

A Second Species of the Genus *Neaplax* Slater 1974, from Mexico (Heteroptera: Lygaeoidea: Oxycarenidae)

Author(s): Harry Brailovsky and Luis Cervantes Peredo

Source: Proceedings of the Entomological Society of Washington, 113(1):1-6. 2011.

Published By: Entomological Society of Washington

DOI: 10.4289/0013-8797.113.1.1

URL: <http://www.bioone.org/doi/full/10.4289/0013-8797.113.1.1>

BioOne (www.bioone.org) is an electronic aggregator of bioscience research content, and the online home to over 160 journals and books published by not-for-profit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Web site, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/page/terms_of_use.

Usage of BioOne content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

A SECOND SPECIES OF THE GENUS *NEAPLAX* SLATER 1974, FROM MEXICO (HETEROPTERA: LYGAEOIDEA: OXYCARENIDAE)

HARRY BRAILOVSKY AND LUIS CERVANTES PEREDO

(HB) Departamento de Zoología, Instituto de Biología, UNAM, Apdo Postal No. 70153, México 04510 D.F., México (e-mail: coreidae@ibiologia.unam.mx); (LCP) Instituto de Ecología, A. C. km 2.5 Antigua Carretera a Coatepec # 351 CP 91070, Xalapa, Veracruz, México (e-mail: luis.cervantes@inecol.edu.mx)

Abstract.—*Neaplax baja* n. sp., assigned to the family Oxycarenidae (Lygaeoidea), is described from México as the second member of the genus. New distributional records for *Neaplax mexicana* Slater are given, and an illustration of the new species and a key to the known species are provided.

Key Words: Insecta, lygaeoid, oxycarenid, new species, key, Mexico

DOI: 10.4289.0013-8797.113.1.1

The Oxycarenidae comprise a small family of Lygaeoidea, with 23 genera known worldwide (Slater 1964, Slater and O'Donnell 1995, Pericart 2001, Henry and Dellapé 2009). They are characterized by ventral spiracles on abdominal segments III to VII, with only II dorsal; lack of lateral trichobothria on sterna III, IV, and V and a median trichobothrium on segment V, three lateral trichobothria on sternum VI and two on sternum VII; a combination of lacking a hamus and the presence of intervannals on the hind wing; metacoxae widely separated; absence of laterotergites; scent gland openings between terga IV–V and V–VI; and abdominal sutures complete to margin (Henry and Dellapé 2009).

Six genera are recorded from the Western Hemisphere. *Anomaloptera* Amyot and Serville is represented by 17 New World species; *Dycoderus* Uhler with only

one species recorded from western United States; *Neaplax* Slater, also represented by only one species described from Mexico; the monotypic genus *Notocoderus* Henry and Dellapé recently described from Argentina; the Palearctic genus *Oxycarenum* Fieber represented by the introduced species *O. hyalinipennis* (Costa) distributed in the West Indies and South America; and *Macroplax variegata* (Curtis), described from northern Canada, which has not been recognized since its original description and almost certainly is not an oxycarenid (Henry and Dellapé 2009).

Neaplax is recognized by having the head extremely globose and swollen dorsally; the eye small, set well away from the pronotum, and with a tumid area immediately posterior to eye; bucculae large, prominent and broad throughout; pronotum with collar-like area wide; and metathoracic scent gland auricle elongate, and strongly raised above evaporative area.

In this paper the second species of the genus collected in Mexico is described,

* Accepted by Michael W. Gates

illustrations of the adult and a key to the known species are provided, and new distributional records for *N. mexicana* Slater are given.

MATERIALS AND METHODS

The following abbreviations are used for the institutions cited in this paper: MLP (Division Entomología, Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata, Argentina); SDNHM (San Diego Natural History Museum, San Diego, California, USA); UNAM (Colección Entomológica, Instituto de Biología, Universidad Nacional Autónoma de México); USNM (Department of Entomology, National Museum of Natural History, Washington DC, USA).

All measurements are given in millimeters.

RESULTS

Neaplax baja Brailovsky and Cervantes, new species

(Figs. 1, 3–7)

Description.—Measurements *Male holotype*: Head length 0.56; width across eyes 0.65; interocular space 0.42; length antennal segments: I, 0.32; II, 0.46; III, 0.30; IV, 0.40. *Pronotum*: Length 0.72; width across humeral angles 0.92. Scutellar length 0.25; width 0.40. *Hemelytron*: Length claval commissure 0.37; distance from apex of clavus to apex of corium 0.65; distance from apex of corium to apex of membrane 0.56; length corium 1.37. Body length 3.05. *Female*: Head length 0.61; width across eyes 0.70; interocular space 0.46; length antennal segments: I, 0.37; II, 0.47; III, 0.33; IV, 0.42. *Pronotum*: Length 0.74; width across humeral angles 1.06. Scutellar length 0.29; width 0.46. *Hemelytron*: Length claval commissure 0.37; distance from apex of clavus to apex of corium 0.71; distance from apex of corium to

apex of membrane 0.57; length corium 1.49. Body length 3.46.

Male (holotype). *Dorsal coloration*: Head dark castaneus orange; antennal segments I to III pale yellowish orange; antennal segment IV castaneus orange with basal joint pale yellowish orange; pronotum dark reddish orange with collar creamy white; scutellum dark reddish brown; clavus creamy white, punctures pale orange; corium creamy white, punctures near clavus pale orange, and large maculae dark reddish brown close to middle third of exocorium; hemelytral membrane translucent with large central yellowish maculae; connexivum and abdominal terga shiny reddish brown. *Ventral coloration*: *Head*: dark castaneus orange; rostral segments I to III pale castaneus orange; rostral segment IV darker; prothorax dark castaneus orange, proacetabulae paler and collar creamy white; mesothorax dark castaneus orange; metathorax dark castaneus orange with posterior margin of metapleura creamy white; metathoracic auricle creamy white. *Legs*: Coxae pale castaneus orange with distal thirds dark yellow; trochanters dark yellow; femora pale castaneus orange with apex creamy yellow; tibiae and tarsi creamy yellow. *Abdomen*: Abdominal sterna III to VI and genital capsule shiny reddish brown; sternite VII reddish brown with lateral marks dark orange. *Structure*: *Head*: conspicuously globose, swollen dorsally, highest area slightly anterior to anterior margin of eye (Fig. 3); antennal segment I robust, extending beyond apex of tylus; antennal segments II and III slender, terete, IV fusiform; ocelli near eye; eye small, ovoid, set well away from the pronotum and with tumid area immediately posterior to eye; bucculae large, prominent, broad throughout, extending slightly caudad of posterior margin of eye; rostrum elongate, reaching anterior border of abdominal sternite III. *Thorax*: Pronotum pentagonal,

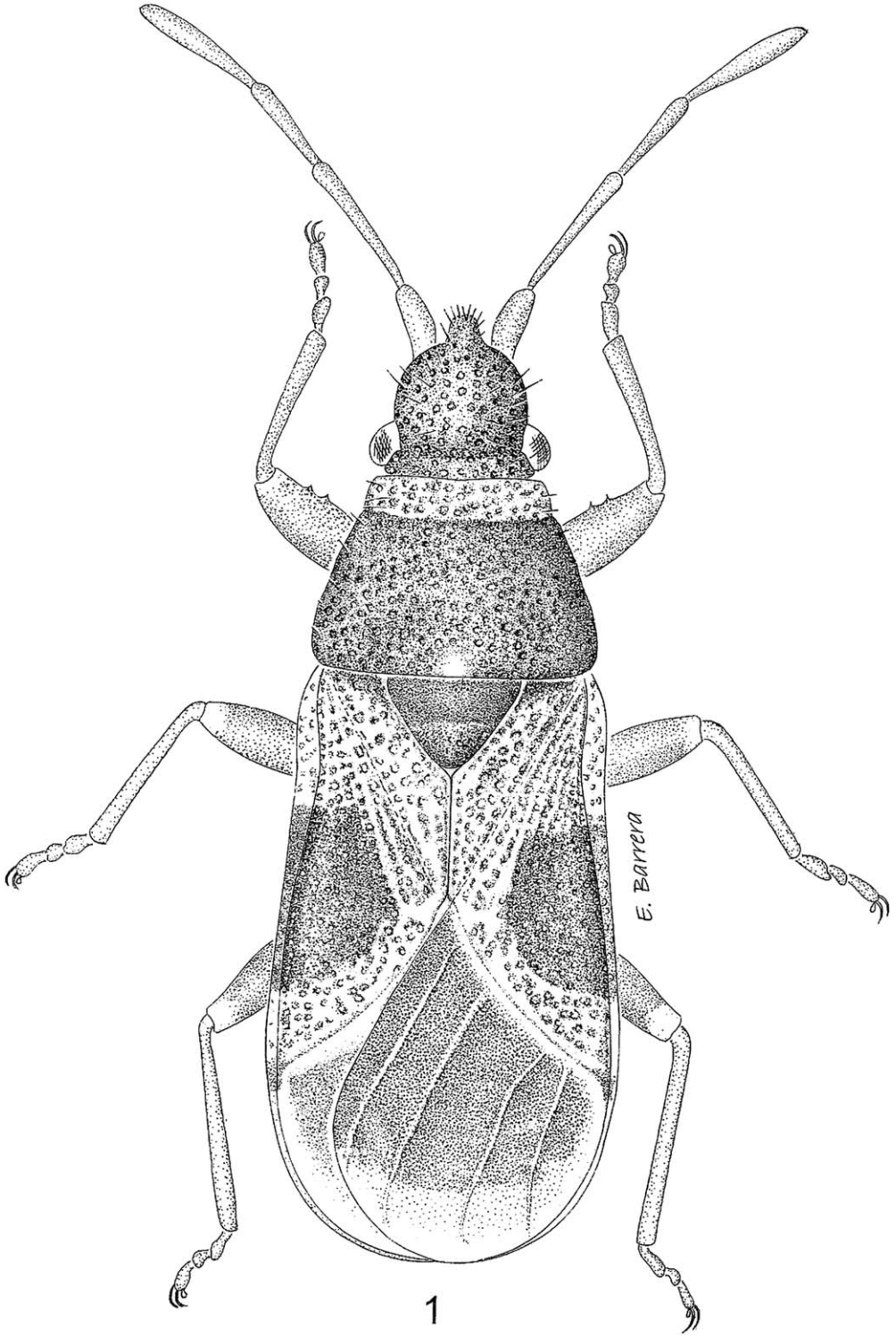
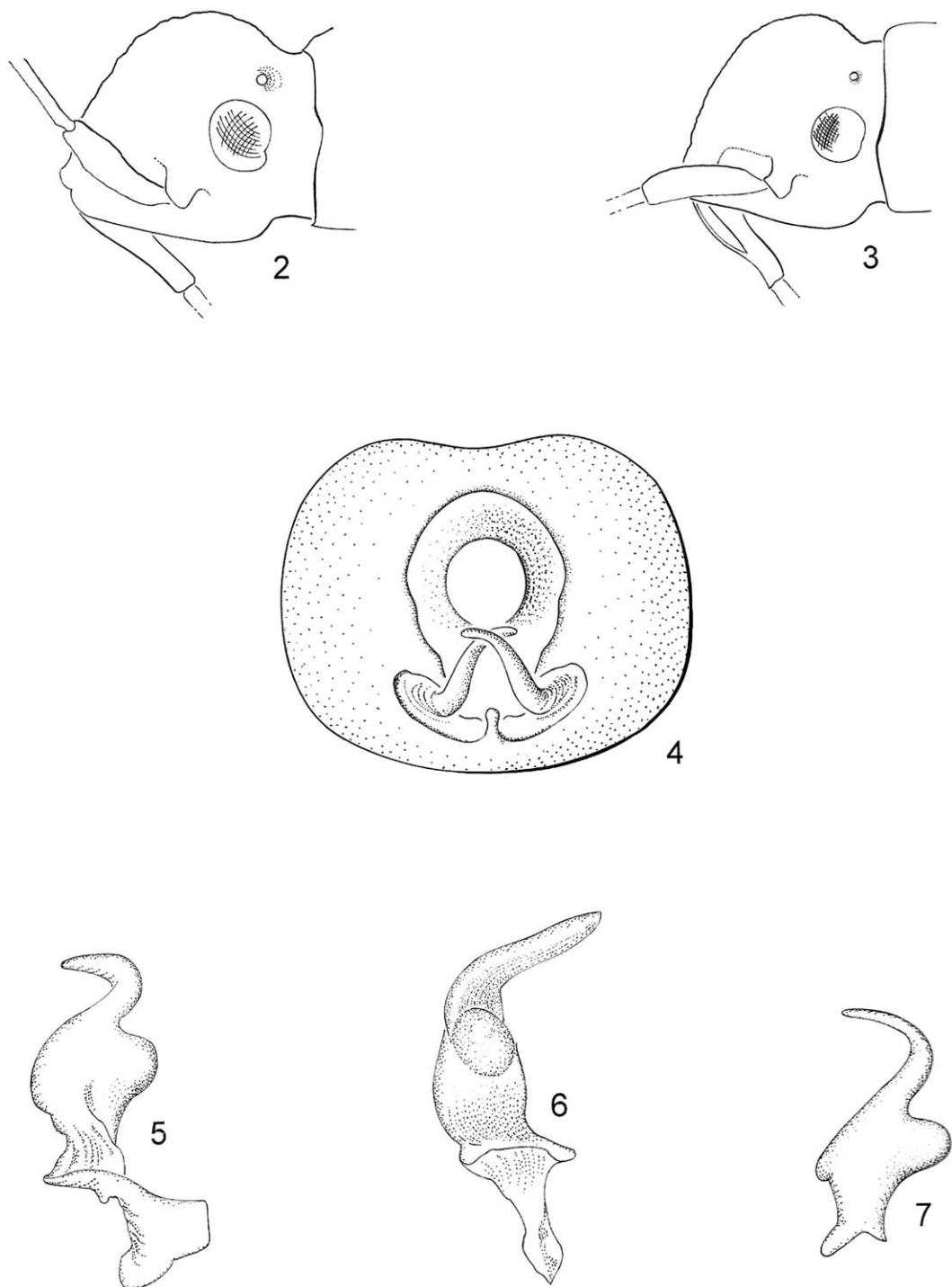


Fig. 1. *Neoplax baja*, dorsal view, male.



Figs. 2-7. *Neoplax* spp., head in lateral view. 2, *N. mexicana*. 3, *N. baja*. 4-7, *Neoplax baja*. 4, genital capsule, dorsal view. 5-7, paramere in different positions.

wider than long, with broad collarlike area; anterolateral margins obliquely straight; humeral angles obtusely rounded; posterolateral margins and posterior margin straight; calli moderately swollen, well separated mesally; posterior lobe higher than anterior lobe; metathoracic auricle elongate, strongly elevated above evaporative area, rounded at distal end; evaporative area covering mesal 2/3 of metapleuron; scutellum wider than long, slightly swollen on posterior 2/3 and lacking a distinct median carina. *Legs*: Metacoxae widely separated; fore femur moderately incrassate, armed below distally with one large and 2 or 3 small acute spines. *Hemelytron*: Macropterous, exceeding apex of abdomen; costal margin strongly explanate, sinuate; apical margin of corium convex at least anteriorly; clavus with 3 or 4 rows of large, coarse punctures; hemelytral membrane broadly rounded, hyaline, translucent. *Genitalia*: Genital capsule broad; posteroventral border weakly concave, U shaped; opening rounded (Fig. 4). Paramere (Figs. 5–7).

Integument: Head deeply granulate and punctate; pronotum, scutellum, clavus, corium, pro-, meso- and metapleura deeply and coarsely punctate; pro-, meso- and metasternum, abdominal sterna, male genital capsule, and female genital plates weakly punctate; body nearly glabrous, except for some upstanding hairs on tylus, postocular area, anterior pronotal disk, abdominal sterna, and male genital capsule; middle third of abdominal sternite VII with two tuft long and decumbent sets of silvery setae lateral to middle line.

Female: Color and habitus similar to male holotype. Connexival segments VIII and IX, dorsal abdominal segments VIII and IX, and genital plates shiny reddish brown.

Variation.—1, Posterior lobe of pronotal disk at middle third with or without

small creamy white discoidal spot near to posterior border. 2, Apical angle of corium reddish brown to creamy white.

Type material.—Holotype ♂, Mexico: Baja California Sur, 7.9 mi W road to Los Naranjos, 23-III-1986, Faulkner and Broomfield (SDNHM). Paratypes: 6 ♂♂, 3 ♀♀, same data as holotype (SDNHM, UNAM).

Etymology.—Named for its distribution in Baja California Sur, México.

Neaplax mexicana Slater

Neaplax mexicana Slater, 1974: 521-522.

Distribution.—This unique species was described and previously known only from the type locality. Mexico: Morelos, Tepoztlan.

New records.—Mexico: Guerrero, 6 ♂♂, 4 ♀♀, 15 km N of Microondas Tuxpan, 23-V-1986, E. Barrera (UNAM); 1 ♀, Chapa, 5-III-1987, H. Brailovsky (UNAM). Estado de México, 1 ♂, 1 ♀, Malinalco, 13-XII-1978, H. Brailovsky (UNAM). Queretaro, 1 ♀, 3 km N of Pinal de Amoles, 2060 m, 15-IX-1988, H. Brailovsky & E. Barrera (UNAM); 1 ♂, 1 ♀, Toluquilla, Nuevo San Joaquín, 15-XI-1991, E. Barrera & H. Brailovsky (UNAM). Hidalgo, 1 ♂, 2 ♀♀, km 30 road Tasquillo-Huichapan (Don Guiño), 7-V-1977, H. Brailovsky (UNAM).

Key to *Neaplax* Species

1. Tibiae creamy white with basal and apical third dark brown; posterior third of clavus dark reddish brown; middle third of posterior lobe of pronotal disk with creamy white longitudinal stripe; head dorsally densely covered with erect setae; head dark reddish brown; tarsi castaneous orange to yellowish brown; mesoacetabulae creamy white, femora dark reddish brown; head globosely swollen (Fig. 2)
 *Neaplax mexicana* Slater
- Tibiae entirely creamy white; posterior third of clavus creamy white; posterior lobe of pronotal disk without

creamy white longitudinal stripe; head dorsally with erect setae on tylus and postocular area; head dark castaneus orange; tarsi creamy white; mesoacetabulae dark castaneus orange; femora pale castaneus orange with apices creamy yellow; head more conspicuously globose (Fig. 3)
 *Neaplax baja* Brailovsky and Cervantes

ACKNOWLEDGMENTS

We thank Michael Wall (SDNHM) and Pam Horsley (SDNHM) for the loan of the specimens. Special thanks are given to Ernesto Barrera (UNAM) for the illustrations. In addition, we appreciate the helpful manuscript reviews from Thomas J. Henry (USNM) and Pablo Matías Dellapé (MLP). This work was supported by the Comisión Nacional para el conocimiento y uso de la biodiversidad, CONABIO, GT035 project.

LITERATURE CITED

- Henry, T. J. and P. M. Dellapé. 2009. A new genus and species of Oxycarenidae (Hemiptera, Heteroptera, Lygaeoidea) from Argentina. *ZooKeys* 25: 49–59. doi:10.3897/zookeys.25.244
- Pericart, J. 2001. Family Lygaeidae Schilling, 1829 – seed-bugs, pp. 35–220. *In* B. Aukema and C. Rieger, eds. *Catalogue of the Heteroptera of the Palaearctic Region. Pentatomomorpha I, Vol. 4.* The Netherlands Entomological Society, Amsterdam.
- Slater, J. A. 1964. *A catalogue of the Lygaeidae of the world.* 2 volumes. University of Connecticut, Storrs. 1668 pp.
- Slater, J. A. 1974. *Neaplax*, a new genus of Oxycareninae from the Western Hemisphere (Hemiptera: Lygaeidae). *Journal of the Kansas Entomological Society* 47(4): 517–522.
- Slater, J. A. and J. E. O'Donnell. 1995. *A catalogue of the Lygaeidae of the world (1960-1994).* New York Entomological Society, New York. 410 pp.