

**A NEW GENUS RELATED TO *DIORYCTRIA* ZELLER
(LEPIDOPTERA: PYRALIDAE: PHYCITINAE), WITH DEFINITION OF
AN ADDITIONAL SPECIES GROUP IN *DIORYCTRIA***

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Abstract

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The new genus *Dioryctriodes* is described for *D. daelei* n. sp., from Italy. This species closely resembles *Dioryctria taiella* Amsel in maculation but not in palpal structure or genitalia. *D. taiella* is referred to a new species-group of *Dioryctria*.

Introduction

Amsel (1970) described *Dioryctria taiella* as a new species from Afghanistan. Because of the abnormal maculation, we did not place this species in one of the seven species-groups of *Dioryctria* Zeller, 1846, that we defined (Mutuura and Munroe 1972), and we cast doubt on its correct placement in *Dioryctria*. Subsequently, the senior author has examined Amsel's type-series of *D. taiella* in Karlsruhe, and through the kindness of Dr. Edgard Van Daele, Centrum voor de Studie van de Sierplantenteelt, Faculteit Landbouwwetenschappen, Rijksuniversiteit Gent, Belgium, we have been able to study another, apparently new, species from Italy with very similar maculation and also with *Dioryctria*-like genitalia. The genitalia of this new species, however, differ from those of *D. taiella* as much as do those of different species-groups already recognized in *Dioryctria*. In addition the labial palpus of the new species is strongly porrect, not upturned as in all known species of *Dioryctria*. As this is usually considered an important character in generic keys, we feel obliged to separate the new species generically from *Dioryctria*, while recognizing its close relationship as indicated by genital structure. *D. taiella* has normal palpi, and we leave it in *Dioryctria*, where we characterize an eighth species-group to receive it.

***Dioryctriodes* n. gen.**

Gender: feminine

Type-species: *Dioryctriodes daelei* n. sp.

EXTERNAL CHARACTERS. Frons rounded, somewhat roughly scaled. Vertex short and wide, with rough, erect scaling and strong chaetosema. Labial palpus porrect (Fig. 1A), exceeding frons by considerably more than length of head; scaling compressed, a little rough, that of different segments fairly well demarcated; first segment short and curved; second segment obliquely ascending to level of middle of frons, then bending forward, scaling forming a triangular crest on dorsal side, weakly bent mesad; third segment porrect, of moderate length, scaling cylindrical and distally acuminate. Maxillary palpus small and squamous. Proboscis present but rather weakly developed, hardly visible below palpus in lateral aspect; base strongly scaled. Eye of moderate size. Ocellus small, placed immediately in front of chaetosema. Antenna of male with basal segment cylindrical; shaft laminate, dorsally scaled, ventrally ciliated; dorsal part of shaft with rather short abrupt scale-tuft, supported by two segmental teeth (Fig. 1B, C). Basal segment of abdomen with a pair of strong dorsolateral scale-caps, at least in male. Body of moderate thickness. Legs short and thick, with strongly compressed femora; outer tibial spurs of male about half length of inner.

Forewing of moderate width; costa arched; apex rectangular; termen with anterior part erect, posterior part rounded to tornus; tornus obtuse; posterior margin weakly convex. Upperside without raised scales. R_1 from cell at about middle of its interior margin. R_2 from just basad of anterior angle of cell. R_{3-5} from anterior angle; R_3 and R_4 fused; R_5 stalked with R_{3+4} about two-thirds the distance from anterior angle of cell to apex of wing. M_1 from anterior angle of cell, its base straight and divergent from that of R_{3-5} . Discocellular concave distad, its general course very slightly oblique distad. M_2 and M_3 from posterior angle of cell, their basal parts strongly approximated for some distance. Cu_1 from just basad of posterior angle of cell. Cu_2 from somewhat farther basad of origin of Cu_1 . 1st A absent. 2nd A strong and nearly straight. 3rd A weak, apparently free.

Hind wing of moderate width; costa straight; apex narrowly rounded; extending farthest distad behind end of R_8 . Termen, anal angle, and annal margin rounded. $Sc+R_1$ not anastomosed with R_8 . R_8 and M_1 stalked

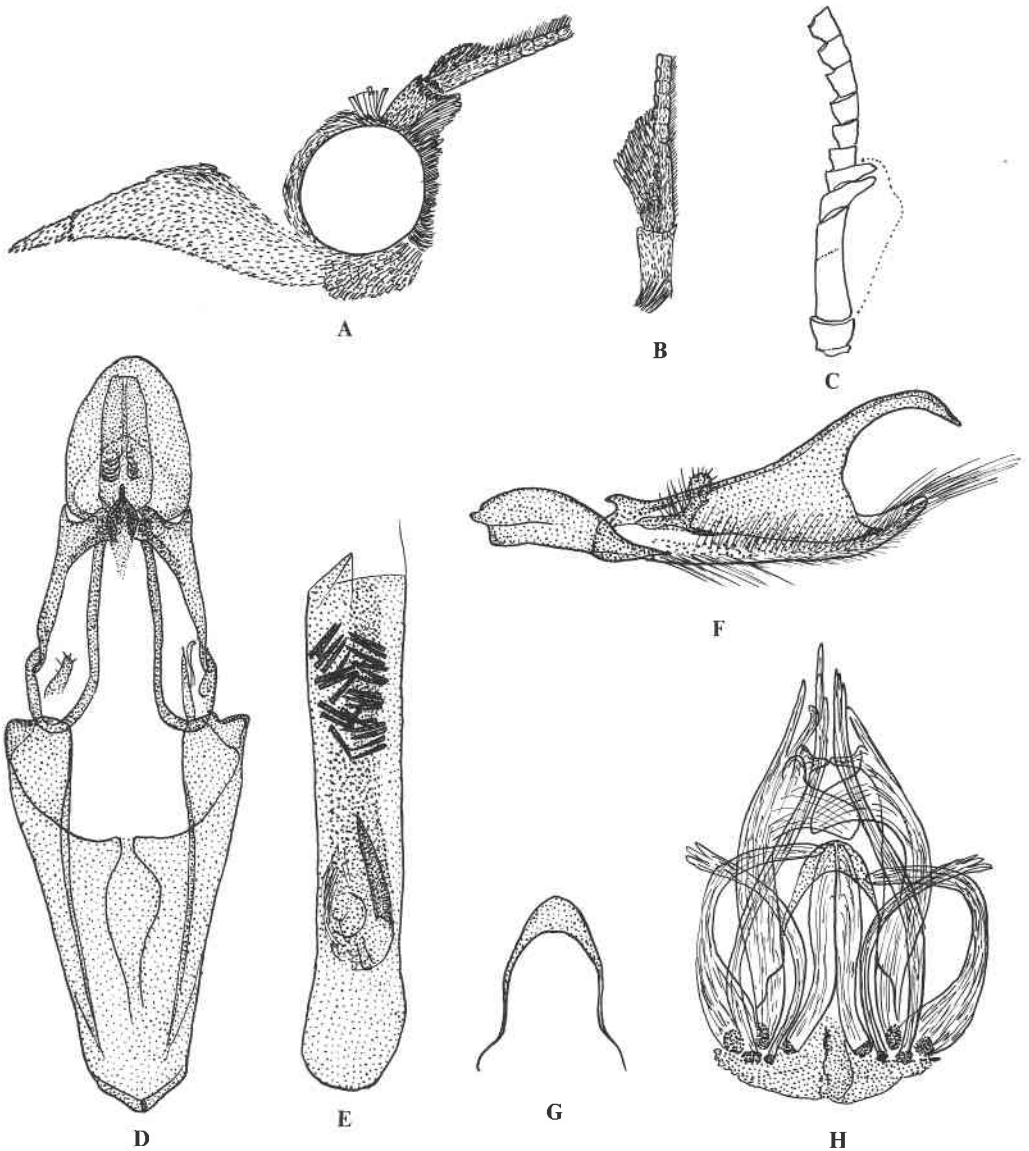


FIG. 1. *Dioryctriodes daelei* n. gen. and n. sp., ♂. A, head, lateral aspect; B, left antenna, with scales, anterior aspect; C, right antenna, without scales, anterior aspect; D, uncus, tegumen, and vinculum; E, penis; F, right valve, mesal aspect; G, apex of eighth abdominal sternum; H, scale tufts of eighth abdominal sternum.

for some distance. Discocellar weak, its anterior oblique basad, its posterior part oblique and concave distad, ending almost in line with M_{2+3} at the very acute posterior angle of the cell. Cell less than half length of wing. M_2 and M_3 stalked for some distance from posterior angle of cell. Cu_1 from a little basad of posterior angle of cell, its basal part curved and strongly approximated to M_{2+3} for a short distance, then straight and parallel to Cu_2 . The latter arising a short distance basad of Cu_1 . Base of Cu strongly pectinated on upperside. Three anals present.

MALE GENITALIA. Uncus of moderate length and width, terminally rounded (Fig. 1D). Gnathos short and claw-like, arising from medially narrowing transverse bridge. Transtilla represented by rudimentary

lateral elements. Juxta weak, U-shaped, with setose dorsal lobes. Vinculum long and trowel-shaped. Valve (Fig. 1F) narrow basally, sclerotized dorsal part widening rapidly and ending in a long, sclerotized, slender, falcate process as in some species of the *Dioryctria baumhoferi* group; membranous ventral part of valve produced into a long, slender, terminal process; clasper prominent, clavate, basally slender. Penis (Fig. 1E) with aedoeagus straight, cylindrical, about seven times as long as wide; vesica with one large spine-like cornutus and about two dozen smaller straight ones. Eighth sternum with bifid sclerite (Fig. 1G) and complex tuft of modified scales (Fig. 1H) as in *Dioryctria*.

FEMALE GENITALIA. Unknown.

EARLY STAGES. Unknown.

REMARKS. Only the type-species, from Italy, is known. The genus resembles *Dioryctria* in all important respects except the porrect labial palpus. The maculation, as already mentioned, differs from that of most species of *Dioryctria*, but is closely similar to that of *D. taiella* Amsel.

Dioryctriodes daelei n. sp.

Figs. 1, 2

EXTERNAL CHARACTERS. Head light ash grey, frons and labial palpus except at base dusted with darker grey; eye and ventral surface of antenna dark fuscous. Thorax and legs light ash grey; legs sparsely dusted with darker grey and on outer surfaces tinted with buff. Abdomen basally light ash grey, the rest not examined by us.

Forewing above light ash grey, sparsely dusted with blackish fuscous. A black costal line from base to antemedial line, narrowing beyond base and widening slightly before joining antemedial line. The latter incomplete, represented by a zig-zag black line running obliquely distad from costa to axis of discal cell. A narrow longitudinal black dash in distal part of discal cell. Postmedial line narrow and weak, black, very strongly zig-zagged, from costa near apex to end of cell, outward again to an acute angle on M_2 , inward to Cu_2 and outward along that vein, then lost in the general dark dusting. A fine blackish terminal line. Fringe finely dusted dark and light ash grey.

Hind wing above light grey, dusted with light fuscous in costal, apical, and terminal areas. Fringe light buffy grey with a darker mid-line.

Forewing beneath almost uniformly fuscous, but scales of retinaculum contrastingly orange-yellow.

Hind wing beneath as above.

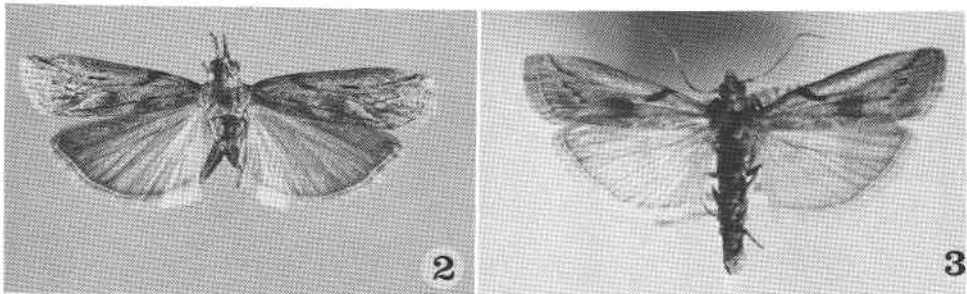
Expanse 26–27 mm.

GENITALIA. As described for the genus.

EARLY STAGES. Unknown.

TYPES. Holotype, ♂, and 1 ♂ paratype, Diano-Castello, Maritime Alps, Italy, 18 June 1968, Edgard Van Daele. Type No. 13340, Canadian National Collection.

REMARKS. As will be seen from the figures, this species closely resembles in pattern *Dioryctria taiella* Amsel (Fig. 3). The differently shaped palpi and the genital characters (cf. Amsel 1970, fig. 20) clearly distinguish them. Dr. Van Daele, after examining the moths and the genital preparations that he made of them, concluded that they were not referable to any described European species. We were able to confirm that



FIGS. 2–3. 2, *Dioryctriodes daelei* n. gen. and n. sp., holotype, ♂, Diano-Castello, Maritime Alps, Italy, 18 June 1968, Edgard Van Daele. 3, *Dioryctria taiella* Amsel, holotype, ♂, Salang Pass, Afghanistan, 2100 m, 5–11 July 1966, H. G. Amsel.

they belonged to no species described in *Dioryctria* or any closely related genus, and the senior author during his examination of major European collections during 1973 was unable to find anything similar except *D. taiella*, which was already known to us. While it cannot be absolutely excluded that the species has been described in some unrelated genus, if so it has been badly misplaced, and in that case it will be useful to have a properly placed available name until the synonymy comes to light.

Dioryctria Zeller

Dioryctria Zeller, 1846: 732. Type-species: *Tinea abietella* [Denis and Schiffermüller], 1775. Subsequent designation, Ragonot, 1885: 19.

Pinipestis Grote, 1878: 19. Type-species: *Nephopteryx zimmermani* Grote, 1877. Monotypy.

Dioryctria Zeller; Heinrich, 1956: 149.

Dioryctria Zeller; Mutuura and Munroe, 1972: 609.

To the seven groups of species listed by us in this genus (Mutuura and Munroe 1972), we now add the following:

(8) ***taiella* group.** Forewing without raised scales and with the usual transverse lines and pale discal spot largely suppressed; maxillary palpus of male squamous; base of male antenna with modified scales, shaft simple. Male genitalia with dorsal part of valve moderately falcate, without longitudinal terminal ridges and without accessory spine; penis with one large cornutus and many small ones. Female genitalia not described by Amsel or seen by us. Life history unknown. Only known species: *Dioryctria taiella* Amsel, 1970.

Acknowledgments

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