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RESEARCH ARTICLE

THE COLEOPTERA OF THE SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER. 2024 SUPPLEMENT.

C. L. STAINES AND S. L. STAINES

Smithsonian Environmental Research Center, 647 Contees Wharf Road, Edgewater, Maryland 21037, USA

Corresponding author: C. L. Staines (*stainesc@si.edu*)

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ABSTRACT

We report 128 Coleoptera species new to the inventory at the Smithsonian Environmental Research Center (SERC) during 2024. This brings the total number of beetle species documented at SERC to 1090. The families Corylophidae and Rhipiceridae are reported from SERC for the first time. Ten species are recorded from Maryland for the first time: *Anelaphus mutatum* (Gahan) (Cerambycidae), *Aleochara littoralis* (Mäklin), *Aleochara rubipes* Blatchley, *Homaeotarsus cinctus* (Say), *Ocypus nitens* (Schrank), *Olophrum consimile* (Gyllenhal), *Philonthus carbonarius* (Gravenhorst), *Phyllodrepa punctiventris* (Fauvel), and *Tachinus basalis* Erichson (Staphylinidae).

Keywords: Beetles, biodiversity, insects, Maryland.

INTRODUCTION

This is a continuation of our inventory work at the Smithsonian Environmental Research Center (SERC), located in Edgewater, Maryland. Previous work had documented 966 Coleoptera species in 78 families (Staines & Staines, 2019, 2020a-d, 2021a-f, 2022, 2023b, Staines & Bennett, 2024). For a detailed description of SERC habitats see Staines & Staines (2020a).

MATERIALS AND METHODS

For 2024 we set three Lindgren funnel traps and left them stationary throughout the season. They were baited with USDA exotic bark beetle lure and ethanol. They were set on 2 March 2024 and checked weekly or every two weeks depending on the weather until 28 September 2024.

Two Townes style Malaise traps were received from Ecology Supplies for field testing. They were set on 13 March 2024 and monitored periodically until 14 October 2024.

Much of the actual collecting of terrestrial species was done by visual survey of potential habitats. We checked the lights around Mathias Lab and the Reed Education Center near dawn, did bark peeling, beating vegetation, and sweeping vegetation in various areas. We also had access to the Coleoptera bycatch for the Carabidae project at Biodiversitree (Staines & Bennett, 2024).

Identifications were made by the senior author using published (See references) and on-line resources (Atkinson, 2023; Mercado, 2010). Voucher specimens are deposited in the SERC collection, located in Mathias Laboratory. Duplicate specimens are deposited at Towson University.

RESULTS

Family Aderidae

Aderus brunnipennis (LeConte) has been collected on *Carya* (Juglandaceae) (Downie & Arnett, 1996). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 30 May to 6 June 2024.

Zonantes subfasciatus (LeConte) has been collected on *Quercus* (Fagaceae) (Downie & Arnett, 1996). SERC specimens were taken sweeping and beating vegetation in Zone 6 on 8 June 2024.

This brings the number of Aderidae species documented at SERC to four.

Family Anthribidae

Eusphyrus walshi (LeConte) has been reared from dead *Toxicodendron radicans* (L.) Kuntze (Anacardiaceae); adults have been collected beating *Quercus alba* L. branches, beating *Ulmus* (Ulmaceae) branches, in Malaise and flight intercept traps (Valentine, 1998). SERC specimens were taken beating vegetation in Zone 5 on 1 June 2024 and in a Malaise trap near the water tower behind the dormitories from 30 May to 4 June 2024.

Ischnocerus infuscatus Fåhraeus is a generalist in dead branches (Valentine, 1998). The single SERC specimen was taken sweeping vegetation in Zone 6 on 8 June 2024.

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

Family Buprestidae

Agrilus egeniformis Champlain & Knull larvae bore in *Gleditsia triacanthos* L. (Fabaceae); adults have been collected on *Celtis occidentalis* L. (Cannabaceae) and *Robinia pseudoacacia* L.

(Fabaceae) (Harpootlian & Bellamy, 2014). SERC specimens were collected beating *Robinia pseudoacacia* along Squirrel Neck Loop on 1 June 2024.

Chrysobothris sexsignata (Say) breeds in a wide variety of hardwood and coniferous trees (Harpootlian & Bellamy, 2014). The single SERC specimen was collected by visual inspection of *Fraxinus americana* L. (Oleaceae) on 8 June 2024 in Zone 6.

Dicerca lurida (Fabricius) larvae bore in *Alnus incana* (L.) Moench. (Betulaceae), *Carpinus caroliniana* Walter (Betulaceae), *Carya cordiformis* (Wangenh.) K. Koch, *C. glabra* Miller, *C. laciniosa* (Mill.) K. Koch, *Prunus caroliniana* (Mill.) Aiton (Rosaceae), *Salix exigua* Nutt. (Salicaceae), and *Tilia americana* L. (Malvaceae) (Harpootlian & Bellamy, 2014). SERC specimens were taken under bark of a fallen pine (*Pinus*, Pinaceae) on 25 March 2024 in the pines opposite the tobacco barn.

This brings the total number of Buprestidae species documented at SERC to 23.

Family Cantharidae

Polemius laticornis (Say) is frequently found on vegetation along edge of damp woods (Downie & Arnett, 1996); collected on *Pinus strobus* L. and *Vicia cracca* L. (Fabaceae) (Pelletier & Hébert, 2014). SERC specimens were collected sweeping vegetation in Zone 6 on 8 June 2024.

Rhagonycha scitula (Say) adults have been collected on *Aralia hispida* Vent. (Araliaceae), *Kalmia, Vaccinium* (Ericaceae), *Quercus rubra* L., *Tilia americana* and *Rhus typhina* L. (Anacardiaceae) (Pelletier & Hébert, 2014). SERC specimens were taken in a Malaise trap near the water tower behind the dorm from 11-16 May 2024 and beating *Celtis* along Squirrel Neck Loop on 13 May 2024.

This brings the total number of Cantharidae species documented at SERC to 20.

Family Carabidae

Agonum ferreum Haldeman is found in low forests bordering ponds, marshes, slow rivers and brooks; shaded ground; soft, wet, sandy-clayish soil, rich in organic debris (e.g., dead leaves).
It is nocturnal; sheltering during the day in leaf litter, under logs, stones, and other debris (Larochelle & Larivière, 2003). The single SERC specimen was taken under the bark of a fallen pine along Squirrel Neck Loop on 6 April 2024.

Coptodera aerata Dejean is a nocturnal species found in deciduous forests and has been collected by beating or sweeping vegetation, under bark, on carrion, and at lights (Larochelle & Larivière, 2003). Two SERC specimens were taken in a Lindgren funnel trap along Fox Point Road from 6-11 May 2024.

Lebia fuscata Dejean is found in light or open forests, their edges and clearings, and adjacent meadows, pastures, vacant lots, sand pits, gravel pits, roadsides, and ski fields (Larochelle &

Larivière, 2003). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 30 May to 4 June 2024.

This brings the total number of Carabidae species documented from SERC to 139.

Family Cerambycidae

Acanthoderus quadrigibba (Say) larvae bore in a variety of trees (Lingafelter, 2007). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 23-30 July 2024.

Anelaphus mutatum (Gahan) has an unknown biology (Lingafelter, 2007). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 10-19 August 2024. **NEW STATE RECORD**

Anelaphus parallelus (Newman) larvae are live twig pruners of most eastern hardwoods and shrubs, especially *Quercus*, but also *Crataegus viridis* L. (Rosaceae), *Celtis tenuifolia* Nutt., and *Betula nigra* L. (Betulaceae) (Lingafelter, 2007). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 20-28 May 2025.

Asemum striatum (L.) larvae feed in recently dead conifers, especially *Pinus*, but also *Picea*, *Larix*, *Abies*, and *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae) (Lingafelter, 2007). SERC specimens were taken in a Lindgren funnel trap in the pines opposite the tobacco barn from 20 April to 6 May 2024.

Enaphalodes atomarius (Dury) larvae bore in *Quercus* (Lingafelter, 2007). SERC specimens were taken in a Lindgren funnel trap along Fox Point Road from 30 July to 5 August and 10-19 August 2024.

Goes tesselatus (Haldeman) larvae feed in living hardwoods, especially *Quercus* (Lingafelter, 2007). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 19-27 June 2024.

Hyperplatys maculata Haldeman larvae feed in various hardwoods (Lingafelter, 2007). The single SERC specimen was taken beating vegetation in the field behind Java House on 4 September 2024.

Necydalis mellita (Say) larvae breed in *Quercus*, *Castana* (Fagaceae), and sometime *Pinus* (Lingafelter, 2007). Heffern et al. (2018) reported larvae in fallen trunks of *Quercus* which had been dead many years. Adults have also been captured in baited panel traps (Rice et al., 2020). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 28-30 May 2024.

Sternidus variegatus (Haldeman) larvae feed in the branches of *Gymnocladus dioicus* (L.) K. Koch (Fabaceae) and *Aesculus pavia* L. (Sapindaceae), among many other hosts (Lingafelter, 2007). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 27 August to 11 September 2024.

Strangalia luteicornis (Fabricius) larvae feed in various hardwoods and shrubs including *Ulmus*, *Quercus*, and *Vitis*. Adults are attracted to many wildflowers, especially *Tragopogon* (Asteraceae), *Daucus carota* L. (Apiaceae), *Hydrangea arborescens* L. (Hydrangeaceae), and occasionally *Asclepias syriaca* L. (Apocynaceae) (Lingafelter, 2007). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 27 June to 1 July 2024.

Urgleptes signatus (LeConte) **l**arvae feed in the branches of various genera including *Acer*, *Carpinus caroliniana*, *Carya*, *Cornus* (Cornaceae), *Quercus*, and *Tilia* (Lingafelter, 2007). The single SERC specimen was taken in a Lingren funnel trap along Fox Point Road from 13-19 June 2024.

Urographis fasciatus (DeGeer) larvae feed on numerous hardwoods (Lingafelter, 2007). The single SERC specimen was taken at lights around Reed Education Center on 27 May 2024.

This brings the total number of Cerambycidae species documented from SERC to 63.

Family Chrysomelidae

Acanthoscelides longistilus (Horn) has been collected on *Desmodium illinoense* A. Gray*; Lespedeza capitata* Michx.*, L. frutescens* (L.) Homem.*, L. hirta* (L.) Homem.*, L. intermedia* (S. Warson) Britton*, L. texana* Britton, and *L. virginica* (L.) Britton (Fabaceae) (Kingsolver, 2004). SERC specimens were collected sweeping vegetation in Zone 6 on 8 June 2024.

Altica chalybea Illiger adults and larvae feed on *Vitis* (Vitaceae) (Isely, 1920). Duckett (1920) listed *Parthenocissus quinquefolia* (L.) Planch. (Vitaceae), *Toxicodendron radicans*, *Prunus*, *Malus* (Rosaceae), *Cydonia* (Rosaceae), *Ulmus*, and *Carpinus* as hosts. The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 30 March to 4 April 2024.

Baliosus nervosus (Panzer) adults feed on a wide variety of plants; larvae are leaf miners on plants in the Betulaceae, Fagaceae, Rosaceae, and Tilaceae (Staines, 2006). SERC specimens were collected beating *Quercus* on 4 September at Fox Point.

Bassareus clathratus (Melsheimer) has been collected on *Salix nigra* Marsh. (Riley & Enns, 1979). The single SERC specimen was taken sweeping and beating vegetation along the woods margin of the agricultural field on Contees Wharf Road on 20 July 2024.

Bruchidius villosus (Fabricius), an introduced species, has been associated with *Cytisus scoparius* (L.) Link, *Laburnum alpinum* J. Presl., *L. anagyroides* Medik*; Petteria ramentacea* (Sieber) C. Presl, and *Spartium junceum* L. (Fabaceae). Several other host plants are recorded from Europe. Adults feed on flowers of *Cytisus scoparius* in North America (Kingsolver, 2004). SERC specimens were taken beating *Prunus virginiana* L. near the Java House ruins on 1 May 2024 and sweeping vegetation along Squirrel Neck Loop on 1 June 2024.

Chaetocnema quadricollis Schwarz has been collected feeding on *Hibiscus lasiocarpus* Cav., *H. robustus* [unable to verify this plant name], *Abutilon berlanderi* Gray, *A. metamorensis* [unable to verify this plant name], and *Malvastrum americanum* (L.) Torrey, *Kosteltezkya*, *Sphaeralcea angustifolia* (Cav.) G. Don. (Malvaceae), *Dalea* (Fabaceae), and *Xanthium* (Asteraceae) (White, 1996). SERC specimens were collected sweeping vegetation in Zone 6 on 8 June 2024.

Chaetocnema truncata White has been collected from Poaceae (Ciegler, 2007). The single SERC specimen was taken sweeping vegetation in Zone 6 on 8 June 2024.

Chrysolina quadrigemina (Suffrian), an introduced species, feeds on many species of *Hypericum* (Clusiaceae) (Clark et al., 2004). The single SERC specimen was taken sweeping vegetation in the field opposite Sellman House on 22 June 2024.

Cryptocephalus mutabilis Melsheimer has been collected by beating *Quercus* and *Prunus* foliage, on *Kalmia* (Ericaceae), and on *Arachis hypogaea* L. (Fabaceae) (White, 1968); on the foliage of *Betula* and *Corylus* (Betulaceae), and on flowers of *Spiraea (*Rosaceae), *Ceanothus americanus* L. (Rhamnaceae) and others (Blatchley, 1910). SERC specimens were taken sweeping and beating vegetation in Zone 6 on 4 July 2024 and along wood margin of the agricultural field along Contees Wharf Road on 20 July 2024.

Kuschelina vians (Illiger) has been reared from the stem of *Polygonum pennsylvanicum* L. (Polygonaceae) (Blake, 1927). SERC specimens were taken at lights around the Reed Education Center on 24 June 2024 and in a Malaise trap near the water tower behind the dormitories from 11-15 July 2024.

Mantura floridana (Koch) has been observed feeding on *Polygonum perforatum* L. (Wheeler & Mengel, 1984). SERC specimens were taken sweeping *Rumex* (Polygonaceae) along wood margin behind Sellman House of 25 May 2024.

Octotoma plicatula (Fabricius) larvae are leaf miners in *Campsis radicans* (L.) Seem. ex. Bureau (Bignoniaceae) (Staines, 2006). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 27 April to 1 May 2024.

Rhabdopterus deceptor Barber Schultz has been collected on flowers of *Spiraea* (Rosaceae), feeding on young *Camellia* (Theaceae), on *Callirrhoe involucrata* (T. & G.) Gray (Malvaceae), *Populus deltoides* W. Bartram ex. Marshall (Salicaceae), on *Quercus wenzigiana* King ex Hook., on *Arachis*, on *Ulmus*, and as injurious to *Vitis* (Schultz, 1977). SERC specimens were taken sweeping and beating vegetation along Squirrel Neck Loop on 1 June 2024, in Zone 5 on 1 June 2024, in a Lindgren funnel trap in the pines opposite the tobacco barn from 1-11 July 2024, and in a Malaise trap near the water tower behind the dormitories from 11-15 July 2024.

Systena marginalis (Illiger) has been collected on a variety of hardwood trees and shrubs (Wilcox, 1979). The single SERC specimen was collected beating *Quercus* at Fox Point on 4 September 2024.

Typophorus nigritus viridicyaneus (Crotch) feeds on *Calystegia sepium* (L.) R. Br.. *Convolvulus arvensis* L., *Ipomoea batatas* (L.) Lam., *I. pandurata* (L.) G. F. W. Mey., and *I. pes-caprae* (L.) R. Br. (Convolvulaceae) (Ciegler, 2007). The single SERC specimen was taken sweeping vegetation along Contees Wharf Road on 28 June 2024.

Xanthonia decemnotata (Say) has been taken on *Quercus*, *Fagus*, and *Ulmus* (Blatchley, 1910). SERC specimens were taken beating vegetation in Zone 6 on 4 July 2024.

This brings the total number of Chrysomelidae species documented from SERC to 98.

Family Cleridae

Cregya mixta LeConte has been collected on vegetation of *Celtis occidentalis* and *Ulmus* (Optiz, 2019). Knull (1951) recorded the species as a predator on Lyctinae and *Xylobiops* (Coleoptera: Bostrichidae) and other borers in dry, seasoned wood. The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 30 May to 4 June 2024.

This brings the total number of Cleridae species documented from SERC to 16.

Family Coccinellidae

Anatis labiculata (Say) feeds on scale insects (Hemiptera: Coccoidea) (Gordon 1985). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 6-11 May 2024.

Chilocorus stigma (Say) feeds on mealybugs, scale insects, and aphids (Hemiptera) (Gordon, 1985). The single SERC specimen was taken sweeping and beating vegetation in Zone 6 on 4 July 2024.

Psyllobora vigintimaculata (Say) feeds on mildew fungi (Gordon 1985). The single SERC specimen was taken sweeping and beating vegetation in Zone 6 on 4 July 2024.

Zilus horni Gordon feeds on Diaspididae (Hemiptera) (Gordon, 1985). SERC specimens were taken sweeping and beating vegetation in Zone 6 on 4 July 2024.

This brings the total number of Coccinellidae species documented from SERC to 19.

Family Corylophidae

Orthoperus glaber LeConte is found under bark of numerus trees (Downie & Arnett, 1996). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 30 March to 4 April 2024.

This is the first species of Corylophidae collected at SERC.

Family Cryptophagidae

Cryptophagus dentatus (Herbst) is found mostly indoors on stored food products like dried beans (Bousquet, 1990). In nature, uncommon in *Pinus sylvestris* L. plantations, on shores in and under flotsam, in *Populus tremuloides* Michx. and *Picea mariana* (Mill.) BSP forests on carrion, and under bark of *Castanea dentata* (Marsh.) Borkh. (Pelletier & Hébert, 2019). The single SERC specimen was taken in a Lindgren funnel trap opposite the Administration Building from 13-18 March 2024.

Cryptophagus setulosus Sturm, an introduced species, is very common in *Abies balsamea* (L.) Mill. (Pinaceae) forests, often mixed with *Betula papyrifera* Marshall or *B. alleghaniensus* Britt. (Betulaceae), *Picea mariana* forests burned after 80 years or partially cut, burnt lands regenerated with *Vaccinium, Kalmia* and *Rhododendron* (Ericaceae), *Thuja occidentalis* L. (Cupressaceae) forests and *Quercus phellos* L. forests; usually in leaf litter and fungi (Woodroffe & Coombs, 1961). The single SERC specimen was taken in a Lindgren funnel trap opposite the Administration Building from 13-18 March 2024.

This brings the total number of Cryptophagidae species documented at SERC to six

Family Curculionidae

Barypeithes pellucidus (Boheman), an introduced species, has been reported from *Fragaria, Rubus idaeus* L. (Rosaceae), and many other plants (Ciegler, 2010). SERC specimens were collected sweeping vegetation in the field at the intersection of Dock and Back Roads on 22 June 2024.

Conotrachelus elegans (Say) adults have been collected in leaf litter, at UV light, on *Carya illinoinensis* (Wengenh) K. Koch and *Gossypium* (Malvaceae). Breeds in *Phylloxera* (Hemiptera: Phylloxeridae) galls on *Carya* spp. (Ciegler, 2010). SERC specimens were taken in a Malaise trap near the water tower behind the dormitories from 6-11 May 2024.

Conotrachelus posticatus Boheman is associated with *Crataegus, Prunus, Quercus,* and *Phylloxera* galls on *Carya* (Ciegler, 2010). SERC specimens were taken in pitfall traps in Biodiversitree from 1-3 May 2024, 18-21 June 2024, and in a Malaise trap near the water tower behind the dormitories from 28 September to 14 October 2024.

Dendroctonus terebrans (Oliver) is a pest of *Pinus* and other conifers (Wood, 1982). The single SERC specimen was taken sweeping vegetation behind Sellman House on 25 May 2024.

Eubulus parochus (Herbst) has been found on freshly downed limbs or small branches of *Carya*; larvae mine beneath the bark in the outer cambium and sapwood (Anderson, 2008). Two SERC specimens were taken in a Malaise trap near the water tower behind the dormitories from 10-27 April 2024.

Magdalis perforata Horn adults have been collected at lights and on *Pinus* (Ciegler, 2010). The single SERC specimen was taken sweeping vegetation near the water tower behind the dormitories on 16 May 2024.

Pachylobus punctivorus Germar has been collected at UV light, washed up on beach, at lumber yards and sawmills, and feeding on bark of *Pinus taeda* L. (Ciegler, 2010). The single SERC specimen was taken in a Lindgren funnel trap in the pines opposite the tobacco barn from 4-10 April 2024.

Piazorhinus pictus LeConte has been collected on *Carya* and *Quercus* leaves (Ciegler, 2010). The single SERC specimen was taken sweeping and beating vegetation in Zone 6 on 4 July 2024.

Platypus flavicornis (Fabricius) is a wood borer in *Pinus* sp. (Wood, 1979). SERC specimens were taken in a Lindgren funnel trap at Fox Point from 27 August to 28 September 2024.

Pseudanthomus validus Dietz has been reported from many plants in the Betulaceae, Ericaceae, and Rosaceae; host plants are: *Ribes* (Grossulariaceae) and *Vaccinium* (Ericaceae) (Ciegler, 2010). SERC specimens were taken sweeping and beating vegetation along Squirrel Neck Loop on 1 June 2024.

Sphenophorus costipennis Horn feeds on *Carex comosa* Boott, *Schoenoplectus tabernaemontani* (C.C.Gmel.) Palla, and other Cyperaceae (Ciegler, 2010). SERC specimens were taken in pitfall traps in Biodiversitree from 20 April to 3 May 2024 and from 18-21 June 2024.

Sphenophorus minimus Hart feeds on *Agrostis gigantea* Roth, *Elymus virginicus* L., *Leersia oryzoides* (L.) Sw., and *Oryza saliva* L. (Poaceae) (Ciegler, 2010). The single SERC specimen was taken in a pitfall trap in Biodiversitree from 17-20 June 2024.

Tachyerges niger (Horn) is associated with *Salix* (Ciegler, 2010). SERC specimens were collected sweeping and beating vegetation behind Sellman House on 25 May 2024, in Zone 5 on 1 June 2024, and in Zone 6 on 8 June 2024.

This brings the number of Curculionidae documented from SERC to 113.

Family Dytiscidae

Matus bicarinatus (Say) has been collected in woodland ponds and pools (Spangler & Gordon, 1973); Carolina bays, in permanent ponds and marshes, and in baited water traps (Ciegler, 2003). The single SERC specimen was taken at lights around Mathias Laboratory on 9 July 2024.

This brings the total number of Dytiscidae species documented at SERC to 18.

Family Elateridae

Ampedus linteus (Say) has been collected under pine bark and in Lindgren funnel, panel, and flight intercept traps (Mathison, 2021). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 20-28 May 2024.

Melanactes piceus (DeGeer) has been collected at ultraviolet and mercury vapor light and in Malaise traps (Mathison, 2021). The single SERC specimen was collected near Mathias Laboratory on 17 June 2024 by head lamping.

This brings the total number of Elateridae species documented from SERC to 41.

Family Erotylidae

Triplax flavicollis Lacordaire is associated with *Pleurotus ostreatus* (Jacq. ex Fr.) P. Kumm (Pleurotaceae) (Goodrich & Skelley, 1993). The single SERC specimen was taken in a Lindgren funnel trap in the pines opposite the tobacco barn from 30 May to 6 June 2024.

This brings the number of Erotylidae documented at SERC to nine.

Family Eucinetidae

Nycteus oviformis (LeConte) has been associated with Coniophoraceae fungi (Basidiomycetes: Aphyllophorales) (Wheeler & Hoebeke, 1984). The single SERC specimen was taken sweeping vegetation near the water tower behind the dormitories on 16 May 2024.

This brings the total number of Eucinetidae species documented from SERC to three.

Family Eucnemidae

Dirrhagofarus modestus (Fleutiaux), an introduced species, has been collected at lights, Lindgren funnel traps, and has been reared from rotten logs of several hardwood genera (Otto, 2022). SERC specimens were taken in Malaise traps near the water tower behind the dormitories from 28-30 May 2024 and 4-6 June 2024.

Isarthrus rufipes (Melsheimer) has been reared from decaying *Fagus* (Muona, 2000). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 30 May to 4 June 2024.

Onichodon orchesides Newman has been collected at lights (Muona, 2000). SERC specimens were taken in a Lindgren funnel trap along Fox Point Road from 30 May to 6 June 2024.

This brings the total number of Eucnemidae species documented from SERC to 10.

Family Geotrupidae

Odonteus liebecki Wallis has an unknown biology but adults are found on well-shaded hillsides (Staines, 1984). The single SERC specimen was taken in a pitfall trap in Biodiversitree from 7-9 August 2024.

This brings the total number of Geotrupidae documented from SERC to eight.

Family Histeridae

Baconia aeneomicans (Horn) has an unknown biology. The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 28-30 May 2024.

Eurylister carolinus (Paykull) has been found under the bark of dead trees, such as *Quercus*, *Acer*, *Fagus*, *Carya*, *Ulmus*, and various species of *Pinus*; also, in polypores (Bousquet & Laplante, 2006). SERC specimens were taken in a Lindgren funnel trap in the pines opposite the tobacco barn from 1-11 July 2024.

Hister depurator Say has no published biological information. SERC specimens were taken in pitfall traps in Biodiversitree from 17-21 June 2024.

Margarinotus egregious (Casey) has been found in woodchuck burrows (*Marmota monax* (L.), Mammalia: Sciuridae) in early spring; also in carrion, dung, and decaying mushrooms (Bousquet & Laplante, 2006). The single SERC specimen was taken in a pitfall trap in the Biodiversitree from 17-20 June 2024.

Saprinus pensylvanicus (Paykull) has been found on dead fish (Downie & Arnett, 1996). SERC specimens were taken in pitfall traps in Biodiversitree from 17-21 June 2024.

Xestipyge geminatum (LeConte) has been collected in hollow trees and leaf litter (Bousquet & Laplante, 2006). The single SERC specimen was taken in a pitfall trap in Biodiversitree from 17-20 June 2024.

This brings the total number of Histeridae species documented from SERC to 13.

Family Hydrophilidae

Hydrophilus triangularis Say is found in large, deep ponds; adults are attracted to lights (Wilson, 1923). The single SERC specimen was taken at lights around Mathias Laboratory on 24 June 2024.

This brings the total number of Hydrophilidae species documented from SERC to 18.

Family Laemophloeidae

Laemophloeus biguttatus (Say) has been found under the bark of trees where they feed on ascomycete fungi such as *Hypoxylon* prob. *atropunctatum* (Schweinitz ex Fries) Cooke (Lawrence, 1977). The single SERC specimen was taken in a Lindgren funnel trap opposite the administration building from 27 June to 1 July 2024.

This brings the total number of Laemophloeridae species documented from SERC to three.

Family Lampyridae

Photinus consanguineous/indictus. This specimen could not be identified to species. The single SERC specimen was taken at lights around Mathias Laboratory on 9 July 2024.

This brings the total number of Lampyridae species documented from SERC to 16.

Family Lateridiidae

Dienerella flava (Aubé) is associated with fungal hyphae, slime molds, and accumulations of plant and animal material; also found in damp, moldy conditions and in buildings, basements, and warehouses (Evans, 2014). SERC specimens were taken beating and sweeping vegetation in Zone 6 on 8 June 2024.

Melanophthalma helvola Motschulsky has been collected in coniferous forests and open coastal environments (Majka et al., 2009). Two SERC specimens were taken in a Malaise trap near the water tower behind the dormitories from 15-16 March 2024.

This brings the total number of Latridiidae species documented at SERC to four.

Family Lycidae

Dictyoptera aurora (Herbst) has an unknown biology. Members of this genus are collected in coniferous or mixed coniferous forests (Miller, 2002). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 18-25 March 2024.

Plateros sp. is a large genus which requires males for species determination. A single female was taken at SERC in a Malaise trap near the water tower behind the dormitories from 11-15 July 2024.

This brings the total number of Lycidae species documented from SERC to seven.

Family Melandryidae

Melandrya striata Say is found under loose bark (Downie & Arnett, 1996). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 6-11 May 2024.

Orchesia ovata Laliberté is associated with mildewed wood and polypore fungi (Majka & Pollock, 2010). The single SERC specimen was taken in a Lindgren funnel trap opposite the Administration building from 27 August to 11 September 2024.

This brings the total number of Melandryidae species documented from SERC to eight.

Family Mycetophagidae

Typhaea stercorea (L.), an introduced species, occurs both outdoors and in association with various indoor stored products: *Zea mays* L. (Poaceae) fields (on decaying kernels), warehouses, stores, flour mills, mangers, dairy barns, dwellings, and granaries in stored grain and seeds, *Nicotiana* sp. (Solanaceae), *Arachis hypogaea*, *Theobroma cacao* L. (Malvaceae), millet (various Poaceae), *Triticum aestivum* L. (Poaceae), *Prunus*, and *Vitis* skins; also in nests of swans and moorhens (Majka 2010). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 2-13 March 2024.

This brings the total number of Mycetophagidae species documented at SERC to nine.

Family Ptinidae

Calymmaderus nitidus (LeConte) is associated with twigs of *Quercus*, *Ulmus*, and *Juniperus* (Cupressaceae) (Arango & Young, 2012). The single SERC specimen was captured in a Malaise trap near the water tower behind the dormitories from 30 May to 4 June 2024.

Ptinus concurrens Fall has been collected in Malaise and Lindgren funnel traps (Arango & Young, 2012). SERC specimens were collected beating *Quercus* at Fox Point on 4 September 2024.

Ptinus sp. We collected a single specimen in a Malaise trap near the water tower behind the dormitories from 4-6 June 2024 which we could not place to species.

Tricorynus sp. We collected a single specimen sweeping vegetation along Contee Watershed Trail on 25 May 2024 which we could not place to species.

Xyletinus peltatus Harris bores in dry wood (White, 1962). The single SERC specimen was taken in a Malaise trap near the water tower behind dormitories from 4-6 June 2024.

This brings the total number of Ptinidae species documented from SERC to 19.

Family Pyrochroidae

Pedilus canaliculatus (LeConte) has no published biological information. SERC specimens were taken in a Malaise trap near the water tower behind the dormitories from 27 April to 1 May 2024.

This brings the total number of Pyrochroidae species documented from SERC to five.

Family Rhipiceridae

Sandalus niger Knoch is a parasitoid of cicada nymphs (Hemiptera: Cicadidae) (Dodge, 1941). The single SERC specimen was taken in a Lindgren funnel trap opposite the administration building from 11-15 July 2024.

Sandalus pterophyus Knoch has been reported active near *Juniperus virginiana* L. (Blatchley, 1910). The single SERC specimen was taken in a Lindgren funnel trap opposite the administration building from 15-18 July 2024.

These are the first species of Rhipiceridae documented at SERC.

Family Scarabaeidae

Ataenius imbricatus (Melsheimer) has been collected at lights, under leaves, and in dung (Price & Ratcliffe, 2023). The single SERC specimen was taken at light around Mathias Laboratory on 27 May 2024.

Ligyrus relictus (Say) adults have been collected under rubbish and at lights (Price & Ratcliffe, 2023). The single SERC specimen was taken at lights around Mathias Laboratory on 24 June 2024.

Nipponoserica peregrina (Chapin), an introduced species, is found on vegetation, attracted to lights, in Lindgren funnel traps, Malaise traps, and pitfall traps (Price & Ratcliffe, 2023). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 6-11 May 2024.

Onthophagus nuchicornis (L.), an introduced species, has been collected in dung & carrion (Price & Ratcliffe, 2023). SERC specimens were collected in pitfall traps in Biodiversitree from 17-20 June 2024.

Phyllophaga horni (Smith) adults feed on a variety of deciduous trees (Price & Ratcliffe, 2023). The single SERC specimen was taken by hand in Zone 5 on 18 April 2024.

This brings the total number of Scarabaeidae species documented from SERC to 69.

Family Silvanidae

Uleiola dubius (Fabricius) adults and larvae are found under bark and probably feed on fungi (Thomas, 1993). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 6-13 June 2024.

This brings the total number of Silvanidae species documented from SERC to four.

Family Staphylinidae

Aleochara littoralis (Mäklin) adults have been collected from rotting seaweed and debris on sea beaches, some were taken from under a dead *Limulus* (Arthropoda: Limulidae) on a sea beach (Klimaszewski, 1984). The single SERC specimen was collected in a Malaise trap near the water tower behind the dormitories from 20-28 May 2024. Brattain et al. (2019) reported this species from Virginia. **NEW STATE RECORD**.

Aleochara rubripes Blatchley is often found in or near groundhog (*Marmota*, Mammalia: Sciuridae) and ground squirrel (*Cittellus*, Mammalia: Sciuridae) burrows (Klimaszewski, 1984). The single SERC specimen was taken in a Lindgren funnel trap opposite the Administration Building from 13-18 March 2024. Brattain et al. (2019) reported this species from Virginia. **NEW STATE RECORD**.

Bledius semiferrugineus LeConte has been collected in moist, sandy clay on shaded, vegetated banks of rivers (Herman, 1972). The single SERC specimen was taken in a Lindgren funnel trap opposite the Administration Building from 2-13 March 2024.

Homaeotarsus cinctus (Say) has been collected in *Carex* (Cyperaceae) marshes, open fens, and bogs (Webster & DeMerchant, 2012b). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 11-20 May 2024. Brattain et al. (2019) reported this species from the District of Columbia and Virginia. **NEW STATE RECORD**.

Laetulonthus laetulus (Say) has been collected around the base of various deciduous and coniferous trees (Webster et al., 2012). The single SERC specimen was taken in a Lindgren funnel trap in the pines opposite the tobacco barn from 20-28 May 2024.

Ocypus nitens (Schrank), an introduced species, is common in forested and open habitats in New England and Canada (Brunke et al., 2011). The single SERC specimen was taken in a pitfall trap in Biodiversitree from 17-20 June 2024. **NEW STATE RECORD**.

Olophrum consimile (Gyllenhal) has an unknown biology. Other members of the genus have been collected in litter, moss, and other vegetation at stream, pond, or bog edges, occasionally in rodent nests or middens (Newton et al., 2000). SERC specimens were taken in a Malaise trap near the water tower behind the dormitories from 23-25 March 2024 and in a Lindgren funnel trap opposite the Administration Building from 4-10 April 2024. Brattain et al. (2019) reported this species from Virginia. **NEW STATE RECORD**.

Oxyporus major Gravenhorst breeds in a variety of fungi (Webster & DeMerchant, 2012a). The single SERC specimen was taken in a Lindgren funnel trap in the pines opposite the tobacco barn from 30 May to 6 June 2024.

Oxyporus rufipennis LeConte feeds on a variety of mushrooms (Webster & DeMerchant, 2012a). SERC specimens were taken in *Agarius* sp. (Agaricaceae) at Back Road near the deer check station on 3 October 2024.

Philonthus carbonarius (Gravenhorst). We were unable to locate any published biological information on this species. SERC specimens were taken in Lindgren funnel traps in the pines opposite the tobacco barn from 20-28 May 2024, 30 May to 6 June 2024; along Fox Point Road from 20-28 May 2024; and opposite the Administration building from 30 May to 6 June 2024. Brattain et al. (2019) reported this species from Virginia. **NEW STATE RECORD**.

Phyllodrepa punctiventris (Fauvel) has an unknown biology. Other species in the genus occur primarily in wooded areas, though a few are at least partly synanthropic. Many are associated with

rotting plant or animal material, as either predators or saprophages, and a few are pollen-feeders (Newton et al., 2000). The single SERC specimen was taken in a Lindgren funnel trap opposite the Administration Building from 4-10 April 2024. Brattain et al. (2019) reported this species from Virginia. **NEW STATE RECORD**.

Quedius laticollis (Gravenhorst) has an unknown biology but one specimen was collected sifting *Sphagnum* (Sphagnacese) (Smetana, 1971 as *Q. neomolochinus* Korge (Smetana, 1973)). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 27 June to 1 July 2024.

Quedius peregrinus (Gravenhorst) has been collected under bark (Blatchley, 1910) and is probably associated with decaying organic matter, such as mushrooms (Smetana, 1971). SERC specimens were taken in a Lindgren funnel traps opposite the Administration Building from 30 July to 5 August 2024 and the pines opposite the tobacco barn from 23-30 July 2024.

Rugilus sp. A single specimen was taken in a pitfall trap in Biodiversitree from 1-3 May 2024 which we could not identify to species.

Sepedephilus sp. A single specimen was taken in *Agarius* sp. at Back Road near the deer check station on 3 October 2024 which we could not identify to species.

Tachinus basalis Erichson has been collected in dung, mushrooms, and carrion (Campbell, 1973). The single SERC specimen was taken sweeping vegetation along the Connector Trail on 25 May 2024. Brattain et al. (2019) reported this species from Virginia. **NEW STATE RECORD**.

Tasgius ater (Gravenhorst), an introduced species, has been found under debris near water (including marine situations) but also common near habitations (in gardens, cellars, shacks) (Majka & Klimaszewski, 2008). SERC specimens were taken in Lindgren funnel traps opposite the Administration Building from 13-20 April 2024 and along Fox Point Road from 6-11 May 2024.

This brings the number of Staphylinidae documented at SERC to 91.

Family Tenebrionidae

Alaetrinus minimus (Beauvois) has been collected on *Andropogon* sp. (Poaceae), on *Zea mays* roots, under stone, in woods trash, in soil shaker, on sandy ground, in house, and at UV light (Ciegler, 2014). The single SERC specimen was taken in a pitfall trap in Biodiversitree from 17-20 June 2024.

Lobopoda punctulata (Melsheimer) has been collected at lights and in leaf litter (Ciegler, 2014). The single SERC specimen was taken at lights around the Reed Education Building on 9 July 2024.

Pseudocistula amoena (Say) has been taken at lights (Ciegler, 2014). The single SERC specimen was taken in a Lindgren funnel trap along Fox Point Road from 27 April to 1 May 2024.

Uloma punctulata LeConte has been collected under *Pinus* bark, in rotten wood, under logs, in leaf litter, and at UV light (Ciegler, 2014). The single SERC specimen was taken under the bark of a fallen pine along Squirrel Neck Loop on 6 April 2024.

This brings the total number of Tenebrionidae species documented from SERC to 48.

Family Throscidae

Aulonothroscus punctatus (Bonvouloir). We could find no published biological information on this species. Other species of *Aulonothroscus* have been collected resting on vegetation (Evans, 2014). The single SERC specimen was taken in a Malaise trap near the water tower behind the dormitories from 28-30 May 2024.

This brings the total number of Throscidae species documented from SERC to four.

Family Trogossitidae

Tenebroides nanus (Melsheimer) has been collected in several types of forests (Barron, 1971). SERC specimens were taken in Lindgren funnel traps along Fox Point Road and opposite the Administration building from 13-18 March 2024.

This brings the total number of Trogossitidae species documented at SERC to four.

Family Zopheridae

Aulonium parallelelopipdum (Say) has been collected under dead *Quercus* bark, in rotten *Globifomes* (Polyporaceae), at UV light, and in dead tree trunk (Ciegler, 2014). The single SERC specimen was collected at light around Mathias Laboratory on 4 June 2024.

This brings the total number of Zopheridae species documented from SERC to three.

DISCUSSION

The 1090 beetle species in 83 families documented from our seven-year survey at SERC compares favorably with other mid-Atlantic state projects. Brown (2008) summarized the published beetle records for Plummers 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 Plummers 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, 2023a). The most beetle species documented project is the 24-year effort along the George Washington Memorial Parkway (Fairfax County, Virginia; Montgomery County, Maryland). To date the project has published records for 1418 species in 46 families (Brattain et al., 2019; Cavey et al., 2013; Chandler & Steury, 2023; Evans & Steury, 2012; Johnson & Steury, 2021; Steury, 2017,

2018ab, 2019, 2020, 2021, 2023a,b; Steury & Chandler, 2023; Steury & Leavengood, 2019; Steury & MacRae, 2012, 2014; Steury & Paulson 2022; Steury & Steiner, 2020, 2021; Steury et al., 2013, 2018, 2020, 2023). These results document most of the speciose beetle families but few of the less species rich ones.

We have been focusing on woodboring beetles for the past four seasons. This year was productive in capturing 23 species new to SERC- three Buprestidae, 10 Cerambycidae, four Curculionidae, three Eucnemidae, one Ptinidae, and two Anthribidae. The most productive woodboring beetle collecting method was Lindgren funnel traps (10 species) followed by Malaise traps (six species), sweeping and beating vegetation (six species), and lights (two species).

Collecting method results for 2024 were sweeping and beating vegetation (36 species, 28.1%), Lindgren funnel traps (37 species, 28.9%), Malaise traps (31 species, 24.2%), at light (nine species, 7.0%), under bark (three species, 2.3%), and pitfall traps (13 species, 10.1%).

Only 10 (7.8%) of the 128 newly documented species are adventive. This brings the total number of adventive species documented at SERC to 60 (5.5%).

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