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Plusiinae (Lepidoptera, Noctuidae) from Vietnam*

By
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Abstract: Plusiinae (Lepidoptera, Noctuidae) from Vietnam - The annotated list of the 20 Plusiinae species collected in Vietnam by four Hungarian expeditions, including the descriptions of two new species, Chrysodeixis chrysopepla sp. n. and Ctenoplusia (Acanthoplusia) microptera sp. n.

INTRODUCTION

Within the framework of an agreement between the National Center for Scientific Research of Vietnam and the Hungarian Academy of Sciences, four Hungarian zoological expeditions went to Vietnam between 1968 and 1988. The reports on these trips containing the characterizations of the collecting sites and methods have already been published (Mahunka and Oláh, 1986; Mészáros, Oláh and Vásárhelyi, 1987) or are in press. It is important to note that the fourth expedition had opportunity to work in the southern part of the country, in the vicinity of Ho Chi Minh City (Sai Gon).

The material of Plusiinae is relatively large, consisting of 172 specimens which belong to twenty species. Two of them are new for science and further eight species are reported here for the first time from Vietnam.

The composition of the Plusiinae fauna of Vietnam is highly interesting from a zoological point of view. It was pointed out that all the Plusiinae species known from the territory of Vietnam - with the exceptions of the two newly described ones - were found also in the SE confines of the Palaearctic Region. On the other hand, there is only a single species - C. agnata Staudinger - to be mentioned as principally Palaearctic (the identity of E. rutilifrons Walker, listed by de Joannis, is open to doubt). The SE region of the Himalayan chain and the Pacific Coast, including the series of islands from Hainan to Japan, represent the bridges of the faunal movement. The former for the Transhimalayan-Indo-Australian rainforest fauna and the latter for the Palaearctic species inhabiting the rich, humid E Palaearctic forest zone; though the latter effect is less expressive. Contrarily, the recent distribution patterns suggest that it was the route of the northern invasion of the expansive, polyphagous Oriental Plusiinae.

More than the half of the Vietnamese Plusiinae species belongs to the Oriental rainforest fauna. The majority of them - although their distributions are not satisfactorily known - seems to be restricted to the northern part of the Oriental Region (C. minutus Dufay, P. aeneofusa Hampson, C. tarassota Hampson, T. reticulata Moore, M. (S.) jessica Butler and D. hedysma de Joannis). The two newly discovered species are, very probably, also the representatives of this faunal type.

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*Hungarian zoological studies in Vietnam, No. 14.

A smaller part of the species is represented by widespread tropic taxa, inhabiting mainly disturbed and/or secondary habitats, some of them are well-known agricultural pests. A group of this faunal type consists of Old World Tropic species, appearing both in Africa and Indo-Australia, from which one (C. limbirena Guenée) has an Ethiopian centre and not reaches the eastern areas of the Oriental Region, the remained taxa (A. signata Fabricius, T. orichalcea Fabricius and C. acuta Walker) are widely distributed in both continents. The second species-group contains the widespread Oriental species (C. eriosoma Doubleday, C. illuminata Robinson, T. intermixta Warren, T. lectula Walker and Z. ochreata Walker), since the third group is represented by a sole species having an unusual, Palaearctic-Transpacific range (C. albostriata), this species shows the connection of the Indo-Australian and S American fauna.

Only one species is known from Vietnam which has a Palaearctic centre of distribution (C. agnata Staudinger), the southernmost part of its range is the northern territory of Vietnam.

The complete list of species collected by the Hungarian expeditions, with the descriptions of the new species are given in the following chapter.

LIST OF SPECIES

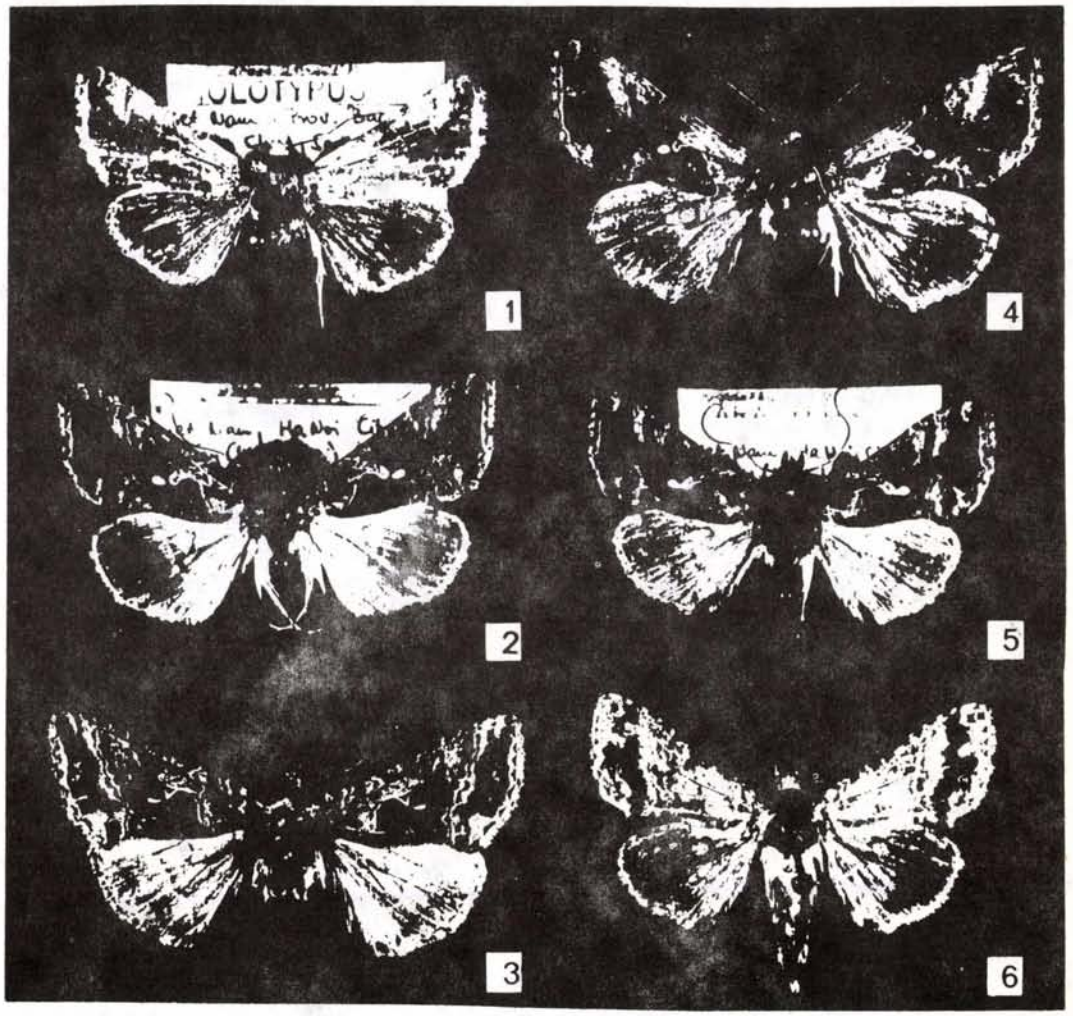
Chrysodeixis chrysopepla sp. n. (Plate I: 1.)

Holotype: male, "Prov. Bac Thai, Quang Chu, 500 m, 22°00'N, 105°50'E, 24 May 1987, leg. Matskási, Oláh et Topál", slide No 3012 Ronkay. Deposited in coll. Hungarian Natural History Museum, Budapest.

Description: wingspan 25 mm, length of fore wing 11 mm, head covered with whitish-ochreous scales, palpi with dark brown hairs on outer side. Thorax light brownish white, metathoracic tuft large, brown. Abdomen brownish, tufts of coremata reduced, last segments with two rows of blackish spots on ventral side. Shape of fore wing triangular, high and relatively short. Ground colour light whitish-grey, covered partly with brown, especially in median area; wings have an intensive golden-metallic sheen. Antemedial line double, brown, basal area with some blackish spots. Orbicular spot flattened, reniform spot narrow with obsolescent outlines (the specimen is not fresh and some areas are partly worn). Upper part of medial field covered with dark brown scales, darkest area of wing; lower part light brownish with strong golden brilliance. Stigma silvery, consisting of two small, conjoined spots. Postmedial line slightly waved, filled with whitish, marginal area with a whitish patch at costa and an oblique, dark shadow running from apex to lower angle of cell. Subterminal line obsolescent, sinuous, apex with a blackish spot. Terminal line brown, defined with a rosy-white line, cilia whitish, spotted with brown and a black spot at vein m3. Hind wing ochreous-brown with intensive dark brown suffusion in marginal field and on veins. Transversal line diffuse, well-discernible. Underside of wings whitish-ochreous with intensive, dark brown irroration in medial areas of both wings, transversal lines visible, cellular lunule pale.

Explanation of the Plate

1. Chrysodeixis chrysopepla sp. n. Holotype.
2. Chrysodeixis minutus Dufay, Vietnam.
3. Ctenoplusia (Acanthoplusia) microptera sp. n., Holotype.
4. C. (A.) microptera sp. n. Paratype, female.
5. Macdunnoughia (Sclerogenia) jessica Butler, Vietnam.
6. Dactyloplusia hedysma de Joannis. Female, Vietnam.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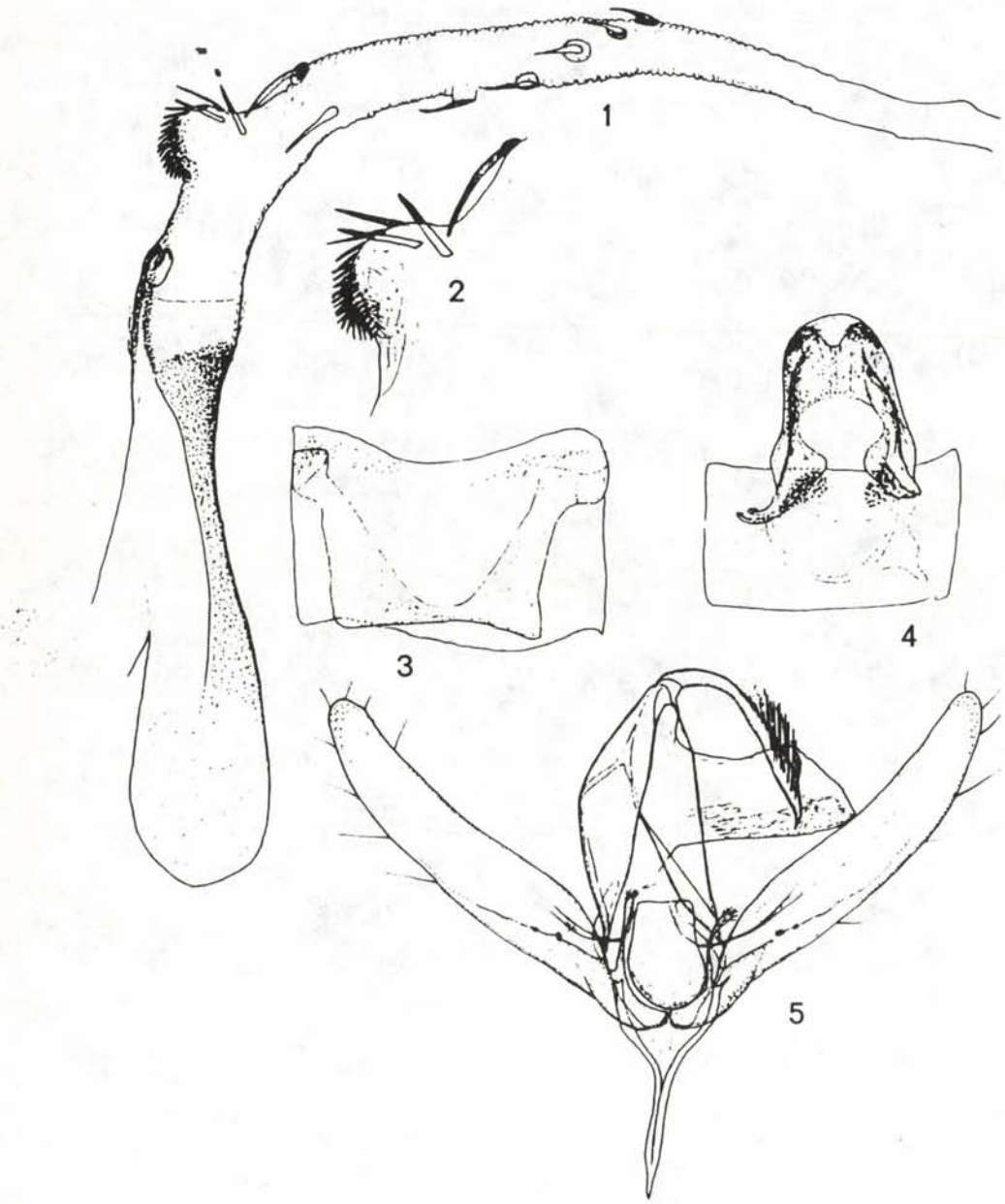
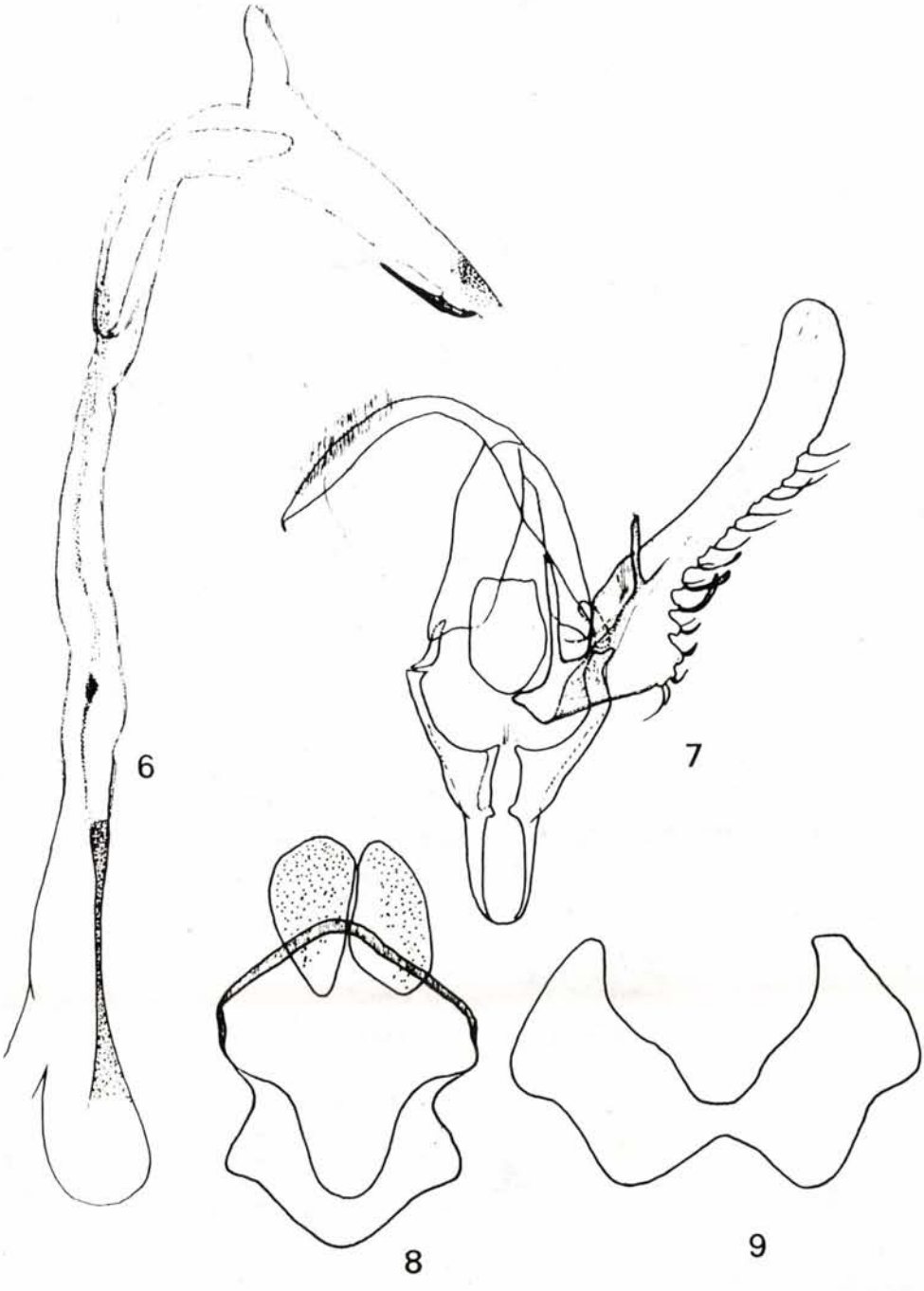
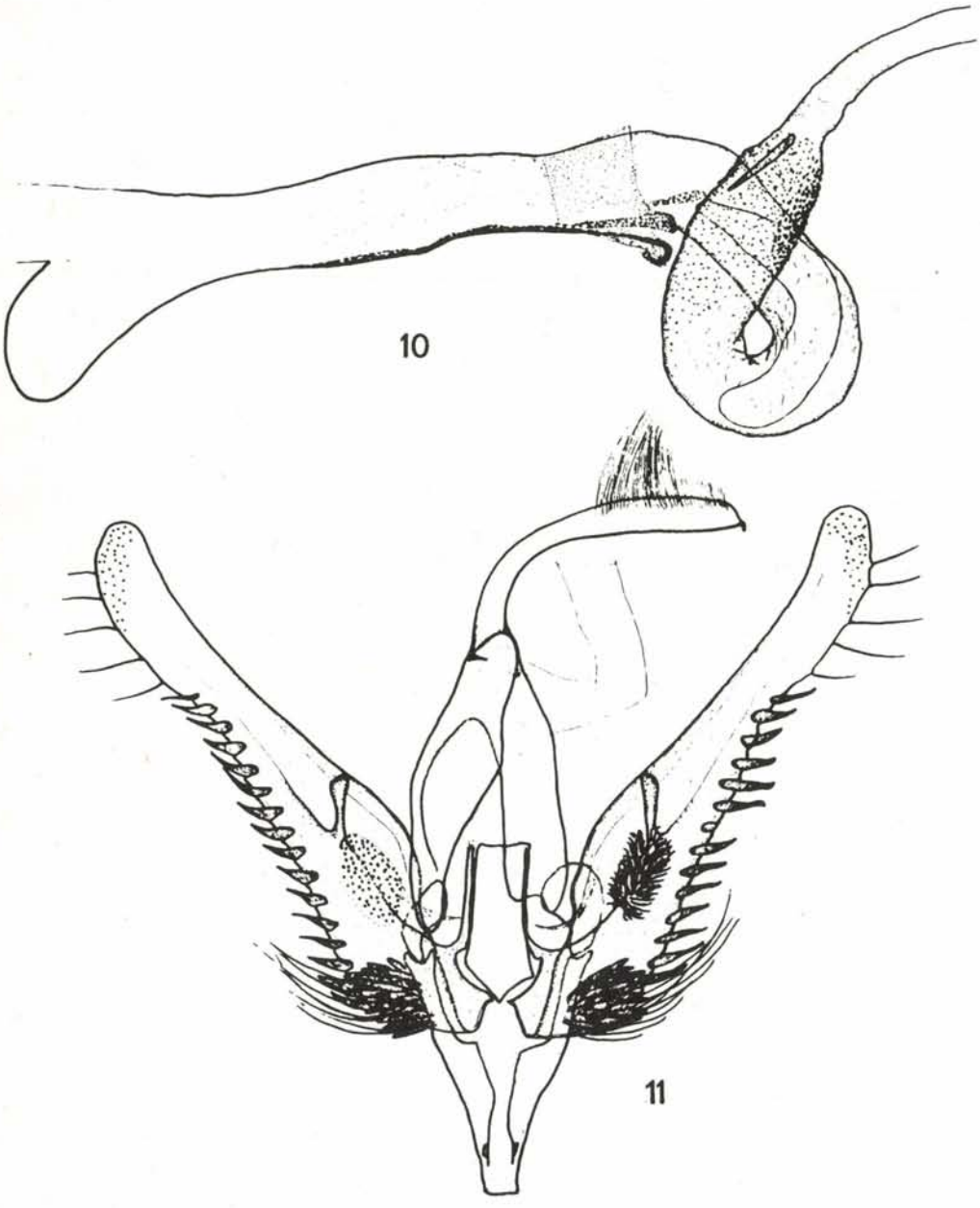


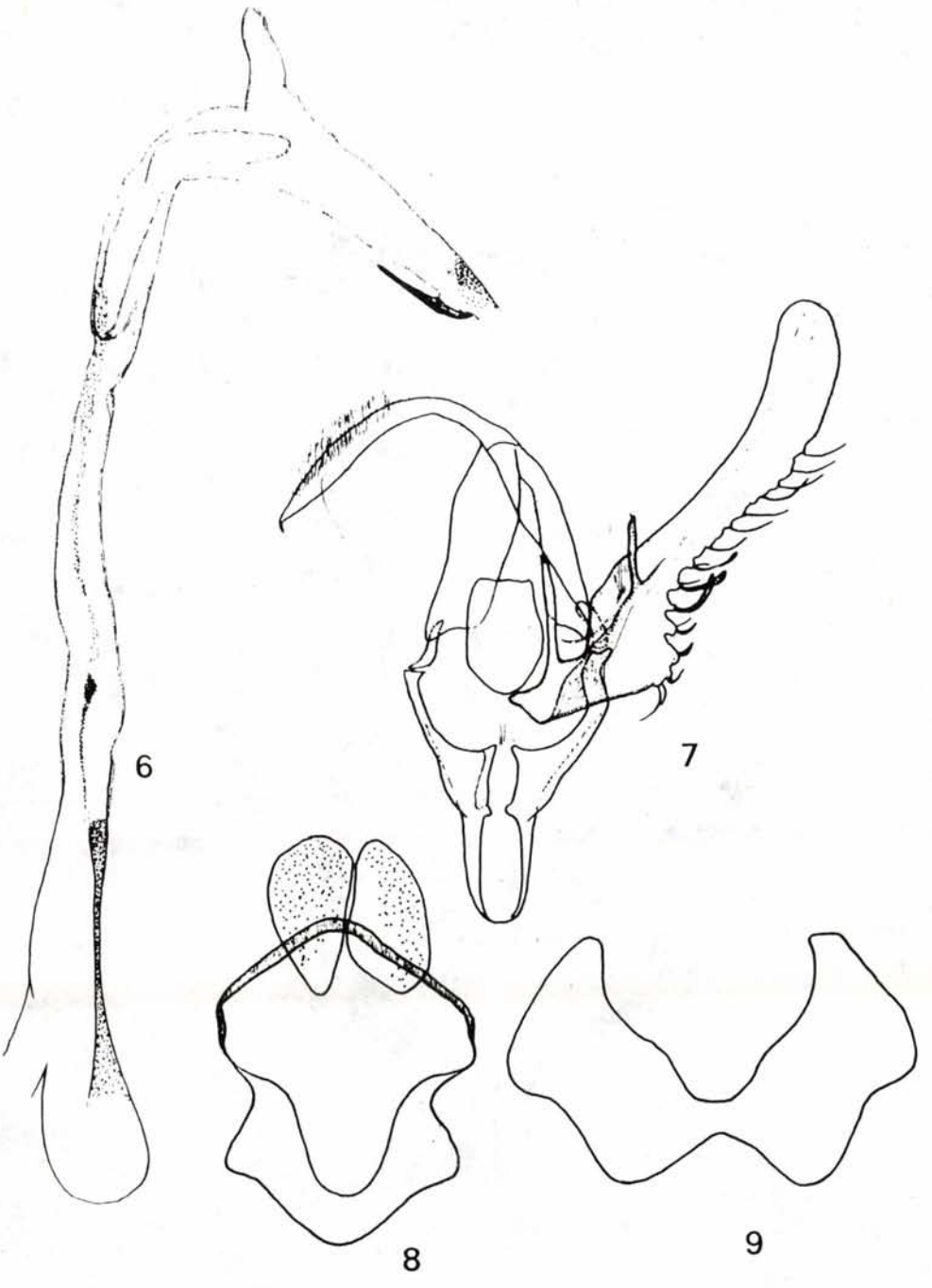
Figs 1-5. Chrysodeixis chrysopepla sp. n. Holotype, slide No. 3012.
(1= aedeagus and vesica, 2= emergence of vesica, 3= tergite VIII, 4= sternite VIII, 5= clasping apparate)



Figs 6-9. Plusia (s. l.) aeneofusa Hampson. Slide No. 2910.
(6= aedeagus and vesica, 7= clasping apparate, left valva removed, 8= sternite VIII, 9= tergite VIII)



Figs 10-11. 10 - Stigmoplusia chalcoides Dufay, slide No. 3026, Ethiopia; aedeagus and vesica
11 - Ctenoplusia (Acanthoplusia) microptera sp. n. Holotype, slide No. 3009; clasping apparate



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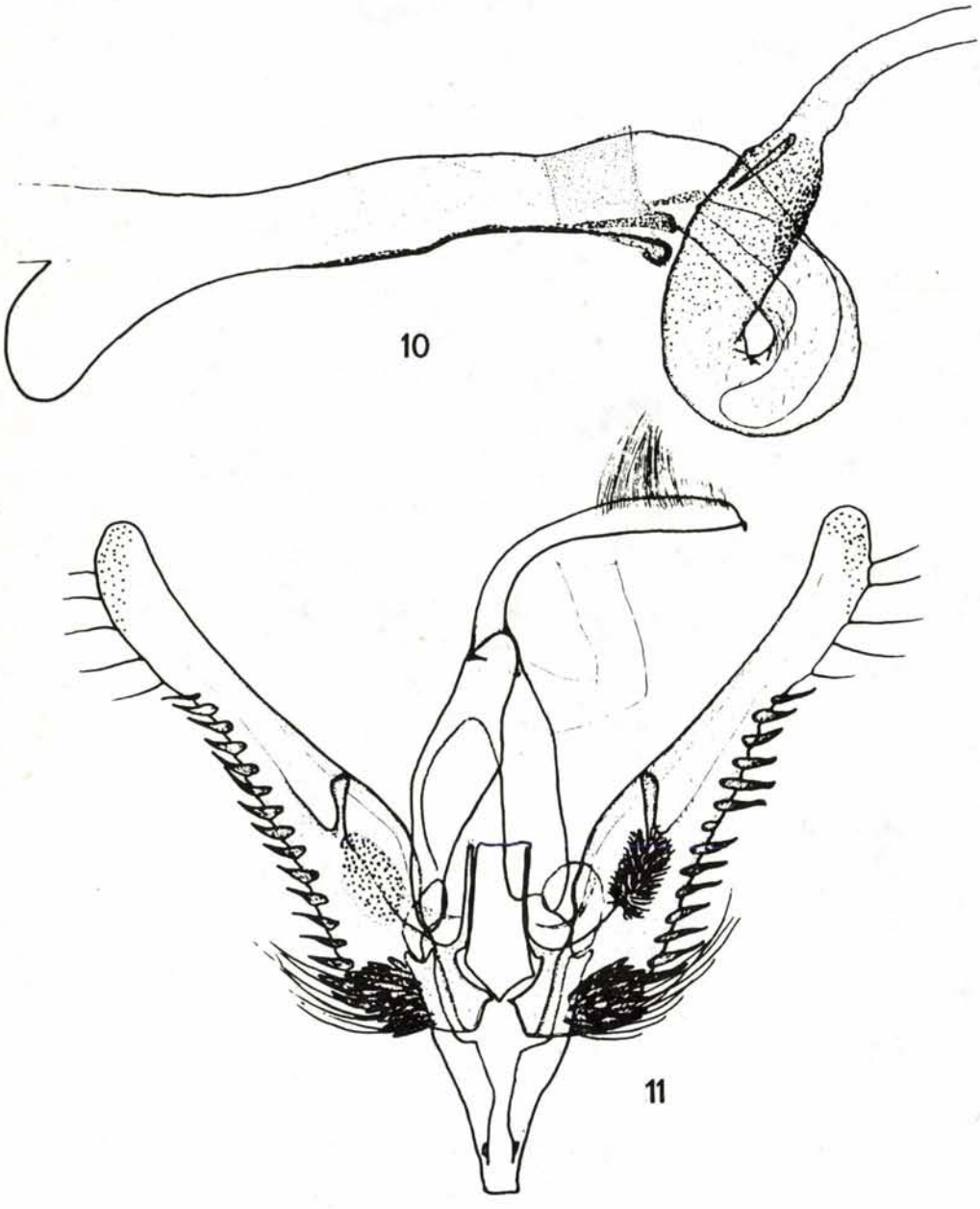
(6= aedeagus and vesica, 7= clasping apparate, left valva removed, 8= sternite VIII, 9= tergite VIII)



Figs 10-11. 10 - Stigmoplusia chalcoides Dufay, slide No. 3026, Ethiopia; aedeagus and vesica
11 - Ctenoplusia (Acanthoplusia) microptera sp. n. Holotype, slide No. 3009; clasping apparate

Male genitalia (Figs 1-2, 5): uncus long and slender, tegumen narrow and high, fultura inferior a rounded plate, vinculum long, pointed, Y-shaped. Valvae elongate, margins nearly parallel, apical part tapering with rounded apex. Clavus long and finely curved, harpe reduced to a small globulus. Aedeagus cylindrical with bulbous base, with a sclerotized ribbon on ventral side. Vesica tubular, arcuate, basal part with a short lamina on dorsal surface and a small, hyaline sac inside. Armature of vesica consists of a row of short, pointed cornuti placed on small prominences and a batch of shorter spiculi (about fifty) sitting on a relatively large, rounded emergence near to proximal end of vesica. The configuration of the sternite and tergite of the eighth segment is illustrated on the Figs 3-4.

The new species is very close to C. diehli Dufay, 1982 both in external and genital features, the distinctive characteristics are as follows:

- the vesica has a rounded basal emergence on the dorsal surface bearing a batch of cornuti which is absent in diehli (Dufay, 1982; Holloway, 1985);
- the row of larger cornuti consists of essentially smaller units as in diehli (Holloway, 1985);
- the eighth sternite has a rounded, slightly tapering and partly membranous apex (Fig. 4) which is wide, quadrangular in case of diehli (Holloway, 1985).

Chrysopepla and diehli have an allopatric distribution as diehli is reported from Sumatra, Nias and Borneo; their habitat preference seems to be similar. The holotype was collected in the valley of a small river near to a hilly forest area.

Chrysodeixis minutus Dufay, 1970 (Plate: 2)

(Bull. mens. soc. linn., Lyon 39: 101)

Examined material: 1 male, Vinh Phu, Tam Dao, 1200 m, 20.I.1986, leg. Mahunka and Oláh; 1 male, Suoi Baco stream, 12 km S of Bao Loc, 800 m, 26.X.1988, leg. Mahunka, Oláh and Vásárhelyi. Slides Nos. 1958, 3013 Ronkay.

A northern Oriental species, associated to montane forest habitats. It was recorded from the southern Himalaya, S India and Japan; new to the fauna of Vietnam.

Chrysodeixis illuminata (Robinson, 1968)

(Entomologist's Rec. J. Var., 80: 250 - Plusia)

Examined material: two males. Vinh Phu, Tam Dao, 1200 m, 20.I.1986, leg. Mahunka and Oláh.

A widespread Indo-Australian species, connected to humid forest habitats; new to the fauna of Vietnam.

Chrysodeixis eriosoma (Doubleday, 1843)

(in Dieffenbach: Trav. New Zealand, 2: 285 - Plusia)

Examined material: 29 males, 31 females from various localities of N and S Vietnam; it was represented nearly in all of the materials collected by light.

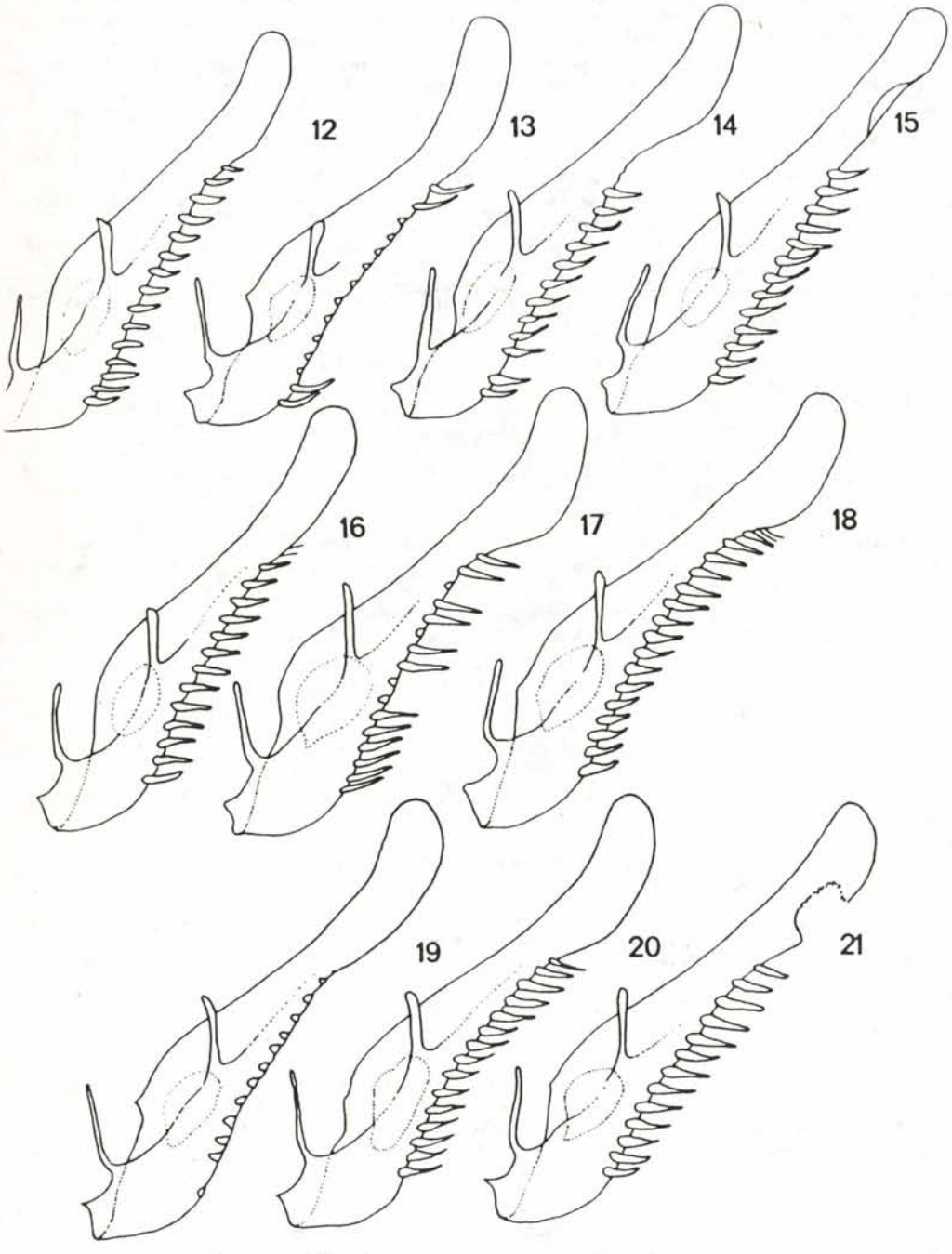
An eastern Palaearctic and Indo-Australian species, an agricultural pest.

Chrysodeixis acuta (Walker, 1857)

(List specimens lepid. - Insects Colln. Br. Mus., 12: 922 - Plusia)

Examined material: 1 male, Ha Noi, Quang Ba, Ho Tay, 8.V.1987; 2 males, Prov. Vinh Yen, Tham Dao, 840 m, 9.V.1987; 1 male from same locality, 10.V.1987; 1 male, 1 female, Prov. Bac Thai, Thai Nguyen, 40 m, 23.V.1987; 1 male, 1 female, Da Lat, 1500 m, 14.X.1988; 1 male from same locality, 17.X.1988; 2 males from same locality, 19.X.1988; 1 female, Duc me waterfall, 15 km S of Bao Loc, 700 m, 23.X.1988; 1 male, Suoi Baco stream, 12 km S of Bao Loc, 800 m, 26.X.1988.

Figs 12-21. 12-16 - Ctenoplusia (A.) microptera sp. n.; paratypes (12 - No. 634, 13 - No. 92, 14 - No. 176, 15 - No. 174, 16 - No. 3008). 17-21 - C. (A.) agnata Staudinger (17 - No. 99, Korea, 18 - No. 97, Korea, 19 - No. 3007, Vietnam, 20 - No. 2908, Vietnam, 21 - No. 93, Korea)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An Old World Tropic species, its migratory specimens can appear in the southern areas of the Palaearctic Region; an agricultural pest.

Argyrogramma signata (Fabricius, 1794)

(Entomologica Syst., 3 (2): 81 - Noctua)

Examined material: 1 female, Prem waterfall, 15 km S of Da Lat, 19.X.1988, leg. Mahunka, Oláh and Vásárhelyi.

An Old World Tropic species, similarly to the preceding one, but more close to the southern ranges and less frequent.

Ctenoplusia limbirena (Guenée, 1852)

(Noct. II: 350 - Plusia)

Examined material: 1 male, Da Lat, 1500 m, 14.X.1988; 4 males from same locality and data, 15.X.1988; 1 female from same locality, 16.X.1988; 1 male, 1 female from same locality and data, 17.X.1988; 1 male, 1 female from same locality, 19.X.1988; all specimens were collected by Mahunka, Oláh and Vásárhelyi.

This species has a widespread distribution in the Palaeotropic Region, being an agricultural pest in several places. It appears more scarcely in India and the Malay Peninsula; new to the fauna of Vietnam.

Ctenoplusia albostriata (Bremer et Grey, 1853)

(Beitr. Schmett. north. China, p. 18. - Plusia)

Examined material: 1 male, Vinh Phu, Lap Thach, 20.I.1986; 1 female, Vinh Phu, Tam Dao, 1200 m, 13.X.1986; 1 male, Cuc Phuong, 400 m, 17.X.1986; 1 male, Prov. Vinh Yen, Tam Dao, 840 m, 9.V.1987; 2 males, Da Lat, 1500 m, 14.X.1988; 2 males from same locality, 16.X.1988; 1 male from same locality, 17.X.1988; 3 females from same locality, 19.X.1988.

Albostriata is one of the most widespread Plusiinae species, its area extending from the Soviet Far East and Japan throughout the Indo-Australian zone to Australia and S America (Chile). Its generic relegation is doubtful, as it possibly belongs - with its related species, C. oxygramma (Hübner-Geyer, /1832/), to a line, evolved distinctly from the typical Ctenoplusia species.

Ctenoplusia (Acanthoplusia) microptera sp. n. (Plate: 3-4)

Holotype: male, "Ha Noi, Quang Ba, Ho Tay (West Lake), 28.X.1986, leg. Mészáros, Oláh and Vásárhelyi", slide No. 3009 Ronkay; deposited in coll. Hungarian Natural History Museum, Budapest. Paratypes: 1 female from same locality and data; 2 males, Hoa Binh, 100 m, 23.X.1986, leg. Mészáros, Oláh and Vásárhelyi; 1 male, Hanoi, Quang Ba, Ho Tay, 19.I.1986, leg. Mahunka and Oláh; 1 male, Da Lat, 1500 m, 14.X.1988, leg. Mahunka, Oláh and Vásárhelyi; 3 males, Vietnam, Hanoi, 4-10.XI.1963, leg. Manninger; 1 male, Vietnam, Hanoi, 40 m, 28.X.1963, leg. T. Pócs; 1 male from same locality, 7.VIII.1963, leg. T. Pócs. The specimens are deposited in coll. HNHM, Bp. and the British Museum (N.H.). 1 ♂, Hanoi, 30.III.1986, leg. Kuznetsov, coll. Zool. Institute, Leningrad. Slides Nos 92,174, 175,176,634, 2909, 2973, 3008 (males), 2974 (female) Ronkay.

Description: wingspan 26-30 mm (holotype 26 mm, $\bar{X}$= 27 mm), length of fore wing 12-14.5 mm. Head and thorax dark brown with some violaceous tinge, tegulae with violaceous-whitish edges. Abdomen greyish-brown, dorsal crest consists of three blackish-brown tufts, ventral side with long ochreous hairs at base; coremata well-developed, dark brownish. Fore wing triangular, ground colour dark chocolate-brown with rosy-violaceous shade and intensive bronze-metallic iridescence. Antemedial line double, filled with rosy-white, defined with rosy-violaceous scales. Basal area with some black spots, basal line usually visible. Orbicular spot flattened, carneous, filled with brown and often with some blackish,

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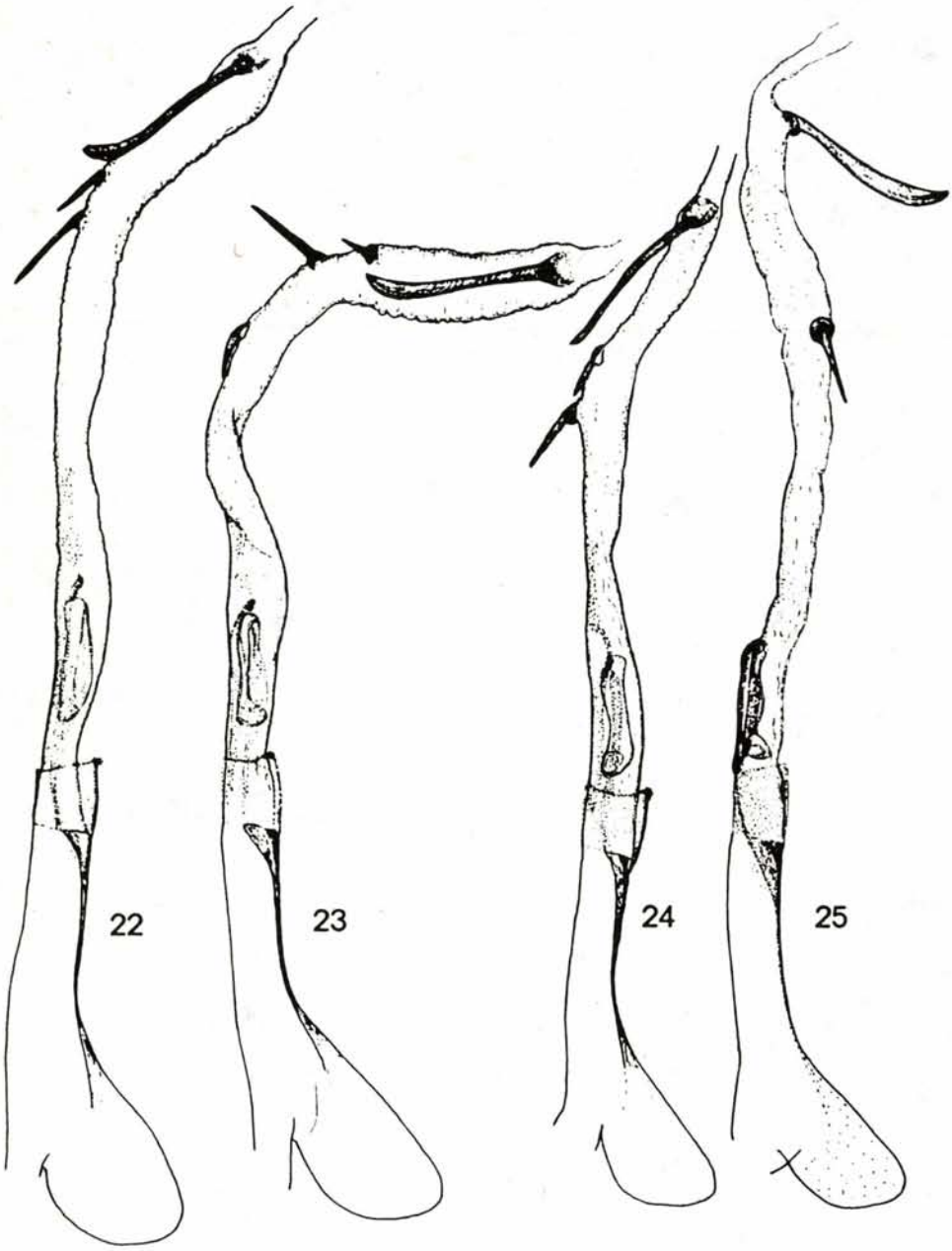
Figs 22-25. 22-23 - Ctenoplusia (A.) agnata Staudinger (22 - No. 2908, Vietnam, 23 - No. 3007, Vietnam). 24-25 - C. (A.) microptera sp. n. (24 - No. 3008, paratype, 25 - No. 3009, holotype).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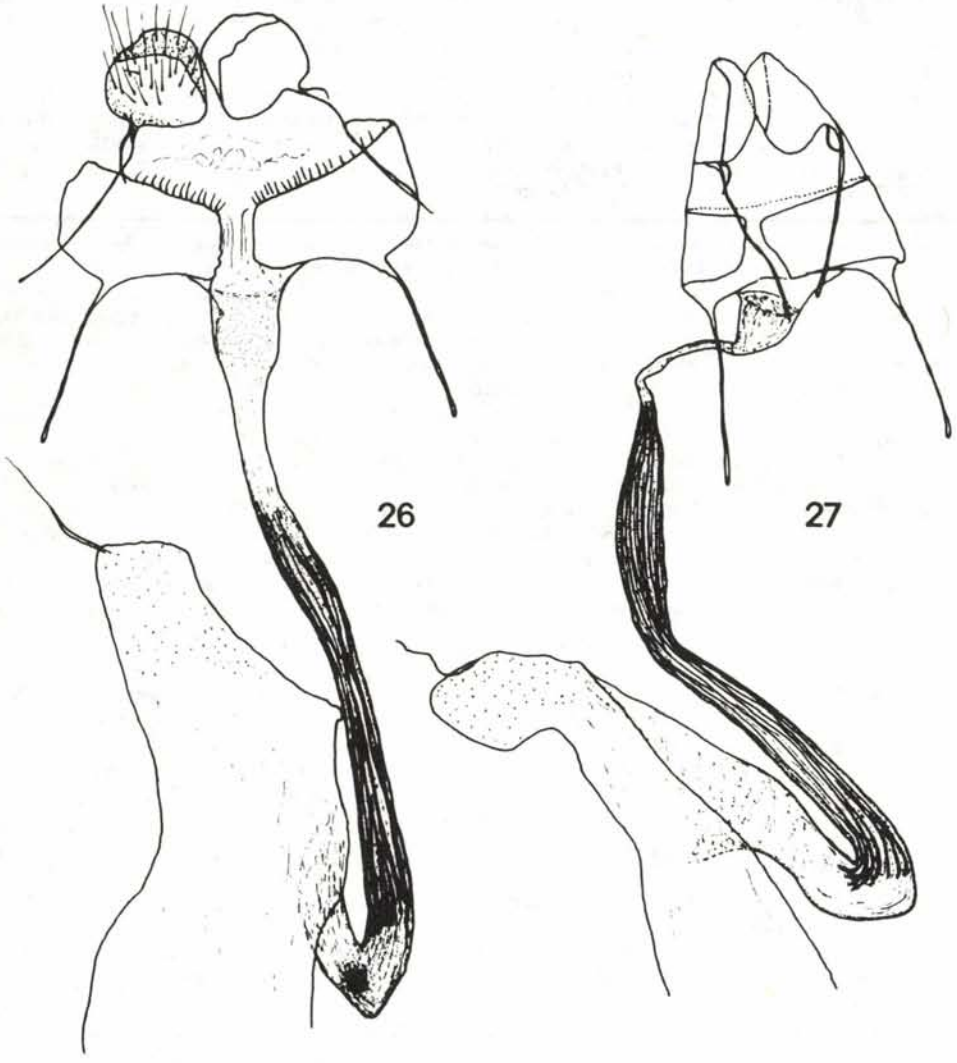
reniform spot obsolescent, defined with some blackish spots at outer edge. Medial area consists of a darker patch below cell containing stigma and a shiny field at inner margin. Stigma small, silvery, bilobate or finely disjunct. Postmedial line double, slightly sinuous, strongly angled inwards between veins anl-cu2, filled with rosy-whitish. Terminal field suffused with greyish, very shiny, subterminal line sinuous, termen with a dark, oblique shadow running from apex to vein m2. Terminal line fine, whitish with blackish triangles and a conspicuous rosy line from apex to vein cu2. Cilia dark violaceous-brown with a black spot at vein m3. Hind wing light ochreous, marginal suffusion wide, brown; veins covered with dark scales. Transversal line and cellular lunule well-discernible, cilia light ochreous, spotted with brown. Underside of wings ochreous-grey, inner area of fore wing and a wide stripe between postmedial and subterminal lines suffused with dark grey-brown.

Male genitalia (Figs 11-16, 24-25): uncus long, distally slightly dilated, tegumen gracile and high, fultura inferior deltoidal, vinculum moderately long. Saccus membranous, with a pair of small, ventral flaps. Valvae elongate, costal margin finely S-shaped, cucullus slightly dilated and rounded, corona nearly entirely reduced. Clavus long, bar-shaped, harpe usually short and apically dilated, apex of it more or less rounded. Ventral margin of valva bears a row of strong, flattened, easily removable scales. Dorsal surface with two bundles of specially modified, dark brown or blackish scales. Aedeagus long, pistol-shaped with a strongly sclerotized ribbon on ventral axis. Vesica tubular, membranous, with a pair of long and slender, granulose laminae running from distal edge of aedeagus towards to basal third of vesica; basal area contains a hyaline sac inside. Distal part of vesica more or less arcuate and bears two or three cornuti, largest of them terminal one.

The new species is very close to C. (A.) agnata (Staudinger, 1892), and, as it has not an unambiguous distinctive feature in the male genitalia, - although the specimens of these sibling-species are externally well-separable -, the specific identity of microptera had not been stated and a part of the specimens of the type series was published as agnata (Ronkay, 1986). The studies on the new material and the previously unknown female are pointed out that microptera is a distinct species having statistical differences also in the configuration of the male genitalia. The characteristic features of the two allied species are as follows:

microptera	agnata
1. fore wing shorter, wingspan smaller with average 27 mm	1. fore wing more elongate, wingspan larger (31.5 mm for the material from Vietnam)
2. ground colour of fore wings darker and more unicolorous	2. ground colour lighter, shine more golden-bronze, with more intensive dark irroration in medial and marginal areas
3. hind wing with light ochreous inner area, transversal line and cellular lunule visible	3. hind wing nearly uniformly dark brown, cellular lunule and especially transversal line obsolescent or deleted,
4. underside of wings lighter, ochreous, terminal light stripes more conspicuous	4. underside of wings suffused with brownish scales and the lighter areas less extensive and greyish-brown,
5. abdomen with ochreous hairs on first three segments	5. abdomen with grey-brown hairs only
6. valvae less arcuate with narrower cucullus	6. valvae more arcuate (costal margin!), cucullus wider, more curved
7. harpe usually short and apically dilated	7. harpe longer and more gracile
8. vesica shorter, field of cornuti placed more near to distal end of aedeagus	8. vesica longer, field of cornuti placed significantly more remote from distal end of aedeagus
9. sclerotized part of ductus essentially shorter	9. ductus bursae longer
10. sclerotization of ductus bursae not reaches anterior angle of ductus	10. sclerotization of ductus bursae extends into anterior angle forming a hook



Figs 26-27. 26 - Ctenoplusia (A.) microptera sp. n., paratype, slide N. 2974.
27 - C. (A.) agnata Staudinger, slide No. 95, Korea

The new species is known only from Vietnam, it occurs sympatrically with agnata in the northern part of the country.

Ctenoplusia (Acanthoplusia) agnata (Staudinger, 1892)
(Mém. Rom., VI: 547. - Plusia)

Examined material: 3 males, Ha Noi, military cemetery, S from the city, 18.I.1986. leg. Mahunka and Oláh; 3 males, 1 female, Ha Noi, S from the city near Hong Song, 18. I. 1986, leg. Mahunka and Oláh; 1 male, Vinh Phu, Tam Dao, 1200 m, 20.I. 1986, leg. Mahunka and Oláh; 3 males, 1 female, Ha Noi, Quang Ba, Ho Tay, 7.V.1987, leg. Mészáros, Oláh and Vásárhelyi. Slides Nos 2908, 3007 Ronkay (males).

An eastern Palaearctic species expanding into the Oriental Region in SE China and at the Pacific Coast; it occurs sympatrically with the preceding species in N Vietnam.

Ctenoplusia (Acanthoplusia) tarassota (Hampson, 1913)
(Cat. Lep. Phal., 13: 473. - Phytometra)

Examined material: six females, Vinh Phu, Tam Dao, 1200 m, 20.I.1986, leg. Mahunka and Oláh; 1 male, Da Lat, 1500 m, 14.X.1988, leg. Mahunka, Oláh and Vásárhelyi; 1 male from same locality, 19.X.1988, collected by the previous collectors. Slide No. 2790 Ronkay (female).

An interesting montane forest species having the largest area from the taxa of this, mainly Indo-Australian subgenus.

Plusia (s.l.) aeneofusa Hampson, 1894
(Moths Ind., II: 376. - Plusia)

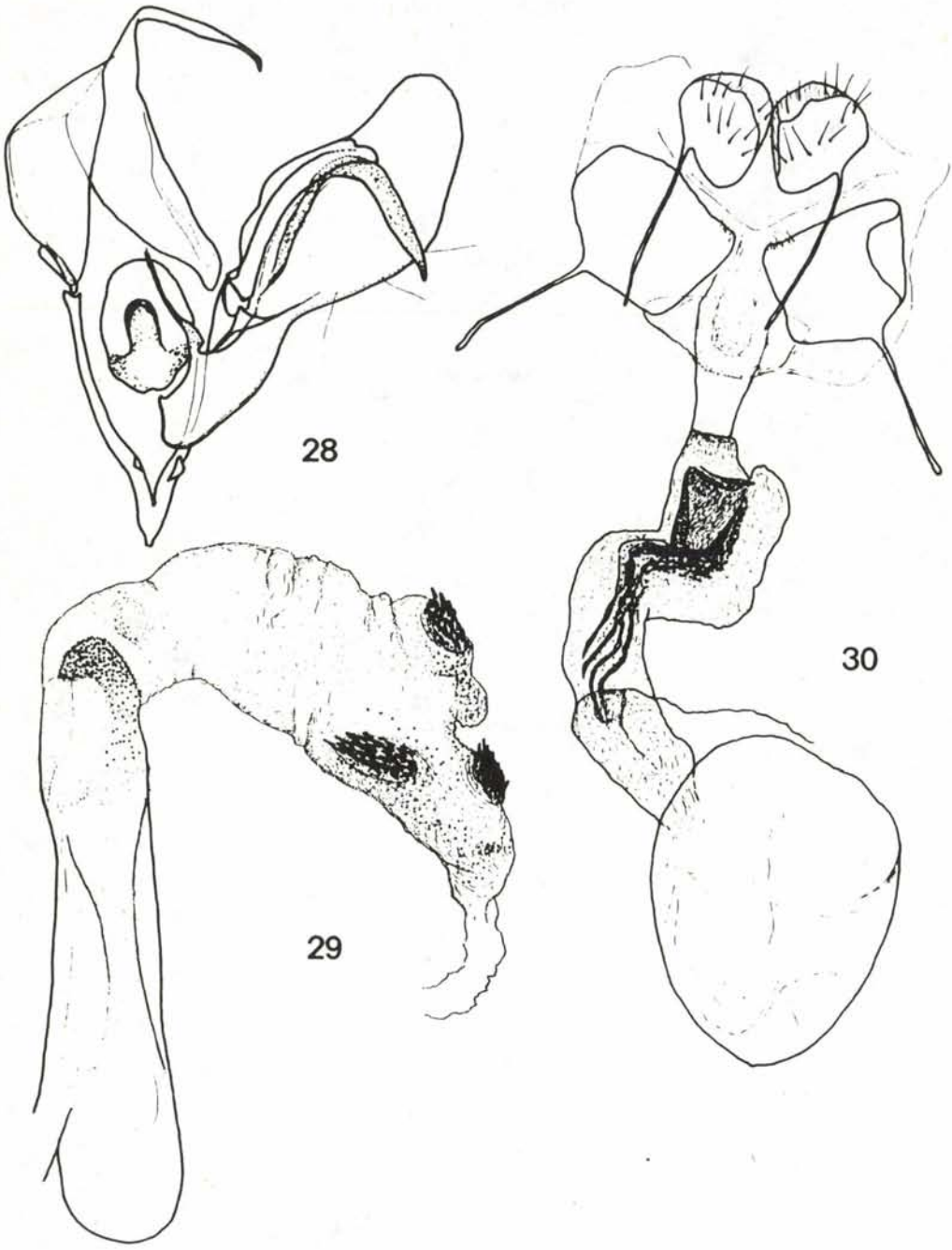
Examined material: a single male. Prov. Vinh Yen, Tam Dao, 840 m, 9.V.1987, leg. Matskási, Oláh and Topál. Slide No. 2910 Ronkay.

An unically modified species showing some virtual similarities with some of the members of the genera Ctenoplusia (phocea Hampson and phocina Dufay), Thysanoplusia (bipartita Snellen) and Stigmoplusia (chalcoides Dufay, allocota Dufay and megista Dufay). Its characteristic morphological features are partly the same as those of the species of Acanthoplusia and some Ctenoplusia (s.l.) species but each of them appears in differently modified stage (see the double row of fixed, not removable setae on the ventral margin of valva; the tubular, long vesica having only a terminal cornutus but with a distal diverticle similar to some species of Autographa; the inside hyaline sac of the vesica placed in the distal curve being far from the edge of aedeagus etc. (Figs 6-9)). It is almost certain that this species represents a distinct, monotypical genus, but for the correct interpretation of its phylogenetic connections further investigations are needed.

Thysanoplusia reticulata (Moore, 1882) comb. nov.
(Lep. Atk., p. 148. - Plusia)

Examined material: 2 males, 1 female, Vinh Phu, Tam Dao, 1200 m, 20.I.1986, leg. Mahunka and Oláh; 3 males, 2 females, Vinh Phu, Tam Dao, 1200 m, S from the village, 21. I. 1986, leg. Mahunka and Oláh; 1 male, Prov. Vinh Yen, Tam Dao, 840 m, 9.V.1987, leg. Matskási, Oláh and Topál; 1 female, Prov. Bac Thai, Quang Chu, 500 m, 24.V.1987, leg. the previous collectors; 1 female, Da Lat, 1500 m, 14.X.1988, leg. Mahunka, Oláh and Vásárhelyi.

The separation of the groups of Trichoplusia (s.l.) is very problematic because of their overlapping characteristics and the high number of species known as Trichoplusia. According to Kitching (1987), in my opinion the ni-group (Trichoplusia s.str.) and the orichalcea-group (Thysanoplusia) are not monophyletic and these main lines should be separated on generic level. The genus Thysanoplusia was erected for the intermixta-group (orichalcea and intermixta), daubei (Boisduval) and ochreata by Ichinose (1973), from these four species only the first two can be considered as undoubtedly monophyletic. Later Holloway (1985) transferred two further taxa - bipartita (Snellen) and ekeikei (Bethune-Baker) - to this genus. Kitching (op. cit.) listed also florina (Guenee) and the species of the violascens group living in Madagascar as possible members of Thysanoplusia. Morphological evidences give the reason of interpretation as members of the genus Thysanoplusia not only the species of



Figs 28-30. 28-29 - Macdunnoughia (Sclerogenia) jessica Butler, slide No. 1959. (28 - clasping apparate, left valve removed, 29 - aedeagus and vesica). 30 - Dactyloplusia hedysma de Joannis, slide No. 3019.

the violascens-group but the whole spoliata-group (the violascens-group is in a fact a more or less defined subgroup of it), including African and Indo-Australian taxa.

Reticulata has a northern Oriental range from the Himalaya and S India to S China and the northern part of the Malay peninsula, inhabiting hilly and montane forests; new to the fauna of Vietnam.

Thysanoplusia intermixta (Warren, 1913)

(in Seitz: Grosssch. der Erde, III, p. 357. - Phytometra)

Examined material: 1 male, Vinh Phu, Tam Dao, 1200 m, 13.X.1986, leg. Mahunka and Oláh; 1 female, Hoa Binh, 100 m, 10 km to Da Bac, 21.X.1986, leg. Mahunka and Oláh; 2 females, Da Lat, 1500 m, 14.X.1988, leg. Mahunka, Oláh and Vásárhelyi; 3 males from same locality, 16.X.1988, leg. the previous collectors; 1 female, Prem waterfall, 15 km S of Da Lat, 19.X.1988, leg. Mahunka, Oláh and Vásárhelyi.

An Indo-Australian species, expanding to the southern temperate areas in the Pacific Coast; previously not found in Vietnam.

Thysanoplusia orichalcea (Fabricius, 1775)

(Systema Ent., p. 607. - Noctua)

Examined material: 1 male, 1 female, Ha Noi, Quang Ba, Ho Tay, 7.V.1987, leg. Matskási, Oláh and Topál; 1 male, Prov. Bac Thai, Thai Nguyen, 40 m, 23.V.1987, leg. Matskási, Oláh and Topál; 1 male, Da Lat, 1500 m, 14.X.1988, leg. Mahunka, Oláh and Vásárhelyi; 1 male from same locality, 15.X.1988, leg. Mahunka, Oláh and Vásárhelyi; 1 female from same locality, 17.X.1988, leg. Mahunka, Oláh and Vásárhelyi.

An Old World circumtropical species with wide range in the Indo-Australian Region.

Trichoplusia (s.l.) lectula (Walker, 1858)

(List specimens Lepid. - Insects Colln. Br. Mus., 15: 1679. - Prodenia)

Examined material: 1 female, Hoa Binh, 100 m, 10 km to Da Bac, 21.X.1987, leg. Mészáros, Oláh and Vásárhelyi; 1 female, Hoa Binh, 100 m, 23.X.1987, leg. Mészáros, Oláh and Vásárhelyi; 1 female, Prov. Vinh Yen, Tam Dao, 840 m, 9.V.1987, leg. Matskási, Oláh and Topál; 1 female, Prov. Bac Thai, Thai Nguyen, 40 m, 23.V.1987, leg. Matskási, Oláh and Topál.

An Oriental species, distributed from the Himalaya Range, S China and Japan to New Guinea, inhabits lowland forests and more or less disturbed habitats. Its taxonomic relegation is doubtful, by the genital characteristics is more close to the members of the genus Thysanoplusia.

Scriptoplusia nigriluna (Walker, 1857)

(List Specimens Lepid. - Insects Colln Br. Mus., 12: 931. - Plusia)

Examined material: a single female. Duc me waterfall, 15 km S of Bao Loc, 700 m, 23.X.1988, leg. Mahunka, Oláh and Vásárhelyi.

The distribution of this species is similar to that of the preceding one; new to the fauna of Vietnam.

Zonoplusia ochreata (Walker, 1865)

(List Specimens Lepid. - Insects Colln. Br. Mus., 33: 839. - Plusia)

Examined material: 1 male, Ha Noi, military cemetery, S from the city, 18.I.1986, leg. Mahunka and Oláh; 1 female, Hoa Binh, 100 m, 23.X.1987, leg. Mészáros, Oláh and Vásárhelyi; 3 females, Ha Noi, Quang Ba, Ho Tay, 28.X.1987, leg. Mészáros, Oláh and Vásárhelyi; 1 male, Prov. Bac Thai, Thai Nguyen, 40 m, 23.V.1987, leg. Matskási, Oláh and Topál; 1 male, Da Lat, 1500 m, 16.X.1988, leg. Mahunka, Oláh and Vásárhelyi; 1 male from same locality, 17.X.1988, leg. Mahunka, Oláh and Vásárhelyi; 1 female, Duc me waterfall, 15 km S of Bao Loc, 700 m, 23.X.1988, leg. Mahunka, Oláh and Vásárhelyi.

The distribution of the species is similar to the preceding two taxa, occurs usually in lowland territories.

Macdunnoughia (Sclerogenia) jessica (Butler, 1878) comb. n. (Plate: 5)
(Ann. Mag. Nat. Hist., (5) I: 201. - Plusia)

Examined material: 1 male, Vinh Phu, Tam Dao, 1200 m, 20.I.1986, leg. Mahunka and Oláh. Slide No. 1959 Ronkay.

The generic relegation of this peculiar species had been changed in several times and its phylogenetic relationships are also had not been satisfactorily clarified. In my opinion the special configuration of the vesica (Fig. 29) undoubtedly shows the common evolutionary line of Macdunnoughia and Sclerogenia, and the unusual saccular structures of jessica (Fig. 28) and the species of Macdunnoughia can be derived from the same ancestral stage. The distribution of jessica is restricted to the northern part of the Indo-Australian Region (S Himalaya, India, S China, N Philippines) and the Pacific zone of the Palaearctic Region; new to the fauna of Vietnam.

Dactyloplusia hedysma (de Joannis, 1928) comb. n. (Plate: 6)
(Ann. soc. ent. France, 97 (3-4): 364. - Phytometra)
(= Trichoplusia scelionis Chou et Lu, 1980, syn. n.)

Examined material: 1 male, Vinh Phu, Tam Dao, 1200 m, 20.I.1988, leg. Mahunka and Oláh; 1 female, Cuc Phuong, 400 m, 17.X.1986, leg. Mészáros, Oláh and Vásárhelyi. Slides Nos 2086 (male), 3019 (female) Ronkay.

An Indo-Australian species with only very few known localities and specimens. It was reported from Vietnam (de Joannis), S China (Chou and Lu, 1980) and newly discovered in Sumatra as a result of the lepidopterological exploration of Sumatra carried out by Dr. E. Diehl.

The phylogenetic relationships of the species of Dactyloplusia, based on the characteristics of the type species, impulsa (Walker) was discussed by Kitching (1987). By the main characteristics of the male and female genitalia of Dactyloplusia represented by impulsa, three further, externally very different species can be placed into this genus as follows: hedysma (de Joannis), mutans (Walker), comb. n. and indica (Ronkay), comb. n. It is important to note that the latter three species are similar to each other but they have some important differences in the configuration of the male genitalia and one of them, indica has reduced abdominal coremata.

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