The Longhorned Beetles (Coleoptera: Cerambycidae) of Tennessee: Distribution of Species, Seasonal Adult Activity, and New State Records

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The longhorned beetles (Coleoptera: Cerambycidae) of Tennessee: distribution of species, seasonal adult activity, and new state records

William E. Klingeman¹,*, Nadeer N. Youssef², Jason B. Oliver², and Joshua P. Basham²

Abstract

Efforts to document species of longhorned beetles (Coleoptera: Cerambycidae) occurring in Tennessee have not been updated since 1973. To address this knowledge gap, institutional, research, and private collections in Tennessee were reviewed to provide faunal distribution assessments and seasonal activity data for the cerambycid beetle species active in Tennessee. Examinations of 9,918 specimens and records yielded a list of 230 cerambycid beetle species within 5 subfamilies. Twenty-seven species are reported as new state records from Tennessee. Adult seasonal activity data that were recorded on specimen labels are presented. Where available, notes on collection method, adult resources, and larval host plants are provided for species within a supplementary table. Supplemental figures report the distribution for species collected across the state and from 85 of the 95 Tennessee counties, as well as the ecoregions from which each species is reported. The bias-corrected Chao1 species richness estimator predicts another 11 species remain to be identified across the state. Future collection efforts in the Central Appalachian, Mississippi Alluvial and Valley Loess Plains, Southeastern Plains, and western portions of the Interior Plateau ecoregions could yield additional new state records. Developmental host and adult resource plants, collection methods, as well as regional collection notes from adjacent states are discussed for several additional candidate longhorned beetle species.

Key Words: adult resource; Chao1 estimator; ecoregion; intrastate distribution; larval host plant; range map

Although the longhorned beetle fauna (Coleoptera: Cerambycidae) is relatively well known across North America, recent efforts have documented substantial increases in longhorned beetle diversity and distribution in Montana (Hart et al. 2013), Nebraska (Spomer 2014), Mississippi (Schiefer 1998, 2001), and Alabama (Holt 2013). Knowledge about the distribution of cerambycid beetles across Tennessee remains limited, and documentation of reporting has been sporadic.

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the University of Memphis Library System (G. P. Barton, personal communication). A portion of Jamerson’s specimens have been relocated and integrated into the University of Georgia Collection of Arthropods [UGCA], along with the remainder of the Memphis State University entomology collection. Other collections examined or acknowledged by Jamerson, including specimens from Vanderbilt University, are no longer available or much diminished by damage (e.g., from dermestid beetles and rough handling).

Regardless, since Jamerson’s project, considerable monitoring efforts for woodboring beetles have been undertaken across portions of Tennessee. Although recent efforts have been focused on metallic woodboring beetles, bark beetles, and other species of economic interest (Oliver & Mannion 2001; Oliver et al. 2002, 2004; Hansen et al. 2012, 2015; Klingeman et al. 2015), extended-season trapping in the region has yielded many longhorned beetle specimens.

To address existing knowledge gaps, cerambycid specimens were examined at institutional research and teaching collections, museums, and personal collections to assemble available label data and to determine species occurrence and distribution across Tennessee. Label data were examined to inform about seasonal flight activity of adult longhorned beetles and to document, when recorded, the various methods used to collect specimens. When present, relevant notes about adult resources and larval hosts listed for species were compiled.

Documenting the extant cerambycid fauna in Tennessee will elucidate the range of distribution among species and is expected to highlight gaps in collection activity across Tennessee’s ecoregions (Fig. 1). Collection data are important for many reasons, including documentation of species diversity, use in assessing environmental and economic impacts of habitat and host plant loss, and monitoring incursion and spread of invasive species. The current specimen summarization effort will update past work to document longhorned beetle species diversity and will help direct future field collection activities.

Supplementary material for this article in Florida Entomologist 100(2) (Jun 2017) is online at http://purl.fcla.edu/fcla/entomologist/browse. Therefore, the supplementary table is referred to in this article as Suppl. Table 3, and all distributional maps for species are displayed online in supplementary figures (Suppl. Figs. 2–231). Fig. 1 is displayed in color in the online version of the journal.

Materials and Methods

Longhorned beetle specimens were identified using descriptive keys (e.g., Yanega 1996; Lingafelter 2007), and data compiled within this report are derived from these individuals and from examinations of specimens and data from institutional and private collections. Many beetles were also collected in conjunction with a series of season-long experimental trials conducted by Tennessee State University affiliated authors and cooperators. A majority of extended seasonal collections that informed this study were made in regions of middle or eastern Tennessee at about weekly intervals from 1 Apr to 28 Aug 2001; 6 Apr to 7 Oct 2002; 5 May to 2 Sep 2003; 12 Apr to 9 Aug 2004; 2 May to 15 Aug 2005; 2 May to 15 Aug 2006; 5 Jun to 21 Jul 2009; 8 Jun to 5 Aug 2010; 17 Jun to 18 Aug 2011; 9 Apr to 10 Sep 2012; and 11 May to 10 Sep 2013.

Specimens were examined in collection depositories [brackets] (Evenhuis 2016, or as acknowledged) at the University of Tennessee Entomology and Plant Pathology Insect Museum [ECUT] and the Great Smoky Mountains National Park [GSNP]. Both collections included results of tree sampling done at multiple times across 2 or...
more seasons from targeted tree species, for example, tulip poplar (Liriodendron tulipifera L.; Magnoliaceae: Magnoliaceae) (LaForest et al. 2000), northern red oak (Quercus rubra L.; Fagales: Fagaceae) (Trieff 2002), southern magnolia (Magnolia grandiflora L.; Magnoliaceae: Magnoliaceae) (Werle 2002), and eastern hemlock (Tsuga canadensis [L.] Carriè`re; Pinales: Pinaceae) (Buck 2004).

Additional collections and published records of collections with Tennessee specimen data that were evaluated and integrated into this report include: [CMNH], [CSCA], [CUAC], [CUIC], [ECUT], [EDNC], [GSNP], [FSCA], [LSAM], [MCPPM], [MEM], [PERC], [TSSR], [UGCA], [UMMZ], and [UTC]. [UGCA] also recently had acquired and made available the arthropod collection previously maintained at the Memphis State University (now, University of Memphis). Prionini examined at [MEM] included Tennessee specimens on loan from [AMNH], [CMNH], [CNC], [CSUC], [FSCA], [MCZ], [MSUC], [NYSM], [RAAC], [SCUC], [SEMC], [TAMU], [UAAM], [UDCC], [UKIC], [USNM], and [WIRC] (Evenhuis 2016). Records of observed specimens and published accounts from additional institutional and personal collections that were incorporated included those of: CNCT = Carson–Newman Teaching Collection, DCHS = Davy Crockett High School (Jonesborough, Tennessee), ETSU = East Tennessee State University (Johnson City, Tennessee), FSGA = Forest Service (Dr. Daniel Miller, Athens, Georgia), JMB = Jason M. Basham, JPBC = Joshua P. Basham, JHGC = Jeffrey P. Huether, NEAC= Nashville El-lington Agriculture Collection, NNYC = Nadeer N. Youssef, TTUC = Tennessee Technological University, WEKC = William E. Klingeman, and WPNC = Warner Parks Nature Center.

Other records that included seasonal activity and county occurrence data were retrieved from published reports (Meyer 1937; Dillon & Dillon 1941, 1947; Linsey 1962a,b, 1963, 1964; Dillon 1956a,b,c; Linsey & Chemsak 1972, 1976, 1984, 1995; TCEIR 1972; McCauley & Eanes 1987; MacRae 2000; Gryzmala 2006; Leavengood & Chapman 2014; Miller et al. 2015).

With the exception of Disteniinae, which is retained within Cerambycidae as a subfamily, nomenclature follows Bezark (2016). Taxonomy is updated to reflect current status, with synonyms used in Jamerson (1973) and more recent publications included after the valid species name. In Table 1, new state records are listed in bold, with specific label and collection data provided. When provided, data were compiled from specimen labels to include collection date, county and locality information, method of collection, and information about habitat, adult resource, or larval plant host. Seasonal adult activities were recorded by range of months, with first and last followed by a numeric superscript indicating week (within month) of first and final collection. For ease of reporting, days 29 to 31 are included within the 4th week period. Observations of species occurrence within any of Tennessee’s 8 ecoregions are noted.

The total dataset for species tallies that were tallied in each Tennessee county was analyzed with EstimateS software, using the bias-corrected Chao1 (Colwell 2006) that, with 95 iterations, enabled a prediction of the number of species expected within the state and consequently yielding an estimated number of species that remain to be detected.

As with our distribution report on Buprestidae occurring in Tennessee and North Carolina (Klingeman et al. 2015), this report on Tennessee Cerambycidae is presented with inherent bias. Not all portions of the state have been subjected to season-long sampling, and some regions remain largely unexamined. Regardless, this report highlights poorly studied ecoregions across Tennessee and is expected to encourage a more detailed future examination of fauna occurring in these areas.

### Table 1. List of the Cerambycidae of Tennessee with notes on seasonal adult activities and ecoregional distribution(s) (west to east), as noted from collection labels.

| Family | Genus | Species | County(s) | Season(s) | Ecoregion(s) |
|--------|-------|---------|-----------|-----------|--------------|
| DISTENIINAE | Elytimitratrix | undata (F., 1775) | Distenia undata [F., 1775], Apr1–Oct3, TN ecoregion(s): 74, 65, 71, 68, 69, 67, 66 (Suppl. Fig. 2). |
| PARANDRINAE | Tribe Parandrini | Neandra brunnea (F., 1798) | =Parandra brunnea [F., 1798], May1–Aug3, TN ecoregion(s): 74, 71, 69, 68, 66 (Suppl. Fig. 3). |
| PRIONINAE | Tribe Prionini | Archodentes melanoplus melanoplus (L., 1767), Jun1, TN ecoregion(s): 67 (Suppl. Fig. 4). |
| | | Mallodon dasystomus dasystomus (Say, 1824) | =Stenodontes dasystomus Lameer, 1902, May1–Aug3, TN ecoregion(s): 74, 71, 69, 67, 66 (Suppl. Fig. 5). |
| | Tribe Macrotomini | | |
| | | Tragosa harrisii (LeConte, 1851), Sevier Co., Great Smoky Mountains NP, Porter’s Creek Trail, 1 Jul 2007, M. Ferro [LSAM]. New state record. TN ecoregion(s): 66 (Suppl. Fig. 6). |
| | Tribe Prionini | Derobrachus brevicollis | Audiend-Serville, 1832, Coffee Co., AEDC, 18 Jun 1998 [ECUT]. New state record. TN ecoregion(s): 71 (Suppl. Fig. 7). |
| | | Orthosoma brunneum (Forster, 1771), Apr1–Aug3, Oct1, TN ecoregion(s): 74, 71, 68, 67, 66 (Suppl. Fig. 8). |
| | | Prionus (Neopolyarthron) imbricornis (L., 1767), Jun1–Aug1, TN ecoregion(s): 74, 65, 67, 68, 67, 66 (Suppl. Fig. 9). |
| | | Prionus (Prionus) laticollis (Drury, 1773), Jun1–Oct1, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 10). |
| | | Prionus (Prionus) pocularis Dalman (1817), May1–Aug2, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 11). |
| | Tribe Solenopertiniae | Sphenostethus taslei | Buquet, 1841 (=Derancistrus taslei [Champlain, Kirk & Knell, 1925]), Jun1–Jul4, TN ecoregion(s): 71, 68, 67 (Suppl. Fig. 12). |
| NECYDALINAE | Nectyalis melitta (Say, 1835), May1–Jun1, TN ecoregion(s): 71, 68, 67 (Suppl. Fig. 13). |
| SPONDYLINAE | Tribe Asemini | Arhopalus foveicollis (Haldeman, 1847), Blount Co., Cades Cove, Jul 2004, Roger Dajoz [GSNP]. New state record. Since then, records from Carter Co., Jul, Oct1, TN ecoregion(s): 66 (Suppl. Fig. 14). |
| | | Arhopalus rusticus obsoletus (Randall, 1838), Jul1–Oct3, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 15). |
| | | Asemum striatum (L., 1758), Feb1–May3, TN ecoregion(s): 74, 65, 71, 67, 66 (Suppl. Fig. 16). |
| | | Tetroplum schwarzianum Casey, 1891, Blount Co., Cades Cove ATBI Plot, 8–21 May 2001, Robert Hightower & Jim Burbank [LSAM]. New state record. TN ecoregion(s): 66 (Suppl. Fig. 17). |
Table 1. (Continued) List of the Cerambycidae of Tennessee with notes on seasonal adult activities and ecoregional distribution(s) (west to east), as noted from collection labels.

| Tribe Atinini | **Atinia confusa confusa** (Say, 1826), Mar–May, TN ecoregion(s): 71, 67 (Suppl. Fig. 18). |
| Tribe Saphanini | **Michthisma heterodoxum** LeConte, 1850, May–Jul, TN ecoregion(s): 66 (Suppl. Fig. 19). |
| Tribe Desmocerini | **Desmoerus palliatus** (Forster, 1771), May–Aug, TN ecoregion(s): 66 (Suppl. Fig. 20). |
| Tribe Encycloplini | **Encyclops caerulea** (Say, 1826), Apr–Jul, TN ecoregion(s): 67, 66 (Suppl. Fig. 21). |
| Tribe Lepturinae | **Alosternida chalybaea** Tribe Lepturini. |
| Tribe Atinini | **Bellamia scolaris** (Say, 1826), May–Aug, TN ecoregion(s): 67, 66 (Suppl. Fig. 25). |
| Tribe Lepturinae | **Brachyteles euphoria** (Casey, 1913), May–Sep, TN ecoregion(s): 71, 66 (Suppl. Fig. 26). |
| Tribe Saphanini | **Brachyteles cirrulata** (Olivier, 1795) (= *Anoplodera cirrulata* Chagnon, 1936), May–Jun, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 27). |
| Tribe Saphanini | **Brachyteles rubricornis** (Say, 1824) (= *Anoplodera rubricornis* Swaine & Hopping, 1928), May–Jul, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 28). |
| Tribe Desmocerini | **Brachyteles vagans** (Olivier, 1795) (= *Anoplodera vagans* Swaine & Hopping, 1928), May–Jun, TN ecoregion(s): 67, 66, 66 (Suppl. Fig. 29). |
| Tribe Atinini | **Charisalia americana** (Haldeman, 1847), May–Jun, TN ecoregion(s): 66 (Suppl. Fig. 30). |
| Tribe Saphanini | **Charisalia affinis** (Haldeman, 1847), May–Jun, TN ecoregion(s): 67, 66, 66 (Suppl. Fig. 31). |
| Tribe Saphanini | **Charisalia affinis** (Haldeman, 1847), May–Jun, TN ecoregion(s): 67, 66, 66 (Suppl. Fig. 32). |
| Tribe Desmocerini | **Charisalia affinis** (Haldeman, 1847), May–Jun, TN ecoregion(s): 66, 66 (Suppl. Fig. 33). |
| Tribe Saphanini | **Judolia cordifera** (Olivier, 1795) (= *Anoplodera cordifera* Swaine & Hopping, 1928), May–Aug, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 35). |
| Tribe Desmocerini | **Leptura (Leptura) subharmata** Randall, 1838, Jun–Aug, TN ecoregion(s): 66 (Suppl. Fig. 36). |
| Tribe Desmocerini | **Leptura (Leptura) subharmata** Randall, 1838, Jun–Aug, TN ecoregion(s): 66 (Suppl. Fig. 37). |
| Tribe Saphanini | **Neolocystes capitata** (Newman, 1841), Apr–Jul, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 38). |
| Tribe Atinini | **Stenelytra emarginata** (F., 1797) (= *Leptura emarginata* [F., 1787]), Jun–Sep, TN ecoregion(s): 71, 68, 66 (Suppl. Fig. 39). |
| Tribe Atinini | **Stictoleptura canadensis** (Olivier, 1795), Aug–Sep, TN ecoregion(s): 66 (Suppl. Fig. 40). |

*Strangapele abbreviata* (Germain, 1824), May–Sep, TN ecoregion(s): 68, 67, 66 (Suppl. Fig. 41).  
*Strangalepta acuminata* (Olivier, 1795) (= *Strangalepta acuminata* Bobbe, 1921), May–Jul, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 42).  
*Strangalepta bicolor* (Swederus, 1787) (= *Strangalepta bicolor* Bobbe, 1921), Jun–Jul, TN ecoregion(s): 71, 68, 66 (Suppl. Fig. 43).  
*Strangalepta faneoula faneoula* (Newman, 1841) (= *Strangalepta faneoula* Bobbe, 1921), May–Jul, TN ecoregion(s): 71, 68, 66 (Suppl. Fig. 44).  
*Strangalepta faneoula solitaria* (Haldeman, 1847) May–Aug, Oct, TN ecoregion(s): 71, 68, 66 (Suppl. Fig. 45).  
*Strangalepta luteicornis* (F., 1775) (= *Strangalepta luteicornis* Bobbe, 1921), May–Aug, Oct, TN ecoregion(s): 74, 65, 71, 68, 67, 66 (Suppl. Fig. 46).  
*Strophiona nitens* (Forster, 1771) (= *Anoplodera nitens* Swaine & Hopping, 1928), May–Jul, TN ecoregion(s): 68, 67, 66 (Suppl. Fig. 47).  
*Trachysida mutabilis* (Newman, 1841) (= *Anoplodera mutabilis* Swaine & Hopping, 1928), May–Jun, TN ecoregion(s): 71, 66 (Suppl. Fig. 48).  
*Trigonarthris minnesota* (Casey, 1913), Blount Co., Cades Cove, 10 Jul 1936, H. B. Seibert [GSNP].  
*New state record*. Since then, records from Anderson and Warren Cos., May–Jul, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 49).  
*Trigonarthris proxima* (Say, 1824) (= *Anoplodera proxima* Swaine & Hopping, 1928), May–Jul, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 50).  
*Typocerus acuticauda acuticauda* Casey (1913), Jun–Jul, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 51).  
*Typocerus deceptus* Knoll, 1929, Jun–Jul, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 52).  
*Typocerus lugubris* (Say, 1824), Jun–Jul, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 53).  
*Typocerus lunulatus lunulatus* (Swederus, 1787), Jun–Jul, TN ecoregion(s): 74, 65, 71, 67, 66 (Suppl. Fig. 54).  
*Typocerus octonotatus* (Haldeman, 1847), Jun–Jul, TN ecoregion(s): 74, 71 (Suppl. Fig. 55).  
*Typocerus sinuatus* (Newman, 1841), Jun–Jul, TN ecoregion(s): 74 (Suppl. Fig. 56).  
*Typocerus velutinus velutinus* (Olivier, 1765), May–Sep, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 57).  
*Typocerus zebra* (Olivier, 1795), Apr–Jul, TN ecoregion(s): 74, 65, 71, 68, 67, 66 (Suppl. Fig. 58).  
*Xestoleptura octonotata* (Say, 1824) (= *Anoplodera octonotata* Swaine & Hopping, 1928), Apr–Jul, TN ecoregion(s): 67, 66 (Suppl. Fig. 59).  

*Tribe Rhagini*  
*Acmaeops discoideus* (Haldeman, 1847), Apr, TN ecoregion(s): 71 (Suppl. Fig. 60).  
*Anthophylax attenuatus* (Haldeman, 1847), Apr–Jul, TN ecoregion(s): 66 (Suppl. Fig. 61).  
*Anthophylax cyaneus* (Haldeman, 1847), May–Jul, TN ecoregion(s): 66 (Suppl. Fig. 62).  
*Anthophylax hoffmani* Beutemuller, 1903, Jul, TN ecoregion(s): 66 (Suppl. Fig. 63).  
*Anthophylax viridis* LeConte, 1850, May–Jun, TN ecoregion(s): 66 (Suppl. Fig. 64).  
*Brachysomidia bivittata* (Say, 1824) (= *Acmaeops bivittatus* Hopping, 1928; *Acmaeops nigriceps* Melsheimer, 1853), Apr–May, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 65).  
*Centroder a decolorata* (Harris, 1841), Jun–Jul, TN ecoregion(s): 66 (Suppl. Fig. 66).  
*Centroder a sublineata* LeConte, 1862, Apr–May, TN ecoregion(s): 71, 67 (Suppl. Fig. 67).
Tribe Xyloseini

*Knulliana cincta spinifera* (Drury, 1773), Apr–Jul, TN ecoregion(s): 71, 68, 67 (Suppl. Fig. 89).

*Plinthocoelium suaveolens suaveolens* (Drury, 1773), Mar–May, Aug, TN ecoregion(s): 73, 71, 67, 66 (Suppl. Fig. 90).

*Phymatodes testaceus* (L., 1758), Apr–Jul, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 91).

*Phymatodes varius* (F., 1776), Mar–May, TN ecoregion(s): 65, 71, 68, 67, 66 (Suppl. Fig. 92).

*Physococynus brevilineum* (Say, 1824), activity data not reported. TN ecoregion(s): 67 (Suppl. Fig. 93).

*Semanotus amethystinus* (LeConte, 1853), Shelby Co., 4 Jun 1971, H. Jamer son [UGCA]. **New state record.** TN ecoregion(s): 74 (Suppl. Fig. 94).

*Semanotus lignicus* (F., 1787), Feb, TN ecoregion(s): 71 (Suppl. Fig. 95).

Tribe Clytini

*Clytoleptus albofasciatus* (Laporte & Gory, 1838), Lawrence Co., 24 Mar 1988 [NEAC]. **New state record.** Since then, records from Anderson, Blount, and Warren Cos., Mar–Jul, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 96).

*Clytus marginicollis* Laporte and Gory, 1838, Apr–Jun, TN ecoregion(s): 71, 68, 67 (Suppl. Fig. 97).

*Clytus ruicola* (Olivier, 1795), Apr–Aug, Oct, TN ecoregion(s): 74, 71, 68, 66 (Suppl. Fig. 98).

*Megacyllene caryae* (Gahan, 1908), Mar–Jul, TN ecoregion(s): 74, 71, 67, 66 (Suppl. Fig. 100).

*Megacyllene robini* (Forster, 1771), Jul–Nov, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 101).

*Neoclytus acuminatus acuminatus* (F., 1775), Mar–Oct, TN ecoregion(s): 73, 74, 71, 68, 67, 66 (Suppl. Fig. 101).

*Neoclytus caprea* (Say, 1824), Mar–May, Nov, TN ecoregion(s): 71, 68, 67 (Suppl. Fig. 102).

*Neoclytus horridus* (LeConte, 1862), Mar–Apr, Nov, TN ecoregion(s): 71, 68, 67 (Suppl. Fig. 103).

*Neoclytus jouteli jouteli* (Davis, 1904), Jun–Jul, TN ecoregion(s): 74, 68, 67 (Suppl. Fig. 104).

*Neoclytus mucronatus mucronatus* (F., 1775), Apr–Nov, TN ecoregion(s): 74, 65, 71, 67, 66 (Suppl. Fig. 105).

*Neoclytus scutellaris* (Olivier, 1790), May–Sep, TN ecoregion(s): 74, 71, 68, 67, 66 (Suppl. Fig. 106).

*Saroseses fulminans* (F., 1775), May–Jul, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 107).

*Xylotrechus aceris* Fisher, 1917, Warren Co., McMinnville, Centertown, 9–16 Jul 2010, [TSRS]. **New state record.** Since then, records from Sequatchie Co., Jun–Aug, TN ecoregion(s): 71, 68 (Suppl. Fig. 108).

*Xylotrechus colonus* (F., 1775), Apr–Sep, TN ecoregion(s): 73, 74, 71, 68, 67, 66 (Suppl. Fig. 109).

*Xylotrechus integer* (Haldeman, 1847), Apr, TN ecoregion(s): 74, 71, 67 (Suppl. Fig. 110).

*Xylotrechus nitidus* (Horn, 1860), Sevier Co., GSMNP, Sugarlands [Visitor Center], 1 April to 28 June 2007, Michael Ferro [LSAM]. **New state record.** TN ecoregion(s): 66 (Suppl. Fig. 111).

*Xylotrechus sagittatus* sagittatus (Germar, 1821), Jun–Oct, TN ecoregion(s): 74, 71, 67, 66 (Suppl. Fig. 112).

Tribe Curiini

*Curius dentatus* Newman, 1840, Warren Co., McMinnville, Nursery Research Center, 1–8 Jul 2002, Jason B. Oliver [TSRS]. **New state record.** Since then, records from Anderson, Fayette, and Franklin Cos., May–Aug, TN ecoregion(s): 74, 71, 67 (Suppl. Fig. 113).
Anelaphus pumilus (Newman, 1840), Mar 3–Jun 3, TN ecoregion(s): 74, 71, 66 (Suppl. Fig. 114).

Tribe Eubriini
Eubria (Eubria) haldemani LeConte, 1851, activity data not reported. TN ecoregion(s): 68 (Suppl. Fig. 115).

Eubria (Eubria) quadrigeminata (Say, 1826), May 2–Aug 2, TN ecoregion(s): 74, 65, 71, 68, 67, 66 (Suppl. Fig. 116).

Tribe Elaphidiini
Anelaphus pumilus (Newman, 1840), Mar 3–Jul 3, TN ecoregion(s): 71, 66 (Suppl. Fig. 117).

Anelaphus moestus moestus (LeConte, 1854), Hamilton Co., Chattanooga, Mountain Creek Road, 16 June 2008, S. Chatzimanolis [UTC]. New state record. Since then, records from Franklin and Sequatchie Cos., Jun 1–3, TN ecoregion(s): 71, 68, 67 (Suppl. Fig. 118).

Anelaphus parallelus (Newman, 1840) (=Elaphidionoides parallelus Linsley, 1963), Mar 3–Oct 3, TN ecoregion(s): 73, 74, 71, 68, 67, 66 (Suppl. Fig. 119).

Anelaphus pumilus (Newman, 1840), Mar 3–Jun 3, TN ecoregion(s): 74, 71, 67, 66, 66 (Suppl. Fig. 120).

Anelaphus villatus (F., 1792) (=Elaphidionoides villatus Linsley, 1957), Apr 1–Aug 3, TN ecoregion(s): 73, 74, 71, 68, 67, 66 (Suppl. Fig. 121).

Elaphidion mucronatum (Say, 1824), May 2–Sep 2, TN ecoregion(s): 73, 74, 71, 68, 67, 66 (Suppl. Fig. 122).

Enaphalodes atomarius (Drury, 1773), Jun 1–Oct 1, TN ecoregion(s): 74, 71, 68, 67, 66 (Suppl. Fig. 123).

Enaphalodes cortiphagus (Craighead, 1923), Jun 1–Oct 1, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 124).

Enaphalodes rufulus (Haldeman, 1847), Jun 1–Aug 3, TN ecoregion(s): 74, 71, 68, 66 (Suppl. Fig. 125).

Micranoplium unicolor (Haldeman, 1847), Jul 1, TN ecoregion(s): 71 (Suppl. Fig. 126).

Parelaophidion aspersum (Haldeman, 1847) (=Elaphidionoides aspersus Linsley, 1963), May 1–Oct 1, TN ecoregion(s): 73, 74, 71, 68, 67, 66 (Suppl. Fig. 127).

Parelaophidion incertum (Newman, 1840) (=Elaphidionoides incertus Linsley, 1963), May 2–Aug 2, TN ecoregion(s): 73, 74, 71, 68, 67, 66 (Suppl. Fig. 128).

Psyrassa pertenuis (Casey, 1924), May 1–Jul 1, TN ecoregion(s): 71, 68, 66 (Suppl. Fig. 129).

Psyrassa unicolor (Randall, 1838), Jun 1–Aug 2, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 130).

Stenosphenus notatus (Olivier, 1795), Mar 1–Jul 1, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 131).

Tribe Hesperophanini
Tylonotus bimaculatus Haldeman, 1847, Jun 1–Jul 6, TN ecoregion(s): 71, 67 (Suppl. Fig. 132).

Tribe Hylotrupini
Hylotrupes bajulus (L., 1758), Apr 2, TN ecoregion(s): 74, 65, 71, 67, 66 (Suppl. Fig. 133).

Tribe Ibiidionini
Heterachthes ebenus Newman, 1840, May 1, TN ecoregion(s): 74 (Suppl. Fig. 134).

Heterachthes quadrimitus Haldeman, 1847 (=Heterachthes pallidus Blatchley, 1919), Jun 1–Sep 1, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 135).
Table 1. (Continued) List of the Cerambycidae of Tennessee with notes on seasonal adult activities and ecoregional distribution(s) (west to east), as noted from collection labels.

Acanthocinus obsoletus (Olivier, 1795) (=Neacanthocinus obsoletus Dillon, 1956), May–Aug, TN ecoregion(s): 65, 71, 68, 67, 66 (Suppl. Fig. 155).

Astleioius variatus (Haldeman, 1847) (=Sternidius variatus LeConte, 1873), May–Aug, TN ecoregion(s): 74, 71, 67, 66 (Suppl. Fig. 156).

Astillidius parvus (LeConte, 1873), Jun–Aug, TN ecoregion(s): 71, 66 (Suppl. Fig. 157).

Astylus curatus (LeConte, 1878), Jun–Aug, TN ecoregion(s): 65, 71, 68, 67, 66 (Suppl. Fig. 158).

Astylus curatus (Haldeman, 1847) (=Amniscus curatus Haldeman, 1847), Jun–Sep, TN ecoregion(s): 71, 66 (Suppl. Fig. 159).

Astillopsis sexguttata (Say, 1826) (=Amniscus sexguttatus Dillon, 1956), Apr–Sep, TN ecoregion(s): 71, 66, 67 (Suppl. Fig. 161).

Dectes sayi Dillon & Dillon, 1953, Jun, Aug, TN ecoregion(s): 71, 66 (Suppl. Fig. 162).

Dectes texanus LeConte, 1862, Jul–Sep, TN ecoregion(s): 73, 74, 65, 71, 67 (Suppl. Fig. 163).

Eutrichillus biguttatus (LeConte, 1852). May–Jul, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 164).

Graphisurus despectus (Say, 1826) (=Urographis despectus Linsley & Chemsak, 1995), May–Aug, TN ecoregion(s): 71, 66, 67, 66 (Suppl. Fig. 165).

Graphisurus fasciatus (De Geer, 1775) (=Urographis fasciatus Lameere, 1883), Apr–Oct, TN ecoregion(s): 73, 74, 71, 68, 67, 66 (Suppl. Fig. 166).

Graphisurus triangulifer (Haldeman, 1847) (=Urographis triangulifer Lameere, 1883), May–Sep, TN ecoregion(s): 74, 71, 67 (Suppl. Fig. 167).

Hyperplatus aspera (Say, 1824), Apr–Jul, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 168).

Hyperplatus maculata Haldeman, 1847, Jun, Oct, TN ecoregion(s): 67 (Suppl. Fig. 169).

Leptostylus asperatus (Haldeman, 1847), Mar–Sep, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 170).

Leptostylus transversus (Gyllenhall, 1817), Mar–Oct, TN ecoregion(s): 74, 71, 68, 67, 66 (Suppl. Fig. 171).

Lepturges (Lepturges) angulatus LeConte, 1852, May–Aug, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 172).

Lepturges (Lepturges) confinis (Haldeman, 1847), May–Jul, TN ecoregion(s): 74, 71, 68, 67, 66 (Suppl. Fig. 173).

Lepturges (Lepturges) pictus (LeConte, 1852). Rutherford Co., Sunnybelt Glade, 12 Jun 1997, T. L. Schiefer [MEM]. New state record. Since then, record from Warren Co., Jun–Jul, TN ecoregion(s): 71 (Suppl. Fig. 174).

Lepturges (Lepturges) regularis (LeConte, 1852), May, TN ecoregion(s): 67 (Suppl. Fig. 175).

Lepturges (Lepturges) symmetricus (Haldeman, 1847), May–Jun, TN ecoregion(s): 71, 67 (Suppl. Fig. 176).

Sternidius alpha (Say, 1827) (=Lioipinus alpha Linsley & Chemsak, 1995), Apr–Jul, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 177).

Sternidius misellus (LeConte, 1852) (=Lioipinus misellus Linsley & Chemsak, 1995), May–Jul, TN ecoregion(s): 71, 68 (Suppl. Fig. 178).

Sternidius punctatus (Haldeman, 1847) (=Lioipinus punctatus Linsley & Chemsak, 1995), Davidson Co., Couchville Glade Natural Area, 10 Jun 1997, T. L. Schiefer [MEM]. New state record. Since then, records from Anderson, Sevier, Warren, and Wilson Cos., May–Jul, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 179).

Styloleptus biustus biustus (LeConte, 1852), Warren Co., Viola, 2006 (emerged from Quercus species collected in 2005), Joshua P. Basham [TSRS]. New state record. Since then, records from Coffee and Lake Cos., Jul, Sep, TN ecoregion(s): 73, 71 (Suppl. Fig. 180).

Urgleptes facetus (Say, 1826), Jun, TN ecoregion(s): 67 (Suppl. Fig. 181).

Urgleptes foveatocollis (Hamilton, 1896), Warren Co., Viola, 2006 (emerged from Cupressus species collected in 2005), Joshua P. Basham [TSRS]. New state record. Since then, records from Anderson and Sevier Cos., May–Jun, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 182).

Urgleptes querci (Fitch, 1858), May–Aug, Oct, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 183).

Urgleptes signatus (LeConte, 1852). Wilson Co., Cedars of Lebanon State Park, 10 Jun 1997, J. M. Campbell [MEM]. New state record. Since then, records from Cocke, Sevier, and Warren Cos., May–Aug, TN ecoregion(s): 71, 66 (Suppl. Fig. 184).

Tribe Acanthoderini

Acanthoderes (Acanthoderes) quadrigibbus (Say, 1835) (=Psaphrochus quadrigibbus Lacordaire 1872; Aegomorphus quadrigibbus Linsley & Chemsak, 1984), Feb–Oct, May–Sep, TN ecoregion(s): 74, 71, 68, 67, 66 (Suppl. Fig. 185).

Aegomorphus modestus (Gyllenhall, 1817) (=Aegoschema modestum Knill, 1946), May–Aug, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 186).

Oplosia nubila (LeConte, 1863), Sevier Co., GSMNP, Twin Creeks AT-BI Plot, 10–29 May 1999, C. R. Parker [LSAM]. New state record. May–Jun, TN ecoregion(s): 66 (Suppl. Fig. 187).

Tribe Agapanthiini

Hippopsis lemniscata (F., 1801), Apr–Sep, TN ecoregion(s): 74, 71, 67 (Suppl. Fig. 188).

Tribe Cyrtinini

Cyrtinus pygmaeus (Haldeman, 1847), May–Jun, TN ecoregion(s): 71, 67 (Suppl. Fig. 189).

Tribe Desmiphorini

Eupogonius pauper LeConte, 1852 (=Eupogonius vestitus LeConte, 1852), Jun–Jul, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 190).

Eupogonius tomentosus (Haldeman, 1847), Jun–Jul, TN ecoregion(s): 74, 71, 68, 67, 66 (Suppl. Fig. 191).

Psapharoopus quadrigibbus (Say, 1824), May–Jun, TN ecoregion(s): 74, 71, 68, 67, 66 (Suppl. Fig. 192).

Tribe Dorcaschematini

Dorcaschema alternatum (Say, 1824), May–Jul, TN ecoregion(s): 74, 71, 67 (Suppl. Fig. 193).

Dorcaschema cinerum (Olivier, 1795), May–Aug, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 194).

Dorcaschema nigrum (Say, 1826), May, Jun, TN ecoregion(s): 71, 66 (Suppl. Fig. 195).

Dorcaschema wildii Uhler, 1855, Jun, Jul, TN ecoregion(s): 74 (Suppl. Fig. 196).

Tribe Monochamini

Goess debilis LeConte, 1852, activity data not reported. TN ecoregion(s): 66 (Suppl. Fig. 197).

Goess pulcher (Haldeman, 1847), activity data not reported. TN ecoregion(s): 71 (Suppl. Fig. 198).
Table 1. (Continued) List of the Cerambycidae of Tennessee with notes on seasonal adult activities and ecoregional distribution(s) (west to east), as noted from collection labels.

| Species                                                                 | Notes                                      | Ecoregions                  |
|------------------------------------------------------------------------|--------------------------------------------|----------------------------|
| Goes tesselatus (Haldeman, 1847)                                        | activity data not reported. TN ecoregion(s): 68 (Suppl. Fig. 199). |
| Goes tigrinus (De Geer, 1775), May—Jul, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 200). |
| Microgoes oculatus (LeConte, 1862), Apr—Sep, TN ecoregion(s): 67, 66 (Suppl. Fig. 201). |
| Monochamus carolinensis (Olivier, 1792), Mar—Sep, TN ecoregion(s): 74, 65, 71, 68, 67, 66 (Suppl. Fig. 202). |
| Monochamus notatus (Drury, 1773), May—Oct, TN ecoregion(s): 68, 67, 66 (Suppl. Fig. 204). |
| Plectrodera scalator (F., 1792), May 3 Oberea affinis Tribe Obereiini Monochamus marmorator (Kirby, 1837), Jul—Sep, TN ecoregion(s): 66 (Suppl. Fig. 203). |
| Monochamus scutellaris scutellaris (Savigny, 1826), Apr—Aug, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 206). |
| Plectrodera scalator (F., 1792), May—Oct, TN ecoregion(s): 73, 74, 71, 67 (Suppl. Fig. 207). |

Tribe Obereiini

Oberea affinis Leng & Hamilton, 1896, Cocke Co., GSMNP, Albright Grove at Old Growth Forest, 29 Jun 2001, Ian C. Stocks [LSAM]. New state record. Since then, records in Blount Co., Jun—Jul, TN ecoregion(s): 66 (Suppl. Fig. 208).

Oberea myops Haldeman, 1847, Jun—Jul, TN ecoregion(s): 66 (Suppl. Fig. 209).

Oberea ocellata Haldeman, 1847, May—Jul, TN ecoregion(s): 74, 71 (Suppl. Fig. 210).

Oberea perspicillata Haldeman, 1847 (=Oberea basalis LeConte, 1852), Mar—Aug, TN ecoregion(s): 74, 71, 67, 66 (Suppl. Fig. 211). Oberea praelonga Casey, 1913, Anderson Co., 7 Jun 1970, W. Cloyd [CNTC]. New state record. Since then, records from Sevier and Warren Cos., May—Jun, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 212).

Oberea rufulollis (F., 1792), Jun—Sep, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 213). Oberea tripectinata (Swederus, 1877) (=Oberea mandarina LeConte, 1852), May—Jun, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 214).

Tribe Onciderini

Oncideres cingulata cingulata (Say, 1826), Apr—Aug, TN ecoregion(s): 74, 71, 67, 66 (Suppl. Fig. 215).

Tribe Phytoecini

Mecas (Mecas) cana cana (Newman, 1840), Jun, TN ecoregion(s): 71 (Suppl. Fig. 216). Mecas (Mecas) cinereo Casey, 1913, Franklin Co., 3 miles NW of Huntland, 12 Aug 2003, N. N. Yusuf [TSRS]. New state record. TN ecoregion(s): 71 (Suppl. Fig. 217). Mecas (Mecas) pergata (Say, 1824), May—Jun, TN ecoregion(s): 71, 67 (Suppl. Fig. 218).

Tribe Pogonocherini

Ecyrus dasycerus dasycerus (Say, 1827), Feb—May, TN ecoregion(s): 74, 71, 68, 67, 66 (Suppl. Fig. 219). Pogonocherus (Pogonocherus) mixtus Haldeman, 1847. Emerged from larval host [controlled climate]. TN ecoregion(s): 68 (Suppl. Fig. 220).

Tribe Pteroplini

Ataxia crypta (Say, 1831), Feb—Jun, TN ecoregion(s): 74 (Suppl. Fig. 221).

Tribe Saperdini

Saperda condita F., 1787, May—Aug, TN ecoregion(s): 67, 66 (Suppl. Fig. 222). Saperda discaoides F., 1798, May—Aug, TN ecoregion(s): 71, 67, 66 (Suppl. Fig. 223). Saperda imitans Felt and Joutel, 1904, Jun—Jul, Oct, TN ecoregion(s): 71, 66 (Suppl. Fig. 224). Saperda lateralis F., 1775, May—Aug, Oct, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 225). Saperda puncticollis Say, 1824, Warren Co., Nursery Research Center, 6–11 May 2004, [TSRS]. New state record. TN ecoregion(s): 71 (Suppl. Fig. 226). Saperda tridentata Olivier, 1795, May—Aug, TN ecoregion(s): 74, 71, 66 (Suppl. Fig. 227). Saperda vestita Say, 1824, May—Aug, TN ecoregion(s): 71, 66 (Suppl. Fig. 228).

Tribe Tetraopini

Tetraopes femoratus LeConte, 1847, Aug, Oct, TN ecoregion(s): 71 (Suppl. Fig. 229). Tetraopes melanurus Schoenherr, 1817, Aug, TN ecoregion(s): 67 (Suppl. Fig. 230). Tetraopes tetrathalmus (Forster, 1771), Apr—Sep, TN ecoregion(s): 71, 68, 67, 66 (Suppl. Fig. 231).

Results

More than 9,918 Tennessee longhorned beetle specimens were assessed, and published literature was reviewed to document 230 species in Tennessee. For some species (e.g., Neandra brunea [F.]), early or late “outlier” records are noted when specimens were collected across a gap in time that spanned at least 4 wk (Table 1). Total number species occurring in each of Tennessee’s 8 ecoregions are reported (Table 2). For each species, available host and habitat data were also compiled from labels and are presented along with managing collection information and noted occurrence within Tennessee counties and ecoregions (Suppl. Table 3; Suppl. Figs. 2–231).

Twenty-seven species are reported as new state records for Tennessee, including Tragosoma harriisi (LeConte), Derobrachus brevicollis Audinet-Serville, Archopalus foveicollis (Haldeman), Tetropium schwarzianum Casey, Charisia americana (Haldeman), Grammoptera exigu (Newman), Trigonarthris minnesotana (Casey), Stylochorus (Stenocorus) schaumii (LeConte), Callidium texanum Schaeffer, Semonastus amethystinus (LeConte), Clytoleptus albofasciatus (Laporte & Gory), Xylotrechus aceris Fisher, Xylotrechus nitidus (Horn), Curius dentatus Newman, Anelaphus moestus moestus (LeConte), Morochus bimaculatus semimustus (Newman), Obrum rufulum Gahan, Lepturgus (Lepturgus) pictus (LeConte), Sternidius punctatus (Haldeman), Styloleptus biustus biustus (LeConte), Urgleptes foveotocollis (Hamilton), Urgleptes signatus (LeConte), Oplosia nutricula (LeConte), Oberea affinis Leng & Hamilton, Oberea praehina Casey, Mecas (Mecas) cineracea Casey, and Saperda puncticollis Say. Distribution records for all 230 cerambycid species documented in Tennessee, including potential range additions taken from Jamerson (1973), are plotted by county (Suppl. Figs. 2–231).

Species counts are summed within 85 of the 95 Tennessee counties from which longhorned beetles are reported. Ten Tennessee counties, including Bedford, Bledsoe, Clay, Fentress, Hancock, Marshall, Meigs, Overton, Pickett, and Stewart counties. yielded no taxa among collec-
Table 2. Ecoregional distribution of Cerambycidae species tallied within each of the 8 ecoregions occurring across Tennessee.

| Ecoregion | Level III ecoregion category | Species tally | Generalized description of representative flora
|-----------|-----------------------------|---------------|--------------------------------------------------|
| Ecoregion 73 Mississippi Alluvial Plain | Cropland, pasture, oak, white oak, black poplar, red willow, sycamore, sweetgum, elm, maple, oak, hickory, pine, spruce, fir, cedar, hemlock, beech, red maple, sugar maple, tulip poplar, locust, aspen, willow, dogwood, magnolia, holly, arborvitae, juniper, huckleberry, dogwood, raspberry, blueberry, currant, blackberry, strawberry, gooseberry, thimbleberry, black raspberry, strawberry, gooseberry, thimbleberry, black raspberry, strawberry, gooseberry, thimbleberry, black raspberry, 
| Mississippi Valley Loess Plains | 63 | Cropland, pasture, woodlands (beech, sugar maple), oak–hickory forest, cypress–gum swamp habitat, oak–tupelo deciduous forest. | 
| Southeastern Plains | 20 | Cropland, pasture, bottomland hardwoods (sycamore, sweetgum, tulip, oak, cypress), oak-hickory–pine forest, white pine, jack pine, balsam fir, sugar maple, tulip poplar, loblolly pine, longleaf pine, Slash pine. | 
| Southwestern Appalachians | 86 | Cropland, pasture, mixed oak and shortleaf pine forests; beech–tulip poplar forests, hemlock, sugar maple, tulip poplar. | 
| Central Appalachians | 2 | Appalachian oak forest, northern hardwood forest (beech, sugar maple, tulip poplar). | 
| Ridges and Valleys | 151 | Cropland, pasture, white and chestnut oak forests, sycamore-ash-elm forests, cedar–pine glades, pine forest. | 
| Interior Plateau | 159 | Appalachian oak forest, northern hardwoods (maple, birch, beech, hemlock, hickory), oak–pine communities, southeastern spruce–fir forest, hemlock, oak, maple, aspen, willow, dogwood, mountain laurel, rhododendron, shrub, grass, and heath beds. | 

Ecoregions are presented in order of occurrence, from West to East, across the state of Tennessee. Generalized descriptions of the representative flora for each ecoregion are adapted from (after Griffith et al. 1997).

The Chao1 estimator predicted that 241 (± 6.7 SD) cerambycid beetle species are expected to occur in Tennessee, with an associated confidence interval of 234 to 264 species that may be found within the state.

Discussion

Although several cerambycid species periodically can cause economic injury to forest tree species (e.g., *Enaphalodes atomarius* [Drury], *E. coriptagogus* [Craighead], *E. rufus* [Haldeman]), herbaceous plants, and row crops (e.g., *Dectes* sp. on soybean, *Glycine max* L. Merrill, Fabales: Fabaceae), none among the 230 documented longhorned beetle species in Tennessee is considered an exotic invasive species.

The limited collections of longhorned beetle species occurring across the Mississippi Alluvial and Valley Loess Plains, Southeastern Plains, western portions of the Interior Plateau ecoregions, and Central Appalachian region indicates that future collection activity across these Tennessee ecoregions would be expected to more clearly define species intra–state distributions and potential range constraints across the cerambycid fauna of Tennessee (Table 2; Suppl. Figs. 2–231).

The Chao1 estimator suggests that there are likely to be about 11 more longhorned beetle species that occur in Tennessee. Among the 185 longhorned beetle species reported in Jamerson’s (1973) thesis are several for which no physical specimen could be located and no
associated collection information was provided. Among these non-validated accounts are 10 species that may yet be documented in Tennessee, including *Parandra polita* Say, *Leptura abdominalis* (Haldeman), *L. plebeja* Randall, *Lycocirriolaus laterolis* (Olivier), *Strangalia sexnotata* Haldeman, *Megacyllene decorra* (Olivier), *Enaphalodes hispicornis* (L.), *Batyle ignicollis australis* Linsley, *Oberea gracilis* (F.), and *Saperda obliqua* Say.

Deciduous plants are important reproductive hosts for several species that may yet be collected in Tennessee. *Parandra polita* are attracted to lights (Holt 2013), and larvae of this species develop within decaying heartwood of, for example, *Cyra* (Fagales: Juglandaceae), *Fagus* (Fagales: Fagaceae), and *Liriodendron* species (Linsley & Chemsak 1997), which occur across Tennessee. *Glycobius speciosus* (Say) larvae develop within *Acer saccharum* Marshall (Sapindales: Sapindaceae), and this beetle species may have been collected in Tennessee in McMinn County, although Holland (2009) does not list the collection that would have contained the record. In Alabama, Holt (2013) reported *G. speciosus* from Jackson County in ecoregion 68. Oak species are also larval host plants for *E. hispicornis*, which has been collected in Alabama from Lawrence and Madison counties (ecoregions 71 and 68, respectively) (Holt 2013). *Oberea gracilis* larvae also develop in seedlings of *Quercus alba* L. and *Quercus falcata* Michaux (Fagales: Fagaceae), which occur across Tennessee, yet reported *gracilis* collections were restricted to southern counties in Mississippi and Alabama (Schiefer 1998; Holt 2013). *Quercus, Amelanchier* (Rosaceae), and *Castanea* (Fagales: Fagaceae) species are larval host plants of *Hebestola nebulous* Haldeman. *Liriodendron* and *Nyssa* (Cornales: Cornaceae) species are developmental hosts for *Aegomorphus morrisii* (Uhler) (Linsley & Chemsak 1997), yet adults of this species have been taken on a blacklight (Shieffer 1998). *A. morrisii* adults can also be attracted to a blacklight (Shieffer 1998). *Anulis serrulata* (Aiton) Willd. (Fagales: Betulaceae), *Betula species* (Fagales: Betulaceae), and *Corylopsis species* (Saxifragales: Hamamelidaceae) are larval host plants used by *S. obliqua* (Lingafelter 2007). All 3 of these cerambycid species have been collected in Mississippi in ecoregion 65 (Schiefer 1998), which extends north into Tennessee in ecoregion 71 (Schiefer 1998), yet adults of these species have been taken on eastern hemlock, *Tsuga canadensis* (L.), in the Great Smoky Mountains National Park. MS thesis, The University of Tennessee, Knoxville, Tennessee. Campbell JW, Hanula JI, Waldrop TA. 2007. Effects of prescribed fire and fire surrogates on floral visiting insects of the Blue Ridge province in North Carolina. Biological Conservation 134: 393–404. Colwell RK. 2006. Estimates: Statistical estimation of species richness and shared species from samples. Version 8.2. https://archive.org/services/purl/domain/estimates (last accessed 20 Dec 2016). Dillen LS. 1956a. The Nearctic components of the tribe Acanthocinini (Coleoptera: Cerambycidae). Part I. Annals of the Entomological Society of America 49: 134–167. Dillen LS. 1956b. The Nearctic components of the tribe Acanthocinini (Coleoptera: Cerambycidae). Part II. Annals of the Entomological Society of America 49: 207–235. Dillen LS, Dillon ES. 1947. The tribe Dorcaschematini (Coleoptera: Cerambycidae). Transactions of the American Entomological Society 73: 173–298. Vermolen NL. 2016. The insect and spider collections of the world website, http://hbs.bishopmuseum.org/codens (last accessed 20 Dec 2016). Griffith GE, Omernik JM, Azavedo SH. 1997. Ecoregions of Tennessee. US Environmental Protection Agency, EPA/660/R-97/022, https://www.epa.gov/eco-research/ecoregion-download-files-state-region-3 (last accessed 20 Dec 2016). Gryzma TL. 2006. Taxonomic revision and phylogenetic analysis of the genus *Elytroleptus* Dugés (Coleoptera: Cerambycidae: Cerambycinae: Trachyderini). MS thesis, University of New Mexico, Albuquerque, New Mexico. Hansen JA, Basham JP, Oliver JB, Youssef NN, Klingeman WE, Moulton JK, Fare DC. 2012. New state and host plant records for metallic woodborining beetles (Coleoptera: Buprestidae) in Tennessee, U.S.A. The Coleopterists Bulletin 66: 337–343. Hansen J, Moulton JK, Klingeman WE, Oliver JB, Windham MT, Trigiano RN, Reding ME. 2015. Molecular systematics of the *Chrysobothris femorata* species group (Coleoptera: Buprestidae). Annals of the Entomological Society of America 108: 950–963.
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