

BEAUFORTIA

SERIES OF MISCELLANEOUS PUBLICATIONS

ZOOLOGICAL MUSEUM OF THE UNIVERSITY OF AMSTERDAM

No. 189

Volume 15

May 17, 1968

Dedicated to Professor Dr. H. Engel

Descriptions of three new genera of Olethreutinae (Lepidoptera, Tortricidae)

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ABSTRACT

Three new genera of the subfamily Olethreutinae are described: *Engelana* (type-species, *Argyroploce anisoptera* Meyrick, 1921), *Rhodonympha* (type-species, *Eucosma rhodantha* Meyrick, 1907), and *Brachioxena* (type-species, *Cydia psammacta* Meyrick, 1908).

The subfamily of the Olethreutinae, richly represented in tropical Asia and Africa has hardly been touched at all with modern methods of study. Great numbers of novel forms still await recognition and description. The present small paper forms one of the initial steps in this direction.

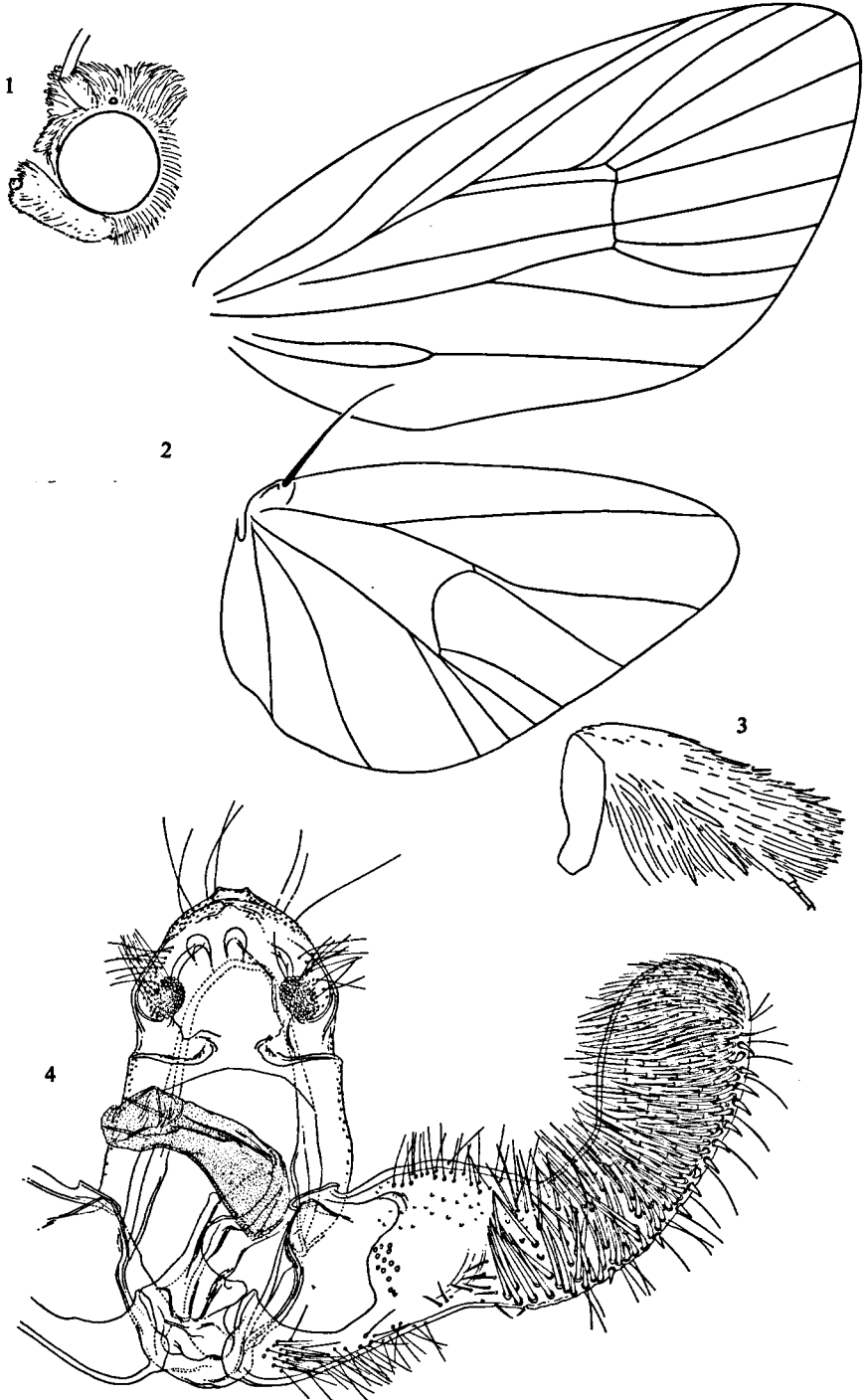
Engelana gen. nov.

Head with loosely appressed scales, roughish between bases of antennae. Ocellus posterior. Proboscis short. Antenna minutely pubescent in male, scape short. Maxillary palpus apparently absent. Labial palpus short, not reaching middle of height of eye, closely appressed to face, ascending, clothed with closely appressed scales, median segment hardly roughish along lower edge, scarcely dilated except at extreme top, which is abruptly truncate and roughish; terminal segment extremely short, rounded, almost concealed in concavity of terminal edge of median segment. Thorax smooth. Posterior tibia flattened and dilated by dense, smoothly appressed hairs above and beneath, flat and smooth on the outside, inside with a very dense brush of long white hair-scales from base, extending beyond top of tibia. Posterior tarsus, basal segment with a very dense, flat and rising tuft of white hair-scales, forming a continuation of the tibial brush.

Fore wing broad and short, subtriangularly oval, costa and apex rounded, termen long, rounded. Vein 2 from $\frac{2}{3}$, 3 from angle, 4 distant,

Received : September 30, 1967

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FIGS. 1—4. *Engelana anisoptera* (Meyrick) comb. nov., ♂. 1, head; 2, wing neuration; 3, posterior leg; 4, male genitalia.

but closer to 3, 5 and 6 not converging posteriorly, 7 separate, to termen, 8 closer to 7, 10 closer to 11, 11 from before middle of cell; upper parting vein well-developed, long, from before base of 10 to just above base of 6; lower parting vein straight, obliterate at origin, to base of vein 5; 1b furcate over $\frac{1}{3}$.

Hind wing with a cubital pecten; reduced in size, about $\frac{3}{4}$, of anomalous shape: broadly semioval with a strongly extended costal area, while terminal area is shortened. Vein 2 from well before angle (from about $\frac{1}{6}$), 3 and 4 shortened, connate from angle, 5 approximated at base, discoidal rounded and long, 6 and 7 moderately approximated towards base, 8 from middle of upper edge of cell, straight because of the large costal cell. Dorsum of wing partially rolled longitudinally in a tube filled with modified scales.

Male genitalia. Tegumen moderately high, top broadly rounded-triangular. Uncus absent. Socius, a rounded tumescence, with thin long bristles, upon a broad, slightly inwards-curved arm. Gnathos membranous, a thin plate with deep lateral excisions. Valva simple, sinuate and curved, slightly narrowed in middle portion, cucullus somewhat dilated, clavate; densely bristled throughout, and on basal half of cucullus strongly spined; sacculus not modified, weakly bristled, with dilated base. Aedeagus moderately long.

Female genitalia unknown.

Type-species. — *Argyroploce anisoptera* Meyrick, 1921, from Java.

Material examined and dissected. — 1 ♂, holotype, labelled: "W. Java, Buitenz.[org], 1893 ♂" (in Snellen's hand); "M 91" (in Meyrick's hand); small green "Type" label; genitalia on slide no. 4994. (Leiden Museum).

The genus belongs to the tribe Olethreutini and should be placed among the moderately specialized genera. The modified hind wing with anomalous neuration is without doubt due to sexual dimorphism often occurring among different genera of the tribe. The wing neuration and the genitalia suggest an affinity to the *Lobesia* group; the valva, however, is less modified.

This genus is dedicated to Professor Dr. Hendrik Engel, Director of the Zoological Museum of Amsterdam, at the occasion of his seventieth birthday.

Rhodonympha gen. nov.

Head densely rough-scaled, with a short projecting tuft between scapes of antennae, a flattened, thin tuft over forehead, face smooth. Ocellus posterior. Proboscis short, naked. Vestigial short maxillary palpus visible. Labial palpus long, porrected, hardly subascending, gently sinuate, projecting the width of eye beyond head; terminal segment concealed in long hair-scales, median segment rather smooth, gradually dilated, clavate, gently sinuate, shortly rough-scaled along lower and apical edges, terminal segment porrected, short, subobtusate. Antenna slightly thickened in male, short-pubescent. Thorax with a slight posterior crest. Posterior tibia in male dilated by very dense, closely appressed scales on the outer and upper sides, projecting in a pointed apical tuft; upon these scales a dense thick brush of long hair-scales, originating

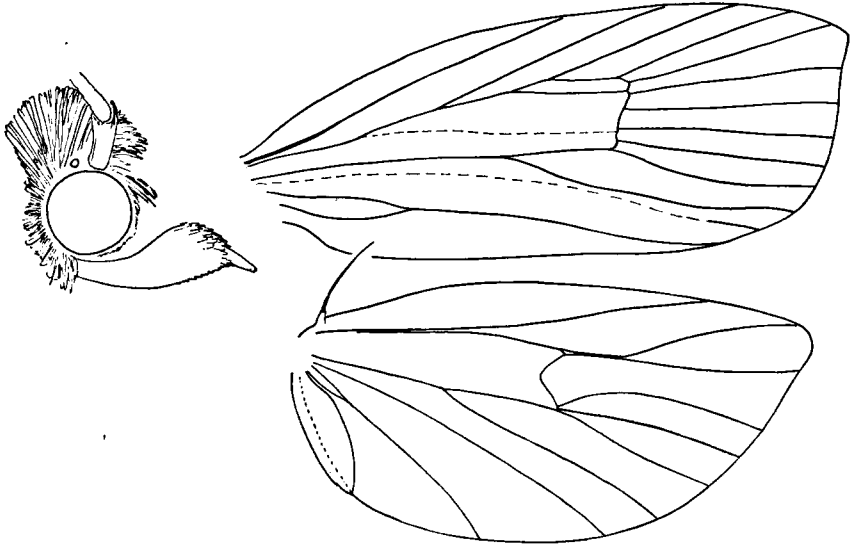


FIG. 5. *Rhodonympha rhodantha* (Meyrick) comb. nov., ♂, head and wing neuration.

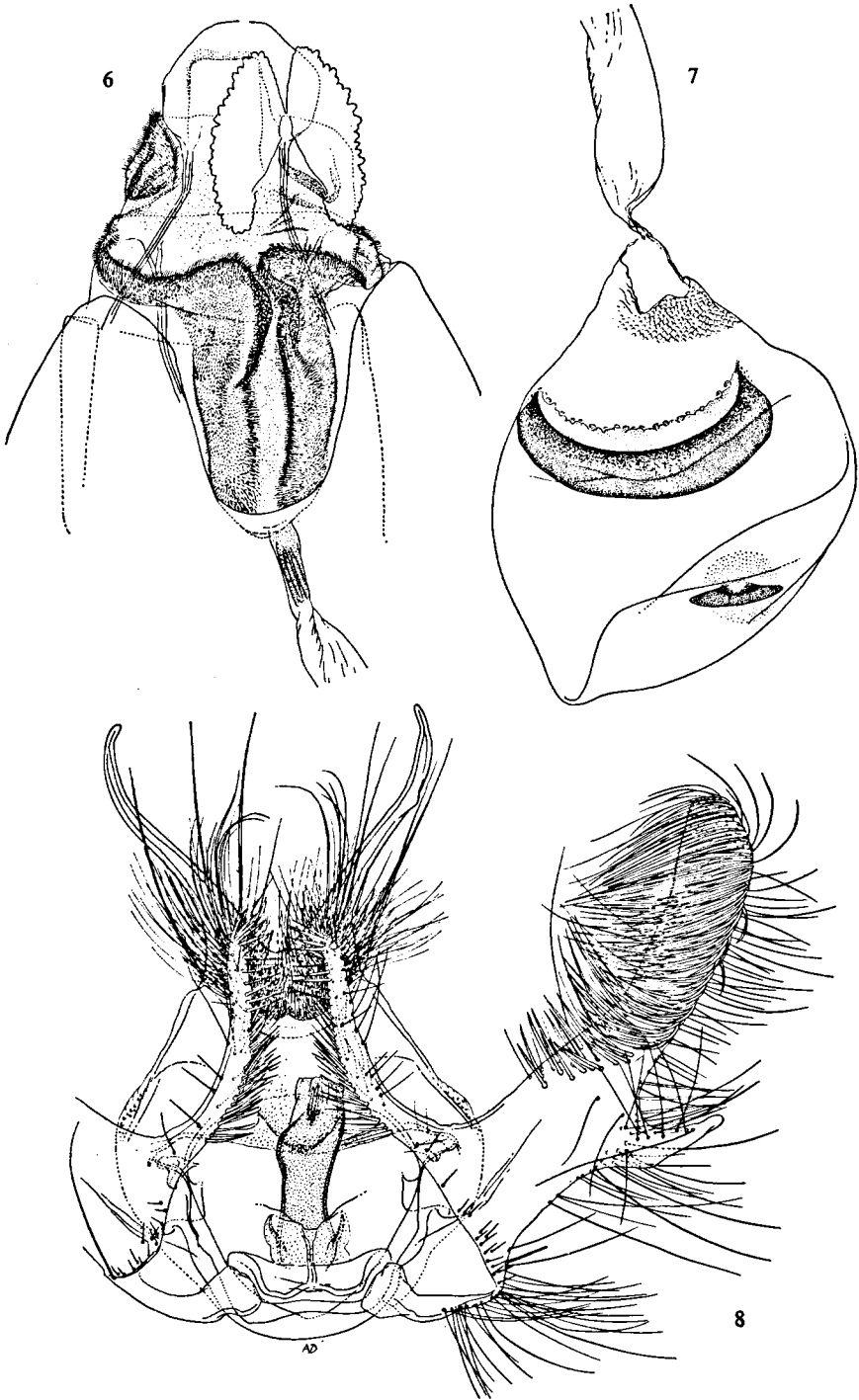
from base and not reaching top of tibia (this brush when in rest is appressed to the modified tubular edge of dorsum in hind wing); in female tibia normal.

Fore wing elongate-subtruncate, obtusely pointed, costa gently curved, termen hardly sinuate. Vein 2 from beyond $\frac{2}{3}$ of lower edge of cell, 3 from angle, 3—5 equidistant, 7—9 equidistant, 7 to termen, 10 closer to 9, 11 from middle of cell; upper parting vein developed, from beyond middle of distance 11—10 to just above base of 7; lower parting vein apparently from upper edge of cell halfway between base and 11, to below base of 5; 1b furcate along its basal third.

Hind wing over 1, semioval, rather pointed; cubital pecten present. Vein 2 from beyond middle, 3 from angle, 3—5 closely approximated towards base. Dorsum rolled in a slender, not entirely closed tube.

Male genitalia. Tegumen broadly triangular. Uncus long, bipartite, arms pointed, diverging. Socius moderate but broad, oval, with an extremely dense clothing of long hairs and bristles and a few very long bristles. Gnathos indicated as a slightly sclerotized transverse band with an inverted-triangular, median impression. Valva long and rather slender, processus basalis developed into a very long and slender rising arm, slightly curved and densely spined along the inner side; sacculus with a long and slender projection covered with long bristles; cucullus normal, bristly. Aedeagus moderate, little curved.

Female genitalia with sterigma strongly extended, so as to form a voluminous vertical body (lamella antevaginalis) with a pair of median longitudinal folds which are continued in a broad circle around the 9th segment and extended into thickened pads dorsally; these structures densely



FIGS. 6—8. *Rhodonympha rhodantha* (Meyrick) comb. nov. 6, sterigma and ovipositor; 7, bursa copulatrix; 8, male genitalia.

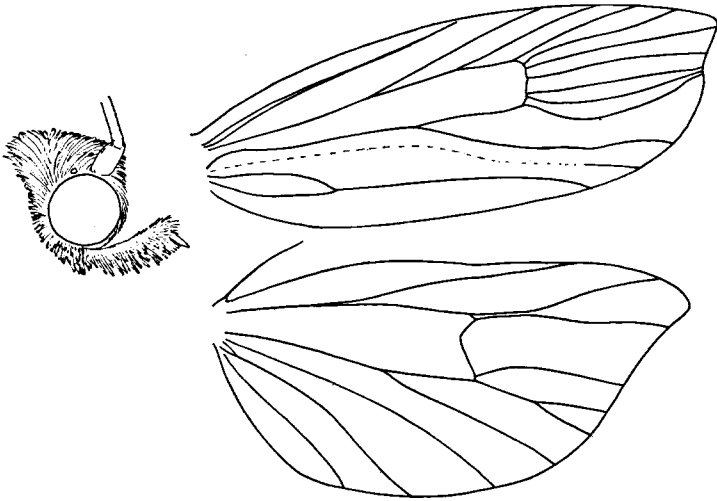


FIG. 9. *Brachioxena psammacta* (Meyrick) comb. nov., ♂, head and wing neuration.

and evenly fine-haired. Colliculum, a small, slender tube with longitudinal ribs. Ductus bursae moderate. Corpus bursae pear-shaped. Signa very large, unequal, the larger one transverse and curved, shaped as a banana peel; the smaller, sigar-shaped.

Type-species. — *Eucosma rhodantha* Meyrick, 1907, from Khasi Hills, Assam.

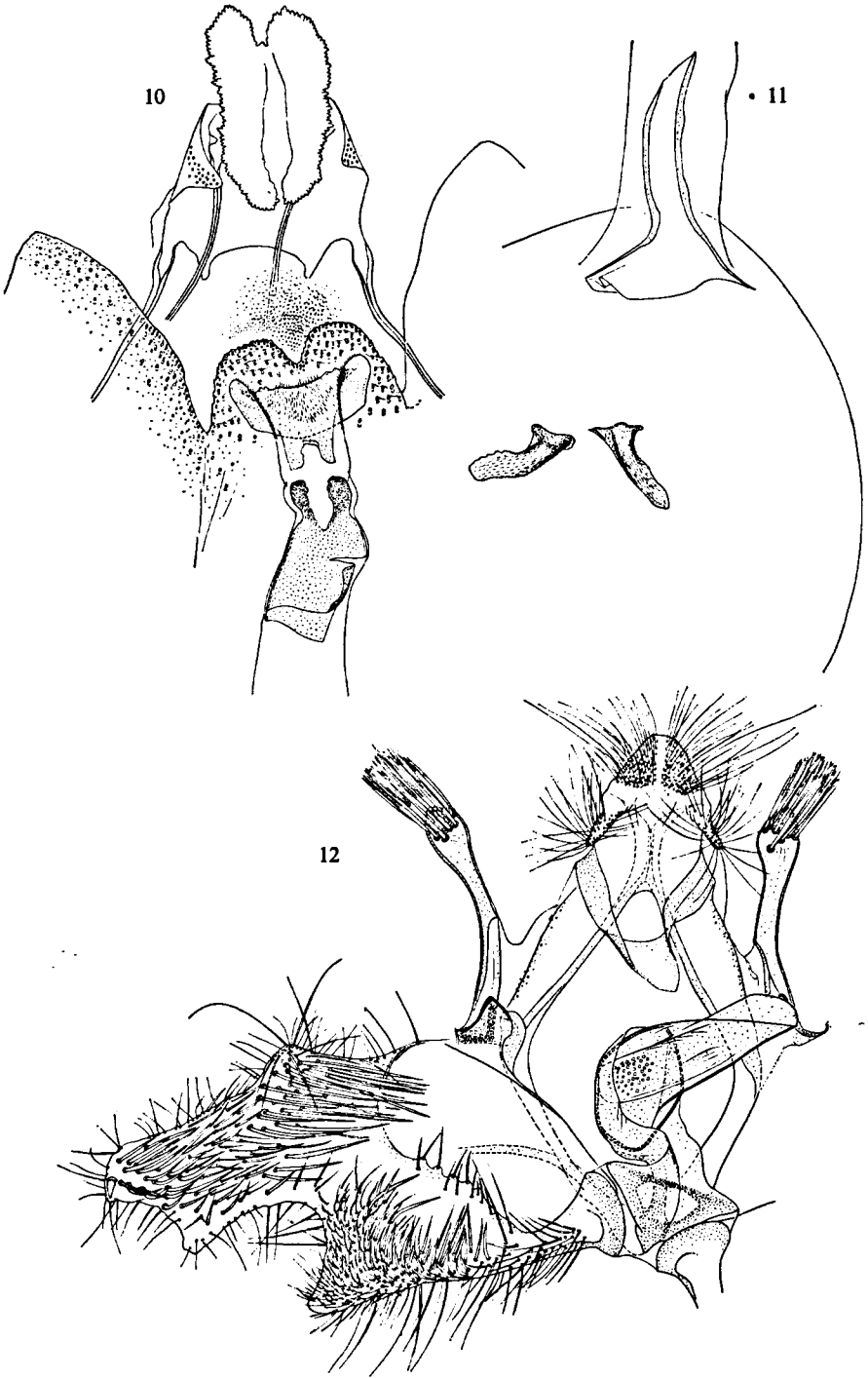
Material examined and dissected. — 1 ♂, 1 ♀, Khasi Hills, 6000 ft., Assam, VI.1889 (Doherty), Walsingham Collection, *Argyroploce rhodantha* Meyr., det. H. Stringer, 1945, genitalia on slides nos. 6506 ♂ and 6506 ♀. (British Museum, Natural History).

The genus belongs to the tribe Olethreutini and, judging from the genitalia, to the group of South Asiatic genera with highly modified male genitalia and females with bizarre, enormous and heavy unequal signa. The type-species is also very striking by the completely unusual, bright purple-crimson colour in the fore wing.

Brachioxena gen. nov.

Head with hair-scales roughly spreading on vertex, face short-scaled. Ocellus posterior. Proboscis weak. Antenna little thickened in male, subserrulate, short-ciliate below. Labial palpus moderate, projecting $\frac{1}{2}$ width of eye, porrected, median segment hardly dilated, with closely appressed scales, forming an even fringe along lower edge almost as long as segment is wide, at apex shortly rough-haired; terminal segment slender, smooth, acute, drooping. Maxillary palpus traceable, minute, appressed to proboscis. Thorax smooth. Posterior tibia slightly rough-haired above and below.

Fore wing elongate-suboval, costa gradually curved, apex pointed, termen



FIGS. 10—12. *Brachioxena psammacta* (Meyrick) comb. nov. 10, sterigma and ovi-
positor; 11, bursa copulatrix; 12, male genitalia.

concave in middle, straight above, rounded beneath. Vein 2 from $\frac{2}{3}$ of lower edge of cell, 3 from angle, 4 distant from 3, closely approximated to 5 at base, 3—5 strongly approximated on termen, 7 separate, to termen just below apex, 6 as far to 7 as 9 to 8, 10 closer to 9, 11 from middle of cell, lower edge of cell towards base strongly curved upwards; branches within cell indistinct; 1b with basal third furcate.

Hind wing subtrapezoidal-semioval, apex pointed and rather produced, termen concave; cubital pecten present. Vein 2 from $\frac{3}{5}$, 3 and 4 stalked from angle, stalk $\frac{1}{2}$, 5 closely approximated at base, discoidal bent above middle, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen rather high-triangular, uncus short, triangular. Socii rod-like, stiffly diverging, long-haired. Gnathos well-developed, band-like, pending. Valva with a striking long and clavate erect labis (with processus basalis at its base), crowned with a sheaf of dense straight spines; valva short and broad, top sometimes with a deep double excision, sacculus triangular or rounded, bristly, costa with a median prominence, cucullus with an apical spine. Aedeagus moderately long, caulis and anellus broad.

Female genitalia. Sterigma situated in a deep excision of the edge of genital sternite, this excision again with an emarginated lobe. Lamella antevaginalis, a transversely curved sclerite with fine hairs. Colliculum with a strong dark sclerite, split at the top. Signa two, almost equal, irregularly blade-like, with small basal plates.

Type-species. — *Cydia psammacta* Meyrick, 1908, from Pretoria, Transvaal, South Africa.

Material examined and dissected. — 1 ♂, Emamgeni, Rhod.[esia], 18.I.18 (A. J. T. Janse) genitalia slide no. 6620; 1 ♀, Pretoria, Transvaal (Janse). 12.07, "*Eucosma psammacta* Meyr., E. Meyrick det., in Meyrick Coll." Genitalia slide no. 6621 (all in the British Museum).

The male genitalia are of such a peculiar type, that it is not possible at present to indicate the affinity of the genus further than the tribe: Eucosmini. A second species which I assign hereto is *Eucosma sparactis* Meyrick, 1928, from Uganda. The species have a characteristic Eucosmine facies. The remarkable arm-like processes at the base of the costa are labides, as a flattened processus basalis is also present, situated at the ventral side of the base of the labis.

ACKNOWLEDGEMENTS

The author is indebted to the Trustees of the British Museum (Natural History), London, for the permission to study and publish descriptions of two new genera. The drawings have been made by Mr. A. C. M. van Dijk, The Hague, by Mr. W. Bergmans, Amsterdam, and by the author.

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