# REICHENBACHIA

## Staatliches Museum für Tierkunde Dresden

Band 28 Ausgegeben: 30. November 1990 Nr. 11

# *Symmetrischema costaricanum* sp. n., an obviously undescribed species from Central America

**(Insecta, Lepidoptera, Gelechiidae: Gnorimoschemini)**

With 2 Figures and 1 Plate

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**Abstract.** A new species of the gnorimoschemine tribe of Gelechiidae (Lepidoptera), *Symmetrischema costaricanum* sp. n., is described from Costa Rica. The species is both similar and related to *Symmetrischema plaesiosema* (TURN.), a well known pest of potato and tomato in South America, Central America and Australia. The external and genitalia differences of the two related taxa are described and figured.

During the years following the description of *Scrobipalpopsis solanivora* POVOLNÝ, 1973, numerous samples of Neotropical gnorimoschemine moths attacking potato and other cultivated Solanaceae were submitted to me for identification. Recently, five species of Gnorimoschemini responsible for attacking potato in several Neotropical countries were reviewed, viz. *Phthorimaea operculella* (ZELLER, 1873), *Symmetrischema plaesiosema* (TURNER, 1919), *Scrobipalpopsis solanivora* POVOLNÝ, 1973, *Scrobipalpuloides absoluta* (MEYRICK, 1917) and *Eurysacca melanocampta* (MEYRICK, 1917) (VALENCIA, 1986; POVOLNÝ & VALENCIA, 1986). Facultatively, *Phthorimaea isochlora* MEYRICK, 1931 mining both cultivated and non-cultivated Solanaceae may occasionally attack potato, too. And finally, *Phthorimaea euchthonia* MEYRICK, 1939, probably confused with *Phthorimaea operculella* in numerous cases, also seems to be a rather widely distributed mining pest of Solanaceae including potato in the Neotropical Region (e.g. POVOLNÝ, 1984). A number of confusions had existed mainly in practice before the above taxonomic situation was gradually cleared, and it is therefore desirable to avoid new possible misidentifications. It is therefore important that a next undescribed species of Gnorimoschemini mining potato is obviously involved in Costa Rica the only female of which should be described to differentiate it from the similar and related *Symmetrischema plaesiosema*.

### Symmetrischema costaricanum sp. n. (Fig. 2, Plate)

The only female shows a comparatively big, pale grey to cinereous whitish moth with a longitudinal blackish stripe extending axially from a black costal stigma situated at about first quarter of costa. Female subgenital plate distinctive by its comparatively short apophyses and very broad and long cylinder-shaped proximal prolongation of subgenital plate. Signum a distinct spine.

Habitus Head, thorax and tegula nearly unicolourous, cinereous whitish, frons whitish lustrous. Labial palpus distinctly longer than head width, but only moderately curved. Second segment interior whitish, exterior mixed with numerous greyish scales, third segment with indication of one basal and one subterminal annulus, subterminal one being more distinct and blackish. Forewing ground colouration pale cinereous to whitish. Forewing base cinereous whitish, this whitish hue expanding also along most part of dorsal wing margin. Tornus with admixture of greyish scales poorly indicating slight submarginal spots. A blackish stigma of brownish hue is situated on costa postbasally continuing in form

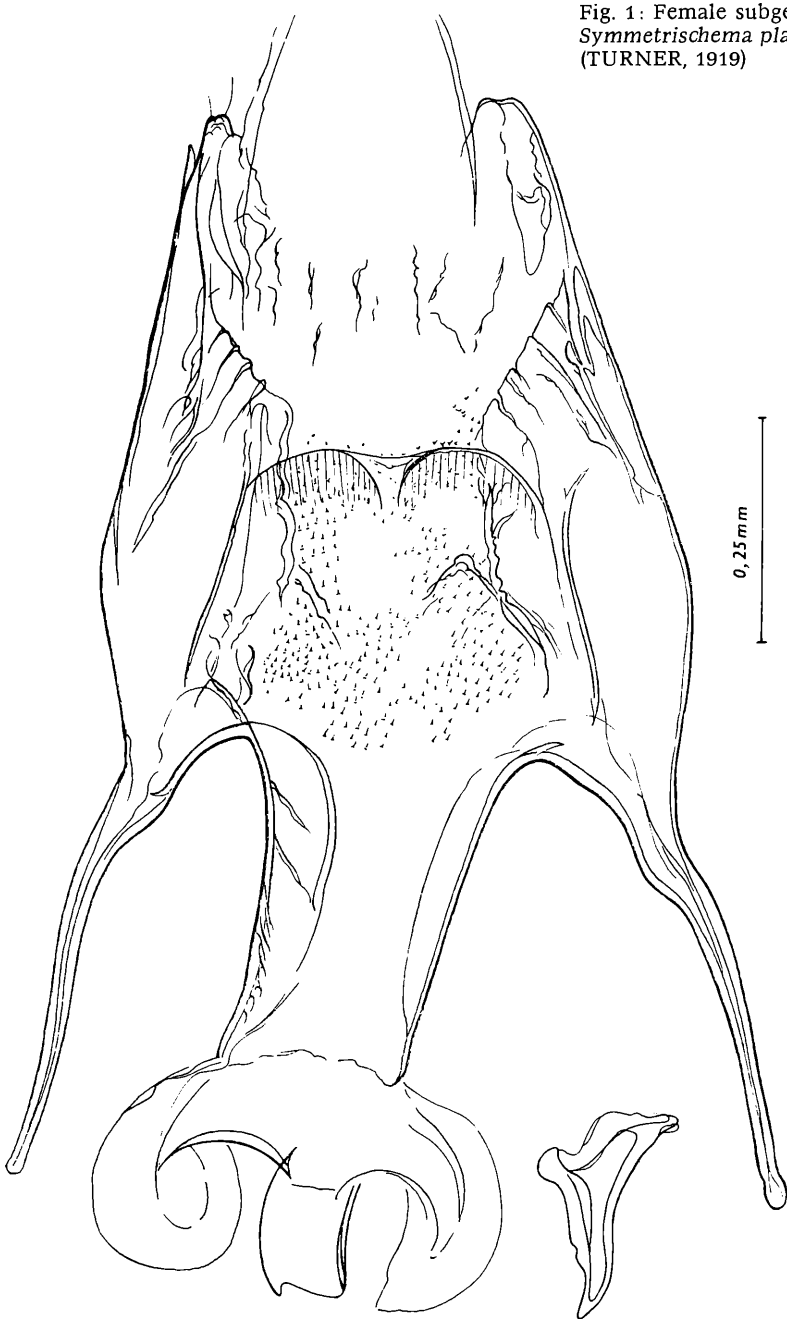


Fig. 1: Female subgenital plate of *Symmetrischema plaesiosema* (TURNER, 1919)

of a striking, gradually narrower stripe expanding axially up to wing apex. Wing apex with a distinct blackish stigma surrounded by pale cinereous scales. Indication of indistinct grey stigmata on costal margin praeapically. Forewing cilia cinereous with slight brownish hue. Hindwing whitish lustrous with somewhat darker veins, cilia whitish to whitish grey. Legs cinereous with indistinct dark cinereous spotting and with indication of dark cinereous ringlets.

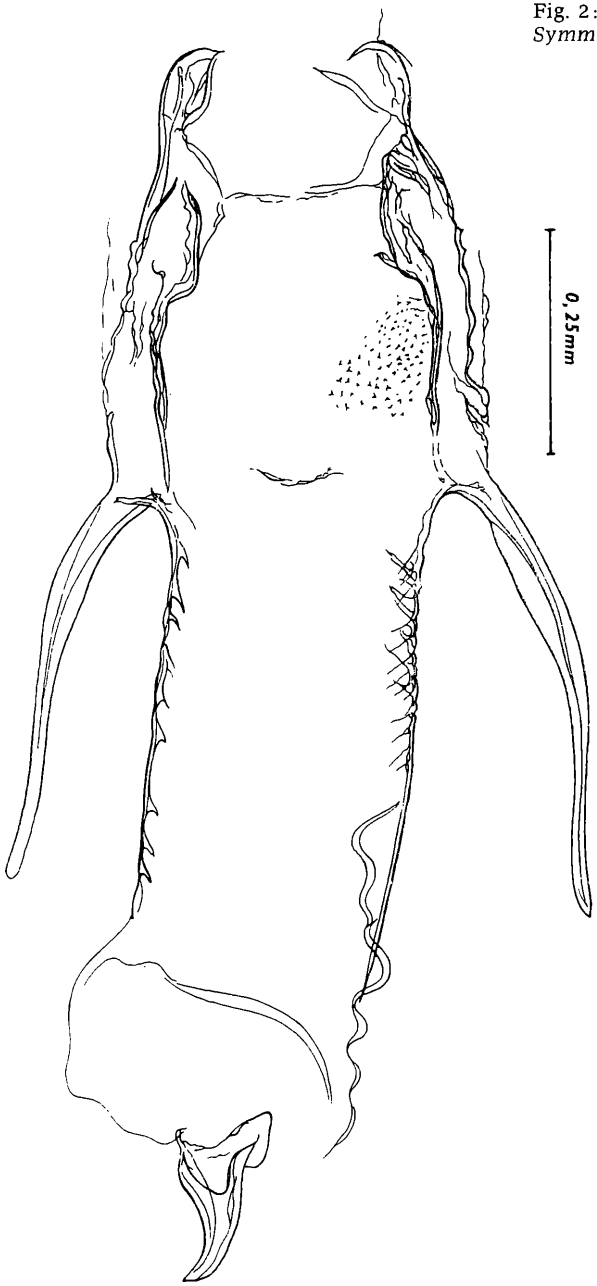


Fig. 2: Female subgenital plate of *Symmetrischema costaricanum* sp. n.

G e n i t a l i a Subgenital plate moderately longer than broad, centrally membraneous with a paired symmetrical field of fine microtrichia and with a paired longitudinal sclerotized ledge on both sides of its membraneous center. Proximal margin of subgenital plate protrudes to form a very broad and long cylinder-shaped funnel (antrum – sclerotized proximal section of ductus bursae including colliculum). Anterior apophyses medium-length, moderately curved, their tips not reaching end of antrum. Signum of corpus bursae a comparatively short and stout spine.

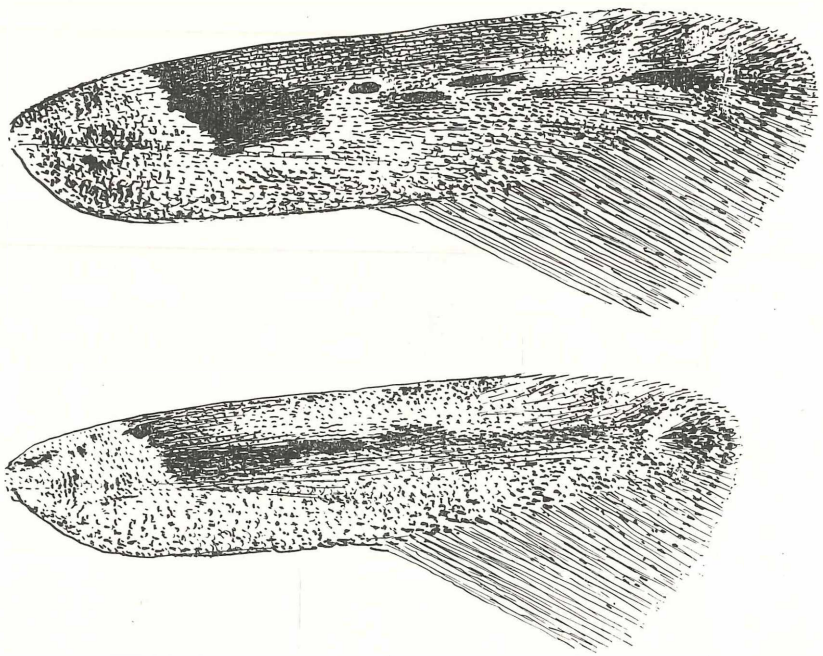

Plate: Forewing pattern of *Symmetrischema plaesiosema* (TURNER, 1919) and of *Symmetrischema costaricanum* sp. n. (bottom).

Comments. The only female of the new species was detected from among a mixture of unspread and unpinned moths reared from potato tubers in Cantón de Oreamuno, Costa Rica, at elevation of 1.800 m in August, 1972, and comprising mostly *Scrobipalpopsis solanivora* and a few specimens of *Symmetrischema plaesiosema* to which this female shows some ressemblance. *Symmetrischema plaesiosema* or the potato stem-borer of Neotropical origin was later introduced to Australia and described, in Australia, by TURNER (1919) although MEYRICK's name *aquilina* MEYRICK, 1917 (described from Peru) has nomenclatorial priority neglected so far for practical reasons. During the early thirties, *Symmetrischema plaesiosema* known also as "polilla gigante de la papa" at that time, was also introduced to California (KEIFER, 1937), where it lives mainly in the stems of *Solanum nigrum* L., a weed species introduced from Europe. Vigorous damage caused to potato stems is known to occur mainly in Australia (the species being present also in New Zealand) and in various parts of South America, where it seems to occupy a vast distributional area mining, obviously, both non-cultivated and cultivated Solanaceae (potato, tomato). It seems to be indigenous to the montane elevations (from 600 m up to nearly 3.000 m a. s. l.) over a range from Patagonia (Argentina, Chile) to Peru, Bolivia and Colombia, and it locally spreads to lower elevations (e. g. in Brasil). The "wild" moths reared from non-cultivated Solanaceae or captured on light seem to show a paler ground colouration with a distinct pattern, and they appear to be generally more slender than the robust and dark-coloured individuals attacking potato cultures.

The adults of *S. plaesiosema*, especially of the populations from potato cultures, are essentially stouter (length of forewing 8–11 mm) and generally more broad winged than the holotype female of *Symmetrischema costaricanum* sp. n. The colouration of *S. plaesiosema* is deep-grey mottled with blackish. The basal blackish stigma on the forewing costa is extended centrally, and its axial prolongation is partly interrupted by longitudinal blackish stigmata. The apical wing stigma of *S. plaesiosema* is elongate and rather distinctive. The hindwing is rather grey lustrous with darker costa. In numerous individuals (or in agricultural populations) of *S. plaesiosema* the above blackish praebasal spot might even further expand to form numerous longitudinal blackish veins contrasting with the

neighbouring chocolate colouration so that only the wing base remains somewhat paler. The female genitalia of *Symmetrischema costaricanum* sp. n. show clear-cut proportional and qualitative differences (compare figs. 1 and 2). The female subgennital plate of *Symmetrischema costaricanum* sp. n. is missing the distinct ventromedial bilobate sclerite characteristic of *Symmetrischema plaesiosema* (TURN.) and supporting or protecting the ostium opening ventrally. The subgenital plate proper shows also different proportions and the proximal cylinder-formed prolongation (antrum) is much shorter, broader and longer than in the female of *Symmetrischema plaesiosema* (TURN.). For other details see figs 1 and 2 and the forewing pattern of the two taxa compared. The complete literature on the genus *Symmetrischema* POVOLNÝ, 1967 follows in references enclosed.

Material: Holotype ♀, Costa Rica, Cantón de Oreamuno, 1800 m, 5. VIII. 1972, leg. Dr. J. J. Castro.

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(Received on 9. VIII. 1989)