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 *Plagiometriona clavata* (Fabricius, 1798) to synonymy with *P. clavata testudinaria* (Boheman, 1855); *Chrysomela 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 *Coscinoptera*; *Promecosoma arizonae* (Crotch, 1873), transferred from *Metaxyonycha*; *Tymnes chrysis* (Olivier, 1808), *T. oregonensis* (Crotch, 1873), and *T. thaleia* (Blake, 1977), transferred from *Colaspis*. The 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

Chalepini Weise, 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

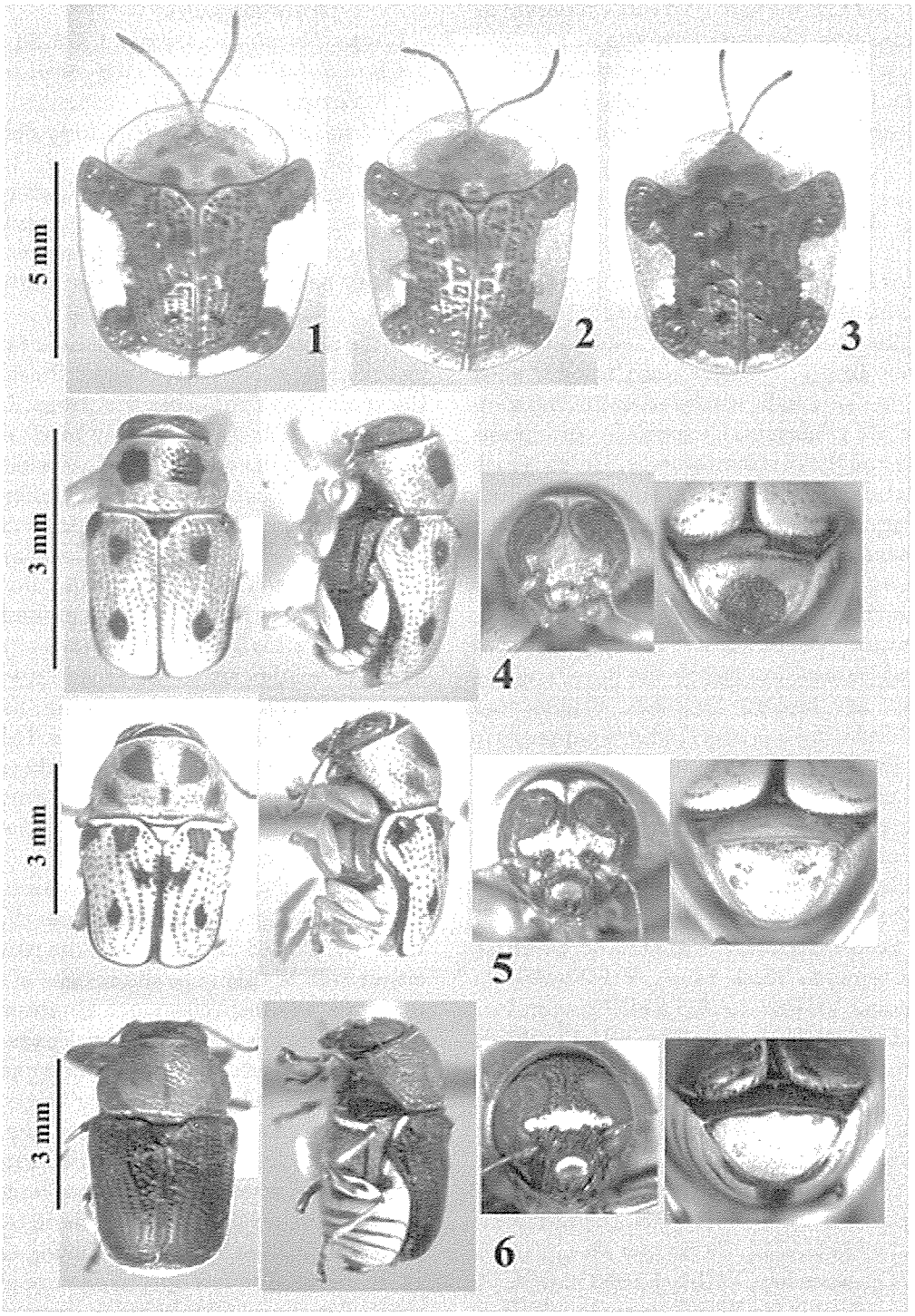

Fig. 1-2, *Plagiometriona clavata testudinaria* (Boheman): 1, Jamaica Beach, Texas [EGRC]; 2,9-13 mi. E Todos Santos, Baja California Sur., Mexico [EGRC]. 3, *Plagiometriona clavata clavata* (Fabricius), College Station, Texas [EGRC]. 4, *Griburius equestris* (Olivier), male, College Station, Texas [TAMU]. 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 *Charidotella 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 [2 AJGC]. **Santa Cruz Co.**, Mt. Washington, 4300', VIII-13-1991 [2 AJGC]. Patagonia Mts., Nogales, IX-15-1985 [1 UIC]; same loc., IX-10-1906 [2 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 [nomino-typical 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