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## RESEARCH ARTICLE

# THE COLEOPTERA OF THE SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER. 2021-2022 SUPPLEMENT.

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### ABSTRACT

Field work in 2021 and 2022 added to the number of Coleoptera species documented at the Smithsonian Environmental Research Center. Added for 2021 were 230 species and 13 families; in 2022 we added 81 species and four families. This brings the total species to 815 in 78 families. Twelve species are documented for the first time in Maryland- Staphylinidae (8), Cerambycidae (1), Curculionidae (1), Dermestidae (1), and Leiodidae (1).

**Keywords:** Biodiversity, insects, Maryland.

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### INTRODUCTION

This is a continuation of our inventory work at the Smithsonian Environmental Research Center (SERC), Edgewater, Maryland. Previous work had documented 503 Coleoptera species in 59 families (Staines & Staines 2019, 2020a-d, 2021a-f). For a detailed description of SERC habitats see Staines & Staines (2020a).

### MATERIALS AND METHODS

We began our 2021 field work on 9 March. Our goal for 2021 and 2022 was to build on the data of 2018-2020 and to expand the collecting methods. Most of the actual collecting of terrestrial species was by visual survey of potential habitats. We did black lighting and head-lamping, several evenings of checking the lights around Mathais Lab and the Reed Education

Center, bark peeling, beating vegetation, and sweeping vegetation. Our main focus was woodboring beetles. We set three Lindgren funnel traps baited with commercial elm bark beetle lures on 19 March 2021 and moved them every two weeks until 27 September 2021. We also set four purple Vivatrap (@) emerald ash borer traps on 18 May 2021 and processed them on 23 July 2021. Two Malaise traps were operated for three 72 hour periods in May and June 2020 and 2021.

For 2022 we set three Lindgren funnel traps at productive locations identified in 2021 and left them stationary throughout the season. They were baited with commercial elm bark beetle lure, ethanol, and USDA exotic bark beetle lure. They were set on 1 March 2022 and checked weekly or every two weeks depending on the weather until 15 October.

Identifications were made by the senior author using published and on-line resources. Voucher specimens are deposited in the SERC collection and in the Department of Entomology Collection, Natural History Museum, Smithsonian Institution.

SERC is part of the National Ecological Observatory Network (NEON). Part of the NEON protocol is a series of pitfall traps which are monitored biweekly. There are ten trap clusters (a total of 40 pitfall traps) at SERC. The sampling plan is described in detail in Hoekman et al. (2017). Specimens from the NEON project were processed and identified under the NEON protocol and specimens are deposited Arizona State University.

Recently SERC has changed the names of two features on campus. The Sellman House is now called Woodlawn House and Java History Trail is now called Fox Creek Nature Trail. We have retained the older names in this publication so that comparison can be made with the previously published records.

## RESULTS

### Family Anthicidae

*Tomoderus* sp. requires males for species identifications. Eastern US species are attracted to lights and are found under debris (Downie & Arnett, 1996). The two SERC specimens were collected on 15 May 2021 sweeping the vegetation of the pond in front of Mathias Lab were all females.

This is the second species of Anthicidae documented at SERC (Staines & Staines, 2021b).

### Family Anthribidae

*Choragus major* Valentine is associated with decaying logs (Valentine, 1998). Valentine (1988) reported the species from Quebec to North Carolina but it is not listed in the Maryland Biodiversity Project (MBP) (2022). Two SERC specimens were swept from vegetation in the meadow in front of Mathais Lab on 2 May 2022.

*Eurymycter tricarinatus* Pierce feeds on fungi and is found from Quebec to North Carolina (Valentine, 1998). A single SERC specimen was collected around Mathais Lab on 22 May 2022. This species is not listed in MBP (2022).

This brings the total number of Anthribidae species documented at SERC to five.

### **Family Armatopodidae**

*Eurypogon niger* (Melsheimer) has an unknown biology. Adults of other species have been collected by sweeping grasses, shrubs, and lower limbs of trees (Cooper, 1991), and by beating forest understory foliage (Young, 2002). Larvae and adults of several species are reported from mosses and lichens growing on granitic boulders (Lawrence, 2010). A single SERC specimen was taken in a Lindgren funnel trap on Back Road opposite the NEON tower from 24 June to 2 July 2021.

This is the first documentation of an Armatopodidae species from SERC.

### **Family Attelabidae**

*Eugnamptus angustatus* (Herbst) larvae are leaf miners in a variety of deciduous trees and shrubs (Hamilton, 1990). SERC specimens were taken in Malaise traps in the grassy field opposite the Sellman House from 3-6 June 2021 and along the woods margin of the grassy field opposite the Sellman House from 17-20 June 2021.

This is the first documentation of an Attelabidae species from SERC.

### **Family Biphyllidae**

*Diplocoelus rudis* LeConte has been collected under bark of logs in contact with the ground and in baited and unbaited pitfall traps (Goodrich & Springer, 1992). The single SERC specimen was taken in a Lindgren funnel trap along Squirrel Neck Trail from 1-8 June 2021. It is found from New Jersey to Florida and west to Texas (Peck & Thomas, 1998). This species is not listed in Maryland Biodiversity Project (MBP, 2022).

This is the first documentation of a Biphyllidae species from SERC.

### **Family Brentidae**

*Arrhenodes minuta* (Drury) is an economic pest of oaks (*Quercus* spp., Fagaceae) in the eastern North America, infesting *Quercus* spp., especially black (*Q. velutina* Lam.) and scarlet (*Q. coccinea* Muenchh.) oaks, elm (*Ulmus*, Ulmaceae), poplar, (*Populus*, Salicaceae), beech (*Fagus*, Fagaceae), and aspen (*Populus*) (Solomon, 1995). The two SERC specimens were taken in a Lindgren funnel trap along Fox Point Road from 22-29 July 2021.

This brings the total number of Brentidae species documented at SERC to five (Staines & Staines, 2021a).

### **Family Buprestidae**

*Agrilus bilineatus* (Weber) is a major pest of weakened oaks throughout eastern North America (Haack et al., 1983). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 1-8 June 2021.

*Ptosima gibbicollis* (Say) adults have been taken on the foliage of eastern redbud (*Cercis canadensis* L., Fabaceae). Adults were also found emerging from dead branches of this plant (MacRae, 1991). SERC specimens were taken beating *C. canadensis* foliage on 13 May 2021 in the field at the intersection of Contees Wharf and Dock Roads and on 18 May 2021 in a field along Contees Wharf Road.

This brings the total number of Buprestidae species documented at SERC to eight (Staines & Staines, 2021f).

### Family Cantharidae

*Ditemnus bidentatus* (Say) has been collected on *Poa* sp. (Poaceae) and in “grasslands” (Pelletier & Hébert, 2014). SERC species were taken sweeping vegetation on 20 April 2021 and 15 May 2021 at the intersection of Back and Dock Roads, on 20 April along the edge of the pond in front of Mathais Lab, and on 24 April 2021 in the meadow in front of Mathais Lab.

*Podabrus brevicollis* Fall is found in tallgrass prairies, savannahs, and freshwater marshes (Pelletier & Hébert, 2014). SERC specimens were taken at light at Mathais Lab on 27 May 2021, in Malaise traps in the grassy field opposite the Sellman House and along the woods margin of the grassy field opposite Sellman House from 11-14 May 2021.

*Rhagonycha recta* (Melsheimer) is commonly found in maple (*Acer*, Spindaceae) forests and in forest edges in shrubby open areas (Pelletier & Hébert, 2014). SERC specimens were found sweeping vegetation in the swamp near Sellman Creek (Zone 14) on 20 May 2021, in Malaise traps in the grassy field opposite the Sellman House and along the woods margin of the grassy field opposite Sellman House from 11-14 May 2021. It is found from eastern Canada to Florida (Pelletier & Hébert, 2014). This species is not listed in MBP (2022).

*Rhagonycha* sp. a single SERC specimen that we were unable to place to species was collected sweeping vegetation in the swamp near Sellman Creek (Zone 14) on 20 May 2021.

This brings the total number of Cantharidae species documented at SERC to 14 (Staines & Staines, 2021d).

### Family Carabidae

*Agonum extensicolle* (Say) is found on open or shaded ground close to water. Adults are mostly nocturnal and feed on a variety of insects (Lindroth, 1966; Erwin, 1981). SERC specimens were taken on 8 July 2021 at lights around Mathais Lab and in a Lindgren funnel trap on the hill just north of Mathias Lab from 11-17 May 2022.

*Amara angustata* (Say) is found on open ground with meadow type vegetation. These beetles have been observed feeding on unripe grass seeds of *Poa pratensis* L. (Lindroth, 1968). A single SERC specimen was taken sweeping vegetation in the meadow in front of Mathais Lab on 20 April 2021.

*Amara crassispina* LeConte prefers open spaces (Bousquet, 2010). SERC specimens were taken in NEON pitfall trap 007 from 19-30 March 2020.

*Amara chalcea* Dejean is found in sand pits and abandoned fields (Bousquet, 2010). A single SERC specimen was taken in fox dung (*Vulpes* or *Urocyon*, Mammalia: Canidae) at the intersection of Contees Wharf and Dock Roads on 2 May 2022.

*Amara musculus* (Say) is found on dry, sandy soils with sparse vegetation, adults are attracted to lights (Erwin, 1981). SERC specimens were taken in NEON pitfall trap 007 from 19-30 March 2020.

*Amphasia interstitialis* (Say) is found in covered places, leaf litter, deciduous forests, under stones, and under logs (Bousquet, 2010). A single SERC specimen was taken in a Lindgren funnel trap in the cypress swamp from 16-25 April 2022.

*Anisodactylus agricola* (Say) has been found beneath stones on sandy soils (Erwin, 1981). SERC specimens were taken in NEON pitfall trap 007 from 19-30 March 2020.

*Anisodactylus laetus* Dejean has been found in leaf litter, at light, on golf greens, in Japanese beetle traps, and at black light (Lindroth, 1968; Ciegler, 2000; Messer, 2009). A single SERC specimen was taken at light around Mathais Lab on 17 July 2021. It is found from Ontario to Florida (Bousquet, 2012). This species is not listed in MBP (2022).

*Anisodactylus merula* (Germar) has been found in open non-riparian forests (Pearce & Venier, 2006). SERC specimens were taken in NEON pitfall trap 007 from 1 April to 5 October 2020, NEON pitfall trap 022 from 17 September to 17 October 2020, and around the Java House ruins on 17 May 2022.

*Bembidion* sp. we were unable to place to species a single SERC specimen taken in a Lindgren funnel trap from 1-8 June along Squirrel Neck Trail.

*Bradycellus neglectus* (LeConte) has been found in variety of habitats and taken at black light (Lindroth, 1968; Ciegler, 2000; Roughley et al., 2010). Three SERC specimens were taken sweeping vegetation on 20 April 2021 in the grassy field opposite the Sellman House. It is found from eastern Canada to Georgia (Bousquet, 2012). This species is not listed in MBP (2022).

*Chlaenius amoenus* Dejean is found in deciduous forests and has been collected in leaf litter and at lights (Bell, 1960). SERC specimens were collected crossing Contee Watershed Trail on 8 June 2021 and around Mathais Lab on 23 May 2022.

*Dicaelus ambiguus* LaFerté-Sénéctère has been found under stones (Erwin, 1981). A single SERC specimen was taken around Mathais Lab on 28 May 2022.

*Lebia ornata* Say is found commonly on goldenrod (*Solidago*, Asteraceae) and in deciduous and mixed forests (Lindroth, 1969; Larochelle, 1974). The single SERC specimen was taken in a

Malaise trap along the woods margin of the grassy field opposite the Sellman House from 3-6 June 2021.

*Myas cyanescens* Dejean is found in covered places: deciduous and mixed forests, forest edges, mainly in leaf litter, and under small logs (Bousquet, 2010). A single SERC specimen was taken around Mathais Lab on 21 May 2022.

*Notiobia terminata* (Say) is found in cultivated and abandoned fields, orchards, sand and gravel pits, and forest margins (Bousquet, 2010). A single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 11-18 June 2022.

*Platynus cincticollis* (Say) is a nocturnal species which is attracted to lights; it is found on tree trunks and under bark and debris (Bousquet, 2010). Three SERC specimens were taken in a Lindgren funnel trap at Fox Point from 28 May to 4 June 2022 and 12-20 August 2022. It is reported from Maryland by Bousquet (2012). This species is not listed in MBP (2022).

*Platynus tenuicollis* (LeConte) has been collected near streams (Ciegler, 2000). The single SERC specimen was collected on a sticky trap from 18 May to 23 July 2021 at the intersection of Back Road and dirt road 11-6.

*Pterostichus atratus* (Newman) has been found beneath logs in open sandy woods (Blatchley, 1910) and head lamping (Ciegler, 2000). Four SERC specimens were taken at light around Mathais Lab on 25 and 27 May 2021.

*Pterostichus permundus* (Say) has been found in a variety of habitats and adults have been collected in leaf litter, pitfall traps, and at light (Lindroth, 1966; Ciegler, 2000). SERC specimens were taken in a Lindgren funnel trap from 28-30 April 2021 along Fox Point Road and at light around Mathais Lab on 3 and 8 June 2021.

*Pterostichus stygicus* (Say) is found under bark, in logs, and under logs and branches in hardwood forests and in "adjoining meadows with high vegetation"; adults have been collected in pitfall traps and by head lamping (Lindroth, 1966; Bousquet, 1986). The single SERC specimen was taken on a purple sticky trap near Mathais Lab from 18 May to 23 July 2021.

*Trechus quadristriatus* (Schrank), an introduced species, is found in cultivated fields, gardens, and vacant lots. Adults have been collected in leaf litter, pitfall traps, and at lights (Mitchell, 1963a,b; Bousquet et al., 1984). The two SERC specimens were taken in a Lindgren funnel trap in the woods north of the Sellman House from 5-13 April 2021.

This brings the total number of Carabidae species documented at SERC to 128 (Staines & Staines, 2021e).

## Family Cerambycidae

*Aneflomorpha subpubescens* (LeConte) has been reported from oak (Solomon, 1995). A single SERC specimen was taken in a Malaise trap in the grassy field opposite the Sellman House from 1-3 May 2020.

*Astyleiopus variegatus* (Haldeman) bores into branches of trees and shrubs (Yanega, 1996); and is attracted to light (Staines, 1987a). SERC specimens were taken at light around the Reed Education Center on 15 July 2021 and 4 June 2022.

*Astylopsis perplexa* (Haldeman) breeds in *Baccharis halimifolia* L. (Asteraceae) (Lingafelter, 2007). SERC specimens were collected in Lindgren funnel traps on the hill just north of Mathais Lab from 25 June to 11 July 2022 and 13-18 July 2022 and around the Reed Education Center on 16 July 2022. It is known from the southeastern United States (Lingafelter, 2007). This species is not listed in MBP (2022).

*Astylopsis sexguttata* (Say) bores under the bark of conifers, especially pine (*Pinus*, Pinaceae) (Yanega, 1996); and is attracted to light (Staines, 1987a). The single SERC specimen was taken in a Lindgren funnel trap in Zone 6 from 8-15 July 2021.

*Elaphidion mucronotum* (Say) is polyphagous, having been reared from at least 31 genera of both angiospermous and gymnospermous plants (Linsley, 1963; Kirk, 1969, 1970, Gosling, 1984; Rice et al., 1985; Boldt & Robbins, 1987; MacRae, 1994; MacRae & Rice, 2007). The two SERC specimens were taken at light around the Reed Education Center on 17 July 2021.

*Enaphalodes rufulus* (Haldeman) bores into oaks of the red and white oak groups (Solomon, 1995) and is attracted to lights (Staines, 1987a). The single SERC specimen was taken at light around the Reed Education Center on 21 July 2021.

*Gaurotes cyanipennis* (Say) bores beneath the bark of various hardwoods and shrubs (Yanega, 1996). SERC specimens were taken in Lindgren funnel traps on the hill just north of Mathais Lab from 22-25 May 2021, and 4-11 June 2022 and along Fox Point Road from 1-8 June 2021 and 28 May to 4 June 2022.

*Goes pulverulentus* (Haldeman) bores into oak, beech, elm (*Ulmus*, Ulmaceae), and sycamore (*Platanus*, Plantanaceae) (Solomon, 1995). The single SERC specimen was taken in a Lindgren funnel trap on the dirt road between Zones 2 and 3 from 2-8 July 2021.

*Goes tigrinus* (DeGeer) bores into various oaks (Solomon, 1995). The two SERC specimens were taken in Lindgren funnel traps along Fox Point Road from 1-8 June 2021 and at Fox Point Road and Connector Trail from 8-15 June 2021.

*Hippopsis lemniscata* (Fabricius) bores in stems of living herbaceous plants, especially Asteraceae (Lingafelter, 2007). A single SERC specimen was taken around the Reed Education Center on 1 July 2022.



*Leptostylus transversus* (Gyllenhal) is found in various hardwoods, conifers, and vines (Yanega, 1996) and is attracted to light (Staines, 1987a). SERC specimens were taken at light around Mathais lab on 15 July 2021, in Lindgren funnel traps on the hill just north of Mathais Lab from 2-8 March 2022, and along Fox Point Road from 2-8 March 2022 and 8-16 April 2022.

*Metacmaeops vittata* (Swederus) breeds in *Castanea* sp. (Fagaceae) and *Liriodendron tulipifera* L. (Magnoliaceae) (Gosling & Gosling, 1976; Linsley & Chemsak, 1997). A single SERC specimen was taken in a Malaise trap in the grassy field opposite the Sellman House from 30 May-2 June 2020.

*Microclytus gazellula* (Haldeman) has an unknown biology and is known from the eastern United States (Linsley, 1964). Staines (1987a) reported that the species should occur in Maryland but was unable to locate any specimens. The Maryland Biodiversity Project (MBP) does not record this species. SERC specimens were taken in Lindgren funnel traps in the cypress swamp from 24-30 April 2021 and 16-25 April 2022, at Frog Haven from 30 April to 4 May 2021, along Fox Point Road from 22-25 May 2021 and 16-25 April 2022, beating eastern redbud around the Reed Education Center on 15 April 2021, and beating *Prunus* (Rosaceae) near the Java House ruins on 2 May 2022. **NEW STATE RECORD.**

*Monochamus carolinensis* (Olivier) larvae feed on dead and dying pine (*Pinus* sp.) (Lingafelter, 2007). A single SERC specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 18 July to 12 August 2022.

*Neoclytus acuminatus* (Fabricius) breeds in at least 35 woody plant genera (Riley, 1880; Beutenmiller, 1896; Craighead, 1923; Knull, 1930; Solomon, 1982; Gosling, 1984; Rice, 1985; Rice et al., 1985; MacRae, 1994; MacRae & Rice, 2007). SERC specimens were taken in a Malaise trap in the grassy field opposite the Sellman House from 1-3 May 2020 and in a Lindgren funnel trap at Fox Point from 20 August to 3 September 2022.

*Neoclytus mucronatus* (Fabricius) larvae develop in various hardwood trees (Lingafelter, 2007). A single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 11-18 June 2022.

*Prionus laticollis* (Drury) is found in the roots of living hardwoods (Solomon, 1995). The single SERC specimen was taken at light around Mathais Lab on 5 July 2021.

*Psenocerus supernotatus* (Say) is found in decaying branches of numerous hardwoods, shrubs, and vines (Yanega, 1996). The single SERC specimen was taken beating *Campsis radicans* Seem. (Bignoniaceae) behind the Wet Lab on 4 May 2021.

*Sternidius misellus* (LeConte) breeds in various hardwood trees and is found in eastern North America (Lingafelter, 2007). A single SERC specimen was collected around Mathias Lab on 2 July 2022. This species is not listed in MBP (2022).

*Xylotrechus colonus* (Fabricius) larvae develop in nearly all eastern United States hardwood trees (Lingafelter, 2007). SERC specimens were taken in Lindgren funnel traps along Fox Point Road

from 28 May to 4 June 2022 and on the hill just north of Mathais Lab from 4-11 June 2022, 11-18 June 2022, and 13-18 July 2022.

This brings the total number of Cerambycidae species documented at SERC to 29 (Staines & Staines, 2020d).

### **Family Cerylonidae**

*Philothermus glabriculus* LeConte is found under bark, in rotten logs, and in forest debris (Lawrence & Stephan, 1975). A single SERC specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 12-20 August 2022.

This is the first species of Cerylonidae documented from SERC.

### **Family Chrysomelidae**

*Altica litigata* Fall is normally associated with plants in the family Onagraceae (Clark et al., 2004). SERC specimens were taken feeding on *Oenothera speciosa* Nutt. (Onagraceae) in the experimental gardens on 17 May 2022.

*Althaeus hibisci* (Olivier) breeds in *Abutilon* and *Hibiscus* (Kingsolver, 2004). Numerous SERC specimens were taken at the Java History Trail and boardwalk on 26 August 2020 feeding on *Kosteletzkya virginica* (L.) Ledeb. (Malvaceae).

*Brachypnoea tristis* (Olivier) has been found it on many trees and herbaceous plants (Riley & Enns, 1979). SERC specimens were taken in a Malaise trap in the grassy field opposite the Sellman House from 12-15 June 2020.

*Capraita scalaris* (Melsheimer) occurs on low Ericaceae near the margins of lakes (Blatchley, 1924) and taken at lights (Kirk, 1969). SERC species were taken sweeping *Vaccinium staminum* L. (Ericaceae) on Hog Island on 26 August 2020.

*Cerotoma trifurcata* (Forster) is a pest of beans (*Phaseolus*), cowpeas (*Vigna*), soybean (*Glycine*), and wild legumes (Fabaceae) (Clark et al., 2004). The two SERC specimens were collected sweeping in the meadow in front of Mathais Lab on 25 May 2021 and at light around Mathais Lab on 25 July 2021.

*Chaetocnema crenulata* Crotch has an unknown biology and no recorded host plants. The single SERC specimen was taken in a Malaise trap in the grassy field opposite the Sellman House from 30 May-2 June 2020.

*Cryptocephalus badius* Suffrian has been taken on cotton, (*Gossypium*, Malvaceae) (White, 1968). A single SERC specimen was taken beating vegetation around the Reed Education Center on 26 August 2020.

*Donacia caerulea* Olivier has been collected on *Sagittaria* (Alismataceae) (Clark et al., 2004). SERC specimens were taken sweeping vegetation around the pond in front of Mathais Lab on 15 May 2021 and at lights around Mathais Lab on 5 June 2021.

*Epitrix humeralis* Dury feeds on Virginia ground cherry (*Physalis virginiana* Mill., Solanaceae) (Wilcox, 1954) and black nightshade (*Solanum nigrum* L., Solanaceae) (Harding, 1961). A single SERC specimen was taken in a Malaise trap in the grassy field opposite the Sellman House from 30 May-2 June 2020.

*Exema elliptica* Karren is associated with *Iva frutescens* L. and *Baccharis halimifolia* (Asteraceae) (Karren, 1966). Three SERC specimens were taken sweeping vegetation in the meadow in front of Mathias Lab on 2 May 2022.

*Fidia longipes* (Melsheimer) has been found on a wide variety of plants but most commonly on various Vitaceae, collected at lights, by "Lindgren funnel", and in Malaise and sticky traps (Strother & Staines, 2008). The two SERC specimens were taken in a Lindgren funnel trap near the water tower behind the dorms from 2-8 July 2021.

*Labidomera clivicollis* (Kirby) has been found on various *Asclepias* (Aponynaceae) (Riley & Enns, 1979). The single SERC specimen was collected sweeping vegetation in the meadow in front of Mathais Lab on 15 May 2021.

*Microrhopala vittata* (Fabricius) is a leaf miner in various *Solidago* (Clark, 1983). SERC specimens were collected sweeping vegetation in the meadow in front of Mathais Lab on 20 April 2021 and 2 May 2022.

*Neochlamisus tuberculatus* (Klug) is associated with *Vaccinium* and oak (Karren, 1972). SERC specimens were taken sweeping *Vaccinium staminum* on Hog Island on 26 August 2020.

*Neolema sexpunctata* (Olivier) feeds on *Commelina communis* L. and *C. virginica* L. (Commelinaceae) (Clark, 2000). The single SERC specimen was taken sweeping vegetation around the solar lot on 4 August 2021.

*Ophraella communis* LeSage feeds on a number of Asteraceae (Palmer & Goeden, 1991). Two SERC specimens were taken sweeping *Ambrosia artemisiifolia* L. (Asteraceae) around Mathais Lab on 14 September 2021.

*Oulema palustris* (Blatchley) has been collected on a wide variety of plants (White, 1993). The single SERC specimen was taken sweeping vegetation in the field along Contees Wharf Road on 20 April 2021.

*Paria quadriguttata* LeConte is found on various species of willow (*Salix*, Salicaceae) (Clark et al., 2004). SERC specimens were taken in Malaise traps along the woods margin opposite the Sellman House from 3-6 June 2021 and 17-20 June 2021.

*Sumitrosis ancoroides* (Schaeffer) has been collected on *Strophostyles helvola* (L.) Ell., *S. umbellata* Britt., *Stylosanthes biflora* (L.) B.S.R., and *Glycine max* (L.) Merr. (Fabaceae) (Staines, 2006). The single SERC specimen was taken sweeping vegetation in the meadow in front of Mathais Lab on 20 April 2021.

*Sumitrosis inaequalis* (Weber) is a leaf miner in numerous Asteraceae (Staines, 2006). The single SERC specimen was taken sweeping vegetation in the swamp near Sellman Creek on 20 May 2021.

*Systema corni* Schaeffer feeds on *Cornus florida* L. (Cornaceae) (Balsbaugh & Hays, 1972). A single SERC specimen was taken beating vegetation around the Reed Education Center on 26 August 2020.

This brings the total number of Chrysomelidae species documented at SERC to 69 (Staines & Staines, 2020d).

### **Family Cleridae**

*Chariessa pilosa* (Forster) adults and larvae feed on larvae of woodboring beetles. They are found on plants infested with these larvae (Leavengood, 2008). A single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 11-18 June 2022.

*Enoclerus ichneumoneus* (Fabricius) is a predator of various woodboring beetles (Cerambycidae, Curculionidae) (Knull, 1951). SERC specimens were taken beating oaks in Zone 6 on 28 April 2021 and in a Lindgren funnel trap along Fox Point Road from 17-23 May 2022.

*Enoclerus nigripes* (Say) is a predator of various Curculionidae borers in conifers (Knull, 1951). SERC specimens were taken in Lindgren funnel traps on Back Road opposite the NEON tower from 22-27 March 2021; along Fox Point Road from 22-27 March 2021, 2-8 March 2022; at Back Road and dirt road 11-6 from 5-13 April 2021; along Squirrel Neck Trail from 1-8 June 2021; on the hill just north of Mathais Lab from 2-8 March 2022; in the cypress swamp from 19 March to 4 April 2022, 4-11 June 2022; and at lights around Mathais Lab on 25 May 2021.

*Madoniella dislocata* (Say) is found on dead tree and shrub branches infested with wood-boring beetles (Evans, 2014). Two SERC specimens were taken in a Lindgren funnel trap along Fox Point Road from 11-18 June 2022.

*Necrobia violacea* (Fabricius) is found on dried skin and bones and feeds on larvae of Dermestidae (Coleoptera) (Knull, 1951). SERC specimens are taken on a dead domestic goose (*Anser anser* L., Aves: Anatidae) on 25 April 2021 near Mathais Lab.

*Pyticeroidea laticornis* (Say) is found on various hardwood trees infested with woodboring beetle larvae (Leavengood, 2008). A single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 11-18 June 2022.

This brings the total number of Cleridae species documented at SERC to nine (Staines & Staines, 2021f).

### **Family Coccinellidae**

*Scymnus indianensis* Weise has no published biological information but other species of *Scymnus* feed on aphids and scale insects (Hemiptera) (Gordon, 1976). The single SERC specimen was collected sweeping vegetation along the edge of the pond in front of Mathais Lab on 15 May 2021. Gordon (1976) reports this species from New Hampshire to Florida. This species is not listed in MBP (2022).

This brings the total number of Coccinellidae species documented at SERC to 10 (Staines & Staines, 2021c).

### **Family Cryptophagidae**

*Atomaria distincta* Casey has been found along margins of marshes, in flood debris, and forested areas (Pelletier & Hébert, 2019). SERC specimens were taken in Lindgren funnel traps along Contee Watershed Trail from 18-22 May 2021 and along Fox Point Road from 8-16 April 2022.

*Atomaria nigrirostris* Stephens is found in early successional fields (Pelletier & Hébert, 2019). The single SERC specimen was taken in a Malaise trap in the grassy field opposite the Sellman House from 17-20 June 2021.

*Caenoscelis basalis* Casey has been found in forested areas, in leaf litter, under debris, and flooded marshes (Pelletier & Hébert, 2019); it feeds on fungal spores (Marche, 2019). The single SERC specimen was taken in a Lindgren funnel trap in the cypress swamp from 24-30 April 2021. It is found from eastern Canada to Georgia (Pelletier & Hébert, 2019). This species is not listed in MBP (2022).

This brings the total number of Cryptophagidae species documented at SERC to four (Staines & Staines, 2021c).

### **Family Cupedidae**

*Tenomerga cinerea* (Say) has been collected in rotten logs and stumps of *Quercus*, in a decayed pole of *Castanea* (Fagaceae), around old farm buildings, from beneath the bark of trees, and off of ripe apples (*Malus*), it is believed to feed, at least partially, on fungi (Atkins, 1979). The single SERC specimen was taken at lights around the Reed Education Center on 21 July 2021.

This is the first Cupedidae species documented at SERC.

### **Family Curculionidae**

*Anthonomus quadrigibbus* Say feeds on a wide variety of Rosaceae, especially apple and hawthorn (*Crataegus*) (Hammer, 1936). SERC specimens were taken beating vegetation in the main parking

lot on 13 April 2021, in the field along Contees Wharf Road on 13 May 2021, along the woods edge at the intersection of Contees Wharf and Dock Roads on 13 May 2021, in a Malaise trap along the woods edge opposite the Sellman House from 3-6 June 2021; and beating *Amelanchier* (Rosaceae) along Back Road on 16 April 2022.

*Anthonomus suturalis* LeConte larvae develop in *Phylloxera* galls (Hemiptera) on the leaves of hickory and pecan (*Carya*, Juglandaceae) (Gates & Burke, 1972). The single SERC specimen was taken beating vegetation around Mathais Lab on 27 May 2021.

*Aphrastus taeniatus* Say breeds in various coarse Poaceae (Blatchley & Leng, 1916) and is found on various Asteraceae and deciduous shrubs (Evans, 2014). A single SERC specimen was taken in a Malaise trap in the grassy field opposite the Sellman House from 3-6 June 2021.

*Calomycterus setarius* Roelofs this introduced species may be abundant on soybeans (*Glycine max* (L.) Merr., Fabaceae) (Bright & Bouchard, 2008). A single SERC specimen was collected around Mathais Lab on 2 July 2022.

*Ceutorhynchus obstructus* (Marsham) this introduced species is a pest on various Brassicaceae (Anderson & Korotyaev, 2004). A single SERC specimen was taken in a Malaise trap along the woods margin opposite the Sellman House from 17-20 June 2021.

*Cnestus mutilatus* (Blandford) this introduced species breeds on a wide variety of trees and vines (Carlton & Bayless, 2011). SERC specimens were taken in Lindgren funnel traps in the cypress swamp, along Fox Point Road from 11 May to 29 September 2022 and on the hill just north of Mathais Lab from 11 May to 29 September 2022.

*Conotrachelus anaglypticus* (Say) feeds on various fruits and the cambium of numerous trees and shrubs (Schoff, 1942). The single SERC specimen was taken in a Lindgren funnel trap near the Java House ruins from 4-8 May 2021.

*Conotrachelus iowensis* Schoff has an unknown biology (Schoff, 1942). SERC specimens were taken in Lindgren funnel traps near the Java House ruins from 4-8 May 2021 and along a hedgerow in Zone 5 from 30 August to 14 September 2021.

*Cossonus impressifrons* Boheman is found under bark of dead deciduous hardwoods, including oak, sycamore, and elm (Evans, 2014) and has been captured in Lindgren funnel traps (Webster et al., 2016). SERC specimens were taken in a Lindgren funnel trap near the water tower behind the dorms from 24 June to 2 July 2021, on a purple sticky trap along Contee Watershed Trail from 18 May to 23 July 2021, and in a Lindgren funnel trap along Fox Point Road from 25 June to 11 July 2022.

*Dirabius rectirostris* (LeConte) feeds on *Carex* (Cyperaceae) and is attracted to lights (Ciegler, 2010). A single SERC specimen was taken sweeping vegetation in the field at the intersection of Contees Wharf and Dock Roads on 13 April 2022. It is found from New Hampshire to South Carolina (O'Brien & Wibmer, 1982). This species is not listed in MBP (2022).

*Dryophthorus americanus* Bedel larvae develop in decaying pines; adults are found under pine bark, in leaf litter, and are attracted to lights (Evans, 2014). SERC specimens were taken in Lindgren funnel traps along Fox Point Road from 22-25 May 2021 and on the hill just north of Mathais Lab from 11-18 June 2022.

*Eubulus bisignatus* (Say) adults have been collected on various hardwoods and at light (Anderson, 2008). A single SERC specimen was collected in a Lindgren funnel trap in the cypress swamp from 28 May to 4 June 2022.

*Eubulus obliquefasciatus* (Boheman) is common at lights and flight intercept traps (Anderson, 2008). A single SERC specimen was taken around Mathias Lab on 21 May 2022.

*Euwallacea validus* (Eichhoff) this introduced species feeds on plants in more than 20 families (Haack & Rabaglia, 2013). A single SERC specimen was collected in a flight intercept trap near Tower O from 6-16 June 2022.

*Glyptobaris lecontei* Champion is reported from various plants and in Malaise traps (Evans, 2014). SERC specimens were taken in a Malaise trap along the woods margin opposite the Sellman House from 17-20 June 2021 and beating *Prunus* near the Java House ruins on 17 May 2022.

*Hylastinus obscurus* Marsham, an introduced species, feeds on red clover (*Trifolium pratense* L., Fabaceae) (Koehler et al., 1961). Three SERC specimens were taken in a Lindgren funnel trap behind the Wet Lab from 24-30 April 2021.

*Hylobius pales* (Herbst) feeds on pine (*Pinus*) and is attracted to light (Drooz, 1985). The single SERC specimen was taken at black light on 11 March 2021 along Java History Trail.

*Hylurgops reticulatus* Wood has an unknown biology, other members of the genus feed in various conifers (Bright, 1976). The single SERC specimen was taken in a Lindgren funnel trap along a hedgerow in Zone 6 from 16-30 August 2021.

*Hypera compta* (Say) feeds on *Polygonum coccineum* Muhl. (Polygonaceae) (Puttler et al., 1973). The single SERC specimen was taken sweeping vegetation in the meadow in front of Mathais Lab on 20 April 2021. It is found from eastern Canada to Florida (O'Brien & Wibmer, 1982). This species is not included in MBP (2022).

*Lechriops oculatus* (Say) is found beating and sweeping vegetation, especially oak, hickory, sassafras (*Sassafras albidum* (Nutt.) Nees, Lauraceae), ash (*Fraxinus*, Oleaceae), viburnum, and hawthorn (Evans, 2014). SERC specimens were taken sweeping vegetation in Zone 6 on 28 April 2021 and in a Lindgren funnel trap in the cypress swamp from 25 April to 4 May 2022.

*Linogeraeus neglectus* (LeConte) has an unknown biology (Prena, 2009). SERC specimens were taken sweeping vegetation in the meadow in front of Mathais Lab on 15 May 2021 and around the solar lot on 4 June 2022. Prena (2009) reports this species from Virginia to Florida and west to Texas. This species is not included in MBP (2022). **NEW STATE RECORD.**

*Monarthrum mali* (Fitch) is found on numerous deciduous trees and conifers (Blackman, 1922). Two SERC specimens were taken in a Lindgren funnel trap along Fox Point Road from 2-8 March 2022.

*Naupactus leucoloma* Boheman is an introduced species which feeds on many horticultural plants and vegetables (Young et al., 1950). SERC specimens were taken at lights around Mathais Lab on 5, 12, and 15 July and at lights around the Reed Education Center on 10 August 2021.

*Odontocorynus falsus* LeConte has been collected on *Solidago* (Prena, 2008). The single SERC specimen was collected in a Malaise trap along the woods margin opposite the Sellman House from 3-6 June 2021. It is known from New Jersey to South Carolina west to Iowa and Texas (Ciegler, 2010). This species is not included in MBP (2022).

*Otiorynchus rugostriatus* (Goeze), an introduced species, feeds on the roots of many Rosaceae (Mattson et al., 1994). The single SERC specimen was taken in a Lindgren funnel trap from 4-16 August 2021 in Zone 5 near the lower barn.

*Pissodes strobi* (Peck) bores in shoots of *Picea* (spruce, Pinaceae) and pine (Hopkins, 1911). The single SERC specimen was taken beating pine in Zone 6 on 29 April 2021.

*Pityophthorus cariniceps* LeConte is found in various species of *Abies*, *Picea*, and *Pinus* (Pinaceae) (Bright, 1981). A single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 16-25 April 2022.

*Pityophthorus liquidambarus* Blackman feeds on *Liquidambar styraciflua* L. (Atingiaceae) (Bright, 1981). SERC specimens have been taken in Lindgren funnel traps along Fox Point Road, in the cypress swamp, and on the hill just north of Mathais Lab from 19 March to 29 September 2022.

*Psomus armatus* (Dietz) is associated with forest habitats, and has been recorded on sprouts of white ash, *Fraxinus americanus* L. (Blatchley & Leng, 1916). The single SERC specimen was taken sweeping vegetation in Zone 1 on 24 June 2021. It is found from eastern Canada to Pennsylvania and west to Tennessee (O'Brien & Wilbmer, 1982). This species is not included in MBP (2022).

*Pseudothysanoes lecontei* Blackman breeds in oak twigs (Blackman, 1922) and has been collected in Lindgren funnel traps (Helm & Molano-Flores, 2015). The single SERC specimen was taken in a Lindgren funnel trap from 29 July to 4 August along Fox Point Road.

*Rhinoncus pyrrhopus* Boheman has been collected on *Polygonum* and *Rumex* (Ciegler, 2010). The single SERC specimen was collected in a Malaise trap in the grassy field opposite the Sellman House from 3-6 June 2021. It is found from Ontario to the District of Columbia (O'Brien & Wilbmer, 1982). This species is not included in MBP (2022).

*Rhysomatus lineaticollis* (Say) feeds on *Asclepias* (Fordyce & Malcolm, 2000). The single SERC specimen was taken at lights around Mathais Lab on 15 July 2021.



*Scolytus mali* (Bechstein), an introduced species, breeds in decaying apple, cherry (*Prunus*, Rosaceae), and elm (Drooz, 1985). Numerous SERC specimens were taken in Lindgren funnel traps from 24 April to 17 September 2021 at cypress swamp, along Contee Watershed Trail, at Frog Haven, on the hill just north of Mathais Lab, along Fox Point Road, and in a hedgerow in Zone 6.

*Scolytus multistriatus* Marshall, an introduced species, breeds in various species of elm (Drooz, 1985). Numerous SERC specimens were taken in Lindgren funnel traps from 24 April to 27 September 2021 along Fox Point Road, at Frog Haven, on the hill just north of Mathais Lab, near the Java House ruins, on Hog Island, behind Wet Lab, along Squirrel Neck Trail, along Java History Trail, in the pines above the Sellman House, in Zone 6 near the upper barn, and along a hedgerow in Zone 5.

*Scolytus quadrispinosus* Say feeds on hickories, pecans, and butternut (*Juglans cinerea* L.) (Drooz, 1985). SERC specimens were taken in Lindgren funnel traps from 15 May to 30 August 2021 on the hill just north of Mathais Lab, in the field opposite the Sellman House and in a hedgerow in Zone 6.

*Scolytus rugulosus* Ratzeberg, an introduced species, breeds in most fruit trees (Drooz, 1985). SERC specimens were taken in Lindgren funnel traps from 4 May to 30 August 2021 near the Java House ruins, along Fox Point Road, at Frog Haven, at Dock Road near the Administration Building, along Contees Wharf Road, picnic area near the Reed Education Center, in a hedgerow in Zone 6, along the dirt road to the Methane Lab, in Zone 6 near the lower barn, and along Dock Road.

*Trypodendron betulae* Swaine breeds in *Alnus* and *Betula* (Betulaceae) and adults have been collected in Lindgren funnel traps (Bright, 1976; Rabaglia, 2003). SERC specimens were taken in Lindgren funnel traps in the pines above the Sellman House from 30 August to 14 September 2021; in the cypress swamp from 23-28 May 2022; on the hill just north of Mathais Lab from 11-17 May 2022, 23-28 May 2022; and along Fox Point Road from 11-17 May 2022.

*Tychius picirostris* (Fabricius), an introduced species, feeds on *Trifolium* spp. (Fabaceae) (Anderson & Howden, 1994). SERC specimens were taken sweeping vegetation in the meadow in front of Mathais Lab on 20 April, 28 April, and 15 May 2021, a single specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 18-20 May 2021.

*Tyloderma foveolatum* (Say) feeds on *Oenothera biennis* L. (Onagraceae) (Wibmer, 1981); and has been found on primrose-willow (*Ludwigia*, Onagraceae), meadowbeauty (*Rhexia*, Melastomataceae), and beaksedge (*Rhynchospora*, Cyperaceae) growing along margins of wetlands (Wibmer, 1981). The single SERC specimen was taken sweeping vegetation in the swamp along Sellman Creek on 20 May 2021.

*Xyleborus celsus* Eichhoff is found on various *Carya* sp. (Juglandaceae) (Douglas et al., 2013). SERC specimens were taken in Lindgren funnel traps on the hill just north of Mathais Lab from 25 April to 4 May 2022 and at Fox Point from 3-17 September 2022.

*Xyleborus dispar* (Fabricius) breeds in a wide variety of hardwood trees (Drooz, 1985). Numerous SERC specimens were taken in Lindgren funnel traps from 22 March to 25 May 2021 along Contee Watershed Trail, at Frog Haven, in the pines opposite Java House ruins, around Java House ruins, Back Road opposite the NEON tower, at the intersection of Back Road and dirt road 11-6, along Fox Point Road, in the woods north of the Sellman House, behind the Wet Lab, in the cypress swamp, and at the canoe shed.

*Xyleborus sayi* (Hopkins) breeds in a wide variety of deciduous trees (Drooz, 1985). The two SERC specimens were taken in Lindgren funnel traps near the Reed Education Center from 20-22 May 2021 and on the hill just north of Mathais Lab from 20-22 May 2021.

*Xylosandrus germanus* (Blandford), an introduced species, attacks numerous woody plants (Agnello et al., 2017). SERC specimens were taken in Lindgren funnel traps along a hedgerow in Zone 5 from 15-22 July 2021; along a hedgerow in Zone 6 from 16-30 August 2021; in the cypress swamp from 8-16 April 2022, 16-25 April 2022; on the hill just north of Mathais Lab from 8-16 April 2022, 16-25 April 2022; and along Fox Point Road from 19 March to 15 October 2022.

This brings the total number of Curculionidae species documented at SERC to 86 (Staines & Staines, 2021a).

### Family Dermestidae

*Anthrenus castaneae* Melsheimer adults have been collected on numerous flowers and at lights (Beal, 1998). Two SERC specimens were taken in a Lindgren funnel trap along Contees Watershed Trail from 20-22 May 2021. Beal (2003) reports this species from Maine to Florida. This species is not included in MBP (2022).

*Anthrenus museorum* (L.), an introduced species, feeds on furs, woolen clothes, and dried animal products (Beal, 1998). SERC specimens were taken beating flowering *Prunus virginiana* L. along Fox Point Road on 15 May 2021, at lights around Mathais Lab on 27 May 2021, and in a Lindgren funnel trap along Java History Trail from 8-24 June 2021. Beal (2003) reports this species from New England. This species is not included in MBP (2022). **NEW STATE RECORD.**

*Anthrenus pimpinellae* Fabricius, an introduced species, adults feed on the nectar and pollen of various flowers (Beal, 1998). SERC specimens were taken beating flowering *Prunus virginiana* along Contees Watershed Trail on 4 May 2021.

*Anthrenus thoracicus* Melsheimer adults feed on the nectar and pollen of various flowers (Beal, 1998). The single SERC specimen was taken sweeping vegetation around the Java House ruins on 4 May 2021. Beal (2003) reports this species from Pennsylvania to South Carolina. This species is not included in MBP (2022).

*Apsectus hispidus* (Melsheimer) is associated with spider webs (Beal, 1959). The single SERC specimen was taken sweeping vegetation in the meadow in front of Mathais Lab on 20 April 2021.

Beal (2003) reports this species from Maryland and Texas. This species is not included in MBP (2022).

*Dearthrus longulus* LeConte has an unknown biology (Beal, 1998). The single SERC specimen was taken sweeping vegetation along Contee Watershed Trail on 15 May 2021. Beal (2003) reports this species from Pennsylvania to Georgia. This species is not included in MBP (2022).

*Dermestes maculatus* DeGeer is a pest of stored products (Beal, 1998). SERC specimens were found on 13 and 15 May 2021 near Mathais Lab on a dead *Anser anser*.

*Orphilus ater* Erichson is often taken in numbers on flowering trees and shrubs (Downie & Arnett, 1966). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 23-28 May 2022. Beal (2003) reports this species from Maryland. This species is not included in MBP (2022).

This brings the total number of Dermestidae species documented at SERC to 10 (Staines & Staines, 2021f).

### **Family Derodontidae**

*Derodontus esotericus* Lawrence is a generalist which feeds on a variety of fungi (Leschen, 1994). The single SERC specimen was taken in a Lindgren funnel trap along Contee Watershed Trail from 18-20 May 2021.

This is the first species of Derodontidae documented from SERC.

### **Family Disteniidae**

*Elytrimitatrix undata* (Fabricius) has an unknown biology (Linsley, 1962). SERC specimens were taken in a Lindgren funnel trap at the intersection of Fox Point Road and the Connector Trail from 15-24 June 2021, in a Lindgren funnel trap in a hedgerow in Zone 5 from 15-22 July 2021, and at lights on 15 July 2021 around the Reed Education Center.

This is the first species of Disteniidae documented from SERC.

### **Family Dytiscidae**

*Celina hubbelli* Young has been found in shallow pools and ponds with cattails (*Typha*, Typhaceae) (Hilsenhoff, 1994); from seepages and adults are attracted to lights (Ciegler, 2003). The single SERC specimen was taken in a Lindgren funnel trap from 23-30 August 2021 on Back Road near the Administration Building.

*Hydroporus niger* Say is found among emergent vegetation along the margins of exposed, sun-warmed pools and ponds (Larson et al., 2000; Ciegler, 2003). Hilsenhoff (1995) found most specimens in ponds but some in marshes. SERC specimens were taken by dip net on 15 May 2021

in the pond in front of Mathais Lab and in the pond at the intersection of Contees Wharf and Dock Roads on 10 May 2022.

This brings the total number of Dytiscidae species documented at SERC to 17 (Staines & Staines, 2020a).

### **Family Elateridae**

*Alaus oculatus* (L.) is found in deciduous forests where larvae feed on the larvae of woodboring beetles (Evans, 2014). A single SERC specimen was taken around the Reed Education Center on 17 May 2022.

*Ampedus collaris* (Say) is common on flowers (Downie & Arnett, 1996). A single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 8-16 April 2022.

*Cardiophorus convexus* (Say) has been found in sandy habitats including beach dune scrubs, turkey oak scrub, pine barrens, oak savannah, and on vegetation; in Lindgren funnel traps in mesic forest; sweeping and beating vegetation and in a variety of traps including Malaise, flight-intercept, ultraviolet-light, and both unbaited and baited pitfall traps (Douglas, 2003). The single SERC specimen was taken sweeping *Vaccinium* along Fox Point Road on 27 April 2021.

*Elater abruptus* Say has been found in hollow trees (Majka & Johnson, 2008). The single SERC specimen was taken in a Lindgren funnel trap from 22-29 July 2021 in the picnic area near the Reed Education Center.

*Hemicrepidius melanophthalmus* Melsheimer is found under loose bark and rocks and is attracted to light (Evans, 2014). The single SERC specimen was taken around Mathais Lab on 17 September 2022.

*Horistonotus curiatus* (Say) has been found on vegetation and is attracted to light (Evans, 2014). SERC specimens were taken in Lindgren funnel traps from 18 May to 1 June 2021 on the hill just north of Mathais Lab, in the woods north of the Sellman House, and along Fox Point Road.

*Lacon discoideus* (Weber) has been found under loose bark of stumps and logs or resting on vegetation (Evans, 2014). SERC specimens were taken in Lindgren funnel traps from 8 June to 2 July 2021 along Java History Trail, at Fox Point Road and Connector Trail, and near the water tower behind the dorms.

*Limonius basillaris* Say is found on *Quercus* sp. (Downie & Arnett, 1996). A single SERC specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 18-28 July 2022.

*Megapenthes limbalis* (Herbst) has been found resting on vegetation (Evans, 2014). The single SERC specimen was taken at lights around Mathais Lab on 8 July 2021.

*Melanotus americanus* (Herbst) has an unknown biology. SERC specimens were taken in Lindgren funnel traps from 8-15 June 2021 along Java History Trail; in the cypress swamp from 17-23 May 2022; and at Fox Point from 28 May to 11 June 2022.

*Melanotus tenax* Say has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap from 4-16 August 2021 along a hedgerow in Zone 6.

*Orthostethus infuscatus* (Germar) has an unknown biology. SERC specimens were collected in a Lindgren funnel trap at Fox Point from 13-18 July 2022 and 18-28 July 2022.

*Tetralimonius definitus* (Ziegler) has an unknown biology. SERC specimens were taken beating *Prunus virginiana* around the Reed Education Center on 27 April 2021; sweeping vegetation on 20 April 2021 near the Java House ruins; and on 21 April 2021 in the grassy field opposite the Sellman House. Downie & Arnett (1996) report this species from Maryland. This species is not included in MBP (2022).

This brings the total number of Elateridae species documented at SERC to 34 (Staines & Staines, 2021d).

### **Family Endomychidae**

*Endomychus biguttatus* Say adults have been collected in many ways and places; larval food is the hyphae of *Schizophyllum commune* Fries (Schizophyllaceae) (Shockley et al., 2009). SERC specimens were collected in Lindgren funnel traps from 30 August to 14 September 2021 at Back Road near the spring house and in the cypress swamp from 11-18 May 2022.

*Rhanidea unicolor* (Ziegler) is found under bark and is associated with fungi (Evans, 2014). SERC specimens were collected in Lindgren funnel traps at Fox Point from 2-8 March 2022 and on the hill just north of Mathais Lab from 11-18 June 2022.

These are the first species of Endomychidae documented from SERC.

### **Family Erotylidae**

*Triplax festiva* Lacordaire both larvae and adults have been collected from *Inonotus* spp. (Hymenochaetaceae) (Goodrich & Skelley, 1993). The single SERC specimen was collected in a Lindgren funnel trap at the intersection of Back Road and dirt road 11-6 from 8-15 June 2021.

This brings the total number of Erotylidae species documented at SERC to six (Staines & Staines, 2021c).

### **Family Eucnemidae**

*Entomophthalmus rufiolus* (LeConte) is found on *Carya* (Muona, 2000). A single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 11-18 June 2022. Otto (2022) reports this species from Maryland. This species is not included in MBP (2022).

*Isorhipis obliqua* (Say) breeds in decaying soft wood of various deciduous trees (Muona, 2000). A single SERC specimen was taken in a Lindgren funnel trap in the cypress swamp from 18-28 July 2022.

*Melasis pectinicornis* Melsheimer develops in various hardwood trees, the preferred host seems to be *Acer* (Muona, 2000). SERC specimens were collected sweeping vegetation in the grassy field opposite the intersection of Contees Wharf and Dock Roads on 15 May 2021 and in a Lindgren funnel trap along Java History Trail from 17-24 June 2021.

This brings the total number of Eucnemidae species documented at SERC to five (Staines & Staines, 2021d).

### **Family Geotrupidae**

*Bolbocerosoma tumefactum* (Beauvois) has been taken in mushrooms (Brimley, 1938) and at lights (Howden, 1955). The single SERC specimen was taken at lights around the Reed Education Center on 28 August 2021.

*Eucanthus impressus* Howden has been collected at lights (Staines, 1984). SERC specimens were collected sweeping vegetation in the meadow in front of Mathais Lab on 25 May 2021 and at lights around the Reed Education Center on 15 and 17 July 2021.

This brings the total number of Geotrupidae species documented at SERC to five (Staines & Staines, 2020b).

### **Family Haliplidae**

*Peltodytes dietrichi* Young is found in ditches, freshwater and brackish ponds (vanVondel, 2021). The single SERC specimen was taken by dip net in the pond in the garden near Mathais Lab on 17 June 2021.

*Peltodytes duodecimpunctatus* (Say) is a predator on Chironomidae (Diptera) eggs (vanVondel, 2021). A single SERC specimen was collected by aquatic net in the pond at the intersection of Contees Wharf and Back Roads.

This brings the total number of Haliplidae species documented at SERC to four (Staines & Staines, 2020a).

### **Family Heteroceridae**

*Heterocerus fatuus* Kiesenwetter has been collected near saline and freshwater bodies of water (Lago et al., 2002). The single SERC specimen was taken at lights around Mathais Lab on 25 May 2021.

This brings the total number of Heteroceridae species documented at SERC to three (Staines & Staines, 2020a).

### **Family Histeridae**

*Acritus exiguus* Erichson is thought to feed on small arthropods (Bousquet & Laplante, 2006). A single SERC specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 11-18 June 2022. It is found from New York to Florida (Downie & Arnett, 1996). This species is not included in MBP (2022).

*Platyomalus aequalis* (Say) is found under the bark of recently dead trees (Bousquet & Laplante, 2006). SERC specimens were taken at lights around Mathais Lab on 4 May 2021, in Lindgren funnel traps at Fox Point from 28 May to 18 June 2022, and on the hill just north of Mathais Lab from 23-28 May 2022.

*Platysoma aequum* LeConte is a predator of bark beetles (Coleoptera: Curculionidae: Scolytinae) (Erbilgin & Raffa, 2002). The single SERC specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 22-25 May 2021.

This brings the total number of Histeridae species documented at SERC to five (Staines & Staines, 2021f).

### **Family Hybosoridae**

*Germarostes globosus* (Say) has been collected under bark and at lights (Staines, 1984). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 1-8 June 2021.

This brings the total number of Hybosoridae species documented at SERC to two (Staines & Staines, 2020b).

### **Family Hydrophilidae**

*Cercyon lateralis* (Marsham) is found in compost piles, fungi, manure, plant debris, flying during daytime, and at lights (Smetana, 1978). SERC specimens were taken in unidentified mushrooms along Contee Watershed Trail on 31 August 2020, at the intersection of Back Road and dirt road 11-6 on 2 September 2020, and in the woods behind Mathais Lab on 9 September 2020.

*Enochrus hamiltoni* (Horn) is a salt marsh and brackish water species in areas protected from wave action (Matta, 1974). The two SERC specimens were taken in a Lindgren funnel trap along Squirrel Neck Trail from 27 May to 1 June 2021.

*Hydrochara soror* Smetana has been reported from shaded or unshaded woodland pools (Matta, 1982); in ponds, streams, ditches, shallow margins of lakes, and salt marshes (Ciegler, 2003); in thick grassy vegetation in roadside pools and grassy bottoms of small woodland pools (Testa & Lago, 1994); adults are attracted to lights (Smetana, 1980). The single SERC specimen was taken at light on 27 July around Mathais Lab.

This brings the total number of Hydrophilidae species documented at SERC to 16 (Staines & Staines, 2020a).

### **Family Lampyridae**

*Photuris versicolor* (Fabricius) has been collected in a variety of habitats but is usually found on forest or scrub-shrub vegetation (Heckscher, 2012). The single SERC specimen was taken at light near Mathais Lab on 3 June 2012. Barber (1951) reports this species from Maryland. This species is not included in MBP (2022).

*Pyropyga nigricans* (Say) is a diurnal species which is not bioluminescent; the species is found along streams (Majka, 2012). A single SERC specimen was collected in a Lindgren funnel trap on the hill just north of Mathais Lab from 25 April to 4 May 2022. Downie & Arnett (1996) reports this species from Maryland. This species is not included in MBP (2022).

This brings the total number of Lampyridae species documented at SERC to 11 (Staines & Staines, 2021d).

### **Family Latridiidae**

*Melanophthalma americana* (Mannerheim) is found in coniferous and mixed forests (Majka et al., 2009). SERC specimens were collected in Lindgren funnel traps in the cypress swamp from 8-19 March 2022 and 11-17 May 2022 and at Fox Point from 11-17 May 2022. Majka et al. (2009) reports this species from eastern Canada to Florida. This species is not included in MBP (2022).

This brings the total number of Latridiidae species documented at SERC to two (Staines & Staines, 2021c).

### **Family Leiodidae**

*Agathidium exiguum* Melsheimer is found in leaf and log litter (Miller & Wheeler, 2005). A single SERC specimen was collected in an unidentified mushroom on the hill just north of Mathais Lab on 18 June 2022.

*Agathidium oniscoides* Beauvois is associated with various slime molds (Miller & Wheeler, 2005). The single SERC specimen was taken in a Lindgren funnel trap in the pines above the Sellman House from 30 August to 14 September 2021. Miller & Wheeler (2005) reports this species from Maryland. This species is not included in MBP (2022).

*Anisotoma globososa* Hatch is found in various fungi (Peck & Newman, 2017). A single specimen was taken beating *Prunus* near the Java House ruins on 17 May 2022. Peck & Newman (2017) reports this species from Maine to New Hampshire. This species is not included in MBP (2022).  
**NEW STATE RECORD.**

*Anogdus obsoleta* (Melsheimer) has been collected from mixed forests on a variety of soils, mostly from flight intercept traps and evening car netting (Peck & Cook, 2013). The single SERC



specimen was taken in a Malaise trap in the grassy field opposite the Sellman House from 17-20 June 2021.

These are the first species of Leiodidae species documented from SERC.

### **Family Lucanidae**

*Platycerus quercus* (Weber) has been collected in decaying logs and blackberry flowers (*Rubus*, Rosaceae) (Staines, 1984). Two SERC specimens were taken in a Lindgren funnel trap along Fox Point Road from 5-13 April 2021.

This is the first species of Lucanidae documented from SERC.

### **Family Lymexylidae**

*Hylecoetus lugubris* Say breeds in a variety of hardwood trees but appears to prefer *Populus* sp. (Salicaceae) (Solomon, 1995). Two SERC specimens were taken in a Lindgren funnel trap at Fox Point from 18-25 June 2022.

This is the first species of Lymexylidae documented at SERC.

### **Family Melandryidae**

*Eustrophus tomentosus* Say is found under the bark of dead trees, on fungi, and at sap flows (Pollock, 2008). A single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 17-23 May 2022. Pollock (2008) reports this species from Maryland. This species is not included in MBP (2022).

*Symphora rugosa* (Haldeman) we were unable to locate any biological information on this species. A single SERC specimen was taken in a Lindgren funnel trap in the cypress swamp from 11-17 May 2022. Downie & Arnett (1996) report this species from Maine to Florida. This species is not included in MBP (2022).

This brings the total number of Melandryidae species documented at SERC to five (Staines & Staines, 2021b).

### **Family Meloidae**

*Meloe campanicollis* Pinto & Selander adults have been reported as crop pests (Pinto & Selander, 1970). A single SERC specimen was collected head lamping along Java History Trail on 11 March 2021.

This brings the total number of Meloidae species documented at SERC to four (Staines & Staines, 2021b).

### Family Melyridae

*Attalus scincetus* (Say) has been collected on flowers of *Prunus*, *Crataegus*, *Cornus*, *Sambucus* (Adoxaceae), *Rosa* (Rosaceae), and many other plants (Evans, 2014). SERC specimens were taken beating and sweeping vegetation on 28 April 2021 along the Java History Trail, on 13 May 2021 along Contees Wharf Road, in a Malaise trap along woods margin of the grassy field opposite the Sellman House from 17-20 June 2021, beating *Prunus* near the Java House ruins on 02 May 2022, and beating *Cornus florida* along Contees Wharf Road on 02 May 2022.

This brings the total number of Melyridae species documented at SERC to two (Staines & Staines, 2021f).

### Family Mordellidae

*Glipostenoda ambusta* (LeConte) has been collected by hand, in flight intercept, and Malaise traps (Lisberg & Young, 2003). SERC specimens were taken in Lindgren funnel traps along the Java History Trail from 15-17 June 2021 and at Back Road near the spring house from 30 August to 14 September 2021.

*Mordellaria serval* (Say) has been collected on flowers and foliage (Evans, 2014). SERC specimens were taken in a Lindgren funnel trap in a hedgerow in Zone 6 from 8-15 July 2021, in a Malaise trap in the grassy field opposite the Sellman House from 17-20 June 2021, in Lindgren funnel traps at Fox Point from 18-25 June 2022, and on the hill just north of Mathais Lab from 11-13 July 2022.

*Mordellaria undulata* (Melsheimer) has been collected in Malaise traps (Jackman & Nelson, 1995). SERC specimens were taken in a Lindgren funnel trap on the shaded beach along the Java History Trail from 8-15 July 2021 and in a Malaise trap in the grassy field opposite the Sellman House from 17-20 June 2021.

*Mordellina pustulata* (Melsheimer) has been reared from stems of many Asteraceae (Lisberg & Young, 2003). SERC specimens were taken in a Lindgren funnel trap at Fox Point Road and Connector Trail from 8-15 July 2021 and in a Malaise trap in the grassy field opposite the Sellman House from 3-6 June 2021.

*Mordellistena fuscipennis* (Melsheimer) has been collected in black light traps, Malaise traps, and flight intercept traps (Lisberg & Young, 2003). SERC specimens were taken in Malaise traps in the grassy field opposite the Sellman House from 3-6 June 2021 and along the woods margin of the grassy field opposite the Sellman House from 17-20 June 2021.

*Mordellistena militaris* LeConte has an unknown biology. A single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 18-25 June 2022.

*Mordellistena ornata* (Melsheimer) has been collected from the flowers of sumac (*Rhus*, Anacardiaceae), poplar, *Caethnothus* sp. (Rhamnaceae), and dogwoods (Lisberg & Young, 2003).

SERC specimens were taken in a Malaise trap in the grassy field opposite the Sellman House from 3-6 June 2021 and 17-20 June 2021.

*Yakuhamanonia bidentata* (Say) has been taken in dead elm, beech, and oak (Frost, 1913). The single SERC specimen was taken beating oak in a forest plot in Zone 6 on 9 July 2018.

This brings the total number of Mordellidae species documented at SERC to 18 (Staines & Staines, 2021b).

### **Family Mycetophagidae**

*Litargus nebulosus* LeConte has an unknown biology. The single SERC specimen was collected in a Malaise trap in the grassy field opposite the Sellman House from 3-6 June 2021. Parsons (1975) reported this species from Maryland. This species is not included in MBP (2022).

*Litargus sexpunctatus* (Say) has an unknown biology. A single SERC specimen was taken beating *Amelanchier* at the intersection of Contees Wharf and Dock Roads on 13 April 2022. Parsons (1975) reported this species from Maryland. This species is not included in MBP (2022).

*Mycetophagus melsheimeri* LeConte has been collected under bark and at lights (Evans, 2014). A single specimen was collected in a Lindgren funnel trap in the pines opposite the road to the Java House ruins from 22-27 March 2021.

*Mycetophagus obsoletus* (Melsheimer) has been found under bark and is attracted to light (Evans, 2014). The single SERC specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 17-29 September 2022.

*Mycetophagus pini* Ziegler has an unknown biology. A single SERC specimen was taken in a Lindgren funnel trap on Hog Island from 4-8 May 2021. Parsons (1975) reported this species from Maryland. This species is not included in MBP (2022).

*Mycetophagus punctatus* Say has been found under loose bark and in polypore fungi (Majka, 2010b). The single SERC specimen was taken in a Lindgren funnel trap in the pines above the Sellman House from 30 August to 14 September 2021.

This brings the total number of Mycetophagidae species documented at SERC to eight (Staines & Staines, 2021b).

### **Family Nitidulidae**

*Carpophilus antiquus* Melsheimer has been collected on new corn tassels (*Zea mays* L., Poaceae) (Vogt, 1950). The single SERC specimen was taken in a Lindgren funnel trap in the grassy field opposite the Sellman House from 22-27 March 2021.

*Carpophilus melanopterus* Erichson feeds on various species of *Yucca* (Asparagaceae) (Connell, 1956). SERC specimens were collected off *Yucca* flower stems near the Reed Education Center on 11 June 2022.

*Colopterus semitectus* (Say) has been found on sap flows on hardwood trees (Vogt, 1950). The two SERC specimens were taken in a Lindgren funnel trap in the woods north of the Sellman House from 5-13 April 2021 and sweeping vegetation on 20 April 2021 in a field along Contees Wharf Road.

*Glischrochilus fasciatus* (Olivier) has been found on sap flows on hardwood trees and decaying fruit (Vogt, 1950). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 15-18 May 2021.

*Glischrochilus obtusus* (Say) has been found on sap flows on hardwood trees (Vogt, 1950). SERC specimens were taken in Lindgren funnel traps on the hill just north of Mathais Lab from 22-27 March 2021, in the woods north of the Sellman House from 22-27 March 2021, and along Fox Point Road from 5-13 April 2021.

*Glischrochilus quadrisignatus* (Say) has been found on various fermenting substances and open seed pods of *Asclepias syriaca* L. (Aponynaceae) (Dailey et al., 1978). SERC specimens were taken in a Lindgren funnel trap in the cypress swamp from 1-8 March 2022 and 4-11 June 2022.

*Glischrochilus sanguinolentus* (Olivier) has been found on sap flows on hardwood trees and decaying fruit (Vogt, 1950). SERC specimens were taken in Lindgren funnel traps along Fox Point Road from 5-13 April 2021 and in the cypress swamp from 4-11 June 2022.

*Lobiopa undulata* Say has been found on sap flows on hardwood trees (Vogt, 1950). SERC specimens were collected on 30 March 2021 on a dead domestic goose near Mathais Lab.

This brings the total number of Nitidulidae species documented at SERC to 20 (Staines & Staines, 2021a).

### **Family Nosodendridae**

*Nosodendron unicolor* Say has been collected from slime flux, tree wounds, under bark, and in hollow trees (Staines, 1982). The single SERC specimen was taken in a Lindgren funnel trap from 3-17 September 2022 at Fox Point.

This is the first species of Nosodenridae documented at SERC.

### **Family Oedemeridae**

*Asclera ruficollis* (Say) has been collected on flowers of various trees and shrubs (Downie & Arnett, 1996). SERC specimens were collecting sweeping vegetation around Mathias Lab on 15 May 2021 and beating *Prunus virginiana* blossoms near the Java House ruins on 4 May 2021.

*Nacertes melanura* (L.), an introduced species, breeds in driftwood and pilings in fresh and brackish water (Arnett, 1984). The single SERC specimen was taken at light around Mathais Lab on 23 July 2021.

These are the first two species of Oedemeridae documented at SERC.

### **Family Passandridae**

*Catogenus rufus* (Fabricius) larvae are ectoparasites of Cerambycidae and Braconidae (Hymenoptera) pupae (Evans, 2014). A single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 11-18 June 2022.

This is the first species of Passandridae documented from SERC.

### **Family Phalacridae**

*Acylomus pugetanus* Casey feeds on the ergot fungus, *Claviceps* spp. (Clavicipitaceae) (Majka et al., 2008b). Two SERC specimens were taken at light near Mathais Lab on 23 July 2021. Steiner & Singh (1987) reported this species from Maryland. This species is not included in MBP (2022).

This brings the total number of Phalacridae species documented at SERC to five (Staines & Staines, 2021a).

### **Family Ptinidae**

*Euvrilletta peltata* (Harris) is thought to prefer wood with high moisture content for development and may thrive on wood already degraded by certain fungi and is widely distributed in the eastern United States (Arango & Young, 2012). A single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 25 June to 11 July 2022. This species is not included in MBP (2022).

*Hadrobregmus notatus* (Say) larvae are found in dead and decaying wood; adults are most often collected in Lindgren funnel or flight intercept traps (Arango & Young, 2012). The single SERC specimen was taken in a Lindgren funnel trap at Back Road and dirt road 11-6 from 15-24 June 2021.

*Hemicoelus pusillus* (Fall) the biology of this seldom collected species is unknown (Arango & Young, 2012). The single SERC specimen was collected in a Lindgren funnel trap at Fox Point from 12-20 August 2022.

*Oligomerus alternans* LeConte has an unknown biology. Four SERC specimens were taken on a purple sticky trap from 18 May to 23 July 2021 along Contee Watershed Trail. Arango & Young (2012) report this species widely distributed in the eastern United States. This species is not included in MBP (2022).

*Oligomerus sericans* (Melsheimer) has a poorly studied biology but larvae have been reared from hardwood branch tips (Arango & Young, 2012). The two SERC specimens were taken on purple

sticky traps from 18 May to 23 July 2021 near Mathais Lab and at the intersection of Back Road and dirt road 11-6.

*Petalium debile* Fall has been collected at lights and in Malaise traps (Arango & Young, 2012). SERC specimens were taken on a purple sticky trap from 18 May to 23 July 2021 near Mathais Lab and in a Lindgren funnel trap from 22-29 July 2021 along Fox Point Road. It is found from New Jersey to Florida (Arango & Young, 2012). This species is not listed in MBP (2022).

*Ptinus bimaculatus* Melsheimer has been collected in Lindgren funnel traps (Arango & Young, 2012). The single SERC specimen was taken in a Lindgren funnel trap along Java History Trail from 17-24 June 2021.

*Trichodesma gibbosa* (Say) larvae are found in dead and decaying wood; adults have been collected in flight intercept traps (Arango & Young, 2012). SERC specimens were taken in Lindgren funnel traps on the hill just north of Mathais Lab from 4-8 May 2021 and in the cypress swamp from 28 May to 4 June 2022.

This brings the total number of Ptinidae species documented at SERC to 13 (Staines & Staines, 2021f).

### **Family Pyrochroidae**

*Pedilus terminalis* (Say) adults are common on flowers and foliage (Evans, 2014); males are highly attracted to cantharidin and are found on blister beetles (Coleoptera: Meloidae) that produce it (Young, 1984). SERC specimens were taken in a Lindgren funnel trap near the Java House ruins from 22-25 May 2021.

This brings the total number of Pyrochroidae species documented at SERC to three (Staines & Staines, 2021b).

### **Family Scarabaeidae**

*Ataenius gracilis* (Melsheimer) has been taken at lights (Staines, 1984). The single SERC specimen was taken at light around Mathais Lab on 25 May 2021.

*Copris fricator* (Fabricius) breeds in dung (Woodruff, 1973). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 13-20 April 2021.

*Cotinis nitida* (L.) has been collected at lights and on ripening fruit, larvae feed on roots of grasses (Poaceae) (Staines, 1984). SERC specimens were found dead around Mathais Lab on 27 August 2021 and in a Lindgren funnel trap at Fox Point from 18 July to 12 August 2022.

*Cyclocephala lurida* Bland is a pest of turfgrass in Georgia; adults have been taken in Japanese beetle traps and at light (Staines, 1984). SERC specimens were taken at light around Mathais Lab on 6 July 2021.

*Dichelonyx fuscula* (LeConte) has been taken on oak, hickory, and pine (Harpoottlian, 2001). SERC specimens were taken sweeping vegetation around Mathais Lab on 27 April 2021 and beating trees along Fox Point Road on 27 May 2021.

*Diplotaxis liberta* (Germar) has been found on poplar roots and at light (Staines, 1984). SERC specimens were taken at light around Mathais Lab on 5 June 2021, 3 July 2021, and 2 July 2022.

*Gnorimella maculosa* (Knoch) larvae feed in decomposing wood and have been recorded from *Cercis canadensis* (Ritcher, 1945). Adults are frequently collected feeding on the nectar of flowers (Majka, 2010a). SERC specimens were taken in Lindgren funnel traps in the cypress swamp from 24-30 April 2021, 25 April to 4 May 2022, 11-17 May 2022; in the field behind the Sellman House from 24-30 April 2021; at Fox Point from 25 April to 4 May 2022, 4-11 May 2022, 11-17 May 2022, 17-23 May 2022; and on the hill behind Mathias Lab from 17-23 May 2022.

*Hoplia trifasciata* Say has been taken on willow (*Salix*, Salicaceae), honeysuckle (*Lonicera*, Caprifoliaceae), oak, and roseaceous flowers (Staines, 1984). The single SERC specimen was taken in a Lindgren funnel trap in the cypress swamp from 18-20 May 2021.

*Hoplia trivialis* Harold has been found on the foliage of hickory, pecan, dogwood, oak, Juneberry (*Amelanchier*, Rosaceae); beneath boards, stones, and rubbish in sandy areas near water; at light (Staines, 1984). SERC specimens were taken beating trees along Fox Point Road on 27 April 2021, in Lindgren funnel traps along Fox Point Road from 24-30 April 2021, 8-16 April 2022, and in the cypress swamp from 25 April to 4 May 2022, 16-25 May 2022.

*Macroductylus subspinosus* (Fabricius) feeds on a wide variety of plants (Staines, 1984). The single SERC specimen was taken around Mathais Lab on 23 July 2022.

*Onthophagus orpheus* (Panzer) has been found in dung, bird and mammal nests, and at malt traps (Staines, 1984). The single SERC specimen was taken at light on 23 July 2021 around Mathais Lab.

*Onthophagus pennsylvanicus* Harold has been found on dung, carrion, and fungi (Staines, 1984). The single SERC specimen was taken at light around Mathais Lab on 15 July 2021.

*Phyllophaga aemula* (Horn) has an unknown biology. The single SERC specimen was taken at the intersection of Fox Point and Back Roads on 4 May 2022.

*Phyllophaga dispar* (Burmeister) has been associated with pine (Harpoottlian, 2001). The single SERC specimen was taken at light around Mathais Lab on 23 July 2021. This species was not included in Staines (1984) but is known from New Jersey to South Carolina and west to Mississippi (Harpoottlian, 2001). This species is not included in MBP (2022).

*Saprosites ventralis* (Horn) has been found under bark and in the frass of passalid tunnels (Coleoptera: Passalidae) (Harpoottlian, 2001). The single SERC specimen was taken at light around Mathais Lab on 25 May 2021.

*Serica georgiana* Leng has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 23-28 May 2022.

*Serica vespertina* Gyllenhal has no published biological information. SERC specimens were taken in Lindgren funnel traps along Fox Point Road from 13-15 May 2021, on the hill just north of Mathais Lab from 18-20 May 2021, in the grassy field opposite the Sellman House from 27 May to 1 June 2021, and at the intersection of Back Road and dirt road 11-6 from 8-15 June 2021.

*Strigoderma arvicola* Fabricius has been collected on the flowers of rose, water-willow (*Justicia americana* L., Acanthaceae), and blackberry (Staines, 1984). The single SERC specimen was taken in a Lindgren funnel trap on the beach along Java History Trail from 8-15 July 2021.

*Trichiotinus bibens* (Fabricius) has been found on the flowers of dogwood, viburnum, Queen Anne's lace (*Daucus carota* L., Apiaceae), and in decaying logs (Staines, 1984). SERC specimens were taken on Queen Anne's lace flowers in Zone 1 on 24 June 2021, 2 July 2021, and near Mathais Lab on 3 July 2021.

*Valgus seticollis* (Beauvois) has been found in logs and on flowers in the spring (Harpootlian, 2001). SERC specimens were taken in Lindgren funnel traps on the hill just north of Mathais Lab from 4-8 May 2021 and 8-16 April 2022; near the Java House ruins from 4-8 May 2021; in the cypress swamp from 1-4 May 2021, 25 April to 4 May 2022, 11-17 May 2022; on Hog Island from 5-13 April 2021; and in the grassy field opposite the Sellman House from 1-8 June 2021.

This brings the total number of Scarabaeidae species documented at SERC to 60 (Staines & Staines, 2020b).

### **Family Scirtidae**

*Nyholmia collaris* (Guérin) adults are found resting on vegetation (Evans, 2014). SERC specimens were taken in a Lindgren funnel trap in the cypress swamp from 16-25 April 2022 and 25 April to 4 May 2002. It is found throughout eastern North America (Young & Stribling, 1990). This species is not included in MBP (2022).

*Sacodes pulchella* (Guérin) has been collected in forests, on tree trunks and vegetation, and at lights (Evans, 2014). SERC specimens were captured in Lindgren funnel traps along the Java History Trail from 8-15 June 2021 and at Fox Point from 11-17 May 2022, 17-23 May 2022, and 11-18 June 2022.

*Scirtes orbiculatus* (Fabricius) adults are found on vegetation in wetlands (Evans, 2014). The single SERC specimen was captured in a Lindgren funnel trap on the hill just north of Mathais Lab from 23-28 May 2022.

*Scirtes tibialis* Guérin has been collected in Carolina bays, at sugar traps, and at black light (Ciegler, 2003). The single SERC specimen was taken on a purple sticky trap from 18 May to 23 July 2021 near Mathais Lab.



This brings the total number of Scirtidae species documented at SERC to 10 (Staines & Staines, 2020a).

### **Family Scraptiidae**

*Anaspis rufa* Say has been found on flowers and vegetation in forests and edges; and is attracted to light (Evans, 2014). SERC specimens were taken beating *Prunus virginiana* blossoms near the Java House ruins on 5 April 2021 and in a Malaise trap in the grassy field opposite the Sellman House from 3-6 June 2021. Evans (2014) reports this species as transcontinental. This species is not included in MBP (2022).

*Canifa pallipes* (Melsheimer) has been found on the foliage of shrubs and trees (Evans, 2014). SERC specimens were taken in a Lindgren funnel trap near the Java House ruins from 4-8 May 2021 and 17-24 June 2021. Downie & Arnett (1996) report this species transcontinental. This species is not included in MBP (2022).

*Pentaria trifasciata* (Melsheimer) has been found on the flowers of trees and shrubs and in Malaise traps (Evans, 2014). The single SERC specimen was taken in a Lindgren funnel trap at Back Road opposite the NEON tower from 2-8 July 2021.

These three species are the first species of Scraptiidae documented from SERC.

### **Family Silphidae**

*Nicrophorus defodiens* Mannerheim is a forest species which does not bury carcasses (Staines, 1989). The single SERC specimen was taken in a Lindgren funnel trap in the cypress swamp from 25 June to 11 July 2022. The collection of this mostly boreal species in coastal Maryland is unexpected. The only published Maryland records are from the far western part of the state (Staines, 1989).

*Nicrophorus hebes* Kirby is found on carrion in marshy areas (Staines, 1987b). Two SERC specimens were taken in a Lindgren funnel trap in the cypress swamp from 25 June to 11 July 2022.

*Nicrophorus tomentosus* Weber this diurnal species is found on carrion of all types (Staines, 1987b). Numerous SERC specimens were taken in a Lindgren funnel trap in the cypress swamp from 25 June to 11 July 2022.

This brings the total number of Silphidae species documented at SERC to seven (Staines & Staines, 2020c).

### **Family Silvanidae**

*Silvanoprus angusticollis* (Reitter), an introduced species, has an unknown biology. A single SERC specimen was taken in a Lindgren funnel trap in a hedgerow in Zone 6 from 15-22 July 2021.

This brings the total number of Silvanidae species documented at SERC to two (Staines & Staines, 2021a).

### Family Staphylinidae

*Acylophorus pronus* Erichson is found in swampy areas (Downie & Arnett, 1996). SERC specimens were taken in Lindgren funnel traps on Hog Island from 5-13 April 2021, at the intersection of Back Road and dirt road 11-6 from 5-13 April 2021, and in the woods north of the Sellman House from 18-20 May 2021. Brattain et al. (2019) recorded this species from the District of Columbia and Virginia. This is the first report of the species from Maryland. **NEW STATE RECORD.**

*Aleochara lustrica* Say has been collected from various types of carrion and dung (Klimaszewski, 1984). The single SERC specimen was collected in a Lindgren funnel trap along Back Road opposite the NEON tower from 2-8 July 2021.

*Aleochara sculptiventris* (Casey) adults are collected from human feces, horse and cow dung or from dung-baited traps; from oak-madrone duff and mud in a meadow; from *Laetiporus sulphureus* (Bull.) Murrill (Polyporaceae) and also from carrion (Klimaszewski, 1984). A single SERC specimen was taken in an unidentified mushroom along Contee Watershed Trail on 31 August 2020. Brattain et al. (2019) recorded this species from Virginia. This is the first report of the species from Maryland. **NEW STATE RECORD.**

*Anthobium sordidum* (Erichson) has an unknown biology. The single SERC specimen was taken on 9 November 2021 along the Connector Trail in *Tylophilus plumbeoviolaceoides* (Snell & E. A. Dick) E. A. Dick & Snell (Boletaceae).

*Apalonia seticornis* Casey has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 17-23 May 2022. Brattain et al. (2019) recorded this species from the District of Columbia. This is the first report of the species from Maryland. **NEW STATE RECORD.**

*Apocellus sphaericollis* (Casey) is taken in pitfall traps in lawn grass (Braman & Pendley, 1993); soyebans (Brunke et al., 2014); feeds on the immatures of *Ataenius spretulus* (Haldeman) (Coleoptera: Scarabaeidae) on golf courses (Jo & Smitley, 2003); found along streams near moss and in open grassy areas (Brunke et al., 2011). Most adults of *A. sphaericollis* (Say) from New Brunswick were collected on bare soil among lawn grasses (Webster et al., 2012). A single SERC specimen was taken in an unidentified mushroom at the intersection of Back Road and dirt road 11-6 on 2 September 2020. Brattain et al. (2019) recorded this species from the District of Columbia and Virginia. This is the first report of the species from Maryland. **NEW STATE RECORD.**

*Bastrisodes lineaticollis* (Aubé) has been associated with various ants (Wickham, 1894). The single SERC specimen was taken in a Lindgren funnel trap in the grassy field opposite the Sellman House from 1-8 June 2021.

*Belonuchus rufipennis* (Fabricius) is reported active in turfgrass in Georgia (Braman & Pendley, 1993), oyster mushroom (*Pleurotus ostreatus* Fries, Pleurotaceae) (Cline & Leschen, 2005), and decaying organic material (Frank & Barrera, 2010). SERC specimens were taken in Lindgren funnel traps in the grassy field opposite the Sellman House from 1-8 June 2021, along Java History Trail from 8-24 June 2021, along the road to the canoe shed from 15-22 July 2021, in Zone 5 near the lower barn from 4-16 August 2021, and along Fox Point Road from 4-16 August 2021.

*Bledius mandibularis* Erichson occurs in saline habitats on coastal regions of the United States (Herman, 1972) and is attracted to lights (Evans, 2014). The single SERC specimen was taken under bark near Mathais Lab on 27 March 2021.

*Creophilus maxillosus* (L.) is a fly predator often found on carrion and decaying material (Greene, 1996). SERC specimens were taken on a dead domestic goose near Mathais Lab on 30 March 2021.

*Eudectus crassicornis* LeConte has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap in the cypress swamp from 25 April to 4 May 2022. Brattain et al. (2019) recorded this species from the District of Columbia. This is the first report of the species from Maryland. **NEW STATE RECORD.**

*Gymnusa grandiceps* Casey is found in wet forested habitats (Webster et al., 2009). SERC specimens were taken in Lindgren funnel traps near the Java House ruins from 5-13 April 2021, along Contee Watershed Trail from 4-8 May 2021, on the hill just north of Mathais Lab from 13-15 May 2021, at the intersection of Back Road and dirt road 11-6 from 18-20 May 2021, and along Java History Trail from 8-10 June 2021.

*Gyrophaeana flavicornis* Melsheimer adults have been collected in various mushrooms (Epps & Arnold, 2010). SERC specimens were taken in unidentified mushrooms along Java History Trail on 26 August 2020; along Contee Watershed Trail on 31 August 2020; at the intersection of Back Road and dirt road 11-6 on 2 September 2020; in the woods behind Mathais Lab on 9 September 2020; in the woods opposite the Sellman House on 14 September 2020; and along Contee Watershed Trail on 7 October 2020.

*Hesperus apicalis* Say is associated with old trees (Webster et al., 2012). The single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 16-25 April 2022.

*Hesperus baltimorensis* (Gravenhorst) is found under logs and other debris (Downie & Arnett, 1996). SERC specimens were taken in Lindgren funnel traps along Contee Watershed Trail from 4-8 May 2021 and at Fox Point from 2-8 March 2022 and 8-16 April 2022.

*Homaetarsus* sp. we collected a series of specimens in Lindgren funnel traps which we could not place to species. SERC specimens were collected from 15 June to 16 August 2021 at the intersection of Back Road and dirt road 11-6, at Fox Point Road and Connector Trail, at Back Road opposite the NEON tower, the picnic area near the Reed Education Center, and along a hedgerow in Zone 6.

*Hoplandria lateralis* (Melsheimer) is collected from human feces, on carrion of various animals, in a malt trap, in a pitfall trap baited with soybean (and others with cotton?), in a pitfall trap placed in an oak-hickory forest, from leaf litter, and by sifting wood chips. Some specimens were collected by sweeping broom sedge (*Carex scoparia* Schkuhr ex. Willd, Cyperaceae), in an ultraviolet light trap, treading mud along a river (Arkansas), and one specimen was caught flying at dusk (Génier, 1989). SERC specimens were taken in unidentified mushrooms along Java History Trail on 26 August 2020; in the woods opposite the Sellman House on 14 September 2020; and in the woods along Fox Point Road below Discovery Trail on 28 September 2020.

*Lordition cinctus* (Gravenhorst) adults are commonly collected from mushrooms (Campbell, 1982). SERC specimens were taken in unidentified mushrooms along Contee Watershed Trail on 31 August 2020; at the intersection of Back Road and dirt road 11-6 on 2 September 2020; in the woods behind Mathais Lab on 9 September 2020; on Hog Island on 20 October 2020; and on 9 November 2021 along Contee Watershed Trail in *Amanita brunnescens* G. K. Atk. (Amanitaceae).

*Oxyporus stygicus* Say has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap in the cypress swamp from 25 April to 4 May 2022.

*Philonthus caeruleipennis* (Mannerheim) has been collected in fleshy fungi (Blatchley, 1910). The single SERC specimen was taken in a Malaise trap along the woods margin of the grassy field opposite the Sellman House from 3-6 June 2021.

*Philonthus gracilior* Casey is found near water in a variety of habitats (Smetana, 1995). SERC specimens were taken in Lindgren funnel traps at the intersection of Back Road and dirt road 11-6 from 8-15 June 2021, the picnic area near the Reed Education Center from 22 July to 4 August 2021, along a hedgerow in Zone 6 from 22-29 July 2021, and along Fox Point Road from 29 July to 4 August 2021, 19 March to 8 April 2022, and 8-16 April 2022.

*Philonthus politus* (L.), an introduced species, is associated with bird nests (Majka & Klimaszewski, 2008). SERC specimens were taken in Lindgren funnel traps from 1-15 August 2021 along Squirrel Neck Trail, along Java History Trail, at Fox Point Road and Connector Trail, and on the dirt road between Zones 2 and 3.

*Philonthus rufulus* Horn has been taken at lights (Peck & Thomas, 1998). SERC specimens were taken in Lindgren funnel traps in the picnic area near the Reed Education Center from 29 July to 4 August 2021 and along a hedgerow in Zone 6 from 4-16 August 2021.

*Philonthus sericans* (Gravenhorst) is a predator of *Haematobia irritans* (L.) (Diptera: Muscidae) eggs and larvae (Hu & Frank, 1998). SERC specimens were taken in unidentified mushrooms along Contee Watershed Trail on 31 August 2020 and on Hog Island on 20 October 2020.

*Philonthus varians* (Paykull) has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap in the cypress swamp from 25 April to 4 May 2022. Brattain et al. (2019) recorded this species from the District of Columbia. This is the first report of the species from Maryland. **NEW STATE RECORD.**

*Platydracus caliginosus* (Erichson) has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 17-29 September 2022. Brattain et al. (2019) recorded this species from Virginia. This is the first report of the species from Maryland. **NEW STATE RECORD.**

*Platydracus femoratus* (Fabricius) has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 8-16 April 2022.

*Rugilus angularis* (Erichson) has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 11-13 July 2022. Brattain et al. (2019) recorded this species from the District of Columbia and Virginia. This is the first report of the species from Maryland. **NEW STATE RECORD.**

*Scaphidium quadriguttatum* Say is found on *Trametes versicolor* (L.) Lloyd (Polyporaceae) (Weiss & West, 1920). SERC specimens were taken in unidentified mushrooms at the intersection of Back Road and dirt road 11-6 on 2 September 2020.

*Stenistoderus rubripennis* (LeConte) is found in leaf litter and debris, especially near water (Downie & Arnett, 1996). The single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 19 March to 8 April 2022.

*Stenus colonus* Erichson we could locate no published biological information on this species. The single SERC specimen was taken sweeping vegetation around Frog Haven on 20 April 2021.

*Tachinus fimbriatus* Gravenhorst is found in *Amanita* sp. (Amanitaceae) and *Megacollybia platyphylla* (Pers.) Kotl. & Pouzar (Tricholomataceae) (Weiss & West, 1920). Adults have been collected in *Pleurotus ostreatus* (Cline & Leschen, 2005). SERC specimens were taken in unidentified mushrooms in the woods opposite the Sellman House on 14 September 2020; along Contee Watershed Trail on 7 October 2020; and in a Malaise trap along the woods margin of the grassy field opposite the Sellman House from 17-20 June 2021.

*Thoracophorus costalis* (Erichson) is found in leaf litter, under bark, and in rotting logs (Ferro, 2015). The single SERC specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 17-23 May 2022.

This brings the total number of Staphylinidae species documented at SERC to 63 (Staines & Staines, 2020a).

## Family Tenebrionidae

*Asiopus minimus* (Beauvois) is a flightless species found in sandy habitats (Steiner, 1999). The two SERC specimens were collected around Mathais Lab on 11 June 2022 and 1 July 2022.

*Blapstinus moestus* Melsheimer has been found under various types of debris (Dunford & Young, 2004). The single SERC specimen was taken in a Lindgren funnel trap near the water tower behind the dorms from 24 June to 2 July 2021.

*Chromatia amoena* (Say) has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap on the hill just north of Mathais Lab from 17-23 May 2022.

*Hapladrus fulvipes* (Herbst) is found in forested areas, larvae develop in decaying wood (Steiner, 2016). SERC specimens were captured in a sugar trap on the hill just north of Mathais Lab from 8-12 July 2021 and at light around Mathais Lab on 26 July 2021.

*Hymenorus discretus* Casey does not have a published biology. SERC specimens were taken in Lindgren funnel traps along a hedgerow in Zone 6 from 16-30 August 2021, in the grassy field opposite the Sellman House from 1-8 July 2021, and along Fox Point Road from 1-8 July 2021.

*Hymenorus niger* (Melsheimer) has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 4-11 June 2022.

*Isomira quadristriata* Couper has been found under debris and on bark (Dunford & Young, 2004). SERC specimens were captured in Lindgren funnel traps along Fox Point Road from 20-22 May 2021, 4-11 June 2022 and on the hill just north of Mathais Lab from 28 May to 4 June 2022, 4-11 June 2022, and 11-18 June 2022.

*Lobopoda nigrans* (Melsheimer) has been reared from *Quercus* (Campbell, 1966). The single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 18-25 June 2022.

*Merinus laevis* (Olivier) adults have been collected under bark (Arnett et al., 1980). The single SERC specimen was taken at light around the Reed Education Center on 12 August 2021.

*Nalassus aereus* (Germar) has been found beneath bark (Blatchley, 1910). Two SERC specimens were collected by sweeping vegetation around Frog Haven on 20 April 2021 and at light around Mathais Lab on 25 May 2021.

*Phaleria picipes* Say is found beneath driftwood, seaweed, carrion, and other debris at or near the high tide line; occasionally attracted to light (Evans, 2014); and on fungi (Ciegler, 2014). A single SERC specimen was collected in a Lindgren funnel trap behind the Wet Lab from 24-30 April 2021.

*Platydema excavatum* (Say) is found on fungi (Majka et al., 2008a). A single SERC specimen was taken at light around Mathais Lab on 23 July 2021.

*Pseudocistela brevis* (Say) has an unknown biology. SERC specimens were taken in Lindgren funnel traps at Fox Point from 4-11 June 2022 and on the hill just north of Mathais Lab from 11-18 June 2022.

*Statira gagatina* Melsheimer has been taken on foliage (Dunford & Young, 2004). SERC specimens were captured in Lindgren funnel traps along Java History Trail from 5-13 April 2021 and at Fox Point from 4-11 May 2022.

*Strongylium crenatum* Maklin has been reared from decaying logs (Triplehorn & Spilman, 1973). Two SERC specimens were taken at light around Mathais Lab on 15 July 2021 and near the Reed Education Center on 17 July 2021.

*Tarpela undulata* (LeConte) has been collected in stands of pine by canopy fogging (Wiggins et al., 2007). A single SERC specimen was taken at light around Mathais Lab on 8 June 2021.

*Uloma mentalis* Horn has been collected at lights (Dunford & Young, 2004). The single SERC specimen was captured in a Lindgren funnel trap near the water tower behind the dorms from 2-8 July 2021.

*Xylopinus saperdoides* (Olivier) has been found on bark and beaten from dead branches of oak (Downie & Arnett, 1996). The single SERC specimen was taken in a Lindgren funnel trap at Fox Point from 20 August to 3 September 2022.

This brings the total number of Tenebrionidae species documented at SERC to 40 (Staines & Staines, 2021b).

### **Family Throscidae**

*Aulonthroscus convergens* (Horn) has an unknown biology. SERC specimens were taken in Lindgren funnel traps on the hill just north of Mathais Lab from 15-18 May 2021, along Fox Point Road from 22-25 May 2021, and along Squirrel Neck Trail from 1-8 June 2021. Downie & Arnett (1996) report this species from New York to Florida. This species is not included in MBP (2022).

*Trixagus cairnicollis* (Schaeffer) adults are active in spring and summer, are found resting on vegetation and are attracted to light (Evans, 2014). SERC specimens were taken in Lindgren funnel traps from 30 April to 4 May 2021 on Hog Island, at Frog Haven; and in a Malaise traps in the grassy field opposite the Sellman House from 3-6 June 2021 and 17-20 June 2021.

*Trixagus chevrolati* (Beauvois) we were unable to find any biological information on this species. SERC specimens were taken in Lindgren funnel traps on the hill just north of Mathais Lab from 22-25 May 2021, along Squirrel Neck Trail from 25-27 May 2021, along Java History Trail from 8-15 June 2021, and on the beach along Java History Trail from 15-22 July 2021.

These are the first Throscidae species documented from SERC.

### **Family Trogidae**

*Trox affinis* Robinson has been collected in bird nests (Vaurie, 1955). The single SERC specimen was taken at lights on 27 May 2021 around Mathais Lab.

This brings the total number of Trogidae species documented at SERC to three (Staines & Staines, 2020b).

### Family Trogossitidae

*Corticotomus parallelus* Melsheimer has been collected under bark of various trees and on *Rubus* (Rosaceae) (Barron, 1971). The two SERC specimens were collected in a Lindgren funnel trap along Squirrel Neck Trail from 25-27 May 2021. Barron (1971) reports this species from Massachusetts to Florida. This species is not included in MBP (2022).

*Tenebroides laticollis* Horn has been collected under bark of various trees (Barron, 1971). SERC specimens were taken in Lindgren funnel traps in the grassy field opposite the Sellman House from 5-13 April 2021, along Fox Point Road from 22-25 May 2021, in the pines opposite the road to the Java House ruins from 25-27 May 2021 and in Zone 6 near the upper barn from 16-27 September 2021.

This brings the total number of Trogossitidae species documented at SERC to three (Staines & Staines, 2021f).

### Family Zopheridae

*Bitoma quadriguttata* (Say) adults are usually found under bark (Evans, 2014). The single SERC specimen was taken beating flowering *Prunus* near the Java House ruins on 2 May 2022.

*Bitoma* sp. adults are usually found under hardwood bark (Evans, 2014). The single SERC specimen, which we could not identify to species, was collected in a Lindgren funnel trap in the grassy field opposite the Sellman House from 25-27 May 2021.

These are the first species of Zopheridae documented at SERC.

## DISCUSSION

The 815 beetle species and 78 families documented from our five year survey at SERC compares favorably with other mid-Atlantic state projects. Brown (2008) summarized the published beetle records for Plummerville Island (Montgomery County, Maryland). From 1901 to 2008 there were 672 species recorded in 20 families. This does not represent the total number of beetle species collected on Plummerville Island since many of the families have no published records. In a one year project there were 400 beetle species in 54 families collected at Eastern Neck National Wildlife Refuge (Kent County, Maryland) (Staines & Staines 2006, 2012, in prep.). The most documented project is the 22 year effort along the George Washington Memorial Parkway (Fairfax County, Virginia). To date the project has published records for 1055 species in 29 families (Brattain et al., 2019; Cavey et al., 2013; Evans & Steury, 2012; Johnson & Steury, 2021; Steury, 2017, 2018ab, 2019, 2020; Steury & Leavengood, 2019; Steury & MacRae, 2012, 2014; Steury & Steiner, 2020; Steury et al., 2013, 2018, 2020). These results document most of the speciose beetle families but few of the less species rich ones.

Results from previous years had only documented 17 wood boring beetles. The Lindgren funnel traps were extremely effective and added an additional 44 species to the inventory. The Cerambycidae are still under represented, especially the subfamily Lepturinae. Many of the



lepturine species are commonly collected on meadow and wood margin wildflowers, but to date we have been unable to find specimens in this way. This is somewhat explained by the majority of SERC consists of deciduous woods of about 60 years old with agricultural areas, roads for field access, and minimal edge. Many of the open fields are mowed several times a summer. This reduces the potential habitat for this group of beetles. Prolific pollen plants used by these beetles (*Daucus carota* and *Solidago*) are sparsely distributed over potential habitat.

The Vivatrap emerald ash borer traps captured no buprestids. While not capturing *Agrilus planipennis* Fairmaire is great for the *Fraxinus* in the area, it was disappointing to capture no buprestids. Workers in other states have used these traps to establish the distribution of other buprestid species (Barringer, 2020). This family with eight documented species is still under represented. This is especially true of the species rich and common genus *Agrilus*. To date we have only collected two of the 38 *Agrilus* species known from Maryland (MBP, 2022).

We have captured 21 species of bark and ambrosia beetles (Curculionidae: Scolytinae). Seven of the species are exotic and 14 are native. However the exotic species are much more widely distributed and numerally common.

The late summer and fall of 2020 was moist enough for an abundant crop of mushrooms. Numerous specimens were sampled for beetles but with the lockdown of most of SERC resources few of the mushrooms could be identified. Work conducted during August and September 2020 added nine mushroom specialists. Rainfall in 2021 and 2022 was insufficient for abundant mushroom growth.

The Meloidae are also under represented. To date we have found four of the 16 species known from Maryland (Staines, 1983). The genus *Meloe* is well represented with three of the four Maryland species. However we have only found one of the six *Epicauta* species which rely on summer wild flowers for adult pollen feeding and larval dispersal.

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