

**DISTRIBUTIONAL AND BIOLOGICAL NOTES ON BUPRESTIDAE (COLEOPTERA)
IN NORTH AND CENTRAL AMERICA AND THE WEST INDIES, WITH VALIDATION
OF ONE SPECIES**

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Abstract

Distributional and/or biological data are presented for 92 species and 1 subspecies of Buprestidae from Canada, the Dominican Republic, Honduras, Mexico, Panama, and the United States in the following genera and subgenera: *Acmaeodera* Eschscholtz, *Acmaeoderopsis* Barr, *Actenodes* Dejean, *Agrilaxia* Kerremans, *Agrilus* (s. str.) Curtis, *Agrilus* (*Engyaulus*) Waterhouse, *Anthaxia* (*Haplanthaxia*) Reitter, *Aphanisticus* Latreille, *Brachys* Dejean, *Buprestis* (s. str.) Linnaeus, *Buprestis* (*Knulloibuprestis*) Kurosawa, *Chrysobothris* Eschscholtz, *Chrysophana* LeConte, *Dicerca* (s. str.) Eschscholtz, *Dicerca* (*Argante*) Gistel, *Hippomelas* Laporte and Gory, *Mastogenius* Solier, *Pachyschelus* Solier, *Phaenops* Megerle, *Polycesta* (*Jamaiquesia*) Cobos, *Polycesta* (*Tularensia*) Nelson, *Sphaerobothris* (s. str.) Semenov-Tian-Shanskij and Rikhter, *Taphrocerus* Solier, and *Xenorhipis* LeConte. *Acmaeodera cazieri* Knull is validated.

In the following notes, new distributions, host plant records, and nomenclatural actions are indicated in **bold**. Specimens are retained by the collector (our names abbreviated TCM and GHN) unless another collection [brackets] is specified (Arnett *et al.* 1993). For brevity, the following abbreviations are used when citing label data: CA = Conservation Area; coll. = collected; em. = emerged; ex = from; NA = Natural Area; NF = National Forest; NM = National Monument; NP = National Park; nr. = near; NWR = National Wildlife Refuge; SP = State Park; WMA = Wildlife Management Area. Plant nomenclature follows Kartesz and Meacham (1999). Entries for all taxa are in alphabetical order.

Acmaeodera alicia Fall. ARIZONA: Pima Co., Tucson, E. Broadway Blvd., nr. Saguro NM, 3.VIII.1997, M. S. Arduser, on flowers *Ferocactus wislizenii* (Engelm.) Britt. and Rose [TCMC].

Acmaeodera amabilis Horn. COLORADO: Montezuma Co., Mesa Verde NP, Old Wetherill Rd. Jct, 1.X.1999, E. Buckner and P. A. Opler [CSUC, GHNC].

Acmaeodera cazieri Knull 1960:6 (**new status**). Originally described as a subspecies of *A. quadrivittata* Horn, this form has been recognized as a valid species by buprestid workers for many years, but no formal indication has been published. It

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was referred to as a species by Nelson (1980b) in comparative remarks with *A. discalis* Cazier, but no justification was included. It differs from *A. quadrivittata* by being larger and more robust; each elytron with one yellow vitta, two in *A. quadrivittata*; ovipositor much more elongate. ARIZONA: Cochise Co., 7.5 mi S of Sierra Vista, Hwy 72 at Piñon Dr., T23S R21E S7, elevation 4,800', 6.VIII.1998, TCM, on flowers *Jatropha macrorhiza* Benth. Knull (1960) recorded this species on flowers of "prickly poppy".

Acmaeodera conoidea Fall. TEXAS: Hidalgo Co., Santa Ana NWR, vic. Willow Lake, TCM, em. 11–20.V.1999 ex 3" diameter dead branch *Ulmus crassifolia* Nutt. coll. 9.X.1997; Jeff Davis Co., Davis Mountains SP, Limpia Canyon, elevation 5,050', TCM, em. V.1996 ex dead branch *Celtis laevigata* Willd. var. *reticulata* (Torr.) L. D. Benson coll. VI.1994. *Juglans* sp. is the only other recorded larval host (Westcott *et al.* 1979).

Acmaeodera depressa Barr. ARIZONA: Mohave Co., Hualapai Mts., road from Kingman, 6.VII.1985, GHN, on flowers *Eriodictyon angustifolium* Nutt. CALIFORNIA: San Bernardino Co., Clark Mt., elevation 1,860–1,960 m, T17N R13E S33, 10.VII.1988, GHN, on flowers *Purshia stansburiana* (Torr.) Henr. [= *Cowanina mexicana* D. Don var. *stansburiana* (Torr.) Jeps.]; Granite Mts., elevation 4,050', T8N R13E S17, 22–25.V.1983, T. L. Griswold [EMUS]. NEVADA: Clark Co., Spring Mts., Lee Canyon, 10 mi W of Hwy 95, 16.VI.1982, GHN, on flowers *Fallugia paradoxa* (D. Don) Endl. ex Torr. UTAH: Washington Co., Paradise Canyon, 24.V.1983 and 30.V–4.VI.1983, D. Beck [EMUS].

Acmaeodera mixta LeConte. TEXAS: Howard Co., 7 mi W of Big Spring on Hwy 176, em. 8–12.VI.1990 ex dying branch *Prosopis glandulosa* Torr. coll. 17.VIII.1989 [USNM]; Webb Co., 10 mi S. Laredo on Hwy 83, GHN, em. 1.IX.1999 ex dead branch *P. glandulosa* coll. 26.V.1997. Adults of this species have been recorded on a wide variety of flowers (Westcott *et al.* 1979).

Acmaeodera neglecta Fall. TEXAS: Bexar Co., 0.7 mi N of Loop 1604 on Hwy 281, TCM, em. 17.V–10.VI.1998 ex dead branch *Ulmus crassifolia* Nutt. coll. 5.X.1997; Hidalgo Co., Santa Ana NWR, vic. Willow Lake, TCM, em. 11–20.VI.1998 ex dead branch *U. crassifolia* coll. 9.X.1997. The only larval host recorded previously for this species is *Quercus pungens* Liebm. (Westcott *et al.* 1979). Adults have been reported on flowers of several plants (Nelson and MacRae 1990; MacRae 1991), to which the following can be added: MISSOURI: Jefferson Co., 4.4 mi NW of Hillsboro, Valley View Glades NA, T41N R4E S30, 22.V.1993, R. S. Thoma, on flowers *Oenothera macrocarpa* Nutt. [TCMC]. TEXAS: Jeff Davis Co., Davis Mountains Resort, 4.6 mi N of Hwy 166, elevation 5,800', 19.VI.1994, TCM, on flowers *Erigeron colomexicanus* A. Nels. and *Phlox* cf. *nana* Nutt.; Davis Mountains SP, Limpia Canyon, elevation 5,050', 19.VI.1994, TCM, on flowers *Cologania angustifolia* Kunth.; same locality, W end of campground, elevation 5,150', 24.VI.1994, TCM, on flowers *Tetraneuris scaposa* (DC.) Greene; Real Co., 8.0 mi NE Camp Wood on Hwy 337, 21.V.1995, TCM, on flowers *Sida spinosa* L.; Uvalde Co., 4.5 mi N of Concan on Hwy 83, 21.V.1995, TCM, on flowers *Calylophus berlandieri* Spach ssp. *pinifolius* (Engelm. ex A. Gray) Townner.

Acmaeodera neoneglecta Fisher. TEXAS: Hidalgo Co., Santa Ana NWR, vic. Willow Lake, TCM, em. 13–23.V.1998 ex dead branch *Parkinsonia aculeata* L. coll. 9.X.1997; Zapata Co., Falcon Lake SP, along nature trail, TCM, em. 24–31.V.1998 ex dead branch *Acacia rigidula* Benth. coll. 7.X.1997. Several other larval hosts have been recorded by Westcott *et al.* (1979) and Westcott (1991). Adults were also collected on flowers of *Cologania angustifolia* Kunth. in TEXAS: Jeff Davis Co., Davis Mountains SP, Limpia Canyon, elevation 5,050', 19.VI.1994, TCM.

Acmaeodera riograndei Nelson. TEXAS: Brewster Co., Big Bend NP, Glenn

Springs Rd., 15.VII.1986, GHN, on flowers *Tiquilia greggii* (Torr. and A. Gray) A. Richardson. Adults have been recorded visiting lavender flowers of *Cirsium* sp. (Nelson 1980b).

Acmaeodera sphaeralceae Barr. **COLORADO**: Mesa Co., Colorado NM, Liberty Cap Trail, 27.V.1988, B. Kondrateiff [CSUC, GHNC]; Rabbit Valley, elevation 4,800', 12.V.1996, C. P. Slater, on *Gaillardia pinnatifida* Torr. [CSUC, GHNC]; Montezuma Co., McElmo Creek E of Battle Rock, 2.V.1992 [CSUC, RLWE].

Acmaeodera texana LeConte. **ARKANSAS**: Logan Co., Magazine Mt., 13–15.V.1994, D. G. LeDoux.

Acmaeodera tubulus (Fabricius). **MISSOURI**: Butler Co., Big Cane SF, 3.5 mi S Neelyville, T22N R5E S35, TCM, em. 7–18.IV.1999 *ex* dead branch *Carya illinoensis* (Wangenh.) K. Koch cut 23.IV.1997 and coll. 3.V.1998; same locality, TCM, em. 1–13.V.2000 *ex* trunk/branch small dead *Crataegus viridis* L. cut 23.IV.1997 and coll. 3.V.1998; St. Louis Co., Jct Orville and Shepard Rds., TCM, em. 3–31.V.1998 *ex* dead branch *Carya alba* (L.) Nutt. *ex* Ell. coll. 4.V.1997; same locality, TCM, em. 17–23.V.1998 *ex* dead branch *Juglans nigra* L. coll. 28.III.1998. Other larval hosts have been reported by Knull (1922) and Westcott *et al.* (1979). Adults have been reported on flowers of several plants (*e.g.*, Nelson and MacRae 1990; MacRae 1991), to which the following can be added: **MISSOURI**: Atchison Co., Star School Hill Prairie NA, 2.VI.1999, T. Nagel, on flowers *Penstemon grandiflorus* Nutt. [TCMC].

Acmaeodera variegata LeConte. **ARIZONA**: Greenlee Co., Apache NF, 2 mi S of Rose Peak on Hwy 191, elevation 6,700', 31.VII.1997, M. S. Arduser, on flowers *Machaerantheria bigloveii* (Gray) Greene.

Acmaeoderopsis guttifera (LeConte). **CALIFORNIA**: Amador Co., 2 mi S of Ione on Hwy 124, TCM, em. VII.1996 *ex* cerambycid-pruned branch *Quercus wislizenii* A. DC. coll. IV.1995; Fresno Co., 4 mi E of Friant Dam, Table Mt. Rd., 15.V.1993, TCM, beaten *ex* dead branch *Frangula californica* (Eschsch.) A. Gray *ssp. cuspidata* (Greene) Kartesz and Gandhi; Riverside Co., Santa Rosa Mts., 2.4 mi NE of Pinyon Flats on Hwy 74, TCM, em. VI.1995 *ex* small dead branch *Quercus dumosa* Nutt. coll. 25.V.1995. Both *Quercus* species were recorded previously as adult hosts (Nelson 1959).

Actenodes acornis (Say). **MISSOURI**: Butler Co., Big Cane SF, 3.5 mi S Neelyville, T22N R5E S35, TCM, em. 17–31.V.1999 *ex* dead 3–6" branch *Betula nigra* L. coll. 23.IV.1997; Dade Co., Stockton Lake, T33N R25W S26 (NE¼), TCM, em. 6–12.VII.1998 *ex* dead branch *Carya ovata* (P. Mill.) K. Koch coll. 12.VI.1997. This species appears to be quite polyphagous, with a variety of other larval hosts recorded by Nelson *et al.* (1981, 1996) and MacRae (1991).

Actenodes davidi Nelson. The only Missouri specimens known until now were the holotype and two paratypes collected in Jackson Co. (Nelson 1979). Additional Missouri specimens include: **MISSOURI**: St. Louis Co., Clarkson Valley, Jct Orville and Shepard Rds., TCM, em. VI.1996 *ex* fallen 1–2" diameter branch declining *Gleditsia triacanthos* L. coll. 2.VI.1996; same data except em. 30.VI–10.VIII.1997 and 23.VI–19.VII.1998 *ex* wood coll. 23.V.1997; same data except em. 5–17.VII.1999 *ex* wood coll. 18.IV.1999.

Actenodes simi Fisher. **OHIO**: Auglaize Co., Wapakoneta, 10.II.1990, J. A. Green, em. indoors [TCMC]. Fisher (1942) recorded this species from Missouri, however, no specimens were seen by MacRae (1991). Additionally, no hosts were known for this species until Westcott (1991) reported adults emerged from *Ulmus crassifolia* Nutt. The following records confirm the occurrence of *A. simi* in Missouri and document additional adult and larval hosts: **MISSOURI**: Bollinger Co., Duck Creek CA, NE corner of Pool 2, T28N R9E S32, 15.VI.1996, TCM, on slash *Quercus palustris* Muenchh.; Jefferson Co., Victoria Glades NA, 2.4 mi SE Hillsboro, T40N R5E S14,

TCM, em. 23–30.VI.1997 *ex* dead branch *Celtis tenuifolia* Nutt. coll. 28.VII.1996; Stoddard Co., Duck Creek CA, W side of Pool 2, T27N R9E S4, 15.VI.1996, TCM, on slash *Q. palustris*; Otter Slough CA, trail from W parking lot, T24N R9E S31, 16.VI.1996, TCM, on slash *Q. palustris*.

Agrilaxia flavimana Gory. TEXAS: Bexar Co., 0.7 mi N of Loop 1604 on Hwy 281, TCM, em. 22.VI–5.VII.1998 and 1–15.VII.2000 *ex* cerambycid-pruned branch *Quercus virginiana* P. Mill. coll. 5.X.1997. The only other recorded larval host for this species is *Quercus* prob. *stellata* Wangenh. (Hespenheide 1973). The following can be added to the flower hosts recorded for this species: ARIZONA: Cochise Co., Chiricahua Mts., 13.8 mi NE of Portal on Rd. 42D, 4.VIII.1998, TCM, on flowers *Sphaeralcea fendleri* A. Gray.

Agrilus (*s. str.*) *acaciae* Fisher. TEXAS: Zapata Co., Falcon SP, GHN, em. 27.VII–4.VIII.1997 *ex* *Acacia rigidula* Benth. coll. 25.V.1997; same locality, along nature trail, TCM, em. 24.V–19.VII.1998 and 14.IX–23.X.1998 *ex* dead branch *A. rigidula* coll. 7.X.1997. Previously recorded larval hosts include *Acacia farnesiana* (L.) Willd. (Fisher 1928) and *Prosopis glandulosa* Torr. (Nelson *et al.* 1981).

Agrilus (*s. str.*) *acutipennis* Mannerheim. MINNESOTA: Itasca, 27.VI.1958, H. W. Hintz [GHNC]. MISSOURI: Clay Co., 2 mi E of Missouri City, Coolie Lake, 7.VI.1998, GHN, on *Quercus macrocarpa* Michx.; Jackson Co., Burr Oak Woods NA, 25–29.V.2000, GHN, on *Q. macrocarpa*.

Agrilus (*s. str.*) *aeneocephalus* Fisher. ARIZONA: Cochise Co., Huachuca Mts., Miller Canyon, 1.9–2.5 mi W of Hwy 92, elevation 5,550–5,780', 5.VIII.1998, TCM, beaten *ex* *Mimosa grahamii* A. Gray; Huachuca Mts., Rd. 61 between Copper Canyon and Montezuma Pass, elevation 6,500', 6.VIII.1998, TCM, beaten *ex* *Mimosa dysocarpa* Benth. and *Acacia angustissima* (P. Mill.) Kuntze. *Mimosa* sp. was the only host previously recorded for this species (Nelson 1965).

Agrilus (*s. str.*) *arcuatus* (Say). ARKANSAS: Logan Co., Magazine Mt., 23–27.VI.1988, D. G. LeDoux.

Agrilus (*s. str.*) *asperulus* Waterhouse. ARIZONA: Cochise Co., Huachuca Mts., Copper Canyon, W of Montezuma Pass, 23–24.VII.1982, GHN, on young leaves *Bouvardia ternifolia* (Cav.) Schltld. [= *B. glaberrima* Engelm.]; same locality, 20.VII.1989, GHN, on sprout *Rhus virens* Lindh. *ex* A. Gray var. *choriophylla* (Woot. and Standl.) L. D. Benson; Santa Rita Mts., Amado Rd. to Mt. Hopkins, 1.VIII.1987, GHN, on *Baccharis sarothroides* A. Gray.

Agrilus (*s. str.*) *audax* Horn. MISSOURI: Jackson Co., Burr Oak Woods NA, 2.VI.2000, GHN, on *Quercus macrocarpa* Michx.

Agrilus (*s. str.*) *benjamini* Fisher. MISSOURI: Jackson Co., Burr Oak Woods NA, 5.VI.2000, GHN, on *Quercus macrocarpa* Michx.

Agrilus (*s. str.*) *bilineatus* (Weber). MISSOURI: Stoddard Co., Otter Slough CA, vic. E pkg. lot, T24N R9E S17, TCM, em. 24.V–21.VI.1998 *ex* inner stump bark large cut *Quercus lyrata* Walt. coll. 16.VIII.1997. Several *Quercus* and *Castanea* spp. are known larval hosts for this species (Chapman 1915; Fisher 1928; MacRae 1991).

Agrilus (*s. str.*) *chiricahuae* Fisher. ARIZONA: Cochise Co., Chiricahua Mts., 12.3 mi NW Portal on Rd. 42, Onion Saddle, elevation 7,600', TCM, em. 17.V–30.VI.1999 *ex* dead branch *Quercus hypoleucoides* Camus coll. 4.VIII.1998. Nelson and Westcott (1976) reported this and other plants as adult hosts, however, this appears to be the first larval host record for the species.

Agrilus (*s. str.*) *cliftoni* Knull. MISSOURI: St. Louis Co., Monsanto Company, 22–29.VI.1997, TCM, beaten *ex* *Carya cordiformis* (Wangenh.) K. Koch. This species has only been associated with *Juglans nigra* L. (Knull 1970; Wellso *et al.* 1976). Reports of puprestids at ultraviolet (UV) light are scarce, and they are generally not regarded as attracted to lights. However, over 160 adults of this species were taken at UV light in

a mature white oak forest in MISSOURI: Warren Co., Village of Innsbrook, 1.0 mi W of Hwy F, T46N R1W S7 (NW¼), 22.VI.1996, 20–27.VI.1997, 13.VI–4.VII.1998, 3–4.VII.1999, and 1.VII.2000, TCM. Most of the individuals collected (89%) were males, and their behavior on the light sheet clearly indicated attraction to the light. **NORTH CAROLINA:** Transylvania Co., Pisgah NF, Coontree Trail, 17–21.V.1999, R. R. Kula, malaise trap [TAMC, GHNC].

Agrilus (*s. str.*) *concinus* Horn. MISSOURI: Stoddard Co., Otter Slough CA, trail from W parking lot, T24N R9E S31, 5.VII.1996 and 5.VII.1997, TCM, on foliage *Hibiscus moscheutos* L. *ssp. lasiocarpus* (Cav.) O. J. Blanchard. Other than "low huckleberry" (Blatchley 1920), no hosts were recorded for this species until Nelson *et al.* (1981) recorded adults on *H. laevis* All. The above record seems to substantiate an association of this rare species with *Hibiscus*.

Agrilus (*s. str.*) *cuprescens* (Ménétriés). IOWA: Cherokee Co., 0.4 mi S of Jct Hwys 59 and 31, 6.VI.1989, M. E. Rice, tallgrass prairie; 2.5 mi NW Larabee, 16.VI.1994, M. E. Rice, tallgrass prairie; Dickinson Co., Cayler Prairie, 19.VI.1992, M. E. Rice, tallgrass prairie; Emmet Co., Anderson St. Preserve, 19.VI.1992, M. E. Rice, sweeping prairie; Webster Co., 4 mi SE of Lehigh, 11.VI.1990, M. E. Rice, on *Rosa* sp.; Jct Taylor Ave. and 240 St., 21.VI.1995, M. E. Rice, on *Phlox* sp.; all specimens [WFBM].

Agrilus (*s. str.*) *dollii* Schaeffer. TEXAS: Jackson Co., below Lake Texana dam, D. J. Heffern, em. 7–31.V.1994 *ex dead Diospyros texana* Scheele coll. 1.V.1994 [and RLWE, TCM]. Adults have been recorded on *Pithecellobium ebano* (Berl.) C. H. Muller [= *P. flexicaule* (Benth.) J.M. Coult.] (Fisher 1928), but this appears to be the first larval host record for the species.

Agrilus (*s. str.*) *egeniformis* Champlain and Knull. ARKANSAS: Logan Co., Magazine Mt., 13–15.V.1994, D. G. LeDoux. ILLINOIS: Iroquois Co., 2 mi NE of Crescent City, 12.VI.1969 [INHS].

Agrilus (*s. str.*) *fisherianus* Knull. ARIZONA: Yuma Co., 10 mi N of Yuma, Mittyry Lake, 1 mi NE of Headgate, GHN, em. 4.VI–8.VII.1984 *ex Salix gooddingii* Ball coll. 8.IV.1984. Nelson and Westcott (1976) and Nelson *et al.* (1981) recorded *Salix* sp. as adult and larval hosts.

Agrilus (*s. str.*) *frisoni* Fisher. The following represent the first records of this species in MEXICO: CHIHUAHUA: 12.2 km W of Concho, 23.VII.1982, A. J. Gilbert. PUEBLA: 23 km NW of Acatlan, Hwy 190, 4.VIII.1965, on *Acacia* sp., GHN. SINALOA: 8.5 km SW of Soquitlan, 30.VI.1982. SONORA: 20.8 km SE of Alamos, 30.X.1972, K. Stephan. TAMAULIPAS: Bocatoma, 7 km SSE of Gomez Farias, 23–30.III.1978, E. G. Riley; all specimens [GHNC].

Agrilus (*s. str.*) *fulgens* LeConte. ARKANSAS: Logan Co., Magazine Mt., 23–27.VI.1988, D. G. LeDoux [and TCMC].

Agrilus (*s. str.*) *geminatus* (Say). FLORIDA: Hernando Co., Croom WMA, Croom Ritual Rd., 1.IV.1995, R. Morris [and RLWE]. Several *Quercus* species have been recorded as larval hosts for this species (Knull 1930; Hesperheide 1973), to which the following can be added: MISSOURI: Stoddard Co., Otter Slough CA, trail from W pkg. lot, T24N R9E S17, TCM, em. V–VI.1997 *ex dead* 2" diameter trunk *Quercus phellos* L. coll. 16.VI.1996.

Agrilus (*s. str.*) *gibbicollis* Fall. COLORADO: Fremont Co., nr. Royal Gorge Park, 11.VII.1995, E. G. Riley [and GHNC].

Agrilus (*s. str.*) *lacustris* LeConte. Although known from Texas, this species was not included in a recent inventory of Big Bend insects (Van Pelt 1999). The following record confirms its occurrence there: TEXAS: Brewster Co., Big Bend NP, 8.3 mi S Hwy 118 on Hwy 15 at Sotol Vista, elevation 4,480', 22.VI.1994, TCM, on *Croton pottsii* (Klotzsch) Muell.-Arg. This species has been recorded on several other species of *Croton* (Fisher 1928; Nelson 1994).

Agrilus (*s. str.*) *lantuellus* Fisher. TEXAS: Bexar Co., NW edge of San Antonio, D. J. Heffern, em. V.1992 ex *Diospyros texana* Scheele coll. 23.II.1992 [and TCMC]. This plant was recorded as an adult host by Knull (1966).

Agrilus (*s. str.*) *lecontei celticola* Fisher. TEXAS: Jeff Davis Co., Davis Mountains SP, Limpia Canyon, elevation 5,050', TCM, em. VI.1996 ex small dead branch *Celtis laevigata* Willd. var. *reticulata* (Torr.) L. D. Benson coll. VI.1994. Other larval hosts include *C. laevigata* Willd. (Fisher 1928) and *Havardia pallens* (Benth.) Britt. and Rose (Nelson *et al.* 1981).

Agrilus (*s. str.*) *lecontei lecontei* Saunders. MISSOURI: Jasper Co., 2.0 mi NW of Carthage, T29N R31W S30, TCM, em. 24–31.V.1998 ex dead branch *Celtis tenuifolia* Nutt. coll. 13.VI.1997; Jefferson Co., Victoria Glades NA, 2.4 mi SE of Hillsboro, T40N R5E S14, TCM, em. 1–7.VI.1998 ex dead branch *C. tenuifolia* coll. 28.VIII.1996. Other *Celtis* species are known larval hosts (Knull 1920; Hespeneide 1973).

Agrilus (*s. str.*) *mimosae* Fisher. ARIZONA: Cochise Co., Huachuca Mts., Miller Canyon 1.9–2.5 mi W of Hwy 92, elevation 5,550–5,780', 5.VIII.1998, TCM, beaten ex *Mimosa grahamii* A. Gray. This species has also been collected on *Mimosa borealis* A. Gray (Fisher 1928) and *Acacia greggii* A. Gray (Knull 1970).

Agrilus (*s. str.*) *oblongus* Fisher. ARKANSAS: Logan Co., Magazine Mt., 22–26.VI.1993, D. G. LeDoux [and TCMC].

Agrilus (*s. str.*) *obolinus* LeConte. This species was not included in a checklist of Missouri buprestids (MacRae 1991). The following record establishes its occurrence in the state and represents an eastern extension of its recorded geographical distribution: MISSOURI: Boone Co., 3 mi S of McBaine, Katy Trail, 3.VII.1991, R. S. Gagne [TCMC]. "Net-veined hackberry" (Nelson *et al.* 1981) is the only host recorded for this species. The following record confirms this association: TEXAS: Jeff Davis Co., Davis Mts. SP, Limpia Canyon, elevation 5,050', 17.VI.1994, TCM, beaten ex dead branch *Celtis laevigata* Willd. var. *reticulata* (Torr.) L. D. Benson.

Agrilus (*s. str.*) *obscurilineatus* Vogt. TEXAS: Brewster Co., Big Bend NP, Chisos Mts. Basin, 24.VII.1998, GHN, on *Juniperus flaccida* Schldtl.

Agrilus (*s. str.*) *obsoletoguttatus* Gory. MISSOURI: Camden Co., Village of the Four Seasons, 3.5 mi W of Business 54 on Hwy HH, TCM, em. 10–31.V.1997 ex dead branch *Quercus prinoides* Willd. coll. 10.V.1997. This polyphagous species has been reared from a variety of hardwoods, especially *Quercus* spp. (Knull 1920; MacRae 1991).

Agrilus (*s. str.*) *pensus* Horn. This species was not included in a checklist of Missouri buprestids (MacRae 1991). The following record establishes its occurrence in the state and represents a significant southwestern extension of its recorded geographical distribution: MISSOURI: Butler Co., Big Cane CA, 3.5 mi S of Neelyville, T22N R5E S35, TCM, em. 1–16.VII.1997 ex fallen dead branch *Betula nigra* L. coll. 23.IV.1997.

Agrilus (*s. str.*) *prospodidis* Fisher. TEXAS: Cameron Co., 2 mi E of Sabal Palm Grove, D. J. Heffern, em. IV.1992 ex *Leucaena pulverulenta* (Schldtl.) Benth. coll. X.1991 [and TCMC]; Hidalgo Co., Bentsen-Rio Grande SP, along Rio Grande River Trail, TCM, em. 1–10.VII.1998 ex dead branch *Celtis pallida* Torr. coll. 8.X.1997; Santa Ana NWR, vic. Willow Lake, TCM, em. 6–12.VI.1998 ex dead branch *Parkinsonia aculeata* L. coll. 9.X.1997. A variety of other plants, mostly in the Fabaceae, have been recorded as larval hosts for this species (Fisher 1928; Nelson *et al.* 1981; Nelson 1987).

Agrilus (*s. str.*) *pubescens* Fisher. NEBRASKA: Buffalo Co., S Loop Rd., Hwy 283, Milton Store, 25.VI.1998, B. Kondratieff and S. Fitzgerald [CSUC]. This species was previously known only from Arizona and Texas (Fisher 1928).

Agrilus (*s. str.*) *pubifrons* Fisher. Nelson *et al.* (1996:185) described the male of this species, however, the name “*A. pubiventris*” was erroneously used in the caption to the figure illustrating the male genitalia. Instead, the illustration refers to *A. pubifrons*.

Agrilus (*s. str.*) *ventralis* Horn. **NEBRASKA**: Dundy Co., 5 mi NE of Haigler, 16.V.2000, Bonta-Wells [GHNC].

Agrilus (*Engyaulus*) *hespenheidei* Nelson. Adults of this species were recorded from *Prosopis glandulosa* Torr. and *Quercus havardii* Rydb. by Nelson and Westcott (1991). They have also been taken sitting on or flying to dead sand bluestem, *Andropogon hallii* Hack. [= *A. gerardii* Vitman var. *paucipilus* (Nash) Fernald], in NEW MEXICO: Chaves Co., 37 mi E of Roswell, Hwy 380, Mescalero Sands NA, 15–28.VII.1995 and 18.VII.1998, GHN.

Anthaxia (*Haplantaxia*) *cyanella* Gory. Nelson and MacRae (1990) and MacRae (1991) recorded *Vitis* as a larval host for this species, however, the specimens upon which these records are based are females of *A. dichroa* Bílý (see below). The adult hosts therein listed correctly refer to *A. cyanella*, which has been reared from *Cercis canadensis* L. (Hespenheide 1973) and *Amelanchier arborea* (F. Michx.) Fernald (Nelson *et al.* 1981).

Anthaxia (*Haplantaxia*) *dichroa* Bílý. This species was recently described from Florida, Louisiana and South Carolina (Bílý 1991). The following records indicate a much broader geographical distribution and record the first known host association for this species: **KANSAS**: Woodson Co., 3 mi SE of Piqua, D. J. Heffern, em. IV.1997 *ex* dead vine *Vitis* sp. coll. XII.1996 [and TCMC]. **MISSOURI**: St. Louis Co., 1-270 Rest Stop nr. Chain of Rocks Park, TCM, em. 25.VI.1990 *ex* dead vine *Vitis* sp. coll. 25.V.1988 [previously recorded as *A. cyanella* (Nelson and MacRae 1990)]; Chesterfield Village, Monsanto Company, TCM, em. 1–21.VI.1998 and 1–30.VI.1999 *ex* dead vine *Vitis* sp. coll. 4.V.1998 [and GHNC]; Stoddard Co., Holly Ridge CA and NA, nr. church and cemetery, T25N R11E S6 (NW¼), TCM, em. 1–20.VI.2000 *ex* dead vine *Vitis* sp. coll. 18.III.2000.

Females of this species exhibit much more chromatic variability than indicated by Bílý (1991). Of 41 females reared from *Vitis* at Chesterfield Village, only 15 are “blue,” ranging from dark aqua to dark violaceous-blue dorsally and with the pronotal disc blue-black. The remaining 26 females are dark brassy-cupreous, sometimes exhibiting more or less distinct greenish reflections on the upper frons, inner ocular margins, apical margin and posteriolateral corners of the pronotum, and elytra around the scutellum extending more or less posteriorly along the elytral disc. All 12 of the Holly Ridge females are of the copper type. All males from both series (41 from Chesterfield Village, 23 from Holly Ridge) are bright green and vary primarily in the intensity of bronzing on the pronotal disc and elytral margins, which ranges from trace to distinct.

Bílý (1991) distinguished females of this species from those of *A. cyanella* Gory and *A. quercicola* Wellso by their relatively longer elytra, however, this character was found to be unreliable in the series available for examination. The more distinct circular impression on the lower frons of *A. dichroa* distinguishes blue females of this species from those of *A. cyanella*, while the distinctly bicolorous frons distinguishes *A. quercicola* females. Copper females of *A. dichroa* are more distinct but might be confused with *A. fisheri* Obenberger, which is darker purple-black and often exhibits greenish reflections on the lower frons, or *A. quercata* (Fab.), which is darker cupreous and usually exhibits markedly bicolorous elytra.

Aphanisticus cochinchinae seminulum Obenberger. This Indomalayan species was introduced in Hawaii and reported as a pest on sugarcane (Chang and Ota 1984). It was later found in North America near Brownsville, Texas (Wellso and Jackman 1995), and Peck and Thomas (1998) reported it mining leaves of *Tripsacum dactyloides* (L.) L. (Poaceae) in Florida. The following records indicate that it has also spread or been

introduced into Central America: **HONDURAS**: Francisco Morazan Dept., El Zamorano, 850 m, 19.VII.1996, R. D. Cave [EAPZ]. **PANAMA**: Panama Prov., Fort Kobbe, 22.V.1993, F. Andrews and A. Gilbert [CDAE]. High populations of this species were found feeding on foliage of *Paspalum lividum* Trin. growing in a roadside ditch in **TEXAS**: Cameron Co., Hwy 4 nr. Palmito Hill, 18.V.1995, TCM. *Cyperus articulatus* L. (Cyperaceae) was also abundant in the ditch, however, no adults were associated with that plant.

Brachys aerosus Melsheimer. **ALABAMA**: Hale Co., Payne Lake, 7.IV.1954, B. D. Valentine [GHNC]; Tuscaloosa, 30.IV.1952, B. D. Valentine, on *Rubus* sp. [GHNC].

Buprestis (*s. str.*) *parmaculativentris* Knull. **TEXAS**: Brewster Co., Big Bend NP, Chisos Mts., Oak Canyon, along Window Trail, elevation 5,400', 21.VI.1994, TCM, cut dead *ex* trunk fallen *Pinus cembroides* Zucc. This plant was previously recorded as an adult host (Nelson 1980a).

Buprestis (*Knuliobuprestis*) *rufipes* (Olivier). **MISSOURI**: Bollinger Co., Duck Creek CA, NE corner of Pool 2, T28N R9E S32, TCM, em. 1–31.VII.1997 *ex* 6–8" diameter lower trunk standing dead *Ulmus rubra* Muhl. coll. 14.IX.1996 [and GHNC]; same locality, TCM, em. 22.VI–19.VII.1998, 21.VI–17.VII.1999, and 21–15.VII.2000 *ex* 12–14" diameter lower trunk standing dead *U. rubra* coll. 4.VII.1997; Ste. Genevieve Co., Magnolia Hollow CA, T38N R8E S3, TCM and R. S. Thoma, cut 27.V.2000 and em. 28.V–11.VI.2000 *ex* 2' diameter lower trunk fallen *Acer saccharum* L. coll. 27.V.2000. In each case, the wood was in early stages of decay with the bark partly sloughed and the outer wood layer slightly softened. Knull (1925) recorded this species breeding in a variety of other hardwoods.

Chrysobothris analis LeConte. A variety of larval hosts have been recorded for this species (Vogt 1949; Manley 1977; Nelson *et al.* 1981, 1996), to which the following can be added: **TEXAS**: Bexar Co., 2.5 mi SE of Loop 1604 on Hwy 151, TCM, em. 22–29.VI.1998 *ex* dying branch *Rhus virens* Lindh. *ex* A. Gray coll. 5.X.1997; Zapata Co., Falcon Lake SP, along nature trail, TCM, em. 24.VIII–13.IX.1998 *ex* dead branch *Acacia rigidula* Benth. coll. 7.X.1997.

Chrysobothris azurea LeConte. **COLORADO**: Larimer Co., Fort Collins, Grandview Canyon, V.1999, D. Leatherman, on sumac [CSUC]. A variety of plants have been associated with this species as adult or larval hosts (Barr 1971; MacRae 1991), to which the following can be added: **MISSOURI**: Butler Co., Big Cane CA, 3.5 mi S of Neelyville, T22N R5E S35, TCM, em. 3–23.V.1998 *ex* trunk/branch small dead *Crataegus viridis* L. cut 23.IV.1997 and coll. 3.V.1998; same locality, TCM, 3.V.1998, on dead *Carya illinoensis* (Wangenh.) K. Koch.

Chrysobothris barri Westcott. This species has been recorded from Nevada and the Panamint, San Gabriel and Santa Rosa Mts. in California (Westcott 1971; Barr and Westcott 1976). The following record represents a western extension of its known geographical distribution: **CALIFORNIA**: Ventura Co., San Rafael Mts., 16 mi E of Hwy 33 on Lockwood Valley Rd., TCM, em. VII–VIII.1993 and V.1994 *ex* dead branch *Pinus monophylla* Torr. and Frém. coll. 20.VI.1992.

Chrysobothris basalis LeConte. **TEXAS**: Zapata Co., Falcon Lake SP, vic. park office, TCM, em. 1–10.VIII.1998 *ex* dead branch *Acacia rigidula* Benth. coll. 7.X.1997. Adults of this species have been coll. on *A. farnesiana* and several other fabaceous plants (Nelson 1975).

Chrysobothris bimarginicollis Schaeffer. **NEW MEXICO** [record previously cited as *C. fiskei* Fisher from Colorado (Nelson *et al.* 1996)]. **TEXAS**: Jeff Davis Co., Davis Mts., 28.VI–2.VII.1986, R. A. Andrew [TCMC]. This species was previously known only from Arizona (Schaeffer 1905).

Chrysobothris chlorocephala Gory. **MISSOURI**: Butler Co., Coon Island CA, T22N R7E S19 (NW¼), TCM, em. 22–29.VI.1998 *ex* fallen dead branch *Betula nigra* L.

coll. 31.VIII.1997. *Vitis* sp. has also been recorded as a larval host for this species (Nelson *et al.* 1981).

Chrysobothris dentipes (Germar). **ARKANSAS**: Logan Co., Magazine Mt., 23–27.VI.1988, D. G. LeDoux.

Chrysobothris fiskei Fisher. This species was erroneously recorded from Colorado by Nelson *et al.* (1996:187). The specimens are actually variants of *C. bimarginicollis* Schaeffer, and the state should have been New Mexico (see above). The Oklahoma record for *C. fiskei* therein listed is correct.

Chrysobothris mali Horn. **NORTH DAKOTA**: Slope Co., Burn[ing] Coal Vein, 12.VII.1965 [NDSU]. **WYOMING**: Platte Co., 23.VI.1981, F. A. Lawson [GHNC].

Chrysobothris octocola LeConte. **CALIFORNIA**: San Bernardino Co., 38 mi E of Barstow, Afton Canyon Campground off I-15, GHN, em. 3.VII.1995 *ex Salix* sp.

Chrysobothris piuta Wickham. **CALIFORNIA**: Riverside Co., Santa Rosa Mts., 13.1 mi S of Palm Desert on Hwy 74, 2.4 mi NE of Pinyon Flats, TCM, em. VI–VIII.1995 and VII–VIII.1996 *ex* dead branch *Cercocarpus montanus* Raf. **var. glaber** (S. Watson) F. L. Martin coll. 25.V.1995. This and other species of *Cercocarpus* have been recorded as adult hosts for this species (Walters 1975; Barr and Westcott 1976).

Chrysobothris purpureovittata Horn. **MISSOURI**: Butler Co., Big Cane CA, 3.5 mi S of Neelyville, T22N R5E S35, TCM, em. 24–31.VII.1997 *ex* trunk/branch small dead *Crataegus viridis* L. cut 23.IV.1997 and coll. 3.V.1998; Camden Co., Village of the Four Seasons, 3.5 mi W of Business 54 on Hwy HH, TCM, em. 15.VI–5.VII.1998 *ex* dead branch *Carya* sp. coll. 10.V.1998. **TEXAS**: Bexar Co., 2.5 mi SE of Loop 1604 on Hwy 151, TCM, em. 20–31.VII.1998 *ex* dying branch *Rhus virens* Lindh. *ex* A. Gray coll. 5.X.1997; Hidalgo Co., Santa Ana NWR, vic. Willow Lake, TCM, em. 18.VII–13.IX.1998 *ex* dead branch *Ulmus crassifolia* Nutt. coll. 8.X.1997. This polyphagous species has been associated with a variety of adult and larval hosts (Fisher 1942; Vogt 1949; Nelson and Westcott 1976; Nelson *et al.* 1981; MacRae 1991).

Chrysobothris rossi Van Dyke. **TEXAS**: Zapata Co., Falcon SP, GHN, em. 6.VIII.1997 *ex Pithecellobium ebano* (Berl.) C. H. Muller coll. 25.V.1997. This species has also been reared from *Prosopis glandulosa* Torr. (Fisher 1942).

Chrysobothris rotundicollis Gory and Laporte. **KANSAS**: Finney Co., Garden City, 18.VI.1997, GHN, on *Tamarix* sp.

Chrysobothris semisculpta LeConte. **CALIFORNIA**: El Dorado Co., vic. Ice House Lake, TCM, em. 6.VI.1992 *ex* 3–5" diameter trunk dead *Calocedrus decurrens* (Torr.) Florin coll. 4.V.1992. **NEVADA**: Mineral Co., Hwy 359 at Anchorite Pass, elevation 7,626', TCM, em. 23.VI–31.VII.1997 *ex* dead branch *Pinus monophylla* Torr. and Frém. coll. 17.IX.1995. This species has been associated with several *Pinus* species (Fisher 1942; Barr 1971) and has been reared from *Pseudotsuga menziesii* (Mirbel) Franco (Nelson *et al.* 1981) and *Pinus sabiniana* Dougl. *ex* Dougl. (Nelson 1987).

Chrysobothris sexsignata (Say). **NORTH DAKOTA**: Ransom Co., 14.VII.1961 [WFBM]. A variety of larval hosts have been recorded for this polyphagous species (Fisher 1942; Hespeneheide 1973), to which the following can be added: **MISSOURI**: Butler Co., Big Cane CA, 3.5 mi S of Neelyville, T22N R5E S35, TCM, em. 3–23.V.1998 *ex* trunk/branch small dead *Crataegus viridis* L. cut 23.IV.1997 and coll. 3.V.1998, Jasper Co., 2.0 mi NW Carthage, T29N R31W S30, TCM, em. 1–10.VI.1999 *ex* dead branch *Celtis tenuifolia* Nutt. coll. 13.VI.1997; St. Louis Co., Chesterfield Village, Monsanto Company, TCM, em. 11–20.VI.1999 *ex* dead branch *Acer saccharum* L. coll. 1.V.1999; same locality, TCM, em. 1–16.V.1999 *ex* dead branch *Celtis occidentalis* L. coll. 1.V.1999; Stoddard Co., Otter Slough CA, vic. area office, T24N R9E S17, TCM, em. 24–31.V.1998 *ex* dead branch *Diospyros virginiana* L. coll. 16.VIII.1997; Taney Co., Henning CA, White River Balds NA, T23N R22W S27 (NW¼), TCM, em. 1–10.VI.1999 *ex* dead vine *Vitis* sp. coll. 10.IV.1999.

Chrysophana placida LeConte. **SOUTH DAKOTA:** Fall River Co., 5 mi NE of Edgemont, Gull Ranch, 8.VI.1978, D. G. LeDoux.

Dicerca (s. str.) *asperata* (Laporte and Gory). The following represents the first record of this species in **CANADA:** QUEBEC: Luskville Falls, 8.IX.1973, B. D. Valentine [GHNC].

Dicerca (*Argante*) *punctulata* Schönherr. This species was not included in a checklist of Missouri buprestids (MacRae 1991), however, the following record establishes its occurrence in the state: **MISSOURI:** Iron Co., 22.IV.1971, R. D. Gass [TCMC].

Hippomelas sphenicus (LeConte). Adults of this species have been collected on *Prosopis* and a variety of other fabaceous shrubs/trees (Vogt 1949; Linsley and Ross 1977). Larval habits, however, remain unknown for this or any other species in the genus (*sensu* Nelson and Bellamy 1996). The following represents a new adult and potential larval host for this species: **ARIZONA:** Cochise Co., Chiricahua Mts. foothills, 3.0 mi SE of Portal on Rd. 42, elevation 4,190', 9.VIII.1998, TCM, female ovipositing on terminal stem of living *Ephedra trifurca* Torr. ex S. Watson. Vogt (1949) also reported this species ovipositing on mesquite branch.

Mastogenius castlei Champlain and Knull. **FLORIDA:** Collier Co., Collier-Seminole SP, vic. boat ramp, 30.I.1998, TCM, beaten *ex* dead branch *Laguncularia racemosa* (L.) Gaertn. Westcott (1990) recorded the first adult (*Conocarpus erectus* L.) and larval hosts (*Tamarindus indica* L.) for this species.

Pachyschelus laevigatus (Say). **MISSISSIPPI:** Hinds Co., Clinton, 12.V.1957, B. and B. Valentine [GHNC].

Pachyschelus purpureus purpureus (Say). **ARKANSAS:** Logan Co., Magazine Mt., 13–15.V.1994, D. G. LeDoux [and TCMC].

Phaenops aeneola Melshemer. **MISSOURI:** Carter Co., Peck Ranch CA, Stegall Mt. NA, vic. fire tower, T28N R2W S19, 11.VII.1999, TCM, beaten *ex* fire-scorched lower branch *Pinus echinata* P. Mill. Dearborn and Donahue (1993) recorded *Pinus resinosa* Soland. as a larval host.

Phaenops piniedulis (Burke). **CALIFORNIA:** Mono Co., 2.3 mi W of Benton Hot Springs on Hwy 120, elevation 6,100', TCM, em. VI.1995 and IX.1995 *ex* dead branch/lower trunk of *Pinus monophylla* Torr. and Frém. coll. 3.IX.1994. Adults of this species have been observed ovipositing on this plant (Nelson 1962; Walters 1975), but it is more often associated with *Pinus edulis* Engelm. (Burke 1908; Knull 1974).

Polycesta (*Jamaiquesia*) *cyanipes* (Fabricius). **DOMINICAN REPUBLIC:** Pedemales Region, X.1997, C. R. Brown, coastal scrub [TCMC]. This species was previously known only from Jamaica (Fisher 1925).

Polycesta (*Tularenisia*) *cazieri* Barr. **CALIFORNIA:** San Bernardino Co., San Gabriel Mts., 7 mi ESE of Wrightwood on Lone Pine Canyon Rd., 2.VII.1993, TCM, beaten *ex* dead branch *Cercocarpus montanus* Raf. var. *glaber* (S. Watson) F. L. Martin. The only known larval host for this species is another rosaceous plant, *Adenostoma fasciculatum* Hook. and Arn. (Westcott 1991). Adults have been recorded on *Chaenactis artemisifolia* (Harvey and A. Gray ex A. Gray) A. Gray (Barr 1949) and dead *Ceanothus greggii* A. Gray var. *perplexans* (Trel.) Jepson (Nelson 1959).

Polycesta (*Tularenisia*) *elata* LeConte. **LOUISIANA:** Catahoula Par., Sicily Island Hills WMA, 28.IV.1984, C. B. Barr. Chamberlin (1926) recorded a variety of hardwoods as larval hosts, however, Barr (1949) questioned their authenticity. The following records appear to confirm the polyphagous nature of this species: **TEXAS:** Uvalde Co., Garner SP, Hwy 1050 at Frio River, TCM, em. 21–31.V.1995, 1–30.VI.1996, 23–30.VI.1997, and 15–21.VI.1998 *ex* 7–8" diameter lower trunk standing, dead *Platanus occidentalis* L. coll. 21.V.1995; Val Verde Co., Hwy 90 at Pecos River, D. J. Heffern, em. 29.IV.1994 *ex* main branch *Fraxinus greggii* A. Gray coll. V.1992 [and TCMC]. In both cases, the wood was dry and very sound.

Sphaerobothris (*s. str.*) *platti* (Cazier). Bellamy and Volkovitch (1997) recently transferred this species and *S. ulkei* (LeConte) from the genus *Chrysobothris* Eschscholtz. *Sphaerobothris platti* has previously been recorded from southern California and southern Nevada. The following record represents a significant northern range extension for this species: CALIFORNIA: Mono Co., 2.3 mi W of Benton Hot Springs on Hwy 120, elevation 6,100', 20.VIII.1995, TCM, adult female cut dead *ex* main root living *Ephedra nevadensis* S. Watson. Two males were also collected on terminal stems of the same host. This locality is approximately 200 miles NW of the nearest previously known locality in southern Nevada (Barr 1969). The 2 males resemble those from San Diego Co., California (dark cupreus with greenish tint to the head, pronotum, and legs), however, the bright cyaneous coloration of the female differs from the flat green coloration exhibited by females from southern California. Adults are commonly associated with *Ephedra* species (Barr 1969), however, this is apparently the first record confirming a larval host for this species.

Sphaerobothris (*s. str.*) *ulkei* (LeConte). ARIZONA: Cochise Co., 5.3 mi SE of Portal on Rd. 42, elevation 3,990', 8.VIII.1998, TCM, cut dead *ex* main root living *Ephedra trifurca* Torr. *ex* S. Watson. Despite the large numbers of adults that have been collected on this plant over the years, this is apparently the first record confirming it as a larval host.

Taphrocerus howardi Obenberger. ARKANSAS: Logan Co., Magazine Mt., 23–27.VI.1988, D. G. LeDoux. Large numbers of adults of this species were swept from stands of *Fimbristylis puberula* (Michx.) Vahl *var. puberula* growing in dolomitic glades in MISSOURI: Jefferson Co., Valley View Glades NA, 4.4 mi NW of Hillsboro on Hwy B, T41N R4E S30, 2.VI–28.VII.1996, TCM. This cyperaceous plant is the first recorded potential host for this species.

Taphrocerus nicolayi Obenberger. MISSOURI: Carter Co., Peck Ranch CA, along Mill Creek, T27N R2W S5, 4.VI.1999, TCM, feeding on leaf margin of *Carex emoryi* Dewey; Stoddard Co., Otter Slough CA, trail from W pkg. lot, T24N R9E S17, 20.IX.1998, TCM, feeding on leaf margin of *Carex hyalinolepis* Steud.; Warren Co., Village of Innsbrook, 1.0 mi W of Hwy F, T46N R1W S7 (NE ¼), 24.V.1998, TCM, feeding on leaf margin of *Carex vulpinoidea* Michx. These represent the first specific adult host records for this species, all in the Cyperaceae.

Taphrocerus cylindricollis Kerremans. No hosts have been recorded for this uncommon species, however, an adult was swept from a stand of an undetermined cyperaceous plant growing on an igneous glade in MISSOURI: Carter Co., Peck Ranch CA, Stegall Mt. NA, vic. fire tower, T28N R2W S19, 5.VI.1999, TCM.

Taphrocerus schaefferi Nicolay and Weisse. NEW YORK: Fisher's Island, 7.IX.1976, L. E. Watrous, sweeping. Story *et al.* (1979) described the biology of this species on *Cyperus esculentus* L., and the following represents another potential host: MISSOURI: Warren Co., Village of Innsbrook, 1.0 mi W of Hwy F, T46N R1W S7 (NE ¼), 24.V.1998, TCM, feeding on leaf margin of *Carex vulpinoidea* Michx.

Xenorhipis brendeli LeConte. MISSOURI: Butler Co., Big Cane CA, 3.5 mi S of Neelyville, T22N R5E S35, TCM, em. 24–31.VII.1997 *ex* fallen dead branch *Betula nigra* L. coll. 23.IV.1997; St. Louis Co., Clarkson Valley, Jct Orville and Shepard Rds., TCM, em. 17–31.VII.1997 *ex* fallen dead branch *Carya ovata* (P. Mill) K. Koch coll. 24.V.1997. This uncommon species has been recorded breeding in *Carya illinoensis* (Wangenh.) K. Koch (Wellso 1966; MacRae 1991).

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