female, S of Poon Hill, Pulvani, 3050 m,

20.VI.2012 (coll. P. Gyulai). – 5 males, Noma pasture, 11 km SE Jomsom, 4000 m, 28°44.5'N, 83°48'E, 9-11. VII.1995 and 17-18.VII.1995, leg. G. Csorba, Gy. M. László & G. Ronkay. – 1 male, Mesokantu pass, 4200 m, 28°44'N, 83°47.5'E, 12-13.VII.1995, leg. G. Csorba, Gy. M. László & G. Ronkay (coll. G. Ronkay, NHMW).

Nepal, Ganesh Himal: 1 male, 1 female, Yurekharka, 3450 m, 16.IX.1995, Herczig & László, slide No. KST999f (female) (coll. HNHM). – 1 specimen, 7 km W Godlang, 2950 m, 20.IX.1995, Herczig & László (coll. HNHM). – 2 males, Godlang, 2520 m, 13.X.1995, leg. S.T. Kovács (coll. S.T. Kovács). – 6 males, Gholjong, 2420 m, 12.X.1995, leg. S.T. Kovács (coll. S.T. Kovács). – 2 males, 2 km W of Thangjet, 2300 m, 85°17'E, 28°10'N, 23.IX.1994, leg. M. Hreblay & T. Csővári, IC ENTO 25465, 25466. – 2 males, 1 km S of Somdang, 3180 m, 85°17'E, 28°10'N, 21.IX.1994, leg. M. Hreblay & T. Csővári, IC ENTO 25467, 25506. – 1 female, 1 km E of Somdang, 3850 m, 85°13'E, 28°10'N, 23.VII.1995, leg. M. Hreblay & T. Csővári, IC ENTO 25511. – 1 female, 1 km W of Somathang (= Somdang), 3180 m, 18.VI.1993, leg. M. Hreblay & G. Csorba, IC ENTO 25496. – 2 males, 4 females, 3 km SE of Somdang, 3450 m, 85°13'E, 28°11'N, 25.VII.1995, leg. M. Hreblay & T. Csővári, IC ENTO 25509, 25510, 25512, 25513. – 1 male, 4 females, Somathang (= Somdang), 3270 m, 15.VI.1993, leg. M. Hreblay & G. Csorba, IC ENTO 25462, 25497, 25498, 25500, 25502. – 2 females, 3 km NE of Sunpati, 2330 m, 13.VI.1993, leg. M. Hreblay & G. Csorba, IC ENTO 25499, 25501. – 1 male, Khurpudanda Pass, 3650 m, 85°13'E, 28°11'N, 20.IX.1994, leg. M. Hreblay & T. Csővári, IC ENTO 25469 (coll. MHNG). – 3 males, Khurpudanda Pass, 3600 m, 85°13'E, 28°12'N, 22.VII.1995, leg. M. Hreblay & T. Csővári (coll. T. Csővári). – 8 males, 6 females, 1 km E of Yurekharka, 3200 m, 85°15'E, 28°10'N, 22.IX.1994, leg. M. Hreblay & T. Csővári, IC ENTO 25470, 25471, 25472, 25503, 25504, 25505 (coll. MHNG and T. Csővári). – 2 males, 3 females, Corikharkha, 3000 m, 16-17.IX.1995, leg. P. Gyulai & A. Garai (coll. P. Gyulai). – 1 female, Khalcapharka, 3400 m, 17-19.IX.1995, leg. P. Gyulai & A. Garai (coll. P. Gyulai). – 5 males, 4 females, Sanlaggothe, 3400 m, 21-22.IX.1995, leg. P. Gyulai & A. Garai (coll. P. Gyulai). – 3 males, 2 females, Gadlang, 2600 m, 22-23.IX.1995, leg. P. Gyulai & A. Garai, slide GYP4172m (coll. P. Gyulai). – 1 female, 1 km SE of Sondang, 3300 m, 20-21.IX.1995, leg. L. Németh (coll. P. Gyulai). – 2 specimens, Khurpudanda pass, NE slope, 85°12'E, 28°10,5'N, 3600-3700 m, 13-16.V.1995, leg. Gy. Fábián & L. Ronkay. – 22 specimens, 7 km W of Godlang, 2950 m, 28°10'N, 85°17'E, 14.IX.1995, leg. B. Herczig & Gy.M. László. – 6 specimens, Gothen village, 3150 m, 28°09'N, 85°12'E, 15.IX.1995, leg. B. Herczig & Gy.M. László. – 8 specimens, Yurekharka, 3450 m, 16.IX.1995, leg. B. Herczig & Gy.M. László. – 1 specimen, Khurpudanda pass, 3720 m, 85°12'E, 28°10.5'N, 17-18.IX.1995, leg. B. Herczig & Gy.M. László. – 2 specimens, above Khurpudanda pass, 3850 m, 19.IX.1995, leg. B. Herczig & Gy.M. László. – 7 specimens, 7 km W Godlang, 2950 m, 85°14'E, 28°10'N, 20.IX.1995, leg. B. Herczig & Gy.M. László. – 2 specimens, 1 km W of Somdang (Somathang), 3850 m, 16.VI.1993, leg. G. Csorba & M. Hreblay (coll. G. Ronkay, NHMW).

Nepal, Langtang: 2 specimens, 2 km S of Dhunche, 2110 m, 28°04'N, 85°14'E, 23.IX.1994, leg. G. Csorba & L. Ronkay (coll. G. Ronkay, NHMW and HNHM). – 57 specimens, Chandrabari, 2860 m, 85°21'E, 28°07'N, 25.IX.1994, leg. Csorba & Ronkay, slide Nos KST874m, KST878m, KST997m (males), KST876f, KST881f (females) (coll. G. Ronkay, NHMW and HNHM). – 7 specimens, 3500 m, between Cholang Pati and Dimsa, 85°22'E, 28°05'N, 26.IX.1994, leg. G. Csorba & L. Ronkay (coll. P. Gyulai, G. Ronkay and HNHM). – 31 specimens, 2850 m, 3 km SE Syabru, 85°21'E, 28°07'N, 27.IX.1994, leg. G. Csorba & L. Ronkay, slide Nos KST879m, KST998m (males), KST877f, KST880f (females) (coll. P. Gyulai, G. Ronkay and HNHM). – 1 specimen, 1.5 km NE Dhunche, 1950 m, 85°18'E, 28°06'N, 24.IX.1994, leg. Csorba & Ronkay (coll. G. Ronkay, NHMW).

Nepal, Solu Khumbu Himal: 26 specimens, Yak Kharka, 12 km E of Lukla, 4000 m, 28.VI.1993, leg. M. Hreblay & G. Csorba, IC ENTO 25448, 25450, 25452, 25453, 25454, 25459, 25460, 25461, 25475, 25476, 25477, 25478, 25480, 25481, 25482, 25483, 25484, 25485, 25486, 25487, 25488, 25489, 25492, 25493, 25494, 25495. – 7 specimens, 7 km E of Lukla, 3450 m, 1.VII.1993, leg. M. Hreblay & G. Csorba, IC ENTO 25449, 25451, 25455, 25456, 25458, 25463, 25490. – 1 female, 5 km E of Lukla, 3200 m, 27.VI.1993, leg. M. Hreblay & G. Csorba, IC ENTO 25479. – 2 females, Lamjura Pass, 3500 m, 5.VII.1993, leg. M. Hreblay & G. Csorba, IC ENTO 25457, 25491 (coll. MHNG). – 3 specimens, 12 km E Lukla, Yak Kharka, 4000 m, 30.VI.1993, leg. M. Hreblay & G. Csorba. – 1 specimen, 7 km E of Lukla, 3450 m, 1.VII.1993, leg. M. Hreblay & G. Csorba (coll. G. Ronkay, NHMW).

Nepal, Kanchenjunga Himal: 1 male, 6 km S of Ghunsa, 4160 m, 23.VI.1998. – 1 male, Jyaudra danda, 1 km N of Khambachen, 4250 m, 1998.VI.28 (coll. HNHM). – 2 females, from the same locality, 15-16.VIII.2000, leg. M. Hreblay & T. Csővári (coll. P. Gyulai). – 1 male, 1 female, Deorali danda, 2 km SSW of Ghunsa, 4060 m, 14-15.VIII.2000, leg. M. Hreblay & T. Csővári (coll. P. Gyulai).

Nepal, Taplejung area: 1 male, Lal Kharka, 2250 m, 10.X.1994, leg. M. Hreblay & T. Csővári, IC ENTO 25464. – 1 male, 1 km NE Suketar, 2500 m, 9.X.1994, leg. M. Hreblay, IC ENTO 25468 (coll. MHNG).

China, Tibet: 4 females, Nyalam, 10-12.VII.2001, leg. Bieber (coll. P. Gyulai).

Additional material: The Nepalese specimens of the type series of *H. anthracina* designated by Boursin

(1967) from the collection of the ZSM (Khumbu, Khumdzung, 3900 m, June-July 1962, Ebert & Falkner leg., Thodung, 3100 m, 21-30 May and 1 June 1962, Ebert & Falkner leg., Prov. Nr. 3 East, Pangpoche, 4000 m, 4 July 1964, leg. Dierl, Khumjung, 3800 m, 14 July 1964, leg. Dierl, Junbesi, 2750 m, 25-31 July 1964, leg. Dierl, Dudh Kosi Tal, 3500 m, 22-23 July 1962, Ebert & Falkner leg.) and the two male specimens from NE India (Champetang, N.E. India, 12.000 ft., 15 Aug. 1927, F. M. Bailey leg., coll. NHMUK) belong most probably to this species. As none of these specimens has been dissected yet, they are not included into the type series.

Diagnosis: The two species are very similar externally, the new species is somewhat darker, more blackish-grey coloured, with finer black markings. The specific differences can be found in the genitalia of both sexes.

In the male genitalia, *H. kalamantra* has, in comparison with *H. antracina*, somewhat shorter and evenly widening uncus, broader, dorsally much stronger dilated juxta, distally more dilated, apically broadly flattened-discoidal clasper and proximally, almost rectangularly ventrally projecting sacculus. In *H. anthracina*, the uncus is longer and thinner, with only the apical third dilated, the lateral sides of the juxta are more or less parallel, the clasper is more elongated and almost evenly broad, with only slightly dilated and rounded apical section, and the sclerotised sacculus is much less projecting ventrad than in its sister species (genitalia Figs 1, 3 and 4).

In the female genitalia, the sclerotised antrum of *H. kalamantra* is broader and more robust than in *H. anthracina*, with larger antero-lateral lobes, narrower and deeper postero-medial cleft and longer, more laterally projecting sclerotised plates of apophyses anteriores, while the sclerotised plates of ductus bursae are considerably shorter in the Nepalese species than in its Chinese sister taxon (genitalia Figs 2, 5 and 6).

Etymology: The specific name refers to the dark colouration and the fine black(ish) markings of the moths.

Description

External morphology: Medium-sized species, wingspan 28-32 mm. Head and thorax unicolorous dark chocolate brown mixed with blackish grey hair-scales; palpi short, slightly upturned, laterally darkened; collar small and rounded, blackish, darker than other parts of thorax, without whitish dorsal edges; antennae of both sexes filiform with short fasciculate cilia, somewhat thinner in females; pubescence of legs dark grey. Forewings long, narrow, apically pointed; ground colour shining, dark chocolate brown suffused with fumous grey and sparsely irrorated by blackish and pale-grey scales. Antemedial and postmedial crosslines double, fine, blackish grey, former more or less straight, latter sinuous; median fascia diffuse or obsolete, dark brown grey. Orbicular stigma small, more or less rounded, black; reniform stigma a fine, long black arch; claviform stigma absent or a tiny dark, shadow-like spot. Subterminal line fine, partly interrupted, pale ochreous defined by dark grey-brown inner shadow; terminal line ochreous, followed by thin dark-brown streaks; fringes as ground colour, with slightly paler inner lines. Hindwing whitish or ochreous grey, irrorated by darker grey scales; veins covered by brown; discal spot pale, thin, greyish with pale inner crossvein; diffuse marginal area and inner margin suffused with greyish brown. Terminal line fine, whitish ochreous, followed by brownish inner stripe; fringes ochreous brown with darker brown inner line. Underside of forewing silky grey, patternless; underside of hindwing whitish grey with ochreous whitish sheen; discal spot greyish.

Male genitalia: Uncus medium long, sclerotised and flattened, evenly dilated towards broadly spatulate-triangular apex. Tegumen wide and short, penicular lobes minute, less hairy. Juxta reversed deltoidal, dorsally strongly dilated. Vinculum very long, heavily sclerotised, more or less V-shaped, with broadly rounded tip; sclerites connecting tegumen and vinculum strong, slightly S-shaped. Valva rather bilobate, relatively short and basally broad, costal lobe membranous, densely setose, with strong hair-pencils; corona absent. Saccular part heavily sclerotised, its distal half cristate and folded, more or less foot shaped and projecting ventrad and backwards almost rectangularly to basal segments of abdomen. Clasper large, heavily sclerotised, hockey-stick shaped, with slender basal half and strongly dilated, flattened, discoidal apical half. Aedeagus long, tubular, coecum penis broader and terminally curved dorsally; distal part of aedeagus tapering; carina with longer dorsal and shorter ventral eversible sclerotised bars. Vesica shortly tubular, with long, subconical subbasal diverticulum terminated in a minute cornutus; medial section bent ventral and recurved towards coecum penis, membranous with variably strongly scobinate walls, latero-medial diverticulum small, rather crest-like, membranous; distal third forms a semiglobular, large, membranous diverticulum; ductus ejaculatorius originates laterally from basal part of this terminal diverticulum.

Female genitalia: Ovipositor medium long, conical; papillae anales elongated, apically finely pointed and sparsely setose; apophyses posteriores short, fine, straight. Penultimate segment broad, sclerotised; basal plates of apophyses anteriores heavily sclerotised and folded; apophyses anteriores short, stick-like. Antrum large, heavily sclerotised, flattened, with smaller postero-medial and larger postero-lateral sclerotised lobes; postero-medial cleft U-shaped; anterior edge of sclerotised section evenly rounded, surrounded with hyaline margins. Ductus bursae medium long, as long as or slightly shorter than antrum; posterior section broad and flattened, with two heavily sclerotised, rather quadrangular plates with hyaline stripes between them;

anterior section tubular, membranous, slightly ribbed. Appendix bursae semiglobular-discoidal, strongly ribbed but not sclerotised; corpus bursae elliptical-sacculiform, strongly, densely ribbed; signum absent.

Bionomics and distribution: The new species inhabits the medium-high and high altitude forest belts and the subalpine regions of the southern Himalayas in Nepal and Sikkim. It appears locally frequent or even common. The species is supposedly univoltine with a partial summer diapause. The adults are on the wing from May to October, visiting the artificial light but are not attracted by sugar baits.

Remarks: The new species is the southern allopatric sister species of *H. anthracina*.
The differences between the male genitalia of the Nepalese species and the Chinese *H. anthracina* have been already noted by Sugi (1995) but without any taxonomic act.

The *dispila* group

The *dispila* species group is more heterogeneous than the related *anthracina* group, including a number of externally very similar species resembling certain taxa of the genus *Chersotis* Boisduval, 1840 with their relatively small size, short and rather broad forewings with characteristic colouration and forewing pattern, and a few differently looking taxa like, for instance, *H. spilota* Moore, 1867, *H. connudata* Chen, 1991, and *H. chryserythra* Boursin, 1968. The genitalia of these species show different trends of change in certain features which led to the often remarkable differences between the male genital capsule of the different lineages of the clade. Due to the basically uniform external appearance and the genital features of the entire species group, as well as partly overlapping differential characters, the taxa of the species group can be arranged into different lineages.
The *dispila* species group comprises the following species: *H. dispila* Boursin, 1967, *H. chersotidia* Boursin, 1968, *H. moorei* sp. n., *H. cyanolepis* Boursin, 1967, *H. renifera* Chen, 1991, *H. shizukoae* Sugi, 1995, *H. ayubia* sp. n., *H. tathabaya* sp. n., *H. spilota*, *H. connudata, H. chryserythra* and *H. oxyspila* Boursin, 1968.

Hermonassa moorei sp. n.

Plate 2 figs 1-4; genitalia Figs 7-8

Holotype: Male, Pakistan, Himalayas, Kaghan valley, 2200 m, Tathabaya, 23-24.VIII.1998, leg. G. Ronkay & Z. Varga; slide No. RL6701m (coll. Ronkay, NHMW).

Paratypes
Pakistan: 1 male, Himalayas, Kaghan valley, 2200 m, Tathabaya, 22.VIII.1998, leg. G. Ronkay & Z. Varga (coll. G. Ronkay, NHMW). – 1 female, Himalayas Kaghan valley, near Khanian village, 1770 m, 12-13.IX.1998 leg. P. Gyulai & A. Garai (coll. P. Gyulai). – 4 males, 4 females, Kaghan valley, above Shogran, Shiripaya, 3000 m, 18.VII. and 4.VIII.2011, slide Nos GYP4917m, GYP4921m (males), GYP4918f, GYP4920f, GYP4926f (females) (coll. P. Gyulai). – 1 female, Azad Jammu & Kashmir, near Thunian, 2300-2700 m, 25-30.VIII.2004, leg. V. Gurko, slide No. RL8570f (coll. G. Ronkay, NHMW). – [India or Pakistan] 1 male, Rala, H. McArthur coll., June 1888, Leech Coll. slide No. BMNoct 4693♂, "Holotype", "Hermonassa moorei Brsn." (manuscript name) (coll. NHM UK London).
India: 1 female, [Kashmir] Goorais valley, June 1887, J.H. Leech Coll, 6000', gen. prep. Tams 1960/65, "Paratype", "Herm. moorei Brsn." (manuscript name)(coll. NHM UK London). – 1 male, Jammu & Kashmir, Bal valley near Sonamarg, 1.VIII.1981, leg. W. Thomas, slide No. PL807, IC ENTO 24975 (coll. J. Plante, MHNG).

Diagnosis: The new species differs externally from the otherwise very similar and sympatrically occurring *H. tathabaya* and *H. ayubia* by its more densely brown suffused hindwings, the stronger double postmedial line with deeper angle inwards below the medial veins, and the somewhat broader reniform stigma, from *H. ayubia* also by the paler collar; from *H. renifera, H. shizukoae, H. cyanolepis, H. dispila, H. chersotidia* and *H. oxyspila* by its paler, only basally blackish collar, more pointed forewing, more oblique, medially not inwards angled antemedial line, better defined and more inwards angled postmedial line and, with the exception of *H. chersotidia*, also by its darker hindwings.
The male genitalia of *H. moorei* (genitalia Fig. 7) differ conspicuously from those of all known relatives by the short and broad valva with shortly triangular cucullus and vary large, sclerotised sacculus, the very strongly sclerotised, evenly tapering, rather horn-like long clasper, the arched tower-like sclerotised medial crest of juxta based on small, rounded basal plate and the very large, strongly bulbed cornutus of the vesica.
The diagnostic features of the female genitalia (genitalia Fig. 8) are the large, heavily sclerotised plates of the penultimate segment, the presence of a second, posteriorly arranged sclerotised plate at ostium bursae, the large, caudally projecting and cristate-ribbed appendix bursae and the single, short signum plate in fundus bursae.

Description
External morphology: Medium-sized species, wingspan 30-31 mm. Head and thorax dark chocolate brown; palpi short, slightly upturned, laterally darkened; collar small and rounded, pale brown with blackish basal stripe, generally paler than tegulae; antennae of both sexes filiform with short fasciculate cilia; pubescence of legs ochreous brown. Forewings elongated, narrow, with pointed apex; ground colour dark hazel brown to chocolate brown, sparsely irrorated by darker brown

and a few ochreous scales. Subbasal and antemedial lines double, rather straight, latter slightly oblique and angled outwards at anal vein. Postmedial crosslines double, rather indistinct, strongly sinuous laced, dark grey brown, angled strongly inwards below cell; median fascia obsolete or absent. Orbicular and reniform stigmata conspicuous, black(ish), orbicular stigma large, irregularly shaped, more or less quadrangular, reniform stigma broadly lunulate; claviform stigma absent. Subterminal line fine, rather indistinct, pale ochreous defined by dark grey-brown inner shadow; terminal line ochreous, followed by tiny dark dots at veins; fringes paler than ground colour, ochreous brown with darker inner line. Hindwing ochreous brown, strongly suffused by cupreous brown, except in anal area; veins not or only slightly darker; discal spot poorly visible, slightly darker than ground colour, with pale inner crossvein. Terminal line slightly darker than marginal area; fringes pale ochreous brown with darker brown inner line. Underside of forewing patternless greyish brown; underside of hindwing ochreous brown; discal spot diffuse, darker brown with greyish centre.

Male genitalia: Uncus medium long, slender, apically slightly flattened; tegumen narrow and relatively long, penicular lobes minute, less hairy; juxta with small basal plate and arched tower-like sclerotised medial crest; transtilla with large, partly sclerotised medial flaps; vinculum short, sclerotised, V-shaped. Valva broadly triangular, with broad, sclerotised saccular part and short, triangular apical section (cucullus); corona absent. Saccular part dorsally evenly rounded, clavus not differentiated; clasper large, heavily sclerotised, its erect part horn-like, evenly tapering towards apex, slightly arched subapically, its ventral surface finely ribbed crested and setose; basal plate long, stick-like, fused with postero-ventral edge of sacculus. Aedeagus medium long, rather thick, arched, coecum penis weaker sclerotised than medial and distal sections; distal part of aedeagus with strong and long dorsal and short ventral carinal plates. Vesica short, ample, more or less discoidal, with small subbasal diverticulum armed by huge, strongly bulbed, thorn-like cornutus.

Female genitalia: Ovipositor short, conical; papillae anales elongated, apically finely pointed and sparsely setose; apophyses posteriores very short. Penultimate segment broad, basal plates of apophyses anteriores heavily sclerotised, rounded quadrangular; apophyses anteriores very short. Antrum large, cup shaped, sclerotised and flattened, with smaller postero-medial sclerotised plate. Ductus bursae relatively short, membranous with fine scobination and with two stronger sclerotised plates with hyaline stripe between them; appendix bursae large, elongated, projecting caudally, strongly ribbed cristate; corpus bursae elliptical-sacculiform, fundus bursae scobinate, with one single, short signum close to bottom of corpus bursae.

Bionomics and distribution: The species inhabits the medium-high altitude mixed woodlands of the south-western Himalayas in the Kaghan valley and Kashmir. A univoltine spring species whose known specimens have been collected between June and the end of August.

Etymology: The new species is dedicated to the great British lepidopterist, Frederic Moore, author of fundamental papers on the Noctuoid fauna of the Himalayan region.

Remarks: The species is closely related to *H. renifera*, *H. shizukoae* and *H. cyanolepis*, representing their allopatric western sister taxon. The new species was first recognised by Boursin who found two specimens in the material of the British Museum (now NHM UK) and named it as "*Hermonassa moorei*." This species has remained undescribed until its re-discovery in Pakistan and the Indian Kashmir. We accepted the dedication of Boursin and preserved the name "*moorei*" but the holotype was chosen from the newly collected specimens.

Hermonassa tathabaya **sp. n.**

Plate 2 figs 5-7; genitalia Figs 9-10

Holotype: Male, Pakistan, Himalayas, Kaghan valley, Tathabaya, 2200 m, 9-10.IX.1997, leg. Gy. Fábián & G. Ronkay, slide No. RL6751m (coll. Ronkay, NHMW).

Paratypes

Pakistan: 1 male, with the same data as the holotype (coll. G. Ronkay, NHMW). – 1 male, Kashmir, Himalaya Mts, Murree Hills, Ayubia, 2650 m, 73°24'E, 34°02'N, 31.VIII.-1.IX.2001, leg. G. Ronkay (coll. MHNG); slide Nos KST860m, KST861m (males). – 1 male, Himalaya Mts, Kaghan valley, Tathabaya, 2330 m, 73°26'E, 34°36'N; 11-12.IV.1998, leg. P. Gyulai & A. Garai, slide No. GYP4923m (coll. Gyulai).

Diagnosis: *Hermonassa tathabaya* differs from its externally most similar relative, *H. ayubia*, by its paler collar (a shared feature with *H. moorei*, all other similarly coloured species of the *dispila* group have prominently black or blackish-brown collars) and the somewhat thicker (not finely lunulate) black reniform stigmata. *Hermonassa tathabaya* can be distinguished from the other members of the *dispila* group, besides the paler collar, by the darker hindwings (except *H. chersotidia*) and the shape of the antemedial crossline, which obliquely turns outwards including its medial section in *H. tathabaya*, whereas this part of the antemedial line is directed obliquely to the base of the wing in the related taxa.

In male genitalia, *H. tathabaya* and *H. ayubia* differ from all other members of the species group by the configuration of the vesica. These two species have evenly curved, basally dilated tubular vesica with reduced subbasal diverticulum, the small and double-peaked (or

even multi-peaked) subbasal cornutus originates from the wall of the main tube. The clasping apparatus of the two species are conspicuously different (see the genitalia Figs 9-12), the specific features of *H. tathabaya* are the short and evenly thick basal 3/4 part and short but rather wide spatulate apex of uncus, the long and strong, apically pointed medial process of juxta, the rabbit-ear-shaped distal part of valva, the absence of the ventral saccular extension and the multi-peaked, rather mace-like cornutus of the vesica.

Description

External morphology: Medium-sized species, wingspan 31-33 mm. Head and thorax dark chocolate brown except paler ochreous-brown- to hazel-brown-coloured collar having blackish basal stripe; antennae filiform with short fasciculate cilia; pubescence of legs ochreous brown to dark brown. Forewings elongated, narrow, with finely pointed apex; ground colour dark chocolate brown, sparsely irrorated by minute dark scales. Subbasal and antemedial crosslines double, former straight, latter obliquely angled outwards at anal vein. Postmedial crossline double, outer line rather indistinct, inner line strongly sinuous laced, dark grey brown; median fascia hardly visible. Orbicular and reniform stigmata conspicuous, black(ish), orbicular stigma large, more or less rounded, reniform stigma broadly lunulate; claviform stigma absent. Subterminal line indistinct, defined by shadow-like, interrupted, dark grey brown line; terminal line ochreous, followed by diffuse, tiny dark dots at veins; fringes as ground colour. Hindwing ochreous brown, strongly suffused by cupreous brown, except in anal area; veins not or only slightly darker than ground colour; discal spot diffuse, slightly darker than ground colour, with pale inner crossvein. Terminal line fine, ochreous; fringes brown. Underside of forewing patternless greyish brown; underside of hindwing ochreous brown; discal spot diffuse, darker brown with greyish centre.

Male genitalia: Uncus medium long, evenly slender, except its flattened, spatulate apex; tegumen relatively short, juxta with discoidal (rounded) basal plate and long, spine-like, acute medial process; transtilla with large, medial flaps covered densely with minute teeth; vinculum long and strong, V-shaped. Valva elongated, slender, saccular part sclerotised, clavus not differentiated; distal part membranous, rabbit-ear shaped, with finely pointed apex and strong hair-pencils; corona absent. Clasper long, slender, evenly broad, finely arched, with rounded apex, its basal plate long, stick-like, fused with postero-ventral edge of sacculus. Aedeagus medium-long, rather thick, finely arched; distal part of aedeagus with strong and long dorsal and long, strongly dentate, eversible ventral carinal plate. Vesica broadly tubular, bent ventrad, with broad dorso-lateral scobinate field; subbasal cornutus rather plate- or mace-like, with a number of tiny peaks.

Female: Unknown.

Bionomics and distribution: The new species is known from the medium-high and upper forest belts of the lower region of the Kaghan Valley and the Murree Hills. The specimens of the type series were collected at light between the end of August and the beginning of September, but are rather worn, the flight period most probably starts in midsummer.

Etymology: The new species is named after its type locality, a medium-high mixed woodland area in the Kaghan Valley.

Remarks: The two other, partly sympatrically occurring Pakistani species of the *dispila* species group, belong to two separate lineages due to their genitalia features. The male genitalia of the two externally rather similar new species show striking differences in practically all details; the female genitalia of the two species cannot be compared because the female of *H. tathabaya* is unknown.

***Hermonassa ayubia* sp. n.**

Plate 2 fig. 8; Plate 3 figs 1-4; genitalia Figs 11-14

Holotype: Male, Pakistan, Kashmir, Himalaya Mts, Murree Hills, Ayubia, 2650 m, 73°24'E, 34°02'N, 10.VII.2000, leg. G. Ronkay & Z. Varga, slide No. KST863m (coll. G. Ronkay, NHMW).

Paratypes

Pakistan: 7 males, 1 female, with the same data as the holotype, slide Nos KST862m, KST865m, KST866m, KST867m, KST868m, KST870m, KST871m (males), KST864f (female). – 1 male, from the same site, 25-26.VIII.1998, leg. G. Ronkay & Z. Varga, slide No. RL6750m. – 5 males, 1 female, from the same site, 25-26.VII.2000, leg. G. Ronkay & Z. Varga, slide Nos KST872m, KST873m, KST883m, KST884m, KST885m (males), KST869f (female). – 2 males, 1 female, from the same locality, 10.VIII.2001, leg. G. Ronkay. – 2 males, 1 female, from the same locality, 31.VIII.-1.IX.2001, leg. G. Ronkay, slide Nos RL7561m (male), KST886f (female). – 3 females, Ayubia village, 2600 m, 18.VII.2011, slide No. GYP5053f. – 1 male, Ayubia NP, 28 km N of Murree, 2450 m, 2.VIII.1998, leg. T. Csővári & L. Mikus (coll. T. Csővári, P. Gyulai, S.T. Kovács, MHNG, G. Ronkay, NHMW, and Z. Varga).

Diagnosis: *Hermonassa ayubia* can be distinguished from its closest relative, *H. tathabaya*, by its dark collar and the thinner, finely lunulate black reniform stigma, and practically all details of the clasping apparatus of the male genitalia. It differs from the other members of the *dispila* group (except *H. chersotidia*) by its darker hindwings and the not inwardly angled medial section of antemedial line.

The male clasping apparatus of *H. ayubia* has, comparing with that of *H. tathabaya* (see the genitalia Figs 9-12),

longer and thinner, apically more dilated, more spatulate uncus, much larger basal plate of juxta with short, rather quadrangular medial process, thinner vinculum, well-developed ventral saccular extension and conical-pyramidal, often acutely-pointed cornutus in the vesica.

Description

External morphology: Medium-sized species, wingspan 31-33 mm. Head and thorax dark chocolate-brown; collar darker, blackish or blackish-brown; antennae of both sexes filiform, those of males with somewhat longer fasciculate cilia; pubescence of legs ochreous-brown to dark brown. Forewings elongated, narrow, with finely pointed apex; ground colour dark chocolate-brown; subbasal and antemedial lines double, former straight, latter obliquely angled outwards; postmedial crossline double, strongly sinuous-laced, dark grey-brown; median fascia hardly visible. Orbicular and reniform stigmata conspicuous, black(ish), orbicular stigma large, subtriangular, reniform stigma thin, lunulate; claviform stigma absent. Subterminal line indistinct, appearing often as an obsolescent row of tiny ochreous dots, followed by shadow-like darker line; terminal line ochreous, followed by diffuse, tiny dark dots at veins; fringes as ground colour. Hindwing ochreous-brown, strongly suffused by cupreous brown; veins not or only slightly darker than ground colour; discal spot diffuse, slightly darker than ground colour, with pale inner crossvein. Terminal line fine, ochreous; fringes brown. Underside of forewing patternless greyish-brown; underside of hindwing ochreous-brown; discal spot diffuse, darker brown with greyish centre.

Male genitalia: Uncus relatively long, slender, apically broadly spatulate; tegumen relatively short, juxta with large, rounded basal plate and small, more or less quadrangular medial process; transtilla with large, medial flaps covered densely with minute teeth; vinculum long and strong, V-shaped. Valva slender, with sclerotised saccular part, postero-ventral part of sacculus with strong, digitifrom saccular extension; clavus not differentiated; distal part membranous, rabbit-ear-shaped, with finely pointed apex and strong hair-pencils; corona absent. Clasper long, slender, evenly broad, finely arched, with rounded apex, its basal plate long, stick-like, fused with postero-ventral edge of sacculus. Aedeagus medium-long, rather thick, finely arched; distal part of aedeagus with strong and long dorsal and long, strongly dentate, eversible ventral carinal plate. Vesica broadly tubular, bent ventrad, dorso-lateral scobinate field broad, strong; subbasal cornutus pyramidal-conical or mace-like, usually with one or two peaks only.

Female genitalia: Ovipositor short, conical; papillae anales elongated, apically finely pointed and sparsely setose; apophyses posteriores very short. Penultimate segment broad, basal plates of apophyses anteriores sclerotised, narrow, elongated-saccate; apophyses anteriores very short. Antrum large, cup-shaped, sclerotised and flattened; ductus bursae medium-long, with funnel-like, partly sclerotised posterior and membranous-scobinate tubular anterior sections; appendix bursae subconical, projecting postero-laterally, its walls strongly ribbed; corpus bursae large, elliptical-sacculiform, fundus bursae scobinate, with two short signum-stripes.

Bionomics and distribution: *Hermonassa ayubia* is known from its type locality only. Its habitats are medium-high mixed coniferous forest areas of the Murree Hills. The freshly emerged specimens of the type series were collected at light in July, the flight period extends until the first half of September.

Etymology: The new species is named after its type locality, a famous resort in the Murree Hills in Pakistan.

Remarks: *Hermonassa ayubia* is a sympatric sister species of *H. tathabaya*.

***Hermonassa dispila* Boursin, 1967**

Plate 4 figs 5-6; genitalia Figs 21-22

Hermonassa dispila Boursin, 1967: 30, pl. 2, fig. 16; gen. fig. pl. 6, fig. 11.

Type locality: China, Yunnan, Li-kiang, 4000 m.

Type material examined: Holotype, male, in coll. ZFMK, [China] "Li-kiang, ca. 4000 m | Prov. Nord-Yuennan | 22.8.1935. H. Höne" (yellow label); "Holotypus" (red label); "*Hermonassa dispila* Brsn. ♂ Holotype det. Boursin (white label) (coll. ZFMK). – Paratypes, China, 3 males, from the same locality, 3.IX., 8.IX., 10.IX.1935, IC ENTO 24747, 24748, 24750, slide Nos RL12588m, RL12589m (males) (coll. Plante, MHNG). – Paratypes, 3 males, Likiang, ca. 2000 m, 8.IX., 13.IX. and 14.IX.1935, IC ENTO 24749, 24751, 24752 (coll. Plante, MHNG).

Diagnosis: *Hermonassa dispila* differs externally from *H. chersotidia* mostly by its paler hindwing; the forewing crosslines are paler (or even obsolete) than in most specimens of its Nepalese sister taxon.

In the male genitalia, *H. dispila* has, comparing with *H. chersotidia* (see the genitalia Figs 19, 21 and 22), thinner and longer, a distally somewhat dilated and apically finely spatulate uncus, weaker basal plate of juxta with large triangular medial process, thinner basal section of clasper, and much shorter, finely-curved subbasal cornutus of vesica having a broader basal bulb.

Remarks: *Hermonassa dispila* is an allopatric sister-species of *H. chersotidia*.

***Hermonassa chersotidia* Boursin, 1968**

Plate 4 figs 3-4; genitalia Figs 19-20

Hermonassa chersotidia Boursin, 1968b: 147, pl. 1 figs 18-20, gen. fig. pl. 5 fig. 41.

Type locality: Nepal, Thodung, 3100 m.

Type material examined: Holotype, in coll. ZSM, male, "Nepal, Thodung 3100 m| 1.VI.1962 | leg. G. Ebert u. H. Falkner | Staatsslg. München","Préparation No. MM 1057 Ch. Boursin" (white label with red letters), "ZSM Genitalprp. No. N1157♂", "Holotypus ♂ | *H. chersotidia* Brsn." (red label), "*Hermonassa chersotidia* Brsn. ♂ | Boursin det.","Abgebildet Brsn 1968 | Khumbu Himal, | 3(1) t. I., 18. (♂)" (coll. ZSM). – Paratype, coll. MNHU Berlin, male (paralectotype of *H. lunata* Moore), "Darjeeling| coll. Atkinson." "*Hermonassa lunata* ♂ Moore (type)", "Origin." (pink label), "coll. Staudinger | K. 342." "Préparation No. MB 456 Ch. Boursin" (white label with red letters), "Paratypus" (red label), "*Hermonassa chersotidia* Brsn. ♂ | Boursin det."

Additional material examined: A large series of some 150 specimens of both sexes from various regions of the Nepalese Himalayas, coll. HNHM, MHNG, ZSM, T. Csővári, Gy. Fábián, S.T. Kovács, and G. Ronkay, NHMW.

Diagnosis: *Hermonassa chersotidia* can be distinguished externally from *H. dispila* by its darker, more uniformly-brown suffused hindwings and the (in most specimens) more prominent, sometimes even sharply-defined antemedial and postmedial crosslines.
The male genitalia of *H. chersotidia* (genitalia Fig. 19) differ from those of *H. dispila* (genitalia Figs 21, 22) by the shorter and thicker, apically more pointed uncus, stronger sclerotised juxta without medial process, more robust clasper with wider basal section, and the much longer, straight, spine-like subbasal cornutus of vesica having smaller basal bulb.

Remarks: *Hermonassa chersotidia* represents the southern Himalayan twin species of *H. dispila*.

***Hermonassa oxyspila* Boursin, 1968**
Plate 4 figs 7-8; genitalia Figs 23-24

Hermonassa oxyspila Boursin, 1968b: 144, pl. 1, fig. 15; gen. fig. pl. 4, fig. 39.

Type locality: Nepal, Prov. Nr. 3 East, Junbesi, 2750 m.

Type material examined: Holotype, in coll. ZSM, male, "Nepal, Prov. Nr. 3 East Junbesi 2750 m| 25–31 VII.1964 | leg. W. Dierl | Staatsslg. München," "Holotypus ♂ | H. oxyspila Brsn. | Zool. Staatsslg. München" (red label), "Hermonassa oxyspila Brsn. ♂ | Boursin det.," "Abgebildet Brsn 1968| Khumbu Himal, | 3(1) t. I., 15." (coll. ZSM).

Additional material examined: A large series of some 350 specimens of both sexes from various regions of the Nepal Himalayas, coll. HNHM, MHNG, ZSM, T. Csővári, Gy. Fábián, S.T. Kovács, and G. Ronkay, NHMW.

Diagnosis: *Hermonassa oxyspila* can be distinguished externally from *H. cyanolepis* by its much sparse irroration with bluish scales; from *H. shizukoae*, *H. renifera* and *H. dispila* by its stronger defined crosslines; from *H. chersotidia* by its paler hindwing and weaker noctuid pattern; from *H. tathabaya* and *H. ayubia* by its smaller size and paler hindwing.
The male genitalia of *H. oxyspila* (genitalia Fig. 23) are characterised by the long and straight uncus, rather cordiform basal plate of juxta with medium-long and thin, spine-like medial process, long and slender valvae with prominent but short, triangular ventro-medial saccular process, long and slender clasper, short and thick aedeagus with sclerotised dorsal and ventral eversible carinal bars, and the very long, tubular subbasal diverticulum of the vesica terminated in small, spiniform, basally bulbed cornutus. *Hermonassa oxyspila* differs from *H. shizukoae*, *H. renifera* and *H. cyanolepis* by its longer valvae, thinner clasper, longer and slenderer medial process of juxta and smaller cornutus of the vesica.
The female genitalia of *H. oxyspila* (genitalia Fig. 24) are easily separable from those of the members of the species group by the weaker sclerotised, lyriform antrum and the weakest sclerotised ductus bursae.

Remarks: *Hermonassa oxyspila* is considered here as the closest relative of the lineage comprising *H. shizukoae*, *H. renifera* and *H. cyanolepis* though the male genitalia show conspicuous similarity also with those of two externally rather dissimilar species, *H. spilota* and *H. connudata*.

***Hermonassa cyanolepis* Boursin, 1967**
Plate 4, figs 1, 2; genitalia Figs 17-18

Hermonassa cyanolepis Boursin, 1967: 35, pl. 2, figs 30-31; gen. fig. pl. 9, fig. 25.

Type locality: China, Yunnan, Li-kiang, 2000 m.

Type material examined: Holotype, in coll. ZFMK, male, [China] "Li-kiang, ca. 2000 m | Prov. Nord-Yuennan | 1.7.1934. H. Höne" (yellow label); "Holotypus" (red label); "*Hermonassa cyanolepis* Brsn. ♂ Holotype det. Boursin" (white label) (coll. ZFMK). – Paratype, China. 1 male, from the same locality, 10.VI.1934, IC ENTO 24787 (coll. Plante, MHNG). – Paratypes, 1 male, 1 female, Likiang, ca. 3000 m, 19.IX. and 20.IX.1935, IC ENTO 24786, 24788, slide Nos RL12593m (male), RL12594f (female) (coll. Plante, MHNG).

Diagnosis: *Hermonassa cyanolepis* differs externally from all uniformly brown-coloured members of the species group by its prominent irroration of fine bluish scales.
The specific features of the male genitalia (genitalia

Fig. 17) are the broad valvae, the relatively less broad basal section of the clasper and the very long, spiniform cornutus of the vesica; the medial process of juxta is shorter and wider triangular than in *H. renifera* and *H. shizukoae*. The female genitalia of *H. cyanolepis* (genitalia Fig. 18) differ from those of *H. shizukoae* (genitalia Fig. 16) by the smaller antrum, longer ductus bursae and the much more strongly developed and long signum-stripes of the corpus bursae.

Remarks: *Hermonassa cyanolepis* is a member of the lineage comprising *H. shizukoae*, *H. renifera* and *H. cyanolepis*; it is also related to the *H. oxyspila* lineage.

Hermonassa renifera Chen, 1991

Hermonassa renifera Chen, 1991: 353, fig. 2.

Type locality: China, Prov. Xizang, Cona.

Holotype: In coll. IZAS Beijing, male, not examined.

Diagnosis: The study of authentic specimens of the species is still a target of future investigations. The similarity of the male genitalia of *H. renifera* shown by the drawing of Chen (1991, 1999) and the examined material of *H. shizukoae* inspired Hreblay & Ronkay (1998) to consider the two taxa as conspecific. Subsequent, intense investigations on the species group suggest to evaluate the smaller differences between the two taxa (shape and length of cucullus, shape of the enlarged basal part of clasper, and, especially, the length of the cornutus of the vesica) as specific ones.

Remarks: *Hermonassa renifera* is considered here as the northern, allopatric twin species of *H. shizukoae*.
The black and white illustration of the species (Chen, 1999: plate XI fig. 38) and the illustrations of the male genitalia published twice (Chen, 1991: fig. 2; 1999: fig. 171). It is unknown whether the published genitalia drawing refers to the holotype or the only known male paratype.

Hermonassa shizukoae Sugi, 1995 stat. rev.

Plate 3 figs 5-8; genitalia Figs 15-16

Hermonassa shizukoae Sugi, 1995: 92, pl. 117, figs 17, 18, genitalia figs 704, 730.

Type locality: India, West Bengal, 50 km NW of Darjeeling, 3600 m.

Type material examined: Holotype, in coll. NSMT, male, " India, W. Bengal, Sandakphu, ca 50 km NW of Darjeeling, 3600 m, 14.VIII.1985", "Genitalia slide No. SS-5155♂", "Shigero Sugi Collection", "HOLOTYPE" (red label), *Hermonassa shizukoae* Sugi ♂, det. S. Sugi, 1995" (coll. NIAES).

Additional material examined: A long series of about 130 specimens of both sexes from various parts of the Nepalese Himalayas.

Diagnosis: The species is characteristically concolorous brown, without or only pale or obsolete postmedial and subterminal lines. It resembles mostly *H. dispila* from which it is separable only by genitalia structures. The other members of the species group have either stronger postmedial (and subterminal) crossline(s), or darker hindwings, or (in case of *H. cyanolepis*) the forewing is irrorated with minute bluish scales.
The male genitalia of *H. shizukoae* (genitalia Fig. 15) are very similar to those of *H. renifera* (Chen, 1991: fig. 2; Chen, 1999: fig. 171), the most prominent difference between the two species can be found in the shape and size of the subbasal cornutus of the vesica, which is considerably longer and finer in *H. shizukoae* having smaller and narrower basal bulb. In addition, the distal part of the valva is more elongated in *H. shizukoae*, the basal part of clasper is less rounded and the distal section of clasper is proportionally shorter than in *H. renifera*.
The female genitalia of *H. shizukoae* (genitalia Fig. 16) has, in comparison with *H. chersotidia*, *H. cyanolepis* and *H. oxyspila*, broader and more regularly calyculate antrum and shorter ductus bursae; the signa are shorter and weaker than in the related species.

Remarks: The species belongs to the *H. cyanolepis* lineage, representing the southern Himalayan member of the species complex. It is considered here as distinct from *H. renifera* due to differences found in the male genitalia of the two taxa.

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Plate 1

1. *Hermonassa anthracina* Boursin, 1967 Holotype male, China, Yunnan

2. *Hermonassa anthracina* Boursin, 1967 male, China, Yunnan

3. *Hermonassa anthracina* Boursin, 1967 male, China, Yunnan

4. *Hermonassa anthracina* Boursin, 1967 male, China, Yunnan

5. *Hermonassa kalamantra* sp. n. Holotype male, Nepal

6. *Hermonassa kalamantra* sp. n. Paratype male, Nepal

7. *Hermonassa kalamantra* sp. n. Paratype female, Nepal

8. *Hermonassa kalamantra* sp. n. Paratype female, Nepal

Plate 2

1. *Hermonassa moorei* sp. n. Holotype male, Pakistan

2. *Hermonassa moorei* sp. n. Paratype male, Kashmir

3. *Hermonassa moorei* sp. n. Paratype female, Pakistan

4. *Hermonassa moorei* sp. n. Paratype female, Kashmir

5. *Hermonassa tathabaya* sp. n. Holotype male, Pakistan

6. *Hermonassa tathabaya* sp. n. Paratype male, Pakistan

7. *Hermonassa tathabaya* sp. n. Paratype male, Pakistan

8. *Hermonassa ayubia* sp. n. Paratype male, Pakistan

Plate 3

1. *Hermonassa ayubia* sp. n. Holotype male, Pakistan

2. *Hermonassa ayubia* sp. n. Paratype male, Pakistan

3. *Hermonassa ayubia* sp. n. Paratype female, Pakistan

4. *Hermonassa ayubia* sp. n. Paratype female, Pakistan

5. *Hermonassa shizukoae* Sugi, 1995 male, Nepal

6. *Hermonassa shizukoae* Sugi, 1995 male, Nepal

7. *Hermonassa shizukoae* Sugi, 1995 female, Nepal

8. *Hermonassa shizukoae* Sugi, 1995 female, Nepal

Plate 4

1. *Hermonassa cyanolepis* Boursin, 1967 Holotype male, China, Yunnan

2. *Hermonassa cyanolepis* Boursin, 1967 Paratype female, China, Yunnan

3. *Hermonassa chersotidia* Boursin, 1968 Holotype male, Nepal

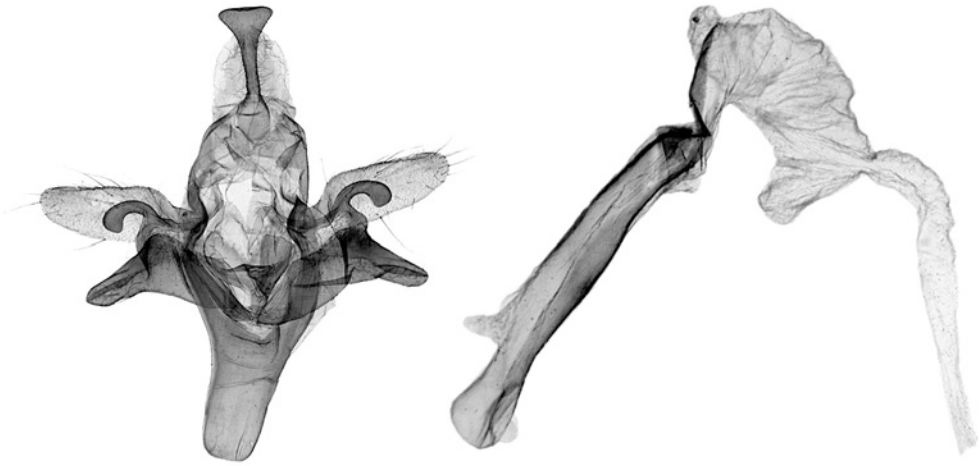
4. *Hermonassa chersotidia* Boursin, 1968 female, Nepal

5. *Hermonassa dispila* Boursin, 1967 Holotype male, China, Yunnan

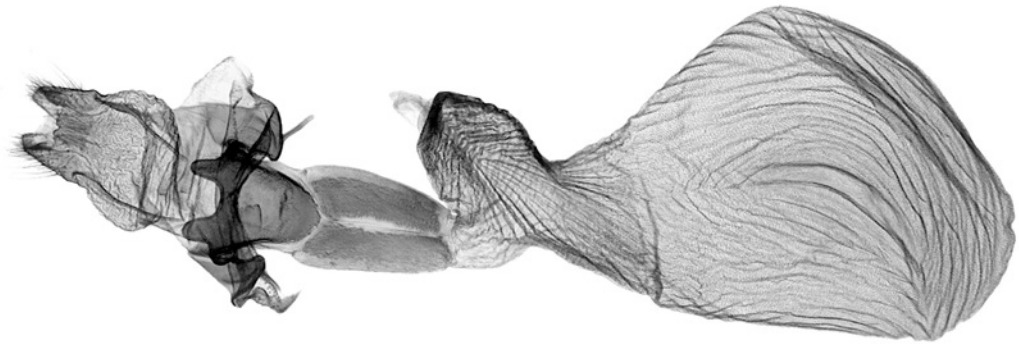
6. *Hermonassa dispila* Boursin, 1967 Paratype female, China, Yunnan

7. *Hermonassa oxyspila* Boursin, 1968 Holotype male, Nepal

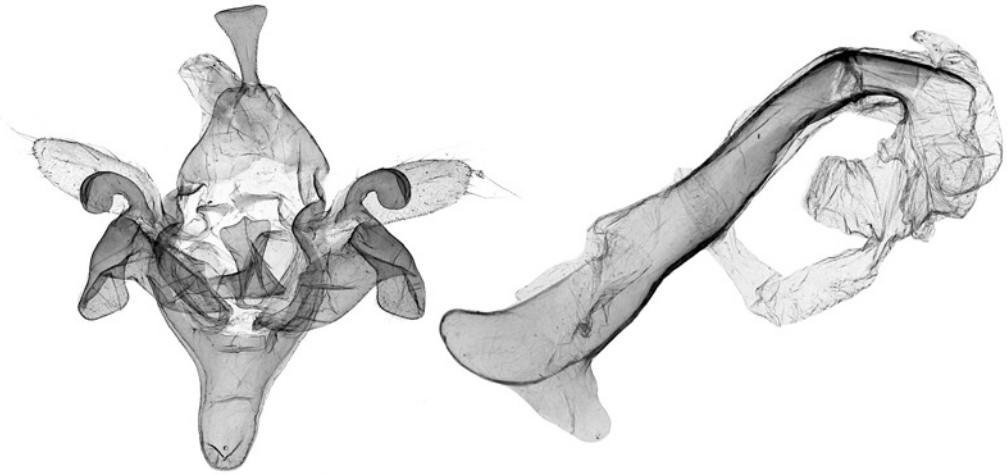
8. *Hermonassa oxyspila* Boursin, 1968 female, Nepal



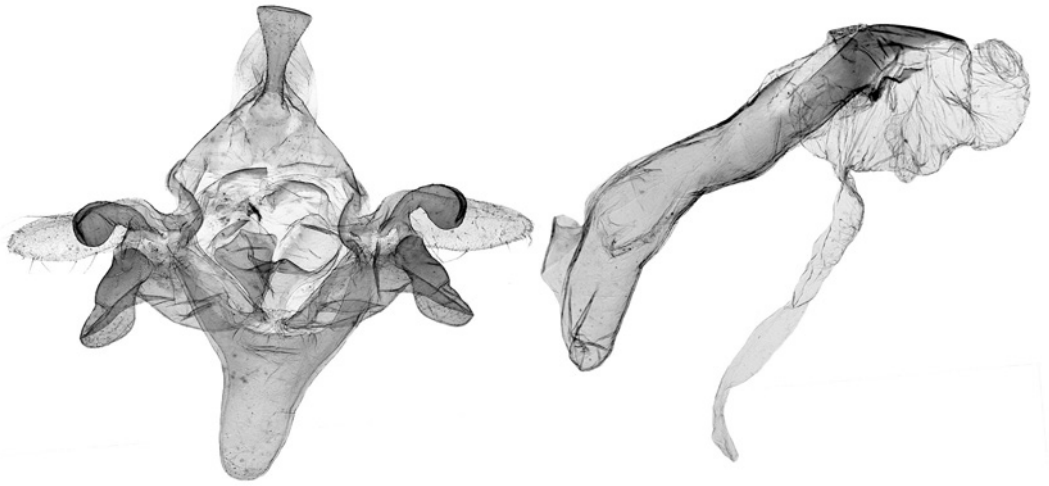
Gen. Fig. 1. *Hermonassa anthracina* Boursin, 1967 male KST882



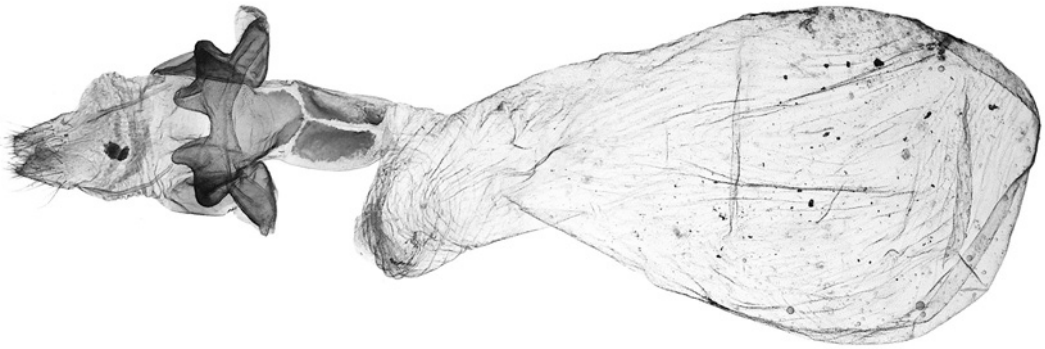
Gen. Fig. 2. *Hermonassa anthracina* Boursin, 1967 female



Gen. Fig. 3. *Hermonassa kalamantra* sp. n. male Paratype KST874

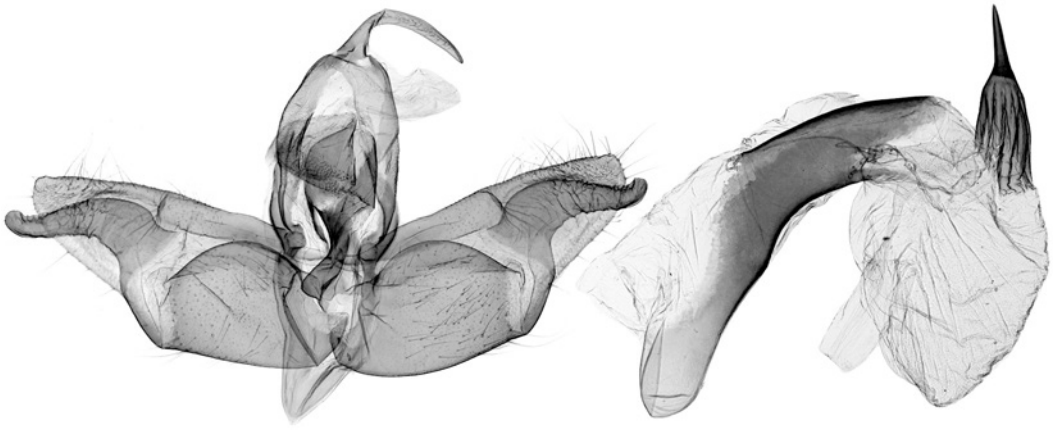


Gen. Fig. 4. *Hermonassa kalamantra* sp. n. male Paratype KST878



Gen. Fig. 5 *Hermonassa kalamantra* sp. n. female Paratype KST880

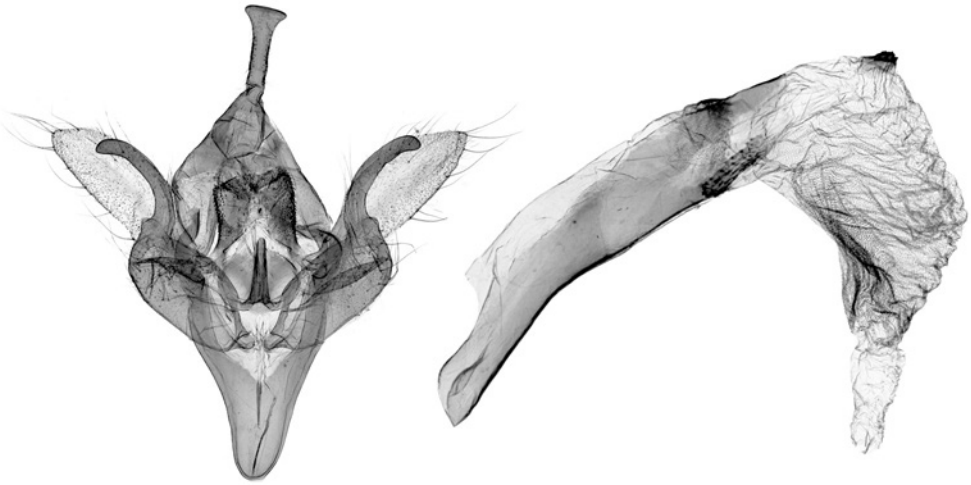
Gen. Fig. 6. *Hermonassa kalamantra* sp. n. female Paratype KST881



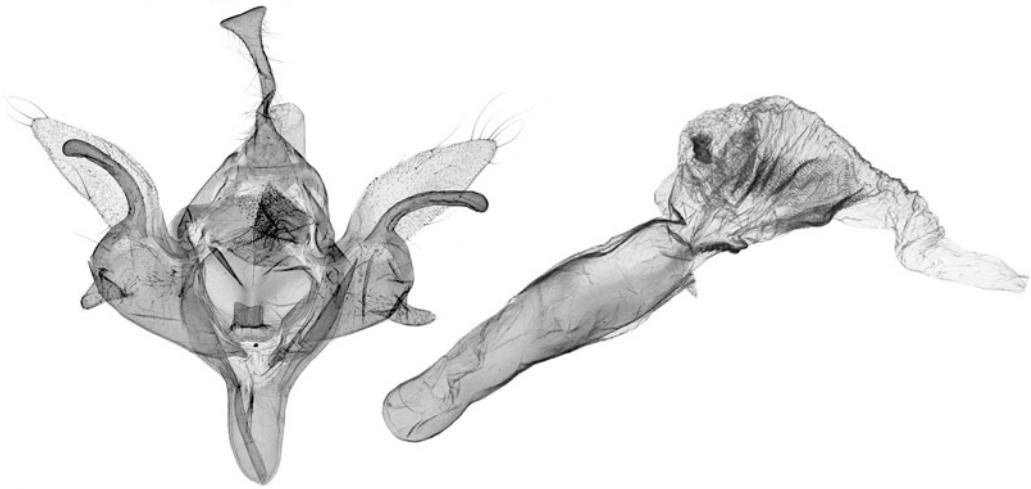
Gen. Fig. 7. *Hermonassa moorei* sp. n. male Holotype RL6701

Gen. Fig. 8. *Hermonassa moorei* sp. n. female Paratype RL8570

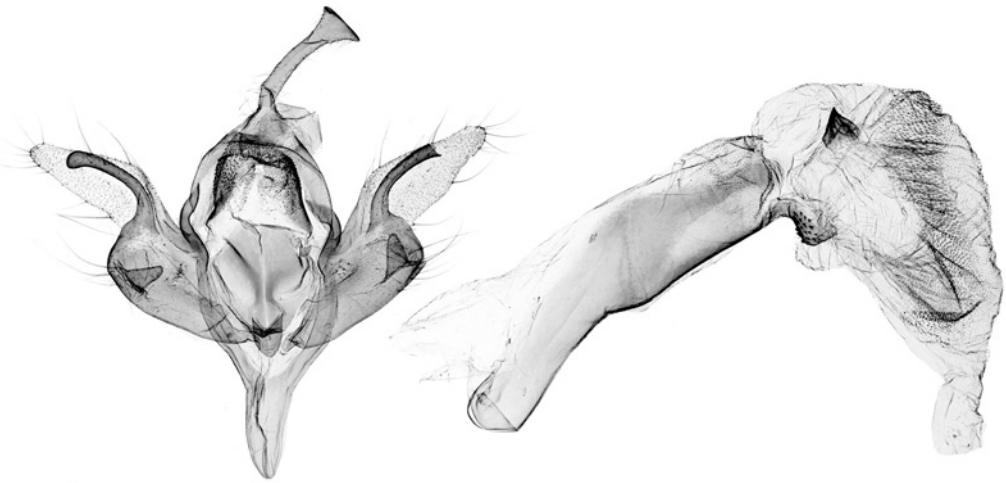
Gen. Fig. 9. *Hermonassa tathabaya* sp. n. male Holotype RL6751



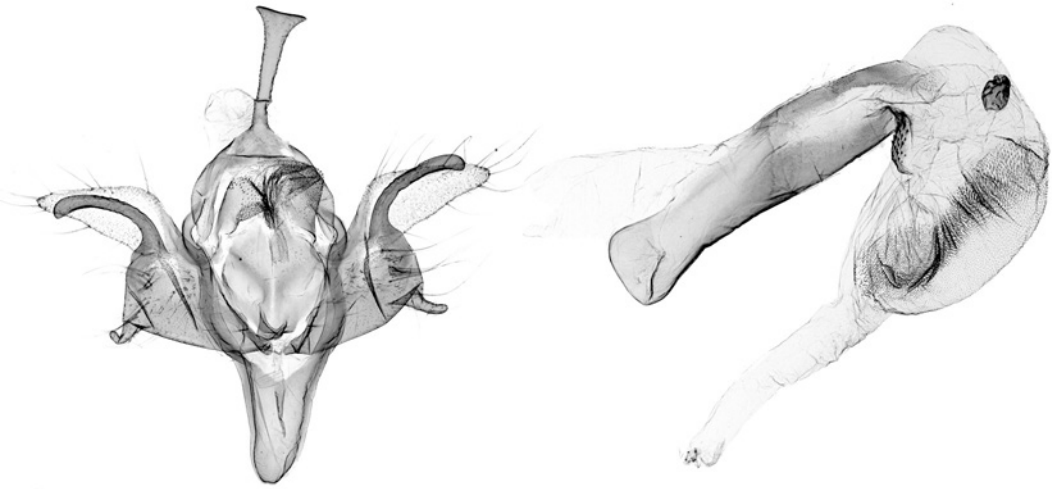
Gen. Fig. 10. *Hermonassa tathabaya* sp. n. male Paratype KST861



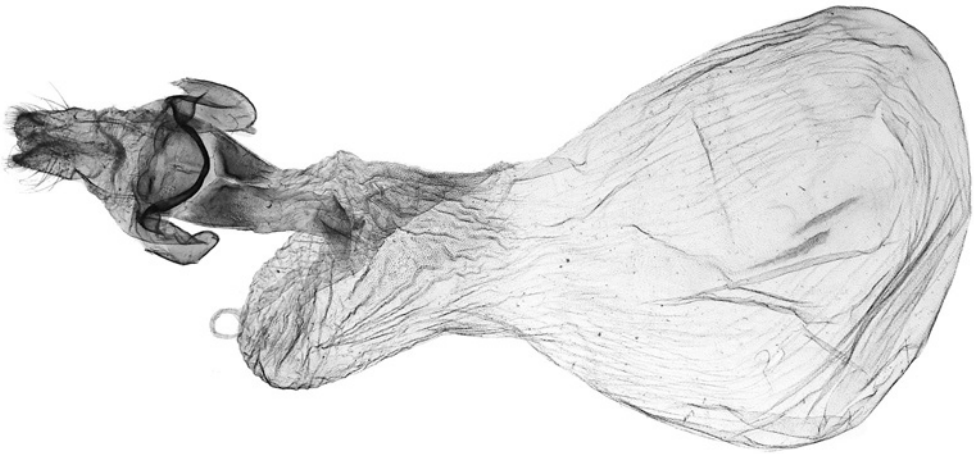
Gen. Fig. 11. *Hermonassa ayubia* sp. n. male Holotype KST863



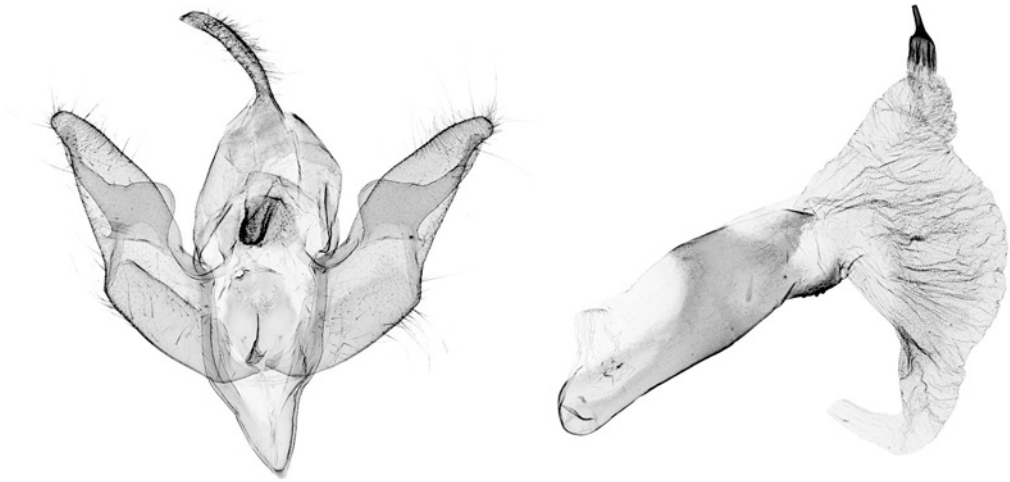
Gen. Fig. 12. *Hermonassa ayubia* sp. n. male Paratype RL6750



Gen. Fig. 13. *Hermonassa ayubia* sp. n. male Paratype RL7561

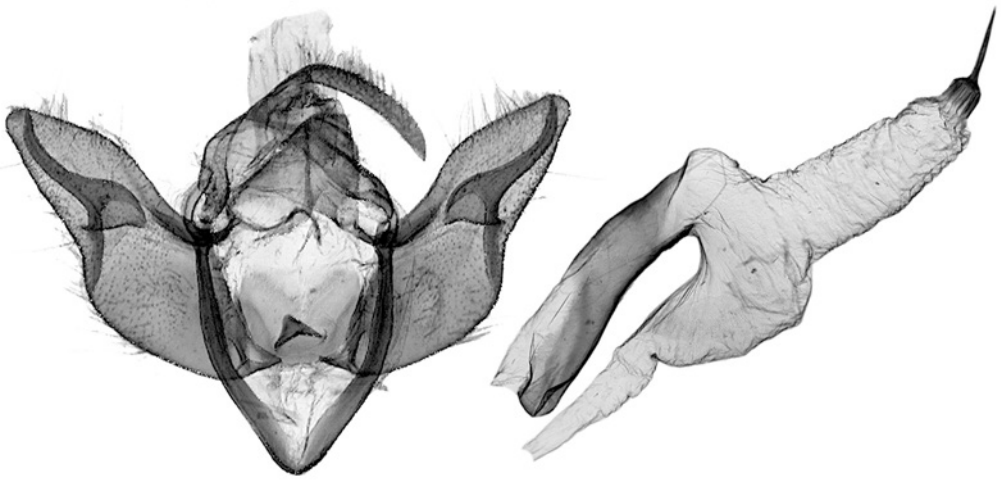


Gen. Fig. 14. *Hermonassa ayubia* sp. n. female Paratype KST869

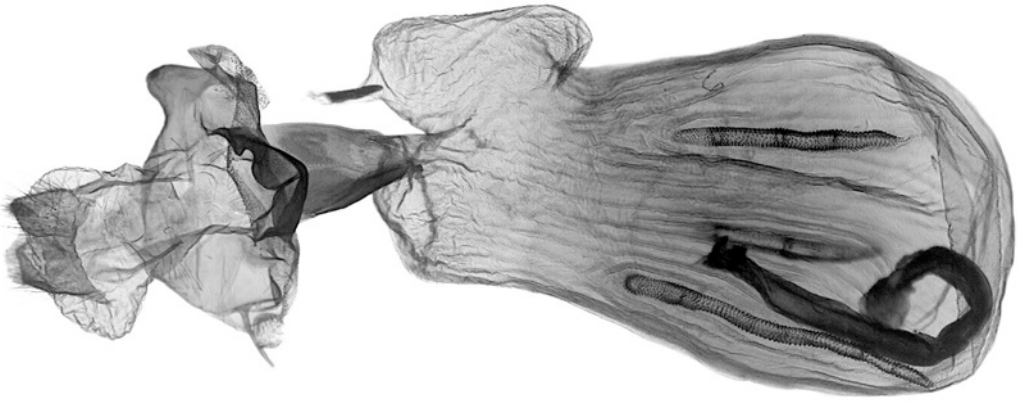


Gen. Fig. 15. *Hermonassa shizukoae* Sugi, 1995 male RL5504

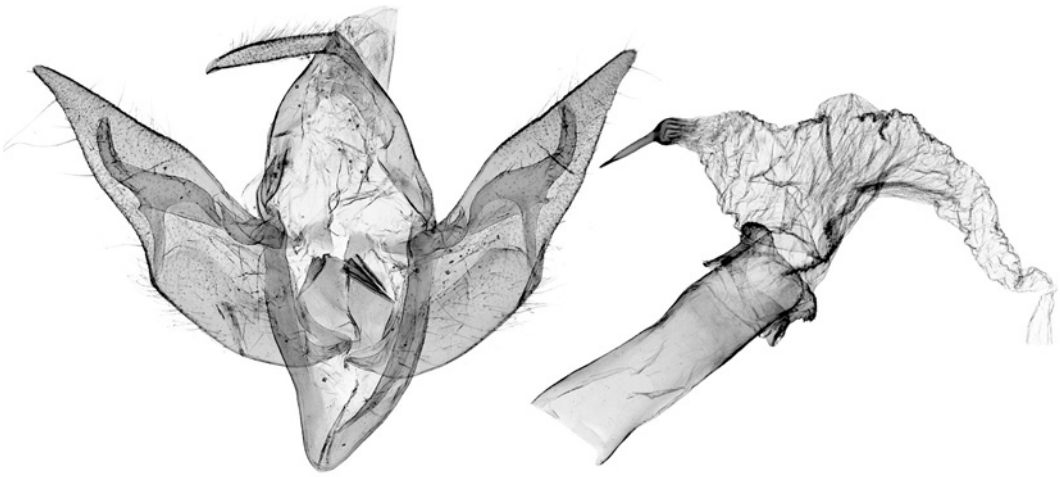
Gen. Fig. 16. *Hermonassa shizokuae* Sugi, 1995 female



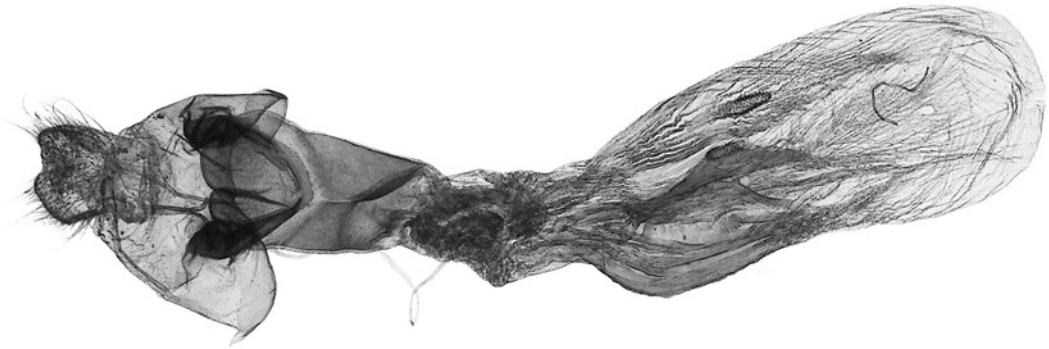
Gen. Fig. 17. *Hermonassa cyanolepis* Boursin, 1967 male



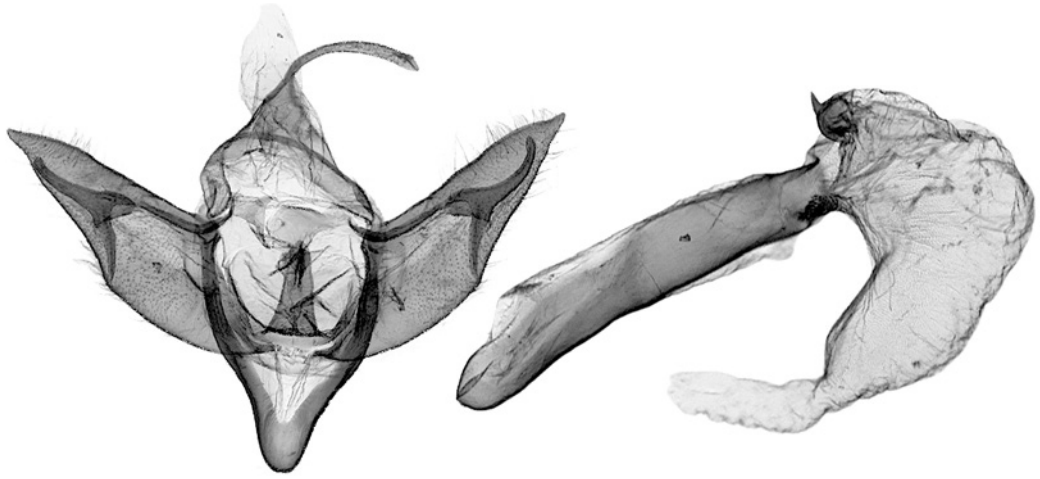
Gen. Fig. 18. *Hermonassa cyanolepis* Boursin, 1967 female



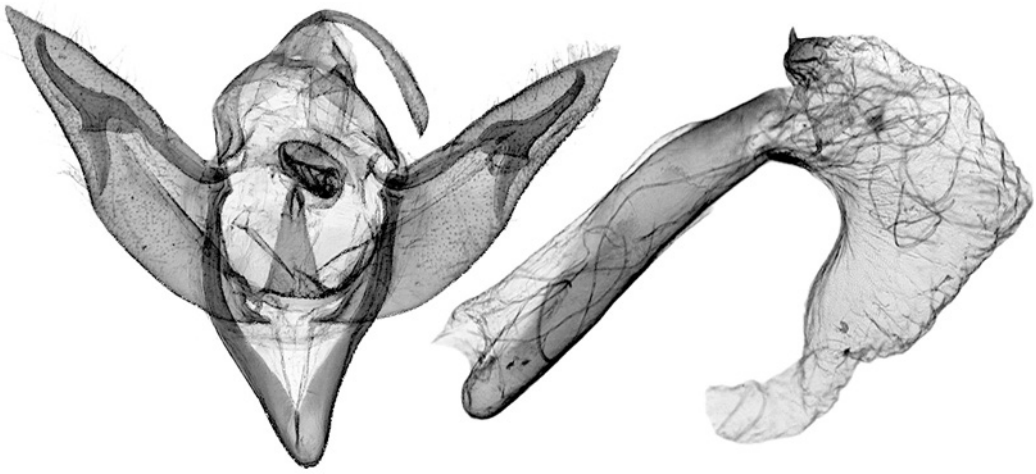
Gen. Fig. 19. *Hermonassa chersotidia* Boursin, 1968 male KST718



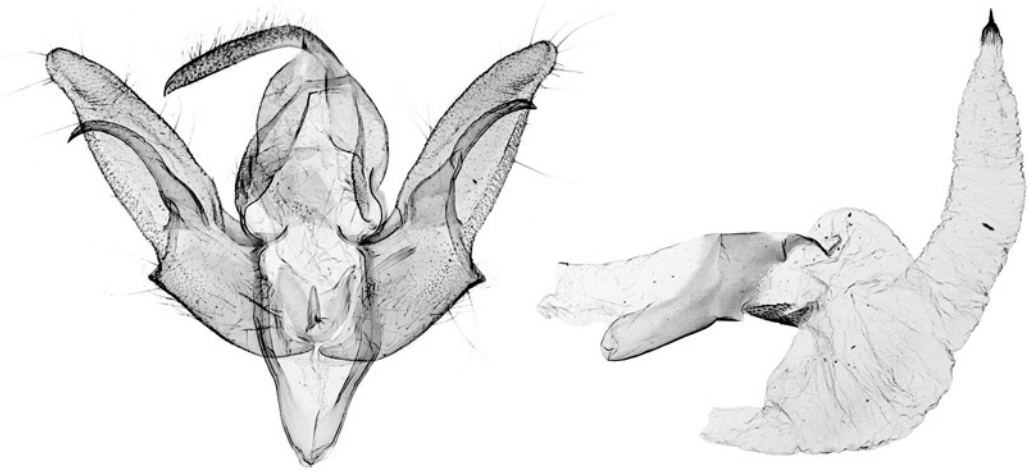
Gen. Fig. 20. *Hermonassa chersotidia* Boursin, 1968 female KST715



Gen. Fig. 21. *Hermonassa dispila* Boursin, 1967 male



Gen. Fig. 22. *Hermonassa dispila* Boursin, 1967 male



Gen. Fig. 23. *Hermonassa oxyspila* Boursin, 1968 male RL6196

Gen. Fig. 24. *Hermonassa oxyspila* Boursin, 1968 female KST722