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# *APHODIUS (PLATYDERIDES) PULLATUS* A. SCHMIDT, 1913, ANOTHER MEXICAN TAXON TO BE MOVED INTO THE GENUS *CEPHALOCYCLUS* AND REMARKS ON *CEPHALOCYCLUS MEXICANUS* (HAROLD, 1862) AND *APHODIUS FREYI* BALTHASAR, 1941. (COLEOPTERA SCARABAEOIDEA: APHODIIDAE)

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**RESUMEN**

Se designa y dibuja el lectotipo de *Aphodius (Platyderides) pullatus* A. Schmidt, 1913, estableciendo una nueva combinación y presentando la redescripción apoyada en un soporte iconográfico. Se registra un caracter distintivo del macho de *Cephalocyclus mexicanus* (Harold, 1863). *Aphodius (Agrilinus) freyi* Balthasar, 1941 es sinónimo de *Aphodius sallei* Harold, 1863.
**Palabras Clave:** Coleoptera, Aphodiidae, *Cephalocyclus pullatus, Cephalocyclus mexicanus, Aphodius freyi*, México

**ABSTRACT**

The lectotype of *Aphodius (Platyderides) pullatus* A. Schmidt, 1913 is designated, the new combination is established and the redescription, supported by iconographical coverage, is supplied. A peculiar character of male *Cephalocyclus mexicanus* (Harold, 1863), is recorded. The new synonymy of *Aphodius (Agrilinus) freyi* Balthasar, 1941 versus *Aphodius sallei* Harold, 1863 is ascertained on the basis of study of the types.
**Key words:** Coleoptera, Aphodiidae, *Cephalocyclus pullatus, Cephalocyclus mexicanus, Aphodius freyi*, Mexico.

## INTRODUCTION

This paper is another in a series whose purpose is to redescribe or redefine the taxa of Aphodiinae from the Mexican Transition Zone using all character systems, including aedeagus and epipharynx.

The study of type specimens of *Aphodius (Platyderides) pullatus* A. Schmidt, 1913 allows to move this taxon into genus *Cephalocyclus* recently created (Dellacasa M., Gordon R.D. & Dellacasa G., 1998). As a matter of fact at present to this genus are ascribed six species (*fuliginosus, gravidus, luridiventris, mexicanus, puncticeps, villosipes*) and probably also *Aphodius durangoensis* Bates, 1887, *A. hogei* Bates, 1887, *A. luteolus* Horn, 1887 and *A. transversus* Robinson, 1940 should be considered pertaining to *Cephalocyclus.*

***Cephalocyclus pullatus*** (A. Schmidt, 1913) **new combination**
(Figs. 1-4)

1913. *Aphodius (Platyderus) pullatus;* A. Schmidt, Arch. Naturg. 79A (11): 123
1913. *Aphodius (Platydera) pullata* A. Schmidt, Arch. Naturg. 79A (11): 176
1922. *Aphodius (Platyderides) pullatus;* A. Schmidt, Tierreich, 45: 46
1988. *Aphodius (Platyderides) pullatus;* M. Dellacasa, Mem. Soc. ent. ital., 66 (1987): 252, 394

**Type locality:** Sierra de Durango [Mexico]
**Type depository:** Naturhistoriska Riksmuseet, Stockholm

*Ovalis, valde convexus; et caput et pronotum et scutellum nitida; elytra opaca, breviter pubescentia. Piceus, pedibus pallidioribus. Capite epistoma fere plano, punctulato; clipeo antice subtruncato, lateribus rotundato, margine sparse ciliato; genis acute angulosis, distincte prominulis; sutura frontali subtiliter impressa. Pronoto valde transverso, disco modice convexo, lateribus explanato, regulariter punctato, lateribus robuste marginatis; margine glabro; angulis posticis obtuse rotundatis; basi immarginata, leviter bisinuata. Scutello parvo triangulari. Elytris ovalibus satis convexis, subtiliter striatis; striis nitidis, distinctis, superficialiter punctatis, haud crenulatis; interstitio juxtasuturali satis nitido, modice convexo, distincte punctulato, ceteris planiusculis, opacis, fere indistincte punctulatis. Mare: calcari protibiarum robusto, abrupto deorsum versus incurvato.*

**Description:** length 4,5-5 mm; stout, oval, strongly convex; head, pronotum and scutellum shiny, elytra strongly microreticulate thus dull, shortly pubescent. Dark reddish-brown; clypeal margin, pronotum sides and elytral apex shadily reddish; legs reddish with darker tarsi; antennal club piceous. Head broad; epistome nearly flat, superficially microreticulate, finely regularly and rather densely punctured; clypeus subtruncate anteriorly, widely rounded at sides, thinly but very distinctly bordered, border sparsely ciliate; genae acutely angulate, elongately ciliate, strongly more protruding than eyes; latter medium size; frontal suture finely impressed; front slightly more coarsely and more sparsely punctured than epistome. Pronotum short and strongly transverse, moderately convex on disc, widely flattened at sides, somewhat depressed toward front and hind angles; finely, regularly and densely punctured; nearly parallel-sided; lateral margins distinctly bordered, border glabrous; hind angles obtusely rounded; base not bordered, feebly bisinuate. Scutellum small, regularly

triangular, nearly flat, superficially microreticulate, sparsely punctured on basal half. Elytra oval; rather convex; finely striate, striae shiny, rather deep, superficially punctured, not crenulate; juxtasutural interstice moderately convex, superficially microreticulate thus somewhat shiny, finely but distinctly punctured; second and third interstices feebly convex from base until the disc, than flat and strongly microreticulate as all other interstices; latter strongly microreticulate, faintly punctured and with two lateral rows of very short yellowish hairs. Foretibiae distally tridentate and proximally serrulate at outer margin, their upper side smooth. Middle and hind tibiae with distinct transverse carinae on outer face bearing spinulae instead of setae; apically fimbriate with elongate spinules irregularly unequal. Hind tibial superior apical spur slightly shorter than first tarsal segment; latter as long as following three combined. Male: head and pronotum relatively larger and less convex; foretibial apical spur stout and abruptly bent downward. Female: head and pronotum relatively narrower and more convex; foretibial apical spur slender and straight.

**Distribution:** the species is known from the type locality only.

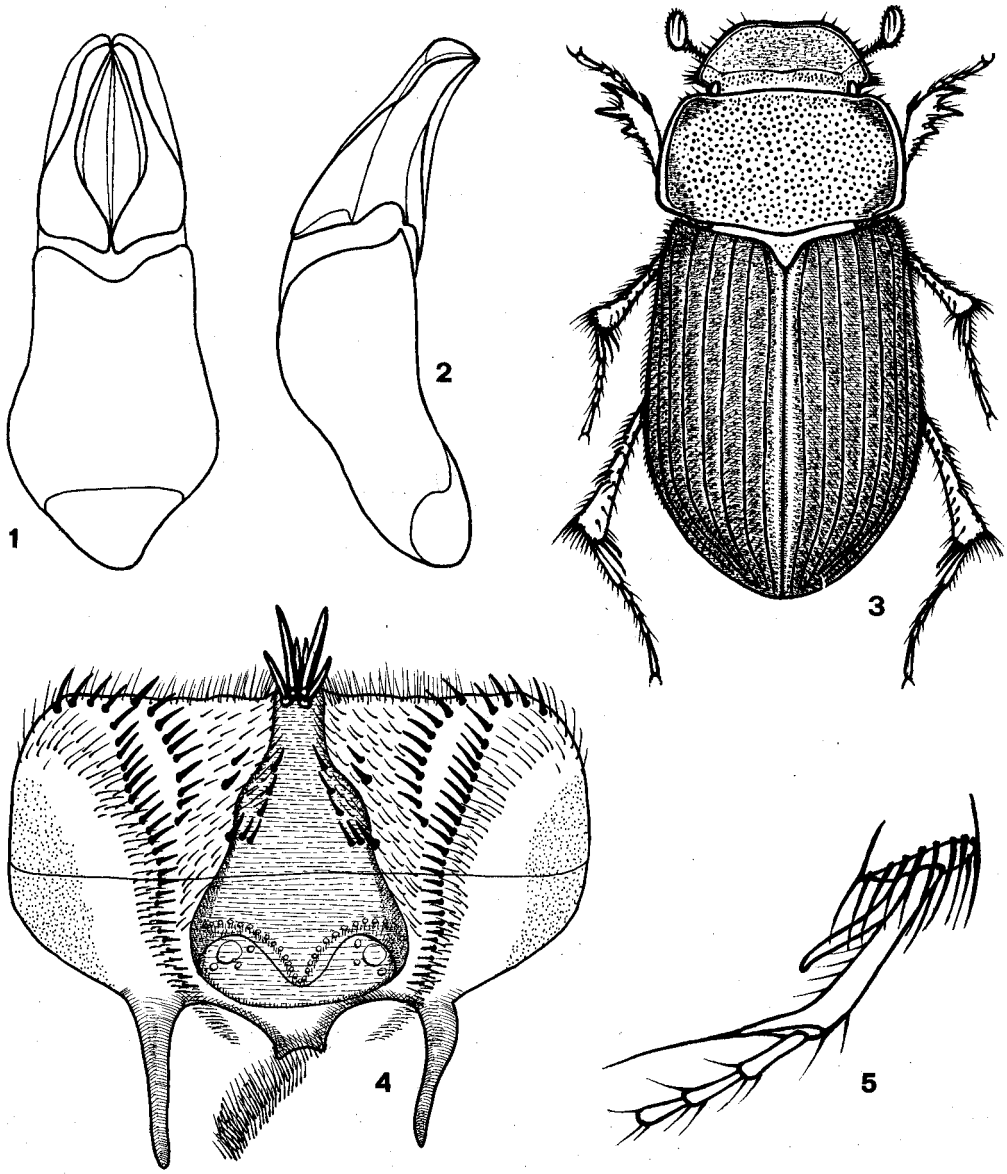
**Material examined**

1 ex. ♂ lectotype (here designated); specimen bears the following labels:
1 - white handwritten: S. Durango; Spinzer [?];
2 - red, printed: 297; handwritten: 71;
3 - red handwritten: *Aphodius pullatus* A. Schmidt, 1913, Lectotype M. Dellacasa des. 1998
1 ex. ♀ paralectotype (here designated); specimen bears the following labels:
1 - white handwritten: S. Durango;
2 - white handwritten in red: Sierra Durango;
3 - red, printed: 298; handwritten: 71;
4 - red handwritten: *Aphodius pullatus* A. Schmidt, 1913, Paralectotype M. Dellacasa des. 1998.

**Remarks:** it is very difficult to establish the systematic position of this species within the genus *Cephalocyclus*. Its more significant morphological features are: brown-blackish colour; strongly transverse pronotum; short pubescence on humeral callus, sides and apex of elytra; elytral interstices flat, strongly microreticulate but distinctly punctured.

***Cephalocyclus mexicanus*** (Harold, 1862)

In our work (Dellacasa M., Gordon R.D. & Dellacasa G., 1998) on the type species of Mexican *Aphodius* described by Harold, we overlooked a character regarding the sexual dimorphism of this taxon. The males of *Cephalocyclus mexicanus* have at inferior apical margin of the first segment of middle tarsi an exceptionally elongate apical seta, as long as the following three tarsal segments combined (Fig. 5).




**Figures 1-5**

*Cephalocyclus pullatus* (A. Schmidt, 1913) (Mexico, Sierra de Durango): 1-2. aedeagus (dorsal and lateral view); 3. habitus (male, length mm 4,5); 4. epipharynx. *Cephalocyclus mexicanus* (Harold, 1862): . 5. middle tarsus of the male (ventral view).

***Aphodius (Agrilinus) freyi*** Balthasar, 1941 **new synonymy**

Balthasar (1941: 164) described *Aphodius (Agrilinus) freyi* from Guatemala (Hacienda Cerro Redonto). The examination of the type specimen preserved in Balthasar's collection (Narodni Museum prirodovedecke Muzeum, Praha) allowed us to ascertain its new synonymy versus *Aphodius sallei* Harold, 1863.

The **lectotype** male specimen of *Aphodius freyi*, **herein designated**, bears the following labels:

1- green, printed: Hacienda Cerro Redonto, 3675 F. 3.1937
2- green, printed: Guatemala, Eing. Nr. 39.1937, F. Ohaus ded.
3- green, handwritten: Freyi m.;
4- red, printed: Typus;
5- white, handwritten: *A. (Agrilinus) Freyi* n.sp.; printed: Dr. V. Balthasar det.;
6- red, handwritten: *Aphodius freyi* Balthasar, 1941, Lectotype, M. Dellacasa des. 1998

As we already remarked (Dellacasa M., Gordon R.D. & Dellacasa G., 1998) *Aphodius sallei* Harold pertains to a new genus to be described by R.D. Gordon in a paper in preparation. This taxon commonly collected from October to April has a large distribution including the southern U.S.A. (Texas), Caribbean Islands (Jamaica, Haiti), Mexican Transition Zone (Mexico, Guatemala, Nicaragua, Costa Rica) and northern South America (Colombia) (Blackwelder, 1944: 213).

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