Resurrection of the Genera *Crophius* Stål and *Mayana* Distant from Synonymy Under *Anomaloptera* Amyot and Serville, Description of a New Genus, and a Key to the New World Oxycarenid Genera (Hemiptera: Heteroptera: Oxycarenidae)

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Source: Proceedings of the Entomological Society of Washington, 117(3):367-380.
Published By: Entomological Society of Washington
DOI: http://dx.doi.org/10.4289/0013-8797.117.3.367
URL: http://www.bioone.org/doi/full/10.4289/0013-8797.117.3.367

PROC. ENTOMOL. SOC. WASH.
117(3), 2015, pp. 367–380

RESURRECTION OF THE GENERA *CROPHIUS* STÅL AND *MAYANA* DISTANT FROM SYNONYMY UNDER *ANOMALOPTERA* AMYOT AND SERVILLE, DESCRIPTION OF A NEW GENUS, AND A KEY TO THE NEW WORLD OXYCARENID GENERA (HEMIPTERA: HETEROPTERA: OXYCARENIDAE)

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Abstract.—The largely New World genus *Crophius* Stål, **revised status**, and *Mayana* Distant, **revised status**, are resurrected from synonymy with the genus *Anomaloptera* Amyot and Serville, which is restricted to contain only the type species, *A. helianthemi* Amyot and Serville, from the western Mediterranean Region. *Mayana*, previously also considered a junior synonym of *Crophius*, is resurrected to contain *M. costatus* Distant, the type species, *M. diruptus* Distant, and *M. formosus* (Van Duzee), **new combination**, transferred from *Crophius*. ***Neocrophius,*** **new genus,** is established to accommodate *Neocrophius heidemanni* (Van Duzee), **new combination**, the type species, transferred from *Crophius*, and *Neocrophius singularis* (Brailovsky and Barrera), **new combination**, transferred from *Anomaloptera*. The genera *Crophius*, *Mayana*, and *Neocrophius* are described and diagnosed and dorsal habitus images and a key are provided to help distinguish the nine New World genera.

Key Words: Hemiptera, oxycarenids, diagnoses, photographs, key, new genus, new combinations, revised status

DOI: 10.4289/0013-8797.117.3.367

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Only seven of the 23 extant genera of Oxycarenidae are known from the Western Hemisphere. *Anomaloptera* Amyot and Serville is represented by 19 species found throughout much of the New World (Slater 1964, Péricart 2001,

Dellapé and Cheli 2007, Brailovsky 2014); *Dycoderus* Uhler, by one species from the southwestern United States (Uhler 1901); *Metopoplax* Fieber, by one adventive species in California, Oregon, Washington, and British Columbia (Lattin and Wetherill 2002, LaGasa and Murray 2007, Wheeler and Hoebeke 2013); *Microplax* Fieber, by one adventive species in southern California (Wheeler and Henry 2015); *Neaplax* Slater by two species from Mexico (Slater 1974, Brailovsky and Cervantes 2011); *Notocoderus* Henry and Dellapé, by one species from Argentina (Henry and Dellapé 2009); and *Oxycarenus* Costa, by one adventive species, widespread in Central and South America and the West Indies (Slater and Baranowski 1994, Smith and Brambila 2008).

In a faunal paper summarizing oxycarenine collections from Iran, Hoberlandt (1987) synonymized the primarily New World genus *Crophius* Stål with the western Mediterranean monotypic genus *Anomaloptera* Amyot and Serville, based on a number of shared characters, including a low buccula attaining about four fifths the length of the head, a short labium extending from the middle of the prosternum to the middle of the coxae, the slender antennae, the strongly convex brachypters, the conspicuous punctures on the dorsum, the narrowly explanate hemelytra, and the reduced venation. In doing so, he (Hoberlandt 1987) noted that the "present range of distribution of the genus *Anomaloptera*...is very strange—West Mediterranean, South and North America and Siberia."

During the course of our studies, we have had the opportunity to study the type species of the genus *Anomaloptera* and nearly all species previously placed in *Crophius* and have concluded that these two genera are not congeneric based on several characters, including a distinct spine on the fore femur and a differently shaped scent gland auricle. As a result, *Crophius* is resurrected from synonymy with *Anomaloptera*, which is redefined to contain only its type species, *A. helianthemi* Amyot & Serville.

We also have determined that at least two other species groups are not congeneric with the type species, *Crophius disconotus* (Say), and should be given generic status. The species *Anomaloptera costatus* (Distant) and *A. diruptus (*Distant), originally described in the genus *Mayana* Distant and previously included in *Crophius* by Van Duzee (1910), as well as *A. ramosus* (Barber), originally described in *Crophius*, possess two to three tubercles on each fore femur and have anastomosing veins on the hemelytral membrane, characters that sufficiently distinguish them from *Crophius* and other oxycarenid genera. We, therefore, resurrect the genus *Mayana* to accommodate these species.

Further study of *Crophius heidemanni* Van Duzee and *Anomaloptera singularis* Brailovsky and Barrera shows that both species lack fore femoral spines and have more swollen heads, among other characters, indicating that they, likewise, are not congeneric with other species of *Crophius*, and are here placed in the new genus *Neocrophius*.

Lastly, two other species, *Anomaloptera meridana* Brailovsky and *A. sitesi* Brailovsky, described from coleopteriform adults, lack hemelytral membranes, making it more difficult to place them in a genus with certainty. Both species, however, possess two tubercles on each fore femur, suggesting they may belong in *Mayana*. Externally, *A. meridana* looks similar to other species included in this genus, with the mottled coloration and heavy dorsal

punctures, whereas *A. sites* is more problematic, with a shiny, uniformly dark and more finely punctate dorsum, and may well represent a new genus. Nevertheless, until macropters or additional material can be studied (we have not seen specimens), we are tentatively placing these two species in *Crophius*.

In this paper, we resurrect *Crophius* and *Mayana* from synonymy with *Anomaloptera* and describe the new genus *Neocrophius* to accommodate two species previously placed in *Crophius*. Descriptions for *Crophius*, *Mayana*, and the new genus *Neocrophius*, and diagnoses and photographs of all genera, and a key are provided to help distinguish the New World oxycarenid genera.

Methods

Color adult habitus images were captured using an EntoVision Imaging Suite that included a JAI Technologies (AT-200GE) digital camera mounted to a Leica Z16 zoom lens via a Leica z-step microscope stand and multiple focal planes were merged using Cartograph 8.0.6 (Microvision Instruments, France) software; and a Visionary Digital imaging system that included an Infinity Optics K2 long-distance microscope affixed to a Canon EOS 40D digital SLR camera. A Dynalite M2000 power pack and Microptics ML1000 light box provided illumination and image stacks were montaged using Helicon Focus 4.2.1. Color images were edited using Adobe Photoshop CS4 and numbered in Adobe Illustrator CS4.

Measurements were taken using a Leica MZ APO stereomicroscope and an eye-piece micrometer. Specimens were examined from the collections of the Museo de La Plata, La Plata, Argentina, and the U.S. National Museum of Natural History, Smithsonian Institution, Washington, D. C.

Crophius Stål, Revised Status

(Figs. 2–6)

Crophius Stål 1874: 141 (orig. descrip.); Van Duzee, 1910: 389 (revision), 1916: 21 (checklist), 1917: 176 (cat.); Kormilev 1950: 22 (review); Slater 1964: 635 (cat.); Brailovsky and Barrera 1979: 84 (descrip., n. sp.); Péricart 2001: 106 (cat.). Type species: *Lygaeus disconotus* Say, 1832. Designated by Van Duzee, 1910: 391. Synonymized with *Anomaloptera* Amyot & Serville by Hoberlandt, 1987: 26; here resurrected.

Aneuropharus Berg, 1879: 285. Type species: *Aneuropharus leucocnemis* Berg, 1879. Synonymized by Berg, 1883: 262.

Diagnosis.—Members of the genus *Crophius* are recognized by the presence of ocelli, the head not or only moderately swollen and not rising above the level of the pronotum, the long first antennal segment that extends well beyond the apex of the clypeus, the relatively short labium extending to the middle of the mesosternum or the bases of the middle coxae, the second labial segment extending only to or slightly beyond the base of the head, the stout spine on each fore femur, the usually short, sparse, reclining dorsal pubescence, the simple, straight veins on the hemelytral membrane, and an elongate, swollen, earlike auricle with a distinct channel, surrounded by a relatively narrow evaporative area.

Description.—Elongate-oval species. Head slightly broader across eyes than long, deeply and uniformly punctate, moderately convex but not rising above level with pronotum, clypeus protruding, broadly rounded apically; antenniferous tubercles prominent to weakly developed, buccula narrow, gradually ending before base of head; eyes relatively small, round; ocelli set much

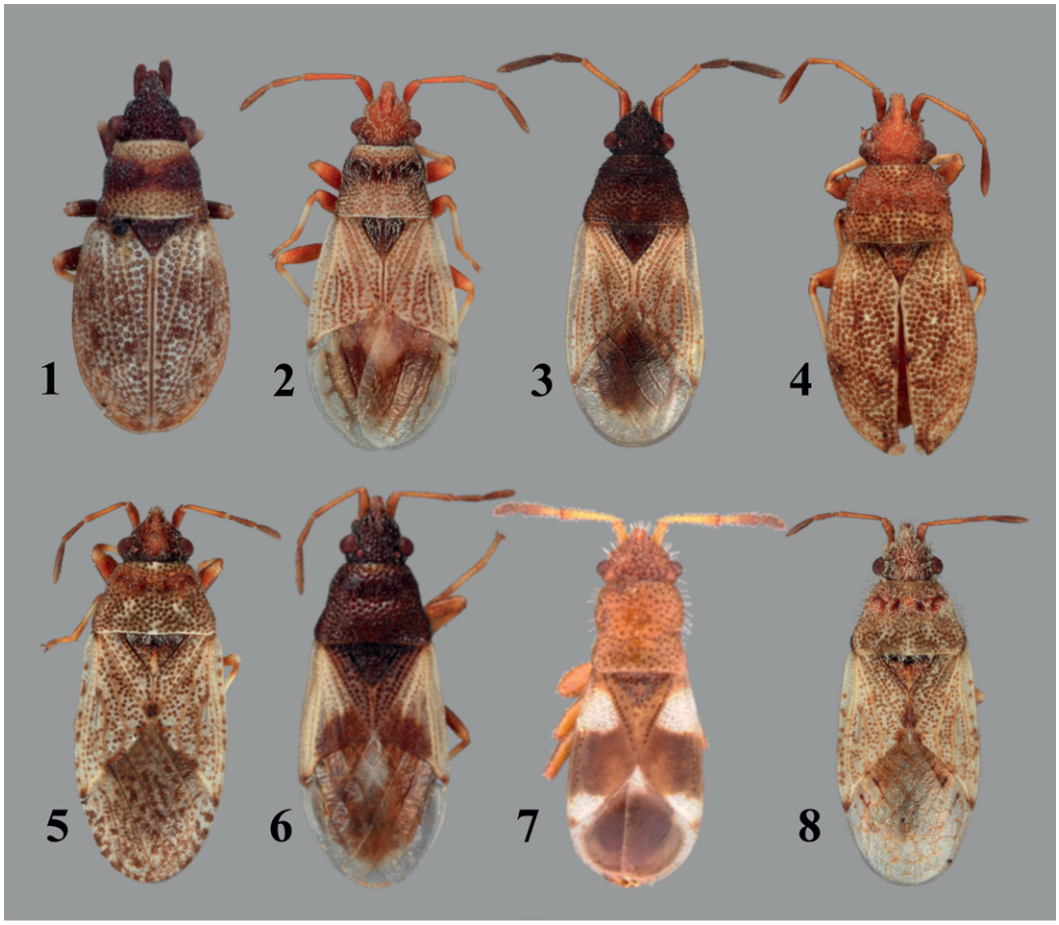


Fig. 1–8. Oxycarenid spp. 1, *Anomaloptera helianthemi* Amyot & Serville. Figs. 2–6. *Crophius* spp. 2, *C. angustatus* Van Duzee. 3, *C. disconotus* (Say). 4, *C. leucocnemis* Kormilev. 5, *C. scabrosus*. 6, *C. schwarzi*. 7, *Dycoderus picturatus* Uhler (after Henry and Dellapé, 2009). Fig. 8, *Mayana costata* Distant.

closer to eyes than to each other. Antennae moderately thickened; segment I thickest, surface granulate or roughed (remainder of segments smooth), length subequal to segment III, extending beyond apex of clypeus; segment II, most slender, subequal to length of segment IV, about two times length of segment I or II; segment III shortest, diameter subequal to apical diameter of segment II; segment IV fusiform. Labium extending to middle of mesosternum or middle coxae; segment II extending to base of head or only slightly beyond. Pronotum trapeziform, uniformly punctate; all margins straight; basal margin about twice as wide as anterior margin; calli punctate, moderately to slightly swollen. Scutellum nearly equilateral, base slightly wider than sides. Hemelytron extending beyond apex of abdomen in macropters, weakly convex, evenly punctate; costal margin impunctate, evenly explanate; membrane with four, straight, nonbranching veins. Ventral surface: Sides of thorax punctate, ventral surface impunctate, prosternum with a broad, shallow labial groove, meso- and

metasternum with a broad, slightly deeper labial groove; abdomen impunctate; male with a short field of glandular setae ventrally either side of median line on segment VII; apex of female abdomen truncate. Ostiolar evaporative area: Evaporative area relatively small, extending only slightly on either side of elongate, swollen, earlike auricle with a distinct channel and protruding away from surface on apical third. Legs moderately stout; fore femur stoutest, about three times as long as broad at middle, armed with one distinct, subapical spine, rarely with a second, minute spine; fore tibia slender, gradually thickening distally, with a distinct apical comb. Pubescence short and erect to semierect on head and scutellum, slightly longer on pronotum; hemelytra nearly glabrous.

Macropterous male length 2.20–2.70 mm (n = 10); macropterous female length 3.00–4.00 mm (n = 10) (based on USNM specimens).

Discussion.—Although superficially similar to *Crophius* (Figs. 2–6), the Mediterranean genus *Anomaloptera* (Fig. 1) differs in several important characters, including the shape of the pronotum, the mutic fore femur, and the shorter, round, flattened ostiolar auricle lacking an external groove. Species of *Crophius* will not key to *Anomaloptera* in Péricart (1999) because of having fore femoral spines. We consider the lack of femoral spines and the quite different round ostiolar auricle sufficient support for distinguishing these geographically disjunct taxa. Coleopteriform specimens of *A. helianthemi* Amyot and Serville lack ocelli, whereas macropters apparently have them (Péricart 1999; fig. 159a), a phenomenon we also have observed in some brachypterous or coleopteriform New World species of *Crophius*.

In addition, *Mayana* Distant, previously considered a junior synonym of *Crophius* by Van Duzee, who indicated he never saw specimens of the two included species, *M. costata* Distant and *M. dirupta* Distant (Van Duzee 1910), is reinstated, based on the two to three fore femoral spines, the numerous, distinct anastomosing veins on the hemelyral membrane, and usually longer, more dense pubescence–see *Mayana* Distant, revised status.

We also have found that *C. heidemanni* Van Duzee and *A. singularis* Brailovsky and Barrera have shorter, more thickened fore femora, lack fore femoral spines, and have a different head and labial structure, among other characters, that require the establishment of a new genus–see *Neocrophius*, new genus.

Included New World species.—*Crophius albidus* Barber; *C. angustatus* Van Duzee; *C. bohemani* (Stål); *C. coleopteroides* Kormilev; *C. convexus* Barber; *C. disconotus* (Say); *C. fasciatus* (Fieber); *C. impressus* Van Duzee; *C. leucocnemis* Berg; *C. meridana* (Brailovsky), **new combination**; *C. patagonica* (Dellapé and Cheli), **new combination**; *C. scabrosus* Uhler; *C. schwarzi* Van Duzee; and *C. sitesi* (Brailovsky), **new combination**.

Included Old World species.—*Crophius bermani* Vinokurov.

Dycoderus Uhler

(Fig. 7)

Dycoderus Uhler 1901: 507 (orig. descrip.); Van Duzee 1916: 22 (checklist), 1917: 186 (cat.); Slater 1964: 639 (cat.); Ashlock and Slater 1988: 209 (cat.); Henry and Dellapé 2009: 55 (descrip.). Type species: *Dycoderus picturatus* Uhler 1901. Monotypic.

Diagnosis.—This genus is recognized by the coarsely punctate head, pronotum, and scutellum; the bilobed

pronotum with a moderately shallow, transverse impression separating the lobes, the weakly convex anterior lobe, and the shorter, narrower posterior lobe; the brown hemelytron with the basal third and apex white; the moderately large ostiolar auricle extended outward into a tuberclelike spout; and the large, stout spine on the distal third of the fore femur.

Macropterous male length 3.14 mm, subbrachypterous male length 2.58 mm; subbrachypterous female length 3.01 mm (Henry and Dellapé 2009).

Discussion.—*Dycoderus* (Fig. 7) is most similar to *Notocoderus* Henry and Dellapé (Fig. 15), but can be differentiated by the more subequally broad pronotal lobes separated by a shallow transverse impression, the lack of posterolateral tubercles, the shorter ostiolar auricle less visible from above, and the larger white spot on the basal third of the hemelytron.

Included species.—*Dycoderus picturatus* Uhler.

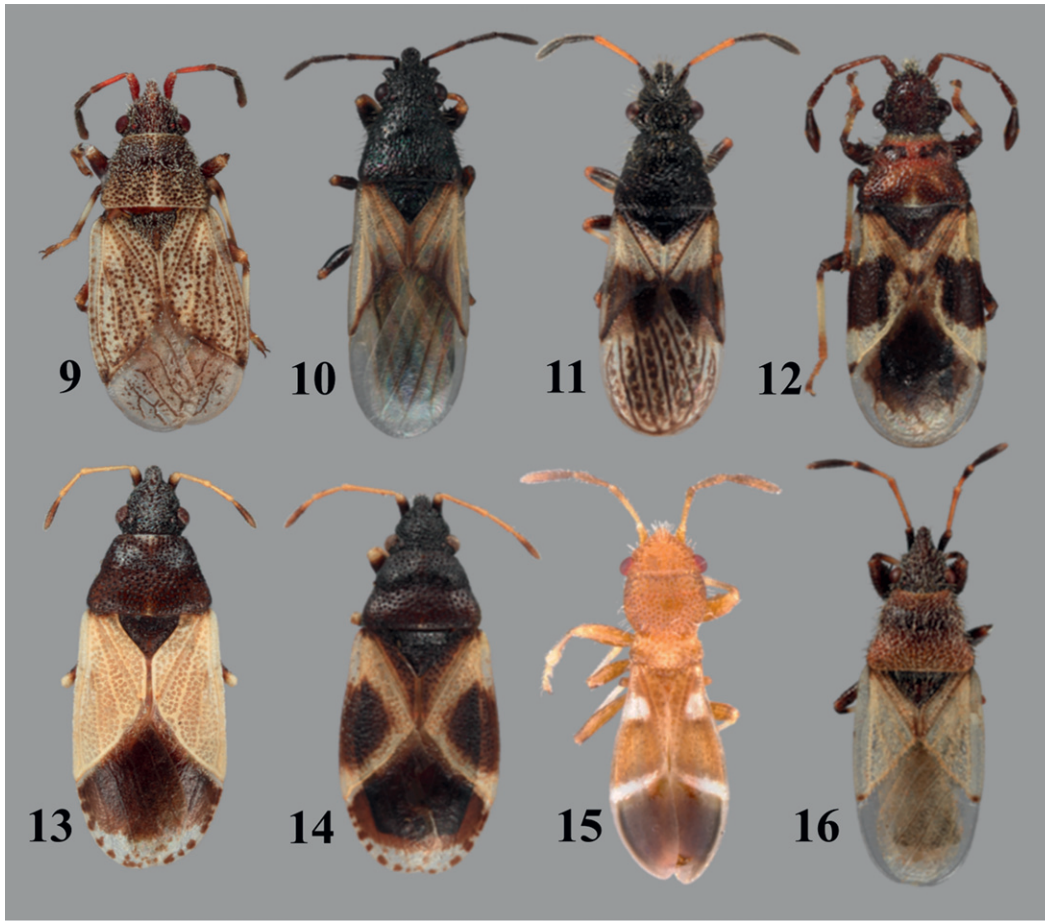
Mayana Distant, **Revised Status**

(Figs. 8, 9)

Mayana Distant 1893: 388 (orig. descrip.); Van Duzee 1916: 21 (checklist, as subgenus of *Crophius*), 1917: 177 (cat., as subgenus of *Crophius*). Type species: *Mayana costatus* Distant, 1893. Designated by Van Duzee, 1916: 21. Synonymized with *Crophius* Stål by Van Duzee, 1910: 390; here resurrected.

Diagnosis.—The species we include in *Mayana* possess two to three fore femoral spines; multiple cross or anastomosing veins on the hemelytral membrane; long, dense pubescence on the head and pronotum; and a long labium, extending from the middle to the hind coxae or beyond.

Description.—Elongate-oval species. Head slightly broader than long, deeply and uniformly punctate, moderately convex but not rising above the level of the pronotum, clypeus protruding, truncate at apex; buccula moderately high, ending abruptly before base of head; antenniferous tubercle short, not visible from dorsal aspect; eyes relatively small, round; ocelli set much closer to eyes than to each other. Antenna moderately thickened; segment I thickest, surface roughened (remainder of segments smooth), extending anteriorly beyond apex of clypeus; segment II most slender, subequal to length of segment IV, about one and a half to two times as long as segment III, segment III shortest, diameter subequal to diameter of segment II; segment IV fusiform. Labium extending from middle to hind coxae; segment II extending well past base of head to middle of prosternum. Pronotum trapeziform, uniformly punctate, all margins straight; basal margin slightly less than twice as wide as anterior margin; calli punctate, prominent, somewhat more shiny than disc. Scutellum equilateral, transversely depressed across base. Hemelytron extending beyond apex of abdomen; strongly punctate; costal margin widely and evenly explanate, weakly punctate; membrane with three or four major veins and numerous anastomosing or cross veins, giving a netlike appearance. Ventral surface: Sides of pro-, meso- and metathorax punctate, less punctate ventrally; pro-, meso-, and metasternum with a wide, shallow labial groove; abdomen shiny, impunctate; male with a short field of glandular setae ventrally either side of median line on segment VII; female abdomen truncate. Ostiolar evaporative area: Evaporative area relatively narrow, extending on either side of elongate, swollen, earlike auricle protruding



Figs. 9–16. Oxycarenid spp. 9, *Mayana ramosa* (Barber). 10, *Metopoplax ditomoides* (Costa). 11, *Microplax albofasciata* (Costa). 12, *Neaplax mexicana* Slater. Figs. 13–14. *Neocrophius* spp. 13, *N. heidemanni* (Van Duzee). 14, *N. singularis* (Brailovsky and Barrera). 15, *Notocoderus argentinus* Henry and Dellapé (after Henry and Dellapé, 2009). 16, *Oxycarenus hyalinipennis* (Costa).

away from surface on apical third. Legs moderately stout, femora thickened, fore femur thickest, about 3 times as long as broad at middle, armed ventrally on apical half with two to three stout spines; tibiae slender, fore tibia gradually thickening distally, apex with a distinct comb. Pubescence long and erect on head and pronotum, intermixed with more dense, recumbent, sericeous setae on head, pronotum, and scutellum; hemelytra nearly glabrous, with only a few widely scattered, short, erect setae.

Macropterous male length 3.20–3.50 mm (n = 10); macropterous female length 3.60–3.80 mm (n = 10) (based on USNM specimens).

Discussion.—The species included in *Mayana* (Figs. 8, 9) share a number of characters with those in *Crophius* (Figs. 2–6), including the shape of the head and type of ostiolar auricle. They differ, however, in having two to three fore femoral spines, one large, one smaller, and, sometimes, with a much smaller third spine; distinctly anastomosing or

netlike veins on the hemelytral membrane; and longer, more dense pubescence on the head and pronotum. These differences sufficiently distinguish *Mayana* from other oxycarenids. Although the second fore femoral spine is minute or absent in several specimens of *M. ramosa*, the anastomosing veins and erect, dense pubescence groups this species with the others in the genus.

Included species.—*Mayana costata* Distant, *M. dirupta* Distant, and *M. ramosa* (Barber), **new combination**.

Metopoplax Fieber 1860

(Fig. 10)

Metopoplax Fieber 1860: 53; Slater 1964: 656 (cat.); Péricart 1999: 32 (descrip.), 2001: 112 (cat.); Lattin and Wetherill 2002: 63 (note, new distr.); Wheeler and Hoebeke 2013: 70 (note, new distr.). Type species *Pachymerus ditomoides* Costa 1843. Monotypic.

Diagnosis.—*Metopoplax ditomoides*, the only New World representative of *Metopoplax*, is distinguished from all other New World oxycarenids by the protruding, apically round and flattened or spatulate clypeus, the relatively long, erect setae on the head and pronotum, the labium extending between the middle and hind coxae, pale hemelytra with the veins becoming brown apically, and the one large and one small spine on the fore femur. It is most similar to the Palearctic *Microplax albofasciata*, recently established in southern California (Wheeler and Henry 2015), but is readily distinguished by the protruding, apically rounded, spatulate clypeus.

Macropterous male length 3.60–3.90 mm (n = 10); macropterous female length 3.60–4.30 mm (n = 10) (based on USNM specimens).

Discussion.—*Metopoplax ditomoides* (Fig. 10) was first reported in North America from Oregon by Lattin and Wetherill (2002) and later from California (Gaimari 2005), Washington (LaGasa and Murray 2007), and British Columbia (Wheeler and Hoebeke 2013).

This species, known to be associated with composites in the Palearctic Region (Péricart 1999), was taken on common yarrow, *Achillea millefolium* L. [Asteraceae], in British Columbia (Wheeler and Hoebeke 2013), and A. G. Wheeler and the senior author (pers. observ.) took it in abundance in May 2012 on willow baccharis, *Baccharis salicina* Torr. & A. Gray [Asteraceae], in Sacramento County, California (specimens deposited in USNM collection).

Included New World species.—*Metopoplax ditomoides* (Costa).

Microplax Fieber

(Fig. 11)

Microplax Fieber 1860: 53 (orig. descrip.); Slater 1964: 661 (cat.); Péricart 1999: 46 (cat.), 2001: 113 (cat.); Wheeler and Henry 2015: 56 (descrip., host, new distr.). Type species: *Oxycarenus plagiatus* Fieber, 1837. Designated by Oshanin 1912: 32.

Diagnosis.—This genus is distinguished from other New World oxycarenids by the bulbous head, protruding clypeus, and bulging eyes; the short buccula extending only to the front margin of the eyes; the short labium, extending to the mesosternum; the black, punctate head, pronotum, and scutellum; the white hemelytra, white membrane, black veins with black spots between; the protruding, pale ostiolar auricle; the rectangular patch of white, sericeous setae above the evaporative area; and the one large and one tiny spine on the fore femur.

Macropterous male length 2.60–2.90 mm; macropterous female length 2.80–3.35 mm (Péricart 1999).

Discussion.—This Palearctic species, first reported in North America from southern California by Wheeler and Henry (2015), is known from Mediterranean Europe, North Africa, and southwestern Asia (Péricart 2001). Little is known of its habits, though Wheeler and Henry (2015) speculated that it probably is a composite specialist introduced from the Mediterranean Basin on imported ceramic tile.

Included New World species.—*Microplax albofasciata* (Costa).

Neaplax Slater

(Fig. 12)

Neaplax Slater 1974: 521(orig. descrip.); Brailovsky and Cervantes 2011: 1 (descrip.). Type species: *Neaplax mexicana* Slater. Original designation.

Diagnosis.—*Neaplax* (Fig. 12) is distinguished by the strongly globose head; the unusually small eyes not touching the anterior margin of the pronotum, the tiny indistinct ocelli, the large, prominent buccula, the wide pronotal collarlike area, the largely pale hemelytron with a large dark spot on the middle of the corium, the moderately swollen fore femur with one large and two or three small spines, and the elongate and elevated ostiolar auricle.

Macropterous male length 3.20–3.46 mm (Slater 1974, Brailovsky and Cervantes 2011).

Discussion.—This genus is distinct among the New World oxycarenids in having the strongly globose head, tiny eyes, large dark spot on the hemelytron, and the multiple spines on the fore femur.

Included species.—*Neaplax baja* Brailovsky and Cervantes and *N. mexicana* Slater.

Neocrophius Henry and Dellapé, new genus

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(Figs. 13, 14)

Type species: *Crophius heidemanni* Van Duzee, 1910.

Diagnosis.—The species we include in this new genus possess a distinctly swollen head that is higher than the level of the pronotum in lateral aspect, the short first antennal segment that extends only to the apex of the clypeus, the long second labial segment that extends nearly to the bases of the fore coxae, and the short, stout fore femora lacking spines.

Description.—Elongate-oval species. Head length equal to width across eyes, deeply and uniformly punctate, strongly swollen and convex, higher than level of pronotum in lateral view, buccula wide, ending abruptly before base of head, clypeus broad, protruding, truncate apically; antenniferous tubercles short, stout, hardly visible dorsally; eyes round, relatively small; ocelli small, set near inner margin of each eye, much closer to eye than to each other. Antenna relatively slender; segment I shortest, thickest, surface finely granulate, not surpassing apex of clypeus; segment II longest, slender, subequal to diameter of segment III; segment III only slightly longer than segment I; segment IV fusiform. Labium extending nearly to bases of middle coxae; segment II extending well beyond base of head, just short of fore coxal bases. Pronotum trapeziform, uniformly punctate, shiny, all margins straight, basal width about two times anterior width; calli punctate, moderately swollen, prominent. Scutellum nearly equilateral, uniformly punctate, with a deep transverse depression across

base. Hemelytron extending beyond apex of abdomen, distinctly convex, evenly punctate; costal margin evenly explanate, weakly punctate; membrane shiny, convex, with four straight, nonbranching veins, apical margin bordered with a row of distinct dark spots. Ventral surface: Sides and ventral surface of thorax punctate, less so ventrally on mesothorax; prosternum with a broad, shallow labial groove, meso- and metasternum with much deeper, more narrow grooves; abdomen impunctate, shiny; male with two fields of glandular setae ventrally on either side of median line; apex of female abdomen truncate. Ostiolar evaporative area: Evaporative area relatively small, extending narrowly on either side of elongate, swollen, earlike auricle protruding away from surface on apical third. Legs moderately stout; femora stout, fore femur stoutest, length about 2.5 times as long as broad at middle, lacking a distinct tubercle, sometimes with only a trace of a tiny spicule; fore tibiae stout, broadly widened distally, with a distinct apical comb. Nearly glabrous; only head with a few widely scattered, short, setae.

Macropterous male length 2.60–2.80 mm (n = 6); macropterous female length 2.90–3.20 mm (n = 8) (based on USNM specimens).

Etymology.—The name of this new genus is a combination of the word "neo," meaning new or recent, and the generic name *Crophius*, and is used to denote the general similarity of this new genus with *Crophius*. The gender is masculine.

Discussion.—*Neocrophius* (Figs. 13, 14) is similar *Crophius* (Figs. 2–6) in the overall general aspect, but the species included in *Crophius* lack the swollen head rising above the level of the pronotum, the first antennal segment always extends well beyond the apex of the clypeus, the second labial segment extends only to the base of the head or only slightly beyond, and the fore femur is more elongate and possesses a distinct spine.

Included species.—*Neocrophius heidemanni* (Van Duzee), **new combination**, and *N. singularis* (Brailovsky and Barrera), **new combination**.

Notocoderus Henry and Dellapé

(Fig. 15)

Notocoderus Henry and Dellapé 2009 (orig. descrip.). Type species: *Notocoderus argentinus* Henry and Dellapé. Original designation.

Diagnosis.—This genus is distinguished by the coarsely punctate head, pronotum, and scutellum; the lack of ocelli; the bilobed pronotum with the lobes separated by a deep transverse impression, the convex anterior lobe and shorter, narrower posterior lobe with a tubercle at each humeral angle; the elongate, protruding ostiolar tubercle; and the swollen fore femur with a small spine on the distal third.

Macropterous male length 2.50 mm; macropterous female length approx. 3.33 mm (Henry and Dellapé 2009).

Discussion.—The only known species of this genus (Fig. 15) was described from two specimens found near Buenos Aires, Argentina (Henry and Dellapé 2009). This genus is most similar to *Dycoderus* Uhler (Fig. 7) in overall general appearance and coloration, but is distinguished by the larger, more strongly convex anterior pronotal lobe separated from the smaller, narrow posterior lobe by a deep transverse impression. Nothing is known of its hosts or habits.

Included species.—*Notocoderus argentinus* Henry and Dellapé.

Oxycarenus Fieber

(Fig. 16)

Stenogaster Hahn, 1835: 15. Type species *Stenogaster tardus* Hahn, 1835, junior synonym of *Acanthia lavaterae* Fabricius, 1787. Monotypic. Preoccupied by *Stenogaster* Guérin, 1831.

Oxycarenus Fieber 1837: 339 (n. n. for preoc. *Stenogaster* Hahn); Kormilev 1950: 22 (note); Slater 1964: 665 (cat.); Henry 1983: 1 (descrip., host, distr.); Péricart 1999: 6 (descrip., distr., key); Slater and Baranowski 1994: 495 (distr.); Péricart 2001: 114 (cat.); Baranowski and Slater 2005: 81 (descrip., distr.); Smith and Brambila 2008: 479 (note, distr.).

Maruthas Distant 1911: 44. Type species: *Maruthas saniosus* Distant 1911. Original designation. Synonymized by Horváth 1912: 609.

Diagnosis.—This genus is readily separated from all other New World oxycarenid genera by the four distinct spines on the fore femur. The sole representative of this genus in the New World, *O. hyalinipennis*, can be further recognized by the brown to black head, pronotum, scutellum, and abdomen, contrasting with the uniformly white hemelytra, and the long labium, extending to the middle of the abdomen or beyond.

Macropterous male length 3.80–4.20 mm; macropterous female length 4.40–5.00 mm (Péricart 1999).

Discussion.—*Oxycarenus hyalinipennis* (Fig. 16) has been present in the Neotropics from at least the early part of the 20th Century (Costa Lima 1922). It is now widespread throughout much of South and Central America and the West Indies (Henry 1983, Slater and Baranowski 1994, Baranowski and Slater 2005, and Smith and Brambila 2008). A small population discovered in Key West, Florida (Nagoshi et al. 2012), apparently now has been eradicated (NAPPO 2014). *Oxycarenus hyalinipennis* has a wide host range, but it prefers malvaceous plants and may become a serious pest of cotton, thus, the common name cotton seed bug (Henry 1983, Smith and Brambila 2008).

Included New World species.—*Oxycarenus hyalinipennis* (Costa).

Key to the Genera of the Western Hemisphere Oxycarenidae

1. Ocelli absent; dorsum brown, with pale spots on hemelytra..... 2
– Ocelli present; if absent, dorsum not brown with pale spots..... 3
2. Head strongly globose in front of eyes; pronotum trapeziform, not separated into two lobes, but with wide collarlike area; costal margin of hemelytra explanate (Fig. 12) .....*Neaplax* Slater
– Head not strongly globose; pronotum lacking a collar and separated into two distinct lobes, with the anterior lobe two or more times longer than the posterior lobe; costal margin of hemelytra not explanate (Fig. 15)..... .....*Notocoderus* Henry and Dellapé
3. Fore femur lacking spines; head strongly swollen above pronotum in lateral view; margin of hemelytral membrane with a row of dark spots (Figs. 13, 14)..... *Neocrophius* Henry and Dellapé, **n. genus**
– Fore femur with one or more spines; head not strongly convex; apex of hemelytral membrane not spotted..... 4
4. Fore femora with one spine, sometimes with a tiny second spine (Figs. 2–6).... *Crophius* Stål, **revised status**
– Fore femora with two or more distinct spines 5
5. Pronotum distinctly bilobed, anterior lobe two times as long as posterior lobe; reddish brown, with a white spot at base and apex of each corium (Fig. 7).....*Dycoderus* Uhler

– Pronotum not bilobed; hemelytra pale or with tiny dark spots, but never reddish brown with large pale spots.....6
6. Fore femora with four spines; head elongate; labium extending to middle of abdomen or beyond; hemelytra uniformly white (Fig. 16).....*Oxycarenus* Costa
– Fore femora with only two to three spines; head less elongate; labium, at most, extending just beyond hind coxae; hemelytra not uniformly white 7
7. Head and pronotum with long, erect setae; membrane with numerous branching or anastomosing veins (Figs. 8, 9) ....*Mayana* Distant, **revised status**
– Head and pronotum without long, erect setae; hemelytral veins simple..... 8
8. Clypeus flattened and broadly roundly apically or spatulate; labium extending beyond the bases of hind coxae; area above ostiolar auricle and evaporative area immaculate (Fig. 10)..... .....*Metopoplax* Fieber
– Clypeus not flattened and broadly rounded apically; labium extending only to middle of mesosternum; area above ostiolar auricle and evaporative area with a large, quadrate patch of white, sericeous setae (Fig. 11)..... .....*Microplax* Fieber

Acknowledgments

We thank Samuel Howard (Intern, Smithsonian Institution) for taking most of the color photographs and creating the plates. We are grateful to Harry Brailovsky (UNAM) for his donation of specimens of *Neocrophius heidemanni* and *Neaplax mexicana* from Mexico to the USNM collection. María C. Melo (Museo de La Plata, La Plata, Argentina) and Alfred G. Wheeler, Jr. (Clemson University, Clemson, South Carolina) kindly reviewed the manuscript and offered comments for its improvement. Mention of trade names or products in this publication is solely for the purpose of providing specific information and does not imply recommendation or endorsement by the U.S. Department of Agriculture. The USDA is an equal opportunity employer.

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