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The taxonomic position of the Neotropical genus *Macrocirca* Meyrick, 1931 with new synonymy and description of one new species (Lepidoptera: Depressariidae, Depressariinae)

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Abstract

Macrocirca strabo Meyrick, 1931, described in the Hyponomeutidae, is transferred to the Depressariidae, Depressariinae. A new species, *Macrocirca moseri* Becker, sp. nov., from Brazil, is described. *Odonna* Clarke, 1982, syn. nov. is a junior synonym of *Macrocirca* Meyrick, 1931; *M. passiflorae* (Clarke, 1982), comb. nov. and *M. xenodora* (Clarke, 1982), comb. nov. are included in *Macrocirca.*
Keywords: Lepidoptera, Depressariidae, Yponomeutidae, *Macrocirca, Odonna,* new species, new synonyms, distribution, Neotropical.

La posición taxonómica del género Neotropical *Macrocirca* Meyrick, 1931 con nuevas sinonimias y descripción de una nueva especie (Lepidoptera: Depressariidae, Depressariinae)

Resumen

Macrocirca strabo Meyrick, 1931, descrita en los Hyponomeutidae, es transferida hacia los Depressariidae, Depressariinae. Se describe una nueva especie: *M. moseri* Becker, sp. nov., de Brasil. *Odonna* Clarke, 1982, syn. nov. es una junior sinonimia de *Macrocirca* Meyrick, 1931; *M. passiflorae* (Clarke, 1982), comb. nov. y *M. xenodora* (Clarke, 1982), comb. nov. son incluidas en *Macrocirca.*
Palabras clave: Lepidoptera, Depressariidae, Yponomeutidae, *Macrocirca, Odonna,* especie nueva, nuevas sinonimias, distribución, Neotropical.

Introduction

Macrocirca strabo Meyrick, 1931 was described in the Hyponomeutidae [Yponomeutidae]. Meyrick (1931, p. 38) provided only this statement on its relationships, "Allied to *Ethmia*, from which it is distinguished by the palpi," and it has remained an enigmatic genus until now. Becker (1984, p. 145), based on Meyrick's assumptions, transferred it to the Ethmiinae (Oecophoridae). Lewis & Sohn (2015, p. 177) followed Becker, retaining the genus in Ethmiinae. Examination of material available revealed that it belongs to the Depressariinae (Depressariidae), becoming a senior synonym of *Odonna* Clarke, 1982, and includes a further, undescribed species from Brazil.

Material and methods

This work is based on the literature, on the type specimens, and on specimens in the author's collection (VOB), the IMLT, and the MNHUK. The holotype of the new species is provisionally

deposited in VOB, and will be transferred, together with the collection, to a Brazilian institution in the future. Genitalia were prepared following the methods described by Robinson (1976). Terms for morphological characters follow Hodges (1971).

Abbreviations

The following abbreviations are used in the text:

IMLT	Instituto Miguel Lillo, Tucumán, Argentina
FW	forewing
g. s.	genitalia slide
HW	hind wing
NHMUK	Natural History Museum, London, United Kingdom
PR	Paraná State, Brazil
SP	São Paulo State, Brazil
USNM	National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA
VOB	Vitor O. Becker Collection, Serra Bonita Reserve, Camacan, Bahia, Brazil
ZSBS	Zoologische Sammlung des Bayerischen Staates, Munich, Germany

Results

Examination of the material and the pertinent literature revealed that *Macrocirca* is represented by four species, one of them undescribed.

Macrocirca Meyrick, 1931
Macrocirca Meyrick, 1931. *Mitt. Münch. Ent. Ges., 21*, 38
Type-species: *Macrocirca strabo* Meyrick, 1931. *Mitt. Münch. Ent. Ges., 21*, 38, by monotypy.
=*Odonna* Clarke, 1982. *J. Res. Lepid., 20*(1), 46, **syn. nov.**
Type-species: *Odonna passiflorae* Clarke, 1982. *J. Res. Lepid., 20*(1), 47, by original designation.

Diagnosis: FW length 18-22 mm (38-48 mm wingspan), long, narrow (nearly 3x longer than broad), costa and dorsum nearly parallel, termen round to sub-acute, angled inwards toward tornus; dark grey, vein interspaces marked as thin dark lines, reniform small, blackish, ringed whitish. Accessory cell present, R4 + R5 stalked from middle, the former to costa before apex, the second to apex; M3 and CuA1 connected at lower angle of cell, CuA2 near end of cell. HW whitish, slightly greyish towards margins; M1 halfway between Rs and M2; M3 + CuA1 connected at lower angle of cell. Mid and hind tibia covered with long, whitish scales. Male genitalia (Figures 3-6): Uncus a short triangle, densely covered with setae dorsally; tegumen narrow, elongated distad; gnathos a pair of slender, spined knobs; valva broad at basal half, distal half a narrow, spatulate projection; vinculum round; juxta a sclerotized ring around aedeagus, whit two lateral, short projection; aedeagus as long as valva, thick, curved at base, covered or not with long setae distally.

Distribution: Colombia, Argentina, and southeastern Brazil, at high elevations.

Food-plant: *Passiflora* sp. (Passifloraceae) (Chacón & Hernandes, 1982; Clarke, 1982).

Remarks: In general appearance, especially the narrow, elongate FW, the adults show similarities to some species of *Ethmia* Hübner, [1819] especially those in the *semilugens*-group (Powell, 1973), which led Meyrick (1931, p. 38) to associate it with this genus. According to Clarke (1982, p. 46) the genus keys in Clarke (1978) near to *Talitha* Clarke, 1978, a monotypic genus described from a single female from Chile. However, as pointed out by Clarke, the shape of their female genitalia indicates that this relationship is doubtful. The shape of the male genitalia is unique and totally distinct among the New World Depressariinae. Nothing that resemble them was found either in the published literature or among the hundreds of genitalia preparations examined by the author. Despite this unique situation, the presence of a double, spined gnathos, places it in this subfamily.

Key to males

1. Male genitalia with distal digit of valva as long as sacculus (Southern South America) 2
   Male genitalia with distal digit of valva much longer than sacculus (Colombia) 3

2. Digital branches of gnathos longer than uncus (Argentina) ..... *strabo*
   Digital branches of gnathos as long as uncus (Brazil) ..... *moseri*

3. FW length less than 30 mm ..... *passiflorae*
   FW length longer than 30 mm ..... *xenodora*

Macrocirca strabo Meyrick, 1931 (Figures 1, 3)
Macrocirca strabo Meyrick, 1931, in Rosen. *Mitt. Münch. Ent. Ges., 21*, 38
Syntypes ♂, ♀, ARGENTINA: Cordoba, Capilla del Monte (Hosseus) (NHMUK, ZSBS) [syntype male examined].

Material examined: Syntype ♂, labelled as above (NHMUK); 1 ♂, ARGENTINA: Catamarca, Belén, Barranca Larga, II-1937 (IMLT).

Diagnosis: Grey; abdomen cream basally; FW stroked dark grey between veins; reniform ringed light grey. HW grey, gradually dark grey towards apex and termen.

Description: As the specimen belonging to the IMLT (Figure 1), available for study, is badly faded, the original description, presumably based on better specimens, sensu Meyrick (1931): "♂, ♀, 38-48 mm. Head, palpi, thorax whitish mixed dark grey. Forewings very elongate, costa gently arched, ♀ more arched, apex obtuse, termen rounded, rather strongly oblique; whitish irregularly irrorated dark grey, veins appearing as darker streaks; a fine black dash in cell before middle (probably representing first discal stigma), surrounded by a pale area, and a transverse blackish line on end of cell (indicating second discal), also surrounded by whitish, before, between, and beyond these undefined patches of dark suffusion; cilia greyish. Hindwings pale grey, darker towards apex and termen; cilia grey-whitish, greyer round apex" (p. 38).

Male genitalia (Figure 3): Uncus a broad, elongate triangle; gnathos arms thin, slightly longer than uncus; valva with a narrow, curved projection at mid costa, sacculus smooth, distal, spatulate projection twice as long as wide, round distally; aedeagus strongly curved at base, without spines at apex; vesica without spines; juxta a thin ring around the aedeagus with a pair of lateral, blunt knobs.

Distribution: Argentina, on the West, dry side of the Andes, at high elevations.

Remarks: Described from an unspecified number of males and females, at least one of each. According to Meyrick (1931) the material he studied belonged to the ZSBS. Dr. W. Speidel, curator of Lepidoptera of this institution, pers. comm., informed the author that no specimens were found in this collection. However, as Meyrick often did when he studied material from other collections represented by more than one specimen, he kept at least one for his collection. In the NHMUK there is one male, labeled as above, and bearing an identification label in his handwriting, examined by the author, which certainly belongs to the type-series. This specimen is not designated as lectotype for two reasons: the specimens at the ZSBS might be found in the future, and the identity of the species is well documented by this syntype. The specimen belonging to the IMLT, whose adult and genitalia are illustrated here, is a perfect match to this syntype, except for being badly faded, being collected in the same Argentinian Andean region. The darker streaks on FW, mentioned by Meyrick, are not located on the veins, but are between the veins.

***Macrocirca moseri* Becker, sp. nov.** (Figures 2, 4)

Holotype ♂, BRAZIL: PR, Lapa, 900 m, 1-2-I-2003, g. s. (Moser) (VOB); Paratypes: 2 ♂ ♂, PR, Castro, 1895 (Jones) (NHMUK); 1 ♂, SP, São Paulo, 1895 (Jones) (NHMUK).

Diagnosis: Head and thorax metallic black, abdomen cream, FW below cell shiny dark grey, whitish, stroked black between veins above cell; reniform ringed whitish; HW whitish.

Description (Figure 2): FW length 17 mm (38 mm wingspan). Head and thorax metallic black; 2nd

segment of labial palpi whitish below; basal third of antenna black, gradually grey towards tip. Legs black, mid, and hind tibia mixed with whitish scales.

Male genitalia (Figure 4): Uncus a short triangle, densely covered with setae dorsally; gnathos as long as uncus; valva with a pair of projections at middle: a dorsal, curved, sharp-pointed one at mid costa, the other, shorter, at the ventral end of sacculus; distal, spatulate projection slightly curved and constricted basally; juxta with the lateral projection asymmetrical: right one broad, left one sharp-pointed; aedeagus slightly curved at middle, expanded based, apex with long setae.

Distribution: Southern Brazil, at high elevation, from the type locality, from Castro, not far away, and from São Paulo.

Remarks: Similar to *M. strabo*, but smaller. Apparently this species is not readily attracted to mercury vapour light. The author has collected intensively in the biome in which it occurs for more than 50 years, focused on Microlepidoptera, but never collected a single specimen.

Macrocirca passiflorae (Clarke, 1982) **comb. nov.**
Odonna passiflorae Clarke, 1982. *J. Res. Lepid., 20*(1), 47
Holotype ♀, COLOMBIA: Valle, Tenerife, 2600 m (Chacón & Hernandes) (USNM, 100175) [examined].

Food-plant: *Passiflora mollissima* Bailey (Passifloraceae) (Chacón & Hernandes, 1982, p. 43).

Distribution: Colombia, from the type-locality only, at high elevations in the Andes.

Remarks: Like the sympatric *M. xenodora*, the distal digit of valva is longer than the sacculus. The size, and the shape of genitalia are the only safe ways to distinguish both.

Macrocirca xenodora (Clarke, 1982) **comb. nov.**
Odonna xenodora Clarke, 1982. *J. Res. Lepid., 20*(1), 49
Holotype ♂, COLOMBIA: Cauca, Paramo de Purace, Lake San Rafael, 3570 m (Clarke) (USNM, 100176) [examined].

Distribution: Colombia, at high elevation in the Andes.

Remarks: Similar to *M. passiflorae* but larger.

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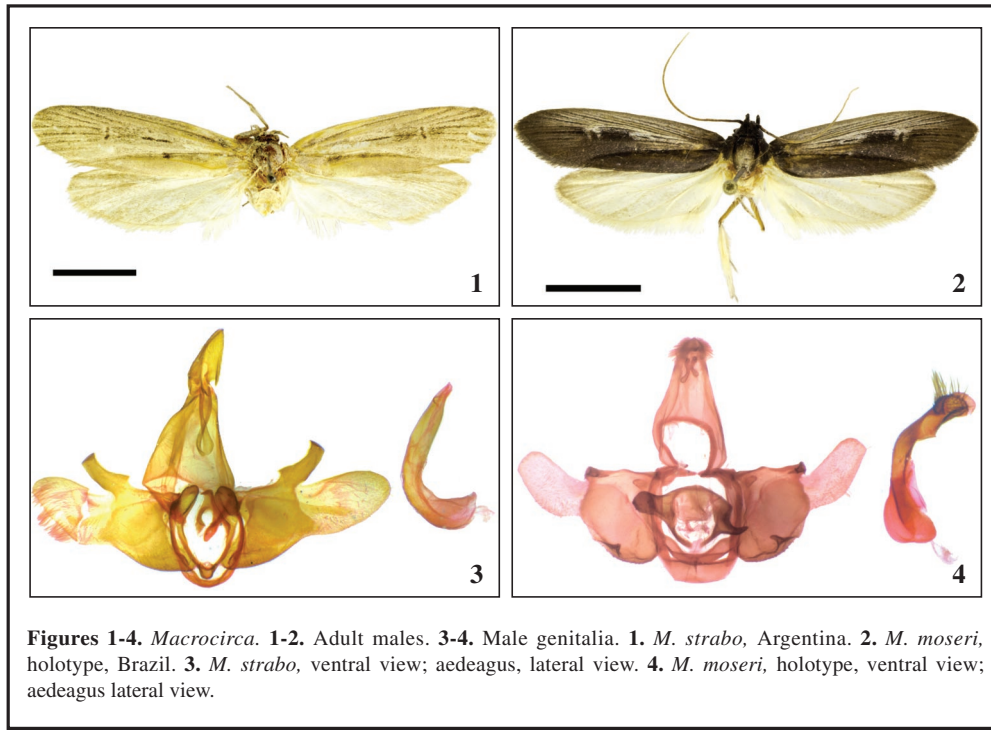

Figures 1-4. *Macrocirca.* **1-2.** Adult males. **3-4.** Male genitalia. **1.** *M. strabo,* Argentina. **2.** *M. moseri,* holotype, Brazil. **3.** *M. strabo,* ventral view; aedeagus, lateral view. **4.** *M. moseri,* holotype, ventral view; aedeagus lateral view.