New records, nomenclatural changes, and taxonomic notes for select North American leaf beetles (Coleoptera: Chrysomelidae)

Edward G. Riley

Department of Entomology Texas A&M University College Station, Texas 77843, USA

Shawn M. Clark

West Virginia Department of Agriculture 1900 Kanawha Blvd., East Charleston, West Virginia 25305, USA

Arthur J. Gilbert

California Department of Food and Agriculture 2889 N. Larkin, Suite 106 Fresno, California 93727, USA

Abstract. New records, nomenclatural changes and taxonomic notes are presented for select North American leaf beetles (Coleoptera: Chrysomelidae). The following genera are newly recorded from the United States: Nesaecrepida Blake, 1964; Acallepitrix Bechyné, 1959; Margaridisa Bechyné, 1958; Parchicola Bechyné and Springlová de Bechyné, 1975; (all Galerucinae: Alticini); and Demotina Baly, 1874 (Eumolpinae). The following species are newly recorded from the United States: Neolema dorsalis (Olivier, 1791) (Criocerinae); Charidotella bifossulata Boheman, 1855 (Hispinae: Cassidini); Syphrea flavicollis (Jacoby, 1884) (Galerucinae: Alticini); and Promecosoma inflatum Lefévre, 1877, and Demotina modesta Baly, 1874 (Eumolpinae). The following new synonymies are proposed: Deloyala clavata, var. diversicollis Schaeffer, 1925, transferred from synonymy with $Plagio metriona\ clavata\ (\text{Fabricius}, 1798)\ to\ synonymy\ with\ \textit{P. clavata}\ testudinaria\ (\text{Boheman}, 1855);\ \textit{Chrysomela}\ (\text{Fabricius}, 1798)\ to\ synonymy\ with\ \textit{P. clavata}\ testudinaria\ (\text{Boheman}, 1855)\ ;\ \textit{Chrysomela}\ (\text{Fabricius}, 1855)\ ;\ \textit{Chrysomela}\ (\text$ hybrida Say, 1824, downgraded from subspecies of Calligrapha lunata (Fabricius, 1787) to full synonym of Calligrapha lunata (Fabricius); Chrysomela casta Rogers, 1856, downgraded from subspecies of Zygogramma suturalis (Fabricius, 1775) to full synonym of Zygogramma suturalis (Fabricius); Trirhabda gurneyi Blake, 1951, downgraded to synonym of Trirhabda caduca Horn, 1893; Scelida mimula Wilcox, 1965, downgraded to synonym of Scelida nigricornis (Jacoby, 1888); Exora californica Wilcox, 1953, downgraded to synonym of Pteleon brevicornis (Jacoby, 1887); Palaeothona arizonensis Blake, 1950, downgraded to synonym of Lupraea discrepans (Schaeffer, 1932); Haltica nigritula Linell, 1898, downgraded to synonym of Nesaecrepida asphaltina (Suffrian, 1868); Cryptocephalus reinhardi Sundman, 1965, downgraded to synonym of Cryptocephalus mutabilis Melsheimer, 1847. The tribes Chalepini Wiese, 1910, and Uroplatini Weise, 1910 (Hispinae), are synonymized, and both of these family-group names are recognized as nomina protecta. The family-group name Octotomites Chapuis, 1875, is recognized as a nomen oblitum. Coptocycla testudinaria Boheman, 1855, is downgraded from specific status to a subspecies of Plagiometriona clavata (Fabricius, 1798); Cassida bicolor (Fabricius, 1798) is recognized as a valid subspecies of Charidotella sexpunctata (Fabricius). The genus Hemiphrynus Horn, 1889, is removed from synonymy with Phrynocepha and reinstated as a valid genus; Rhabdopterus weisei (Schaeffer, 1920) is removed from synonymy with Rhabdopterus praetextus (Say) and reinstated as a valid species. The following new combinations are proposed: Synetocephalus wallacei (Wilcox, 1965), transferred from Pseudoluperus; Nesaecrepida infuscata (Schaeffer, 1906), transferred from Monomacra; Acallepitrix nitens (Horn, 1889), transferred from Epitrix; Margaridisa atriventris (Melsheimer, 1847), transferred from Hornaltica; Parchicola iris (Olivier, 1808) and P. tibialis (Olivier, 1808), transferred from Monomacra; and Coleothorpa panochensis (Gilbert, 1981), $transferred from \ \textit{Coscinoptera}; Promecosoma\ arizonae\ (Crotch, 1873), transferred from\ \textit{Metaxyonycha}; Tymnes\ arizonae\ (Crotch, 1873), transferred from\ \textit{Metaxyonycha}; Ty$ $chrysis \, ({\rm Olivier}, 1808), \textit{T. oregonensis} \, ({\rm Crotch}, 1873), \\ {\rm and} \, \textit{T. thaleia} \, ({\rm Blake}, 1977), \\ {\rm transferred} \, \text{from} \, \textit{Colaspis}. \\ \text{The original of the colaspis} \, ({\rm Crotch}, 1873), \\ {\rm colaspis}$ following new replacement name is proposed: Triarius nigroflavus, for Luperodes flavoniger Blake, 1942 (not Laboissiere, 1925). The identities of Griburius equestris (Olivier, 1808) and G. larvatus (Newman, 1840) are discussed.

Introduction

In this paper we record taxonomic notes and changes on select North American Chrysomelidae and report collection records for species newly recorded from the United States. This information is presented here so that it may be included in the Catalog of the Leaf Beetles of America North of Mexico (Riley, Clark and Seeno, in prep.) and in the chrysomelid chapter of the second volume of American Beetles (Riley, Clark, Flowers and Gilbert in Arnett and Thomas, in prep.).

The collections cited below include: AJGC, Arthur J. Gilbert Collection, Fresno; BMNH, British Museum of Natural History, London; CMNH, Carnegie Museum of Natural History, Pittsburgh; EGRC, Edward G. Riley Collection, College Station; EMEC, Essig Museum, University of California, Berkeley; FSCA, Florida State Collection of Arthropods, Gainesville; GHNC, Gayle H. Nelson Collection, Blue Springs; MCZ, Museum of Comparative Zoology, Harvard University, Cambridge; MSEM, Mississippi State Collection, Mississippi State; OSUC, Ohio State University, Columbus; RHTC, Robert H. Turnbow Collection, Fort Rucker; SMCC, Shawn M. Clark Collection, Charleston; TAMU, Texas A&M University, College Station; UAZC, University of Arizona, Tucson; UGC, University of Georgia, Athens; UIC, University of Idaho Collection, Moscow; UMRM, Enns Museum, University of Missouri, Columbia: USNM, United States National Museum of Natural History, Washington.

Criocerinae

Neolema dorsalis (Olivier)

Crioceris dorsalis Olivier, 1791: 201

This widespread Neotropical species has been collected from Starr County in extreme southern Texas where a large colony was discovered along the banks of the Rio Grande. This population occurs on *Commelina elegans* H. B. K. (Commelinaceae). The present report represents the first record of this species from the United States.

United States Records: **TEXAS**: **Starr Co.**, along Rio Grande at Salineño, X-27-1991 [109 EGRC, 10 TAMU]; same loc., XI-2-1991 [13 TAMU]; same loc., X-25-1992 [1 EGRC]; same loc. X-9-1994 [1 EGRC].

Hispinae: Chalepini

ChalepiniWeise, 1910

Octotomites Chapuis, 1875:311, nomen oblitum Chalepini Weise, 1910:69, nomen protectum

Uroplatini Weise, 1910:69, nomen protectum Two tribes, Chalepini Weise and Uroplatini Weise, are separated by a single trivial character, the number of antennomeres. Among the included genera, there is a continuous range in the number of freely articulated antennomeres with genera of the Chalepini having 10 or 11 and genera of the Uroplatini having 9 or fewer. The fusion of antennomeres across taxa proceeds from the terminal segments towards the scape resulting in an enlarged terminal segment that may sometimes possess variously developed annulae. We cannot find other characters for distinguishing two tribes among this group of genera; therefore, we propose to merge these two tribes (NEW SYNONYMY).

The oldest available family-group name for this group is Octotomites Chapuis, 1875, based on Octotoma Dejean, 1836. To our present knowledge, this family-group name has not been used as a valid name since its proposal and had been almost completely ignored by workers during the 1900's. The genus Octotoma was grouped with similar genera and placed in the tribe Uroplatini by Weise, 1910. Both family-group names Chalepini and Uroplatini date from the same work (Wiese, 1910) and both have been in long-standing usage as separate valid names for tribes of hispine beetles. The following publications from the last 50 years use both Chalepini and Uroplatini as valid names: Arnett, 1968, 1985; Balsbaugh and Hays, 1972; Chen, 1973; Chen, et al., 1986; Downie and Arnett, 1996; Ford and Cavey, 1985; Hatch, 1971; Jolivet and Hawkeswood, 1995; LeSage, 1991; Peck and Thomas, 1998; Riley and Enns, 1979; Seeno and Wilcox, 1982; Suzuki, 1996; Uhmann, 1957, 1964a, 1964b; and Wilcox, 1954, 1975. The following additional publications use Chalepini as a valid name: Butte, 1968a-c, 1969; Ramos, 1996; Staines, 1993; Staines and Riley, 1994; and Virkki, et al., 1992. The following additional publications use Uroplatini as a valid name: Riley, 1985; Staines, 1986a & b, 1988, 1989a and b, and 1998.

Although Octotomites is the older family-group name and would normally have priority, prevailing usage must be maintained in this case (ICZN, 1999, Article 23.9.1). We hereby recognize both Chalepini

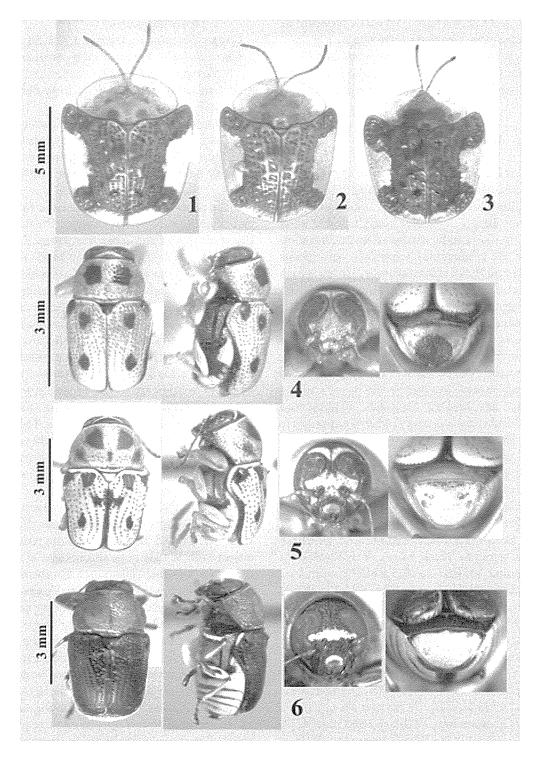


Fig. 1-2, Plagiometriona clavata testudinaria (Boheman): 1, Jamaica Beach, Texas [EGRC]; 2,9-13 mi. E Todos Santos, Baja California Sur., Mexico [EGRC]. 3, Plagiometriona clavata clavata (Fabricius), College Station, Texas [EGRC]. 4, Griburius equestris (Olivier), male, College Station, Texas [TAMU]. 5, Griburius larvatus (Newman), male, Big Pine Key, Florida[EGRC]. 6, Griburius montezuma (Suffrian), dark form, female, 9 mi. E Hemphill, Texas [TAMU]. Figs.4-6, dorsal and lateral views to scale bar, face and pygidial views at higher magnification.

and Uroplatini as nomina protecta over Octotomites, a nomen oblitum (ICZN, 1999, Article 23.9.2 and glossary, p-111). We use the name Chalepini as the valid name over Uroplatini for the newly combined group, favoring this name for no reason other than its stem, *Chalepus* Thunberg, which seems to be the more widely known generic name.

Hispinae: Cassidini

Charidotella bifossulata (Boheman)

Coptocycla bifossulata Boheman, 1855: 135 Material of this species is known from Arizona and represents the first records for the United States. This species is likely to be confused with *Charidot*ella sexpunctata (Fabricius), especially specimens from Arizona and the Mexican state of Sonora which are smaller and narrower in form than those found in most of western Mexico and further south. Charidotella bifossulata may be distinguished from C. sexpunctata by the shape of the clypeus which is nearly flat and has the basal corners weakly angled. In C. sexpunctata, the surface of the clypeus has a distinct broad impression before the base, and the basal corners are broadly rounded. Preliminary study of the hind wing has revealed what appears to be another distinguishing feature of this species, namely the lack of microtrichia on the veins circumscribing the radial cell. In C. sexpunctata, these veins are densely covered with microtrichia. More study is needed to evaluate this character in these and other *Charidotella* species.

United States records: ARIZONA: Cochise Co., E. of Coronado Natl. Mon., VII-24-1964 [1 GHNC]. Douglas, VIII-27-1926 [1 EMEC]; same loc., VIII-1932 [1 USNM]. Huachuca Mts., VII-12-1950 [1 OSUC], Naco, VII-19-1933 [1UAZC]; same loc., X-7-1932 [2 UAZC]. 7 mi. SW Palominas, Huachuca Mts., VII-8-1984 [2AJGC]. Santa Cruz Co., Mt. Washington, 4300', VIII-13-1991 [2 AJGC]. Patagonia Mts., $Nogales, IX\text{-}15\text{-}1985 \, [1 \, UIC]; same \, loc., IX\text{-}10\text{-}1906 \, [2 \, IC]; same \, loc., IX\text{-}10\text{-}1906 \,$ USNM]; same loc., IX-8-1908 [1 USNM]. Patagonia, VIII-15-17-1947 [9 UAZC]. Patagonia Mts., VII-20-1940 [3 OSUC]; same loc., VIII-2-4-1953 [2 OSUC]; same loc., VII-15-1952 [1 OSUC]; same loc., VIII-8-1952 [1 OSUC]; same loc., VIII-3-1955 [2 OSUC]; same loc., IX-1-1957 [1 UAZC]; same loc., VIII-1-1962 [1 OSUC]; same loc., VIII-9-1966 [3 UAZC]. Patagonia Mts., nr. Nogales, IX-4-1939, on leaves of wild morning glory [30 USNM].

Charidotella sexpunctata bicolor (Fabricius)

Cassida sexpunctata Fabricius, 1781: 109 [nominotypical subspecies]

Cassida bicolor Fabricius, 1798: 83

Charidotella sexpunctata bicolor: LeSage in Bosquet, 1991: 323

Metriona bicolor, var. floridana Schaeffer, 1925: 235

This common Convolvulaceae-feeder ranges from southern Canada to northern Argentina and thus has the widest range of any Western Hemisphere tortoise beetle. Its synonymy is lengthy (Borowiec, 1999).

We propose to retain the name Cassida bicolor Fabricius at subspecific rank for the form occupying the majority of the Nearctic range. In C. s.bicolor the venter of body is entirely black except for the narrow margins of the ventrites which are yellowish, and the blackish maculae on inferior surface of elytron are small to absent. This form occurs in all of the United States, except Arizona, and in adjacent eastern Canada. In C. s. sexpunctata the venter of the body ranges from black with extensive pale areas to entirely pale (at least the sides of metasternum are pale in addition to the broad lateral margins of the ventrites), and the maculae on the inferior surface of the elytral disc are large. This form occurs in southeastern Arizona and southern and central Texas southward to Argentina. Some specimens from South America have the venter of the body entirely dark as in C. s. bicolor.

A large gap exists in the Nearctic range of C. sexpunctata, this gap encompasses the drier southwestern United States and adjacent Mexico. On either side of this gap, the ranges of the forms we maintain as subspecies meet. On the eastern side of the distribution gap in eastern Texas occurs a narrow zone of overlap in the character states separating the two subspecies. Here the ranges of the subspecies meet, and specimens are found which exhibit character states intermediate between the two. On either side of this region (central and south Texas to the west and Louisiana to the east) specimens can be clearly assigned using the characters given above. Too few specimens are available from north Texas and Oklahoma to demonstrate a clear zone of character intergradation, but it is likely that such a zone occurs there as well. To the west of the distribution gap, it is unclear exactly where the two forms meet because this beetle is not particularly common in northeastern Mexico or Arizona. The two specimens examined from Arizona are assignable to the nominotypical form. The size of the elytral spots found in populations presently treated as *C. s. bicolor* from California approach the size of those in *C. s. sexpunctata* from northwestern Mexico, possibly indicating a closer genetic relationship to the nominotypical form than to the populations of eastern North America.

The form of C. sexpunctata described by Schaeffer (1925) as variety floridana is a larger immaculate form of C. s. bicolor. All Floridian populations of C. sexpunctata lack the maculae on the inferior surface of the elytra. These maculae are gradually regained in populations occurring in surrounding states as one moves away from Florida. There does not appear to be a clear break between immaculate and maculate forms, nor is there a clear break in body size. Specimens from populations of southern Florida are conspicuously larger than specimens from northern Florida and the adjacent southeastern United States. However, one observes a gradual decrease in body size as one moves incrementally northward up the Florida peninsula. We retain Schaeffer's name as a strict synonym of C. s. bicolor.

The other synonyms of *C. sexpunctata* described from the United States, namely *Cassida bistripunctata* Herbst, 1799; *Cassida pallida* Herbst, 1799; *Cassida aurichalcea* Fabricius, 1801; and *Coptocycla aurisplendens* Mannerheim, 1843, are here also regarded as synonyms of *C. s. bicolor*.

Plagiometriona clavata testudinaria (Boheman) NEW STATUS (figs. 1-2)

Cassida clavata Fabricius, 1798: 83 [nominotypical subspecies] (fig. 3)

Coptocycla testudinaria Boheman, 1855: 390 NEW PLACEMENT as subspecies of Cassida clavata Fabricius, 1798)

Coptocycla asperata Boheman, 1855: 395

Deloyala clavata, var.diversicollis Schaeffer, 1925: 235 NEW SYNONYMY

Our examination of hundreds of specimens has convinced us that the Mexican, Central American and northern South American Plagiometriona testudinaria (Boheman) can not be maintained as anything more than a subspecies of Plagiometriona clavata (Fabricius) which is found throughout the eastern United States and adjacent Canada. The variety diversicallis proposed by Schaeffer for specimens from Arizona and Texas is of the same size and

coloration of P. testudinaria of Mexico and Central America. We feel the recognition a single species with two subspecies is appropriate in this case. The nominotypical P. clavata is smaller and with darker brownish coloration of the elytral and pronotal discs; most of the pronotal disc is dark brownish (fig. 3). Specimens of P. c. testudinaria are almost always slightly larger than the nominotypical form, and they have the elytral disc lighter brownish in color; the pronotal disc is pale or largely pale with variably developed dark maculae (figs. 1-2). Additional variations in color pattern, including the named form Coptocycla asperata Boheman, are found in Mexico and Central America, but these appear to be only variations within populations containing typical specimens of P.c. testudinaria. Plagiometriona c. testudinaria is also more variable in the shape of its outline when viewed from above and in its pronotal surface texture which may be microreticulate, appearing dull without polished luster. This later condition is especially well developed in populations of the Louisiana and Texas coastal areas. These color forms and other variations are not found in P. c.clavata. The subspecies are parapatric with P. c. clavata found throughout the eastern half of the United States into eastern Texas. Plagiometriona. c. testudinaria ranges from the coastal areas of Texas and southwestern Louisiana to Arizona and southward to northern South America. The subspecies meet in eastern Texas where they probably intergrade.

Chrysomelinae

Trachymela sloanei (Blackburn)

Paropsis sloanei Blackburn, 1896 (1897): 681 Approximately 120 species comprise the genus Trachymela Weise, all being endemic to the Australian Region (Weise, 1916). In December, 1997 one species, T. sloanei (Blackburn) was collected at Riverside, California. Since then this beetle has been collected in the southern California counties of Los Angeles, Orange, San Bernardino, San Diego, Santa Barbara, and Ventura. This beetle is considered a naturalized introduction and is now very abundant in many areas of southern California. In 2000 this species was collected near Dunnigan, California (Yolo County), and in early 2001 specimens were collected in the cities of Arbuckle and Williams, California (Colusa County) (R. L. Penrose, personal communication). These latter two counties are in

northern California near Sacramento. Adults and larvae feed on the leaves of red gum eucalyptus, *Eucalyptus camaldulensis* Dehnh. (Garrison, 1998), a behavior that has earned this species the status of a pest.

In applied agricultural literature and various related communications, this beetle is commonly referred to as the Australian tortoise beetle. The reference to "tortoise beetle" in this case is a misnomer because that name refers to the "cassids" (several tribes of the chrysomelid subfamily Hispinae) and *Trachymela* is a member of the Chrysomelinae.

Calligrapha lunata (Fabricius)

Chrysomela lunata Fabricius, 1787: 69 Chrysomela hybrida Say, 1824: 449 NEW SYNON-YMY

Chrysomela lunata Fabricius and Chrysomela hybrida Say are currently classified in the genus Calligrapha Chevrolat and are generally recognized as subspecies of a single species. Diagnostic characters separating the so-called subspecies include the dark discal marking of each elytron (a single broad longitudinal stripe, as opposed to three narrow longitudinal stripes) and the lateral elytral punctures (completely confused, as opposed to a tendency towards rows) (Wilcox, 1972). Our examinations of numerous specimens, many of them deposited in the Canadian National Collection, show that one form is indeed more common in eastern North America, while the other is more common in the West. However, the area of intergradation is very large, and, even at the eastern and western extremes of the species distribution, a few specimens are colored or punctured opposite from what would be expected from their locality data. With this in mind, we feel that these two names are best treated as strict synonyms. Chrysomela brunnea Thunberg, 1787: 43 and the varietal names proposed by Achard, 1923: 69 (Polyspila lunata.var.bowditchi, P. lunata var. latevittata, and P. l. var. mediorupta) have been treated by various workers as synonyms of either C. l. lunata or C. l. hybrida, but they are here also viewed as strict synonyms of C. lunata.

Zygogramma suturalis (Fabricius)

Chrysomela suturalis Fabricius, 1775: 95 Chrysomela casta Rogers, 1856: 33 NEW SYN-ONYNY

Chrysomela casta Rogers is generally recognized as being conspecific with Chrysomela suturalis Fabri-

cius, although the two are treated as subspecies in the genus Zygogramma Chevrolat. A diagnostic character separating the two is the dark discal marking of each elytron, this marking consisting of either a single broad stripe or of two narrow stripes (Wilcox, 1972). One form is more common in eastern North America, while the other is prevalent in the more western areas of the central United States. However, as illustrated by our own examination of specimens and by numerous published records, the area of intergradation is very large and numerous beetles occur far outside of the normally expected range for the color form. Although authors such as Kovalev and Medvedev (1983) have questioned the validity of subspecies recognition for the two forms, they did not formalize the synonymy. Based on our own investigation, this synonymy is now enacted. The names Chrysomela festiva Fabricius, 1775: 100 and Chrysomela pulcra Fabricius, 1792: 313 (previously treated as synonyms of either Z. s. suturalis or Z. s. casta) are here also regarded as strict synonyms of Z. suturalis.

Galerucinae: Galerucini

Trirhabda caduca Horn

Trirhabda caduca Horn, 1893: 69 Trirhabda gurneyi Blake, 1951: 326 NEW SYN-ONYMY

Hogue (1970) recognized the synonymy of *Trirhabda* gurneyi Blake, with *Trirhabda* caduca Horn. However, his dissertation has never been published and this synonymy has therefore not been formalized. Based on our own investigations, we concur with his assessment, and the taxonomic change is here enacted.

Galerucinae: Luperini

Scelida nigricornis (Jacoby)

Cneorane nigricornis Jacoby, 1888:604 Scelida mimula Wilcox, 1965:95 NEW SYNONY-MY

Wilcox (1973) transferred *Cneorane nigricornis* Jacoby to the genus *Scelida* Chapuis, but he did not recognize the synonymy with *Scelida mimula* Wilcox. Our examinations of the female holotype of *C. nigricornis* [BMNH] from Durango, Mexico, the male holotype of *S. mimula* [OSUC] from Arizona, and numerous other specimens assignable to one or

the other of these names indicates that the differences between the two are variable, inconsistent, and not adequate for species separation. Incomparison with most specimens examined, the holotype of *C. nigricornis* is a little larger, and the elytra are not so metallic. However, within populations readily identified as *S. mimula*, a few specimens are nearly identical with the holotype of *C. nigricornis*, and intermediate specimens are not uncommon.

Synetocephalus wallacei (Wilcox) NEW COMBINATION

Pseudoluperus wallacei Wilcox, 1965: 113 Examination of the male holotype of Pseudoluperus wallacei Wilcox (CMNH) and of 12 other specimens reveals that, except for the uniformly dark color, this species is similar to those classified in the genus Synetocephalus Fall. It fits the diagnostic characters given in the generic key provided by Clark (1998).

$Triarius\ nigroflavus\ { m Riley},\ { m Clark},\ { m and}\ { m Gilbert}$ NEW NAME

Luperodes flavoniger Blake, 1942: 64 [not Luperodes flavonigrum Laboissiere 1925: 100]

Luperodes flavoniger Blake (currently classified in the genus Triarius Jacoby) is a primary homonym of the Angolan species Luperodes flavonigrum Laboissiere, differing only in the male rather than neuter ending of the name. Therefore, a replacement name is here provided for Blake's species.

Pteleon brevicornis (Jacoby)

Exora brevicornis Jacoby,1887: 582 Exora californica Wilcox, 1953: 52 NEW SYNON-YMY

Among species currently classified in the genus *Pteleon* Jacoby, Wilcox described *Exora californica*, distinguishing it from *Exora brevicornis* Jacoby based on perceived differences in punctation, microsculpture, pubescence, and especially the aedeagus. Later (Wilcox, 1965), he gave additional emphasis to the color of the head. Our own examinations of numerous specimens show that these characters are variable, inconsistent, and not adequate for species separation. Accordingly, we treat the two names as synonyms.

Galerucinae: Alticini

Lupraea discrepans (Schaeffer)

Systena discrepans Schaeffer, 1932: 244
Palaeothona arizonensis Blake, 1950: 180 NEW
SYNONYMY

Examination of syntypical material of Systena discrepans Schaeffer [USNM] and the holotype of Palaeothona arizonensis Blake [USNM] has confirmed our belief that these two names apply to a single species. Blake (1950) was apparently unaware that the species described as a "Systena" by Schaeffer actually belonged to the group of beetles she was studying.

Hemiphrynus Horn REVISED STATUS

Hemiphrynus Horn, 1889: 212. Type species: Phrynocepha intermedia Jacoby, 1884, by monotypy

This genus is cited as a synonym of *Phrynocepha* Baly, 1861:201 (type species *Phrynocepha pulchella* Baly, 1861) in recent literature (Scherer, 1962; Wilcox, 1975; Furth and Savini, 1996). We feel *Hemiphrynus* should stand as valid because of its narrow, depressed prosternal process and the short lower frons and genae. In *Phrynocepha* the prosternal process is a broad flat plate and the genae are long and frequently carinate. Scherer (1962, 1983), who placed *Hemiphrynus* in synonymy with *Phrynocepha*, apparently misinterpreted comments made by Horn (1889), believing *P. pulchella* Baly was Horn's choice of type species for *Hemiphrynus*.

Nesaecrepida Blake

Nesaecrepida Blake, 1964: 21. Type species: Haltica asphaltina Suffrian, 1868, by original designation

Until now, this genus has only been recorded from the West Indies. Present study of specimens of Nesaecrepida asphaltina (Suffrian) from the West Indies and syntypes [USNM] of Haltica nigritula Linell, 1898: 484, described from Texas, has shown that these two names are synonyms (NEW SYNON-YMY). A second species described from Texas, Lactica infuscata Schaeffer, 1906: 250, also belongs in Nesaecrepida (NEW COMBINATION). Blake's (1964) comparative notes relate this genus to Crepidodera, but in reality it is closely related to Syphrea Baly. Contrary to her description, the procoxal cavities are open in this genus.

Syphrea flavicollis (Jacoby)

Haltica flavicollis Jacoby, 1884: 294

This Mexican species, described from Cuernavaca (Morelos), is here recognized as occurring in the United States, Baja California Sur, and other Mexican states. Our identification of the species is based on external comparison with syntypical material contained in the Bowditch collection [MCZ]. This species has been repeatedly associated with Argythamnia (=Ditaxis), Euphorbiaceae.

MEXICO: BAJA CALIFORNIA SUR: 2.7 mi. S Buena Vista, IX-5-1990, Ditaxis lanceolata (Benth.) [1 AJGC]. 0.7 mi. W El Rosario, VIII-30-1990, Ditaxis serrata (Torr.) Heller [2 AJGC]. 2.1 mi. SW Rosarito, VIII-28-1990 [1 AJGC]. vic.San Antonio, VIII-27-IX-1-1994 [1 EGRC, 4 TAMU]. Ramal a las Naranjas, km.2-28, VIII-28-1994 [1 EGRC, 2 TAMU]. jct. Hwy. 1 and Hwy. 19 on Hwy. 19, VIII-30-1994 [6 EGRC]. Mocorito, IX-13-1988 [1 AJGC]. 9 mi. E Hwy. 19, east of Todos Santos, IX-21-1988, on Ditaxis serrata (Torrey) Heller. [4AJGC, 5EGRC]. 24km.NW Santa Rosalia on Hwy. 1, IX-21-1988 [2 AJGC, 2 EGRC]. JALISCO: vic. Chamela, VII-19-1993 [1 TAMU]. OAXACA: 7-8 km. E Tehuantepec, X-24-1976, on Cienfuegosia rosei [7 TAMU]. PUEBLA: 7.3 mi. SW Izucar de Matamoros, VII-22-1981 [1 TAMU].

UNITED STATES: ARIZONA: Cochise Co., Douglas, VIII-26-1971 [1 EGRC]. 3 mi. E Douglas, VIII-6-1971 [1EGRC]. 6 mi. E Douglas, VIII-11-1974 [1 EGRC]; 6 mi. NE Douglas, IX-4-1971[3 EGRC]; same loc., VII-24-1974 [2 EGRC]. 7 mi. NE Douglas, VIII-24-1971[1 EGRC]; same loc., IX-7-1974 [1 EGRC]. 8 mi. NE Douglas, IX-7-1974 [3 EGRC]. 13 mi. W Fairbanks, VIII-13-1981[6 EGRC]. south end of Copper Canyon, Huachuca Mts., VIII-10-1976 [GHNC]. 5mi. SW McNeal, IX-25-1970 [1 EGRC]. Patagonia, VIII-11-13-1964 [1 TAMU]. Santa Cruz Co., Arivaca, VIII-19-1972 [2 EGRC]. CALIFORNIA: Riverside Co., Pleasant Valley, Joshua Nat'l. Mon., X-29-1963 [1 EGRC]. 17 mi. W Blythe, IX-18-1984, feeding on Ditaxis neomexicana (Muell. Arg.) Heller [45] AJGC, 11 EGRC]. TEXAS: Brewster Co., Heath Canyon Ranch, VII-3-1999, on Argythamnia neomexicana Muell. Arg. [57 EGRC]. Brooks Co., 11 mi. N Encino, IX-24-1996 [2 SMCC]. Val Verde Co., Seminole Canyon St. Pk., Rio Grande Trail, 1400', VII-20-1986 [1 TAMU].

Acallepitrix J. Bechyné

Acallepitrix J. Bechyné, 1956: 592 [unavailable, type species not designated]

Acallepitrix J. Bechyné, 1959: 323. Type species: Chalcoides erichsoni Jacoby, 1902, by original designation

Horn (1889) expressed reservations about the generic placement of *Crepidodera nitens* Horn, 1889: 243 at the time he described this species. It was later moved to *Epitrix* Foudras (Wilcox, 1953). We find that its morphology agrees much better with that of the Neotropical genus *Acallepitrix* where we here place it (NEW COMBINATION). *Acallepitrix* is very close to *Epitrix*, but *Acallepitrix* species are glabrous or nearly so above, more robust in body form, and have the basal calli of the elytra well developed and accentuated posteriorly by a weak to moderate transverse impression. However, the morphological limits of this genus are not well understood.

Margaridisa J. Bechyné

Margaridisa J.Bechyné, 1958: 653. Type species: Crepidodera flavescens Baly, 1876, by original designation

A single described species north of Mexico, Crepidodera atriventris Melsheimer, 1847: 165, belongs in Margaridisa (NEW COMBINATION). Margaridisa is closely allied to the Nearctic genus Hornaltica Barber, 1941: 66 (type species, Diphaulaca bicolorata Horn by monotypy) where Melsheimer's species has been placed until now. Hornaltica is here rendered monotypic by the removal of H. atriventris (Melsheimer). Hornaltica and Margaridisa are similar in overall morphology. We maintain their separation based on the following differences: in Hornaltica the ocular sulci are nearly horizontal; the pronotum has sparse, small to moderate-sized punctures; the rows of elytral punctures are somewhat irregular, especially apically; and the aedeagus has a short, angular flange on each side before the apex. The corresponding characters in Margaridisa are diagonal ocular sulci, impunctate or micropunctate pronotum, regular rows of elytral punctures, and lack of an angulate flange on either side of the aedeagus before the apex.

Parchicola J. Bechyné and Springlová de Bechyné
 Parchicola J. Bechyné and Springlová de Bechyné
 1975: 63. Type species Monomacra yena
 Bechyné, 1956, by original designation

This genus was split from *Monomacra* Chevrolat, a large and diverse "catch-all" genus found throughout

the Neotropical region, and several other genera were also created out of this genus (Bechyné and Springlová de Bechyné 1975, 1977). Two of our North America species formerly assigned to *Mono*macra belong to Parchicola: Altica iris Olivier, 1808: 702 and Altica tibialis Olivier, 1808: 697 (NEW COMBINATIONS). Recorded food plants for these two species are Passiflora spp. (Passifloraceae). The generic placement of our other two species of Monomacra, namely Lactica bumeliae Schaeffer, 1905: 172 and M. opaca Wilcox, 1953: 57, is much less clear. From Schaeffer's (1905) account and two specimens [EGRC] of M. opaca labeled as having been taken on Bumelia lanuginosa in Arizona, it appears that these two species are both associated with Bumelia (Sapotaceae).

Eumolpinae

Promecosoma Lefévre, 1877

Promecosoma Chevrolat in Dejean, 1836: 409 [nomen nudum]

Promecosoma Lefévre, 1877: 126. Type species: Promecosoma abdominale Lefévre, 1877, by subsequent designation of Bechyné, 1950

Schultz (1970) and Wilcox (1975) listed two species from Arizona as members of the genus Metaxyonycha Chevrolat. However, this is an incorrect generic assignment for both species given our current understanding of these two genera (see Flowers, 1996). Both species are correctly assigned to Promecosoma. One of these species, Colaspis arizonae Crotch, 1873: 45, has remained incorrectly placed until now (NEW COMBINATION). The second species, P. flohri Jacoby, 1890: 219, was first recorded from north of Mexico by Schultz (1970) who stated that he identified specimens from Arizona by comparison to the syntypical material. Despite his rather detailed treatment, Schultz expressed some doubt about the identity of the Arizona specimens and left open the possibility that they may not be conspecific with the types of P. flohri. Our examination of the Bowditch collection (MCZ) and one specimen in the UAZ collection determined as Metaxyonycha flohri by Schultz reveals that the Arizona material belongs to P. inflatum Lefévre, 1877: 132, not to P. flohri.

United States records for *P. inflatum*: Arizona: Cochise Co., Huachuca Mts., 1676 m., Sunnyside Canyon, VII-26-1989, beating *Phoradendron coryae*

on *Quercus* [3 EGRC]. Copper Canyon W of Montezuma Pass, Huachuca Mts., VIII-24-1964 [1 AGJC]. **Santa Cruz Co.**, Patagonia Mts., VIII-2-1968 [1 UAZ]. Pena Blanca Lake, VII-22-1988 [1 SMCC].

Rhabdopterus weisei (Schaeffer)

Colaspis subaenea Schaeffer, 1919 (1920a): 328 [not Jacoby, 1890]

Colaspis weisei Schaeffer, 1920b: 117 [replacement name for Colaspis subaenea Schaeffer, 1920a] Based on our study of Rhabdopterus material from the lower Rio Grande valley of Texas, we are reinstating this species as valid. It was incorrectly synonymized by Schultz (1977) with the widespread R. praetextus (Say) with which it is sympatric. It is easily distinguished from R. praetextus not only by the shape of the male median lobe (illustrated by Barber, 1943), but also by the form of the male hind tibia, its smaller size, more rotund shape and coarser punctation of the dorsum.

Tymnes Chapuis

Tymnes Chapuis, 1874: 310. Type species: Tymnes verticalis Chapuis, 1874, by monotypy

Three species currently classified in Colaspis are here transferred to Tymnes: Colaspis chrysis Olivier, 1808: 866, Typophorus oregonensis Crotch, 1873: 38 and Colaspis thaleia Blake, 1977: 418 (NEW COMBINATIONS). Although not developed as strongly as in some other Tymnes species, these three species possess the expanded proepisternal lobes characteristic of Tymnes. They also possess the reduced pygidial groove found in Tymnes and the general habitus of the genus (narrow pronotum, head retracted, short legs). Tymnes has traditionally been assigned to the section Edusites Chapuis of the tribe Eumolpini along with several Old World genera with transverse rugulae on the elytra. This character is absent or expressed to varying degrees in our North America species, but it is a very weak character for the establishment of a division within the tribe. We propose to abandon the use of this section, at least in North America, since we can find no other reason to keep Tymnes separate from the bulk of the genera in the Eumolpini. We place Tymnes in the section Iphimeites Chapuis.

Demotina modesta Baly

Demotina modesta Baly, 1874: 164

This species is here recognized as a naturalized introduction to North America. Its native range

includes Japan and Korea. The earliest North American record known to us is a specimen collected in 1970 from northernGeorgia [UGC]. This species is now widespread in the southeastern United States, being known from North Carolina and Tennessee and from there southward to include all the coastal states to Texas. It is known to be parthenogenetic in parts of its native range (Isono 1988, 1990b), and, to date, no males are known from North America. This beetle can be very abundant, especially on oaks (Quercus spp., Fagaceae), an association also noted in its native range (Isono,1988). The fact that this beetle has been overlooked in North America for almost 30 years can be attributed to its great similarity in appearance to our native species of Xanthonia Baly, a genus whose taxonomy is poorly known, and to the fact that it is of very little, if any, economic importance. Demotina modesta is distinguished from North American Xanthonia by its dorsal vestiture which is composed of narrow recurved scales and by the serrate margins of the pronotum. In Xanthonia, the dorsal vestiture is entirely of hair-like setae and the pronotal margins are entire. See Isono (1990a,1990b) for taxonomic notes on Demotina.

United States records: ALABAMA: Autauga Co. 1 mi. S Pine Level, V-20-1990[2 RHTC]. Baldwin Co. 1 mi. N Foley, V-30-1981 [1 EGRC]. Choctaw Co. 6.2 mi. Sjct. Hwy. 14 and Hwy. 231, VI-11-1989 [2 RHTC]. Coffee Co. Ft. Rucker Military Reservation, VI-26-1983 [1 RHTC]. Hwy. 167, 2 mi. N jct. Hwy. 126, V-28-1990 [8 RHTC]. Conecuh Co. 11 mi. NW Andalusia, VI-11-1992 [4 RHTC]. Dale Co. Enterprise, dates from V-17 to VI-30-1992 [7 RHTC]; same loc., dates from VIII-10 to VIII-18-1993 [6 RHTC]; same loc., VI-12-1983 [3 RHTC]; same loc., dates from V-26 to VI-8-1985 [RHTC]; same loc., dates from V-12 to VIII-4-1994 [3RHTC]; same loc., VI-5-9-1995 [1 RHTC]. Ozark, 12.6 mi. NEVII-4-1987 [1RHTC]. Monroe Co. Big Flat Creek, V-27-1995 [1 MSEM]. 1 mi. S Claiborne Dam, V-29-30-1995 [11 MSEM]. Haines Island Park, dates from V-26 to V-31-1995 [17 MSEM]. Sumter Co. 17.2 mi. E Cuda, VI-9-1989 [4RHTC]. FLORIDA: Alachua Co. Gainesville, V-9-13-1996, at UV light [16 FSCA]. Calhoun Co. Chason, 0.2 mi. S VI-23-1986 [1 RHTC]. Jackson Co. Florida Caverns St. Pk. V-19-1985 [4 EGRC]. near Mariana, VI-4-1994 [1SMCC]. Jefferson Co. Monticello, 3 mi. E IV-1993 [1 SMCC]. Leon Co. Tallahassee VI-26-1977 [1 EGRC]; same loc., V-23-1979 [2 MSEM]; sameloc., dates from V-8 to VI-3-1980 [1 EGRC, 1 SMCC]; same loc., V-6-1981 [1

EGRC]; same loc., V-19-1976 [1 EGRC]. Taylor Co., BlueSprings, VI-5-1974 [1 UGA]. GEORGIA: Baker Co. Milford, vic.VI-10-1993 [1 SMCC]. Chatham Co. Pooler VII-28-1996 [1SMCC]. Clarke Co. (no further data) VII-22-27-1970 [4 UGC]; Athens, VI-13-18-1976 [1RHTC]. 3 mi. N Athens, VII-14-1974 [1 RHTC]; same loc, dates from VI-1 to VIII-30-1976 [7 RHTC]. Horseshoe Bend, IX-9-1976 [1 EGRC, 2 RHTC]. Sandy Creek, VIII-21-1975 [1 RHTC]. Whitehall Forest, dates from VII-16 to IX-3-1976 [21 RHTC]; same loc., VII-16-21-1977 [1 RHTC]; same loc., dates from VI-5 to VI-16-1978 [2 EGRC]. Green Co. Redlands Wdlf. Mgt. Ar., Oconee Nat. For., VI-17-1997 [1 SMCC]. Jackson Co., 4 mi. W on rt. 1, VII-9-1974 [1 UGA]. Macon Co. Montezuma, 1 mi. W at Flint River V-24-1992 [1 SMCC]. Oconee Co., 0.5 mi. S. of Salem, VI-7-1999 [5 SMCC]. Oglethorpe Co. Lake Oglethorpe V-10-VI-13-1976 [7 RHTC]. Spalding Co. Griffin VI-1-1995 [7 SMCC]. LOUISIANA: Calcasieu Par. S. H. Jones St. Pk., V-18-24-1993 [38 MSEM]. East Baton Rouge Par. Baton Rouge V-23-1981 [6 EGRC]. Baton Rouge, Place Duplantier Apartments, V-10-1981, beating water oak, Quercus nigra [97EGRC]. East Feliciana Par. Idlewild Exp. Station V-27-1981 [7 EGRC]. MISSISSIPPI: Harrison Co. (no further loc.) V-31-1981 [1 EGRC]. Holmes Co. Holmes Co. St. Pk. VI-8--9-1994 [1 MSEM]. Jackson Co. Gulf Island Nat'l. Seashore VI-3--6-1984 [7MSEM]. **Kemper Co.** 1 mi. E Wahalak, VIII-10-1993 [3 MSEM]. Lee Co. Tombigbee St. Pk. VI-7-1995 [8MSEM]. Oktibbeha Co. Adaton, 3 mi. W, VI-9-1995 [1 MSEM]. same loc., dates from V-30 toVI-7-1996 [6MSEM]. Maben, 4 mi. W, VI-13-1995 [3MSEM]. Starkville, VI-25-1983 [1MSEM]. Perry Co. Boque Homma Ck. at Hwy. 42, VI-13-1992 [2] RHTC]. NORTH CAROLINA: Mecklenburg Co. Caldwell, VIII-4-1996 [1 SMCC]. Swaine Co., Cherokee, VI-5-1997 [1 EGRC]. SOUTH CAROLINA: Greenville Co. Greenville, VI-5-1985 [1 TAMU]. TENNESSEE: Loudon Co. 7 km. N Lenoir City, V-30-1998 [3 SMCC]; same loc. VI-6-1999 [9 SMCC]; same loc., VI-10-2000 [3 SMCC]. TEXAS: Hardin Co. jct. FM 1122 and Hwy. 418, V-25-1997 [3 EGRC]. near Silsbee, V-25-1997 [5 EGRC]. Jasper Co., Buna, V-25-1997, beating water oak, Quercus nigra [30] TAMU]. Newton Co. 8 mi. S. jct. FM 253 and Hwy. 87, V-25-1997, beating oak, *Quercus* sp. [3 EGRC, 6 TAMU].

Cryptocephalinae: Clytrini

Coleothorpa panochensis (Gilbert) NEW COMBINATION

Coscinoptera panochensis Gilbert, 1981: 364 Moldenke (1981) restricted the definition for Coscinoptera and moved most species formerly included in this genus to his new genus Coleothorpa Moldenke 1981: 91 (type species: Clytra dominicana Fabricius, 1801, by original designation). The above species was proposed under the older concept for Coscinoptera. It is here formally transferred to Coleothorpa.

Cryptocephalinae: Cryptocephalini

Griburius equestris (Olivier) (fig. 4)

Cryptocephalus equestris Olivier, 1808: 804, pl. 5, fig. 70

After study of Olivier's original description and figure, we believe this name is correctly applied to an uncommon and little-known *Griburius* species of the southeastern United States and Texas. *Griburius larvatus* Newman, 1840: 250 is a similarly colored species that is common in Florida. Another, yet undetermined *Griburius* species which is similar in appearance is common in southern Texas and reaches eastward to Louisiana. Olivier's limited description applies fairly well to all three species. We have seen specimens of all three species in various collections identified as *G. equestris*.

Our basis for assigning Olivier's name is the dorsal color pattern and the color of the abdomen. His illustration depicts a yellow *Griburius* beetle with two round, black maculae on each elytron, the anterior-most being isolated and well-separated from the anterior elytral margin. The abdomen is described as black with the sides marked with yellow and with a black median spot. We interpret the latter as a black pygidial spot. The scale line given with Olivier's figure is approximately 4.5 mm in length.

Several specimens we assign to *G. equestris* have the discal elytral maculae absent, and one from Georgia has four weakly developed discal maculae. Of the specimens from Texas, five specimens have the four maculae on the elytral disc complete and well developed (fig. 4), and two specimens have only the anterior discal maculae. When developed, the anterior discal maculae are well separated from the anterior elytral margin. Both the elytral and pronotal maculae are round or nearly round in shape. The

elytral suture is entirely pale. Both pronotal and elytral maculation of these heavily-marked specimens match the color pattern shown in Olivier's figure. All of our specimens have black abdomens with yellow marginal spots and their pygidia are yellow with a large black spot (fig. 4). Our specimens are smaller than Olivier's scale bar, ranging from 3.2 (the smallest male) to 3.76 mm (the largest female).

The specimens we assign to *G. larvatus* (over 100 examined) have the elytral pattern variably developed, ranging from nearly absent to heavily marked. The anterior discal spot of the elytra is basal, nearly touching the leading margin of the elytron (fig.5). Frequently in heavily marked specimens there is a weak to strongly developed median elytral macula which may be narrowly joined to the discal maculae. The elytral and pronotal maculae are somewhat angular in shape, and the suture is narrowly black in most specimens. The abdomen is yellow with a median, variably sized, dark macula. The pygidium is always entirely pale. Our specimens of *G. larvatus* range from 4.32 (smallest male) to 5.6 mm (largest female).

Despite the apparent discrepancy in size, we feel the evidence best supports the assignment of Olivier's name to the little-known uncommon species of the southeastern United States and Texas. Newman's name is available for the common Floridian species. Jacoby (1889) identified a small, similarly marked species from Guatemala as G. equestris. We have examined specimens from Chiapas, Mexico, which may be the same species as Jacoby's specimen. Our Mexican specimens are yet another similarly marked species, different from either G. equestris or G. larvatus. We consider Jacoby's Guatemalan record for G. equestris to be in error. Other records for G. equestris should be confirmed.

Confirmed records for *G. equestris*: FLORIDA: Lake Co., Fruitland Park, 20-V-1993, *Quercus virginiana* [2 FSCA]. Lee Co., Okahumpka, 3-V-1989, on *Quercus virginiana* [1 FSCA]. Leon Co., Tallahassee, IV-11-1976, on *Quercus* [1 EGRC]; same loc., IV-3-1982, at light [1 EGRC]. Levy Co., Hwy 24 at Alachua County line, IV-9-1980 [1 EGRC]. Marion Co., East Silver Spring Shores, Malauka Rd. near Meadow, IV-19-20-1992, beating on *Quercus* sp. [1 EGRC]. Hopkins Prairie, Ocala Nat'l. For., IV-29-1988 [1 EGRC]. Polk Co., Bartow, IV-24-2001, Trimed-baited Jackson trap in grapefruit tree [1 FSCA]. Putnam Co., Welaka Research Station, IV-8-11-1983 [2 EGRC]. Union Co., Hwy. 238 2 km. N. Hwy.

18, 10-IV-1989 [1 FSCA]. **GEORGIA: Johnson Co.**, 1 mi. E Kite, IV-7-1977, on *Quercus laevis* [1 EGRC]. **TEXAS: Bastrop Co.**, Buescher St. Pk., IV-22-1973 [1 TAMU]. **Brazos Co.**, College Station, IV-21-1933 [2 TAMU]; College Station, Lick Creek Park, IV-13-1996, uv light [2 EGRC]; same loc., IV-27-1996, uv light [1 EGRC]. **Tyler Co.**, 4 mi. E Spurger, III-24-25-1995, mv and uvlights [2 TAMU].

Griburius montezuma (Suffrian) (fig. 6)

Scolochrus montezuma Suffrian, 1852: 116 Pachybrachis hybridus: Riley and Enns, 1979: 58 (misidentification)

Griburius montezuma is a species of the southwestern United States and Mexico extending east as far as south Texas and Kansas. There exists a color form of this species where the ivory-white elytral markings are absent or nearly so, being reduced to a very narrow strip along the lower anterior portion of the elytral margin. From above, the elytra of these specimens appear to be entirely black. This dark form also has the pronotum almost entirely red, whereas the normal form has a large part of the anterior pronotal disc black and the extreme anterior edge creamy white. The dark form is found in the eastern-most part of the species' range (from eastern Texas to Missouri and Florida). This color form and its eastern occurrence, neither formerly recorded in the literature, have resulted in the previous misidentification of this species.

Records of dark color form of G. montezuma: ARKANSAS: Benton Co., Illinois River at Osage Creek, V-16-1972, dry ice baited sticky trap [1 TAMU]. FLORIDA: Alachua Co., Gainesville, III-29-IV-14-1989, Lindgren funnel with 95% ETOH bait [1 FSCA]. Indian River Co., South of Vero Beach, III-15-1975, on oak [1 FSCA]; Winter Beach, IV-17-1987 [1 FSCA]. Marion Co., Ocala, V-14-1989, on Aralia spinosa [1 FSCA]. Putnam Co., Welaka, V-4-1971 [1 FSCA]. MISSOURI: Boone Co., Columbia, VII-4-1943 [1 UMRM]. Pettis Co., Sedalia, VI-11-1972 [1 UMRM]. **Dent Co.**, VIII-21-1974 [1 EGRC]. **Jackson** Co., VI-21-1980 [2 EGRC]. OKLAHOMA: Latimer Co., VI-1987 [1 EGRC]; same loc., V-1989 [1 EGRC]; same loc., VI-1990 [1 EGRC]. TEXAS: Freestone Co., Old Spring Seat Church, near Donie, V-26-1995 [2 EGRC]; Robertson Co., 6 mi. E New Baden, nr. headwaters of Mill Creek, V-18-1998, uv light [1 EGRC]. Sabine Co., "beech bottom", 9 mi. E Hemphill, IV-24-1989, reared from larva taken in Neotomanest [3 TAMU].

$Cryptocephalus\, mutabilis\, {\it Melsheimer}$

Cryptocephalus mutabilis Melsheimer, 1847: 172 Cryptocephalus reinhardi Sundman, 1965: 5 NEW SYNONYMY

Sundman's species described from Texas is nothing more than a color variant of the widespread *C. mutabilis* Melsheimer. The holotype of *C. reinhardi* [TAMU] has been examined.

Acknowledgements

We thank the curators of the collections cited above for making specimens available for study. Chris Reid made the initial identification of *Trachymela sloanei* from specimens from California, and Al Samuelson, Sean Strother, and Hauro Takizawa contributed significantly to the recognition of *Demotina modesta*. We thank Catherine Duckett, David Furth and Vilma Savini for sharing with us their concepts for certain Neotropical alticine genera.

Literature cited

- Achard, J. 1923. Nouveaux Chrysomelini d'Amrique (Col. Chrysomelidae). Fragments Entomologiques (par Julian Achard) (No. 5): 65-80.
- Arnett, R. H. 1968. The beetles of the United States (a manual for identification). 2nd printing. The American Entomological Institute, Ann Arbor, xii + 1112 pp.
- Arnett, R. H. 1985. American insects. A handbook of the insects of America north of Mexico. Van Nostrand Reinhold Co., New York. xiii + 850 pp.
- Balsbaugh, E. U. and K. L. Hays. 1972. The leaf beetles of Alabama (Coleoptera: Chrysomelidae). Alabama Agricultural Experiment Station Bulletin no. 441, 223 pp.
- Baly, J. S. 1861. Descriptions of new genera and species of Phytophaga. Journal of Entomology 1: 193-206, 275-302.
- Baly, J. S. 1874. Catalogue of the phytophagous Coleoptera of Japan, with descriptions of the species new to science. Transactions of the Entomological Society of London 1874, part II: 161-217.
- Barber, H. S. 1941. Some flea beetles injurious to beans in tropical America (Genus *Diphaulaca*, Family Chrysomelidae). Proceedings of the Entomological Society of Washington 43(3): 65-68.

- Barber, H. S. 1943. Notes on *Rhabdopterus* in the United States (Coleoptera: Chrysomelidae). Bulletin of the Brooklyn Entomological Society 38(4): 111-120.
- Bechyné, J. 1950b. Les générotypes des Eumolpides de l'Amérique du Sud et du Centre avec les diagnoses des formes nouvelles (Col. Phytoph. Chrysomeloidea). Mitteilungen der Münchner Entomologischen Gesellschaft 40: 264-292.
- Bechyné, J. 1956. Über die Alticiden-Sammlung Heikertinger (Col. Phytophaga). Entomologische Arbeiten aus dem Museum G. Frey 7: 577-598.
- Bechyné, J. 1958. Notizen zu den neotropischen Chrysomeloidea (Col. Phytophaga). Entomologische Arbeiten aus dem Museum G. Frey 9(2): 478-706.
- Bechyné, J. 1959. Beiträge zur Kenntnis der Alticiden fauna Boliviens. Coleopt. Phytoph. Beiträge zur neotropischen Fauna 1(4): 269-381.
- Bechyné, J. and B. Springlov‡de Bechyné. 1975. Notes sobre la serie filética de *Monomacra* y sus formas convergentes (Col. Phytophaga, Alticidae). Revista de la Facultad de Agronomía (Maracay) 8(4): 25-140.
- Bechyné, J. and B. Springlov‡de Bechyné. 1977. Zur phylogenesis einiger neotropischen Alticiden (Col. Phytophaga). Studies on the Neotropical Fauna 12: 81-145.
- **Blackburn, T.** 1896 (1897). Revision of the genus *Paropsis*, part I. Proceedings of the Linnean Society of New SouthWales 21(4): 637-692.
- Blake, D. H. 1942. The chrysomelid beetles *Luperodes bivittatus* (Leconte) and *varicornis* (Leconte) and some allied species. Proceedings of the United States National Museum 92: 57-74.
- Blake, D. H. 1950. The generic status of *Altica picta*Say with descriptions of four closely related species (Coleoptera, Chrysomelidae). Proceedings of the Entomological Society of Washington 52(4): 178-183.
- Blake, D. H. 1951. New species of chrysomelid beetles of the genera *Trirhabda* and *Disonycha*. Journal of the Washington Academy of Sciences 41(10): 324-328.
- Blake, D. H. 1964. Notes on new and old species of Alticinae (Coleoptera) from the West Indies. Proceedings of the United States National Museum (no. 3477), 115: 9-29.
- Blake, D. H. 1977. *Colaspis chrysis* Olivier and its close relatives (Coleoptera: Chrysomelidae).

- Proceedings of the Entomological Society of Washington 79(3): 417-421
- Boheman, C. H. 1855. Monographia Cassididarum. Holmiae. 543 pp., 1 pl.
- **Borowiec, L.** 1999. A world catalogue of the Cassidinae (Coleoptera: Chrysomelidae). Biologica Silesiae, Wroclaw. 476 pp.
- Butte, J. G. 1968a. The revision of the tribe Chalepini of America north of Mexico. I. Genus *Xenochalepus* Weise (Coleoptera: Chrysomelidae). The Coleopterists Bulletin 22(2): 45-62.
- Butte, J. G. 1968b. The revision of the tribe Chalepini of America north of Mexico. II. Genus Chalepus Thunberg (Coleoptera: Chrysomelidae).
 Journal of the New York Entomological Society 76: 117-133.
- Butte, J. G. 1968c. The revision of the tribe Chalepini of America north of Mexico. III. Genus Odontota Chevrolat (Coleoptera: Chrysomelidae). The Coleopterists Bulletin 22(4): 101-124.
- Butte, J. G. 1969. The revision of the tribe Chalepini of America north of Mexico. IV. Genus Sumitrosis Butte (Coleoptera: Chrysomelidae). Journal of the New York Entomological Society 77: 12-30.
- Chapuis, F. 1874. Famille LXIX. Phytophages, vol. 10, pp. 1-455 in Lacordaire, T. and F. Chapuis, Histoire naturelle des insectes. Genera des coléoptéres. La Librairie encylopédique de Roret, Paris. iv + 455 pp.
- Chapuis, F. 1875. Famille LXIX. Phytophages, vol. 11, pp. 1-420 in Lacordaire, T. and F. Chapuis, Histoire naturelle des insectes. Genera des coléoptéres. La Librairie encylopédique de Roret, Paris. 420 pp.
- Chen, S. 1973. The classification of leaf beetles. Acta Entomologica Sinica 16(1):47-56.
- Chen, S., Y. Peiyu, S. Caihong, T. Chuanchich, and Z. Yunzhen. 1986. Coleoptera Hispidae. Fauna Sinica (Insecta). Science Press, Beijing, xv + 653 pp., 14 pls.
- Clark, S. M. 1998. Descriptions of new luperine genera and species from Mexico, with keys to related taxa (Coleoptera: Chrysomelidae: Galerucinae). Insecta Mundi 12(3-4): 189-206.
- Crotch, G. R. 1873. Materials for the study of the Phytophaga of the United States. Proceedings of the Academy of Natural Sciences of Philadelphia 25: 19-83.

- Dejean, P. F. M. A. 1836. Catalogue des coléoptéres de la collection de M. le comte Dejean, 2nd. edition fasc. 5. Paris. pp. 361-443.
- Downie, N. and R. H. Arnett, Jr. 1996. The beetles of northeastern North America, vol. 2. The Sandhill Crane Press, Gainesville, Florida. x + pp. 891-1721.
- Fabricius, J. C. 1775. Systema entomologiae, sistens insectorum classes, ordines, genera, species, adiectis synonymis, locis, descriptionibus, observationibus. Kortii, Flensburgi et Lipsiae. xxxii + 832 pp.
- Fabricius, J. C. 1781. Species insectorum, exhibentes eorum differentias specificas, synonyma auctorum, loca natalia, metamorphosin adiectis observationibus, descriptionibus. Tom. I. Bohnii, Hamburgi et Kilonii. viii+ 552 pp.
- Fabricius, J. C. 1787. Mantissa insectorum, sistens eorum species nuper detectas adiectis characteribus genericis, differentiis specificis, emendationibus, observationibus. Tom. I. Proft, Hafniae. xx + 330 pp.
- Fabricius, J. C. 1792. Entomologica systematica emendata et aucta, secundum classes, ordines, genera, species adjectis synonimis, locis, observationibus, descriptionibus. Tom. I. Proft, Hafniae. 330 + 538 pp.
- **Fabricius, J. C.** 1798. Supplementum entomologiae systematicae. Proft et Storch, Hafniae. ii + 572 pp.
- Fabricius, J. C. 1801. Systema Eleutheratorum secundum ordines, genera, species: adiectis synonymis, locis, observationibus, descriptionibus. Tom. I. Bibliopolii Academici Novi, Kiliae. xxiv + 506 pp.
- Flowers, R. W. 1996. La subfamilia Eumolpinae (Coleoptera: Chrysomelidae) en América Central. INBio Special Publications no. 2, 59 pp.
- Ford, E. J. and J. F. Cavey. 1985. Biology and larval descriptions of some Maryland Hispinae. The Coleopterists Bulletin 39(1): 36-59.
- Furth, D. G. and V. Savini. 1996. Checklist of the Alticinae of Central America, including Mexico (Coleoptera: Chrysomelidae). Insecta Mundi 10(1-4): 45-68.
- Garrison, R. W. 1998. New agricultural pest for southern California, Australian tortoise beetle, *Trachymela sloanei*. California Plant Pest and Disease Report 17(1-3): 5-6.
- Gilbert, A. J. 1981. A new species of *Coscinoptera* Lacordaire from California (Coleoptera: Chry-

- somelidae). The Pan-Pacific Entomologist 57(2): 364-370.
- Hatch, M. H. 1971. The beetles of the Pacific Northwest. Part V: Rhipiceroidea, Sternoxi, Phytophaga, Rhynchophora, and Lamellicornia. University of Washington Publications in Biology 16: 662 pp.
- Herbst, J. F. W 1799. Natursystemaller bekannten in- und ausländischen Insecten, als eine Fortsetzung dervon Bÿffonschen Naturgeschichte. Der Käfer achter Theil. Pauli, Berlin.. 420 pp., pls.
- Hogue, S. M. 1970. Biosystematics of the genus Trirhabda LeConte of America North of Mexico (Chrysomelidae: Coleoptera). Unpublished Ph. D. Dissertation, University of Idaho. 212 pp.
- Horn, G. H. 1889. A synopsis of the Halticinae of boreal America. Transactions of the American Entomological Society 16: 163-320.
- Horn, G. H. 1893. The Galerucinae of boreal America. Transactions of the American Entomological Society 20: 57-136.
- ICZN (International Commission on Zoological Nomenclature). 1999. Code of zoological nomenclature, fourth edition adopted by the International Union of Biological Sciences. xxix + 306 pp.
- Isono, M. 1988. Differentiation in life history pattern and oviposition behavior, the thelytoky in *Demotina* and *Hyperaxis* beetles (Coleoptera, Chrysomelidae) in western Japan. Japanese Journal of Entomology 56(2): 402-409.
- Isono, M. 1990a. A revision of the genus *Demotina* (Coleoptera, Chrysomelidae) from Japan, the Ryukyus, Taiwan and Korea, I. Japanese Journal of Entomology 58(2): 375-382.
- Isono, M. 1990b. A revision of the genus *Demotina* (Coleoptera, Chrysomelidae) from Japan, the Ryukyus, Taiwan and Korea, II. Japanese Journal of Entomology 58(3): 541-554.
- **Jacoby, M.** 1884. Biologia Centrali-Americana, Insecta, Coleoptera, Galerucidae, vol. 6, pt. 1, 265-336.
- **Jacoby, M.** 1887. Biologia Centrali-Americana, Insecta, Coleoptera, Galerucidae, vol. 6, pt. 1, pp. 497-584.
- **Jacoby, M.** 1888. Biologia Centrali-Americana, Insecta, Coleoptera, Galerucidae, vol. 6, pt. 1, pp. 585-625.
- **Jacoby, M.** 1889. Biologia Centrali-Americana, Insecta, Coleoptera, Supplement to Phytophaga, vol. 6, pt. 1, pp. 81-168.

- Jacoby, M. 1890. Biologia Centrali-Americana, Insecta, Coleoptera, Supplement to Phytophaga, vol. 6, pt. 1, pp. 169-232.
- Jacoby, M. 1891. Biologia Centrali-Americana, Insecta, Coleoptera, Supplement to Phytophaga, vol. 6, pt. 1, 233-312.
- Jolivet, P. and T. J. Hawkeswood. 1995. Hostplants of Chrysomelidae of the world. An essay about the relationships between the leaf-beetles and their food-plants. Backhuys, Leiden. [viii] + 281 pp.
- Kovalev, O. V. and L. N. Medvedev. 1983. Theoretical principles for the introduction of *Ambrosia* leaf beetles of the genus *Zygogramma* Chevr. (Lepidoptera [sic], Chrysomelidae) into the USSR for the biological control of *Ambrosia*. Entomological Review 62(1): 1-19.
- Laboissiere, V. 1925. Chrysomelidae. Tribu: Galerucini, par V. Mission Rohan-Chabot sous les Auspices du Ministére de l'Instruction Publique et de la Société de Géographie 4(3): 93-113.
- LeConte, J. L. 1878. Additional descriptions of new species. pp. 373-434 in Schwarz, E. A. The Coleoptera of Florida. Proceedings of the American Philosophical Society 17: 353-472.
- Lefévre, E. 1877. Descriptions de coléoptéres nouveaux ou peu connus de la famille des Eumolpides. Annales de la Société Entomologique de France (ser. 5) 7: 115-280.
- LeSage, L. 1991. Family Chrysomelidae leaf beetles, pp. 301-323, in Bousquet, Y., ed., Checklist of beetles of Canada and Alaska. Canada Communication Group, Ottawa, Ontario.vi + 430 pp.
- Linell, M. L. 1897 (1898). New species of Coleoptera of the family Chrysomelidae, with a short review of the tribe Chlamydini. Proceedings of the United States National Museum 20: 473-485.
- Mannerheim, C. G. 1843. Beitrag zue Kaefer-Fauna der Aleutischen Inseln, de Insel Sitkha und neu-Californiens. Bulletin de la Société Impériale des Naturalistes de Moscou 16: 175-314.
- Melsheimer, F. E. 1847. Descriptions of new species of Coleoptera of the United States. Proceedings of the Academy of Natural Sciences of Philadelphia 3: 158-181.
- Moldenke, A. R. 1981. A generic reclassification of the New World Clytrinae (Coleoptera: Chrysomelidae) with a description of new species. Entomologische Arbeiten aus dem Museum G. Frey 29: 75-116.

- Newman, E. 1840. Descriptions of eight new Cryptocephali, captured near St. John's Bluff, E. Florida by Edward Doubleday, Esq. The Magazine of Natural History 4: 249-250.
- Olivier, A. G. 1791. Encyclopedie méthodique. Historie naturelle. Insectes, vol. 6 (pt. 1). Paris. pp. 1-368.
- Olivier, A. G. 1808. Entomologie, ou histoire naturelle des insects, avec leurs caractères génériques et spécifiques, leur description, leur synonymie, et leur figure enluminée. Coléoptères, vol. 6. Paris. pp. 613-1104, 41 pls.
- Peck, S. B. and M. C. Thomas. 1998. A distributional checklist of the beetles (Coleoptera) of Florida. Arthropods of Florida and neighboring lands areas, vol. 16. viii + 180 pp.
- Ramos. T. C. 1996. Revisao do gênero *Clinocarispa* Uhmann, 1935 (Coleoptera, Chrysomelidae, Hispinae, Chalepini). Revista Brasileira de Entomologia 40(3-4): 367-374.
- Riley, E. G. 1985. Review of the North American species of *Glyphuroplata* Uhmann, 1940 (Coleoptera: Chrysomelidae: Hispinae). Journal of the Kansas Entomological Society 58:428-436.
- Riley, E. G. and W. R. Enns. 1979. An annotated list of Missouri leaf beetles (Coleoptera: Chrysomelidae). Transactions of the Missouri Academy of Science 13: 53-83.
- Rogers, W. F. 1856. Synopsis of species of *Chrysomela* and allied genera inhabiting the United States. Proceedings of the Academy of Natural Sciences of Philadelphia 8: 29-39.
- Say, T. 1824. Descriptions of coleopterous insects collected in the late expedition to the Rocky Mountains, performed by order of Mr. Calhoun, Secretary of War, under the command of Major Long. Journal of the Academy of Natural Sciences of Philadelphia 3(2): 238-282, 298-331, 403-462.
- Schaeffer, C. F. A. 1905. Some additional new genera and species of Coleoptera found within the limit of the United States. Brooklyn Institute Museum Science Bulletin 1(7):141-179.
- Schaeffer, C. F. A. 1906. On new and known genera and species of the family Chrysomelidae. Brooklyn Institute Museum Science Bulletin 1(9):221-253.
- Schaeffer, C. F. A. 1919 (1920a). Synonymical and other notes on some species of the family Chrysomelidae and descriptions of new species. Jour-

- nal of the New York Entomological Society 23: 307-340.
- Schaeffer, C. F. A. 1920b. Change of names in Coleoptera. Bulletin of the Brooklyn Entomological Society 15: 117.
- Schaeffer, C. F. A. 1925. New species and varieties of North American Cassidini (Coleoptera, Chrysomelidae). Journal of the New York Entomological Society 33: 233-237.
- Schaeffer, C. F. A. 1932. Notes on some Halticinae with descriptions of new species (Col. Chrysomelidae). Bulletin of the Brooklyn Entomological Society 27: 239-245.
- Scherer, G. 1962. Bestimmungs schlüssel der neotropischen Alticinen-Genera (Coleoptera: Chrysomelidae: Alticinae). Entomologische Arbeiten aus dem Museum G. Frey 13(2): 497-607.
- Scherer, G. 1983. Diagnostic key for the Neotropical Alticine genera (Coleoptera: Chrysomelidae: Alticinae). Entomologische Arbeiten aus dem Museum G. Frey 31/32: 1-89 [English translation of 1962 with additions].
- Schultz, W. T. 1970. The Eumolpinae of America north of Mexico with revisions of selected genera (Coleoptera: Chrysomelidae). Unpublished Ph.D. dissertation, The Ohio State University, Columbus. 342 pp.
- Schultz, W. T. 1977. Review of the genus *Rhabdopterus* (Coleoptera: Chrysomelidae) in America north of Mexico. Annals of the Entomological Society of America 70(6): 968-974.
- Seeno, T. N. and J. A. Wilcox. 1982. Leaf beetle genera (Coleoptera: Chrysomelidae). Entomography 1:1-221.
- Staines, C. L. 1986a. A revision of the genus *Brachycoryna* (Coleoptera: Chrysomelidae: Hispinae). Insecta Mundi 1 (4):231-241.
- Staines, C. L. 1986b. New combination and new synonymy in North American *Stenopodius* (Coleoptera: Chrysomelidae: Hispinae) with a taxonomic note on Uroplatini. Proceedings of the Entomological Society of Washington 88 (1):192.
- Staines, C. L. 1988. A review of the species of *Acritispa* Uhmann (Coleoptera: Chrysomelidae, Hispinae). Proceedings of the Entomological Society of Washington 90 (2):193-195.
- Staines, C. L. 1989a. A revision of the genus *Octotoma* (Coleoptera: Chrysomelidae, Hispinae). Insecta Mundi 3 (1):41-56.
- Staines, C. L. 1989b. A new genus and species of Hispinae (Coleoptera: Chrysomelidae) from Cen-

- tral America. Proceedings of the Entomological Society of Washington 91 (3):342-345.
- Staines, C. L. 1993. A revision of the genus Anisostena Weise (Coleoptera: Chrysomelidae, Hispinae). Part I. Introduction and the subgenera Neostena and Apostena. Insecta Mundi 7 (3): 183-190.
- Staines, C. L. 1998. A review of the genus *Physocoryna* Guérin-Méneville, 1844 (Coleoptera: Chrysomelidae: Hispinae). Journal of the New York Entomological Society 106 (4):163-169.
- Staines, C. L. and E. G. Riley. 1994. Nomenclature and status of *Xenochalepus* and *Hemichalepus* (Coleoptera: Chrysomelidae, Hispinae). Journal of the Kansas Entomological Society 67(2): 218-220.
- Suffrian, E. 1852. Zur Kenntniss der nordamerikanischen Cryptocephalen. Linnaea Entomologica 7: 1-238.
- Suffrian, E. 1868. Verzeichniss der von Dr. Gundlach auf der Insel Cuba gesammelten Chrysomelinen. Archiv für Naturgeschichte 34, 1:163-252.
- Sundman, J. A. 1965. Checklist and description of a new species of the genus *Cryptocephalus* in Texas (Coleoptera: Chrysomelidae). The Southwestern Naturalist 10 (1): 1-8.
- Suzuki, K. 1996. Higher classification of the family Chrysomelidae (Coleoptera), pp. 3-54 in Jolivet P, and M. L. Cox. Chrysomelidae Biology, volume 1: the classification, phylogeny and genetics. SPB Academic Publishing, 443 pp.
- **Thunberg, C. P.** 1787. Museum naturalium academiae Upsaliensis. Cujus partem quartam, pp. 43-58. Upsaliae.
- Uhmann, E. 1957. Chrysomelidae: Hispinae (Hispinae Americanae) (Pars 35, Fasc. 1) in W. D. Hincks (ed.) Coleopterorum catalogus supplementa. W. Junk, s-Gravenhage. pp. 1-153.
- Uhmann, E. 1964a. Chrysomelidae: Hispinae, corrigenda et addenda (Pars 35, Fasc. 3) in W. O. Steel (ed.) Coleopterorum catalogus supplementa. W. Junk, s-Gravenhage. pp. 399-490.
- Uhmann, E. 1964b. Hispinae aus dem Staate Sao Paulo, Brasilien (209. Betraig zur Kenntnis der Hispinae (Coleoptera, Chrysomelidae)). Iheringia (Ser. Zool.) 32:1-27 pp.
- Virkki, N., J. A. Santiago-Blay, and E. G. Riley, 1992. Chromosomes of Puerto Rican Hispinae and Cassidinae (Coleoptera: Chrysomelidae). The Coleopterists Bulletin 46(1): 29-42.

- Weise, J. 1910. Beitrage zur Kenntnis der amerikanischen Hispinen. Archiv für Naturgeschichte 76, 1 (1): 67-127, 1 pl.
- Weise, J. 1916. Über australische Chrysomelinen. Archiv für Naturgeschichte 82 (5): 124-141.
- Wilcox, J. A. 1953. New species of Galerucinae and Alticinae with notes on other species. The Ohio Journal of Science 53 (1): 51-58.
- Wilcox, J. A. 1954. Leaf beetles of Ohio (Chrysomelidae: Coleoptera). Ohio Biological Survey, Bulletin no. 43: 353-506.
- Wilcox, J. A. 1965. A synopsis of the North American Galerucinae (Coleoptera: Chrysomelidae).
 New York State Museum and Science Service Bulletin 400: iv + 1-226.

- Wilcox, J. A. 1972. A review of the North American chrysomeline leaf beetles (Coleoptera: Chrysomelidae). New York State Museum and Science Service Bulletin 421: 1-37.
- Wilcox, J. A. 1973. Chrysomelidae:Galerucinae (Luperini: Luperina) (Pars 78, Fasc. 3) in J. A. Wilcox (ed.),Coleopterorum catalogus supplementa. W. Junk, 's-Gravenhage. pp. 432-664.
- Wilcox, J. A. 1975. Checklist of the beetles of Canada, United States, Mexico, Central America and the West Indies. Vol. 1, pt. 7. The leaf beetles (red version). [inside title: Checklist of the Chrysomelidae of Canada, United States, Mexico, Central America and the West Indies, family no. 104]. Biological Research Institute of America. New York. 166 pp.