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RESEARCH ARTICLE

CATALOG OF THE COLEOPTERA FAMILIES OF MARYLAND 2026

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ABSTRACT

The published literature, Maryland Biodiversity Project, BugGuide, and iNaturalist were reviewed for records of Coleoptera families and species reported from Maryland. The Maryland Coleoptera fauna is 3674 species in 104 families. The family Mycteridae has not been recorded from Maryland but has been documented in three adjacent states.

Keywords: Biodiversity, Coleoptera, Maryland.

INTRODUCTION

Coleoptera is the most speciose order of living organisms (Bouchard et al., 2017). Goczal et al. (2024) estimate that there are 442,275 described species, with numerous new species described each year. Beetles are placed in 230 extant and extinct families (Bouchard et al., 2011, 2024). With this high diversity the family-level classification of Coleoptera is constantly changing (Lawrence & Newton, 1995; Bouchard et al., 2011, 2024). There are nearly 30,000 species of Coleoptera known in the United States (Smithsonian Institution, 2026). Downie & Arnett (1996) reported about 7500 species in northeastern North America.

It is a common misconception that vertebrates are the major shapers of ecosystems. Many think that ecosystems such as the African savannah are shaped by vertebrates but without the coprophagous beetles the system would soon be overwhelmed with accumulated dung. Our dependence on beetles for survival is mostly ignored (Wilson, 1987).

Coleoptera are found in every conceivable habitat and have many different functions that are important in sustaining the balance of ecosystem processes (Hawkins & MacMahon, 1989; Walker, 1992; Wilson, 1987). Beetles are highly specialized in their niche requirements, with

diverse ecological roles which provide important services to the ecosystem processes, as decomposers, consumers, pollinators, predators, and parasites (Swift & Anderson, 1989; Morris et al., 1991; Miller, 1993). The active decomposition of plant and animal matter by beetles is essential to material recycling systems (Frost, 1959). Beetles are essential pollinators for some native plants (i.e Magnoliaceae). Predators and parasites play an important role in regulating populations of phytophagous pests (DeBach & Rosen, 1991; Olembo, 1991). Coleoptera and other invertebrates are the major movers and shakers in subterranean ecosystems including litter layers. They are involved in every aspect of the ecosystem processes (Kühnelt, 1976; Paoletti et al., 1991). Even in impoverished habitats, Coleoptera and other arthropods support the ecosystem in which insectivorous vertebrates flourish (Braithwaite et al., 1988; Braithwaite, 1991). Losey & Vaughan (2006) arrived at $57 billion as a conservative estimate of the ecological services provided by insects in the United States. Yang et al. (2015) found that the yellow mealworm, *Tenebrio molitor* Linnaeus, 1758 (Coleoptera: Tenebrionidae), larvae can feed, survive, and biodegrade polystyrene. This raises intriguing possibilities for the disposal of this common product.

The purpose of this project is to present a summary of the beetle families reported from Maryland and the number of described species in each family. General information on the ecology of each family is presented.

MATERIALS AND METHODS

The published taxonomic literature and checklists were the initial basis to determine which species are recorded from Maryland. No effort was made to examine the agricultural literature for records. Additional records were obtained from the Maryland Biodiversity Project (MBP, 2026), BugGuide (2026), and research grade records in iNatualist (2026).

Rather than following the current phylogenetic analysis of beetle families (Bouchard et al., 2011, 2024) the results are presented in alphabetical order. This makes the data more accessible to nonspecialists.

The section on each family includes a summary of the biology, information on the diversity of the family worldwide, in America north of Mexico, and in Maryland. References for the diversity of Maryland are publications or websites with first documentation of Maryland species. The section Maryland literature is a list of all the articles focused on the Maryland fauna. When needed, taxonomic issues are discussed.

Mycteridae has no species recorded from Maryland but is likely to occur (with a widespread distribution or documented from two adjoining states) are listed in non-bold font. Families with documented Maryland species are in bold font.

RESULTS

Currently the Maryland Coleoptera fauna consists of 3674 species in 104 families (Table 1). The family Mycteridae is not yet recorded from but is probably present in Maryland based on the known distribution. It is included since it probably occurs in Maryland.

Table 1. Summary of the Coleoptera families known from Maryland.

Family	World species	North American species	Maryland species
Aderidae	1200	65	8
Anamorphidae	170	9	3
Anthicidae	3000	231	21
Anthribidae	4000	88	22
Artematopodidae	72	9	2
Attelabidae	2500	51	11
Biphyllidae	200	3	2
Bolboceridae	300	43	10
Boridae	4	2	1
Bostrichidae	620	73	13
Bothrideridae	300	16	2
Brentidae	4400	160	15
Buprestidae	14,600	762	99
Byrrhidae	500	35	5
Byturidae	16	2	1
Callirhipidae	175	1	1
Cantharidae	5700	473	47
Carabidae	42,268	2439	444
Cerambycidae	38,800	900	253
Cerophytidae	22	2	1
Cerylonidae	300	19	3
Chrysomelidae	40,000	1720	431
Ciidae	550	88	26
Cimberidae	70	15	2
Cleridae	3366	291	28
Coccinellidae	6000	475	78
Corylophidae	400	61	3
Cryptophagidae	745	145	12
Cucujidae	72	3	1
Cupedidae	36	4	2
Curculionidae	60,000	2388	323
Dermestidae	1954	123	25
Derodontidae	22	9	3
Disteniidae	300	1	1
Dryopidae	280	13	3
Dytiscidae	4820	500	92
Elateridae	12,500	965	136
Elmidae	1600	99	12
Endomychidae	1600	45	12
Erotylidae	3500	49	25

Table 1 cont.

Eucinetidae	62	11	4
Eucnemidae	1900	88	27
Geotrupidae	1123	18	7
Glaphyridae	215	8	1
Gyrinidae	877	56	22
Haliplidae	238	64	15
Helophoridae	210	41	4
Heteroceridae	300	34	11
Histeridae	4822	425	30
Hybosoridae	707	2	2
Hydraenidae	2203	67	8
Hydrochidae	273	26	13
Hydrophilidae	3513	260	88
Ischaliidae	34	3	1
Kateretidae	120	13	2
Laemophloeidae	533	51	8
Lampyridae	2629	170	39
Latridiidae	1050	140	8
Leiodidae	4364	328	30
Limnichidae	345	28	3
Lucanidae	1500	24	8
Lutrochidae	21	3	1
Lycidae	4600	76	17
Lymexylidae	87	2	2
Melandryidae	430	60	15
Meloidae	2500	410	23
Melyridae	6000	520	10
Monotomidae	220	55	7
Mordellidae	2300	205	47
Mycetophagidae	200	26	13
Mycteridae	160	12	0
Nitidulidae	4500	165	41
Nosodendronidae	120	6	1
Noteridae	280	14	4
Ochododaeidae	151	35	1
Oedemeridae	1500	87	9
Omethidae	32	10	1
Orsodacnidae	54	13	1
Passalidae	800	4	1
Passandridae	114	3	1
Phalacridae	635	122	8
Phengodidae	250	23	2
Pesphenidae	288	16	3
Ptiliidae	1016	120	2

Table 1 cont.

Ptilodactylidae	500	19	4
Ptinidae	3000	400	27
Pyrochroidae	200	50	10
Pythidae	23	8	1
Rhipiceridae	57	5	2
Rhipiphoridae	400	51	9
Salpingidae	300	20	2
Scarabaeidae	36,781	1700	221
Scirtidae	1900	50	17
Scraptiidae	500	46	5
Silvanidae	535	32	9
Sphindidae	61	9	2
Staphylinidae	68,866	4100	418
Stenotrachelidae	20	10	2
Synchroidae	8	2	1
Tenebrionidae	30,000	1303	134
Tetratomidae	155	26	9
Throscidae	152	20	6
Trogidae	300	51	18
Trogossitidae	600	59	12
Zopheridae	1700	100	18

Family Aderidae Csiki, 1909b

Aderidae is a poorly studied family within Coleoptera, with very little knowledge about their biology (Gompel, 2024). Adults are found by sweeping and beating vegetation and are usually found resting on the undersides of leaves of various shrubs and trees, particularly angiosperms with broad leaves. Larvae have been found in rotting wood, leaf litter and the nests of other insects (Chandler, 2002b).

There are approximately 1200 described species worldwide with 65 species known from America north of Mexico (Gompel, 2024). Eight species are documented from Maryland (Gompel, 2024; MBP, 2026). Werner (1990) reported *Ariotus subtropicus* Casey, 1895 from Maryland in the Ulke collection (currently deposited in the Carnegie Museum, Pittsburgh, Pennsylvania). Gompel (2024) questions this report since all other specimens are from Florida and Mississippi.

Maryland literature: Staines & Staines, 2023b, 2024.

Family Anamorphidae Strohecker, 1953

Until 2015 this group was part of the family Endomychidae Panzer, 1795 (Robertson et al., 2015). There are 170 described species worldwide with nine species known from America north of Mexico (Shockley et al., 2009). *Anamorphus pusillus* LeConte, 1878 and *Rhymbomiorus lobatus* (LeConte & Horn, 1883) are recorded from Maryland in Shockley et al. (2009). *Bystus uklei* (Crotch, 1873) is listed from Maryland in iNaturalist (2026) and a *Bystus* sp. is recorded in MBP (2026).

These beetles are typically mycophagous on spores and hyphae of microfungi. The most effective way to collect the smaller species is by sifting leaf litter and rotting wood, while other taxa may be collected from their host fungi under bark or on rotting wood (Shockley & Leschen, 2002).

Maryland literature: None.

Family Anthicidae Latreille, 1819

Adult Anthicidae are omnivores and opportunistic predators on small arthropods. Some species may feed on pollen or fungal hyphae. Larvae are omnivores, predators, or fungi feeders (Chandler, 2002a). Adults are commonly collected sweeping and beating vegetation.

There are 3000 described species worldwide with 231 species known from America north of Mexico (Chandler, 2002a). A total of 21 species have been recorded in Mayland (Werner, 1958, 1964; Chandler, 1982, 1997, 2025; MBP, 2026).

Maryland literature: Steury et al., 2013; Steury, 2019; Staines & Staines, 2021b, 2022, 2023a, b, 2025b; Staines & Bennett, 2024.

Family Anthribidae Billberg, 1820

Most species feed on fungi or decaying plant material. Larvae are stem borers in herbaceous plants, woodborers or feed in fungi. Adults are collected on the host plant or by Malaise trap, flight intercept traps, or at lights (Bright, 1993; Janicki & Young, 2017).

There are 4000 species described worldwide with 88 species known from America north of Mexico (Valentine, 2002). Valentine (2002) also stated that there are 32 undescribed species in America north of Mexico. There are 22 species known from Maryland (Valentine, 1998; MBP, 2026).

Maryland literature: Staines & Staines, 2021a, 2022, 2023a, b; 2024, 2025a, b.

Family Artematopodidae Lacordaire, 1857

Little is known about the habits of the Artematopodidae. Adults are often collected sweeping and beating forest understory vegetation (Young, 2002a). There is strong evidence that some species live and feed on mosses (Lawrence, 2010)

This family consists of 72 described species worldwide (Packova et al., 2024) with nine species known from America north of Mexico (Young, 2002a). Two species have been recorded from Maryland (Brown, 1944; Staines & Staines, 2025b, MBP, 2026).

Maryland literature: Staines & Staines, 2022, 2025b.

Family Attelabidae Billberg, 1820

All known species of Attelabidae are leaf-rollers and apparently cause minimal damage to their host plant. Females lay their egg(s) on leaves that they prepare by biting and cutting with their mandibles. The leaves are then rolled into a more or less barrel-shaped structure that nourishes and protects the developing larvae. Pupation occurs in the ground (Hamilton, 2002).

There are 2500 described species worldwide (Riedel, 2014) with 51 species known from America north of Mexico (Hamilton, 2002). There are 11 species recorded from Maryland (Hamilton, 1983, 1990; MBP, 2026).

Maryland literature: Staines & Staines, 2022.

Family Biphyllidae LeConte, 1861

Adult and larval biphyllids may be found in leaf litter, fruiting bodies of Pyrenomycetous Ascomycota fungi (Sordariomycetes), and under bark of dead trees or fallen branches (Cline & Shockley, 2010).

There are about 200 species described worldwide with three species known from America north of Mexico (Goodrich, 2002b). There are two species known from Maryland (Goodrich & Springer, 1992; MBP, 2026).

Maryland literature: Staines & Staines, 2022.

Family Bolboceratidae Mulsant, 1842 (sometimes treated as subfamily of Geotrupidae)

Bolboceratidae resemble Geotrupidae and Scarabaeinae (Scarabaeidae) and are often classified as a subfamily of Geotrupidae. Species are attracted to lights, are found in burrows in wooded areas, and captured in pitfall traps (Steury & Paulson, 2022; Staines & Bennett, 2024).

There are about 300 described species worldwide (Ratcliffe & Paulson, 2008) with 43 species known from America north of Mexico (Howden, 1955, 1964). Price & Ratcliffe (2023) record ten species from Maryland.

Maryland literature: Staines, 1986a, 2020c; Brown, 2008; Guarnieri, 2010; Staines & Bennett, 2024.

Family Boridae C. G. Thomson, 1859

Immature stages of *Boros* are found in the subcortical region of dead (often standing or leaning) coniferous trees. Larvae of *Lecontia* inhabit the subcortical region of fire-killed coniferous trees (Pollock, 2002c).

The Boridae is a small family with four described species worldwide with two species known from America north of Mexico (Pollock, 2002c). One species, *Borus unicolor* Say, 1827, is known from Maryland (MBP, 2026).

Maryland literature: None.

Family Bostrichidae Latreille, 1802

The larvae of most groups are wood borers, with a few species found in stored grain and tubers. This family is difficult to diagnose based on external features of dried adults (Ivie, 2002c).

There are at least 620 described species worldwide (Zahradnik & Háva, 2014) with 73 species known from America north of Mexico (Ivie, 2002c). MBP (2026) has no records for this family, but 13 species are documented from Maryland (Fisher, 1950; Downie & Arnett, 1996; Staines & Staines, 2023a; iNaturalist, 2026).

Maryland literature: Staines & Staines, 2023a.

Family Bothrideridae, Erichson, 1845

This family includes members that are both ectoparasites and fungal feeders. Many species are found in the galleries and tunnels of wood-boring beetles where they are ectoparasites of larvae and pupae (Philips & Ivie, 2002).

There are approximately 300 described species worldwide with 16 species known from America north of Mexico (Philips & Ivie, 2002; Stephan, 1989). Two species are recorded from Maryland (Stephan, 1989; MBP, 2026).

Family Brentidae Billberg, 1820 (includes Apioninae and Ithycerinae)

Brentidae is a composite of subfamilies, three are found in Maryland, each with a different body form and biology. Brentinae are elongate and usually found under bark as both adults and larvae. Apioninae are pear-shaped and are associated with plants in various families. Larvae are stem miners, fruit feeders or seed feeders (Anderson & Kissinger, 2002). The Ithycerinae are large and wide at the humeri. They feed on the bark of woody trees, mostly *Quericus* (Fagaceae) (Anderson, 2002b).

There are about 4400 described species worldwide (Barclay & Bouchard, 2023) with about 160 species known from America north of Mexico (Ciegler, 2010). There are 15 species known from Maryland (Kissinger, 1968; Staines & Staines, 2021a; MBP, 2026; iNaturalist, 2026).

Maryland literature: Guarnieri, 2010; Staines & Staines, 2021a, 2022, 2023a, b, 2025b.

Family Buprestidae Leach, 1815

Larvae burrow through roots and logs, from within the bark to within the cambium layers, or are leaf and stem miners of herbaceous and woody plants, including grasses and sedges. Most of the wood boring species attack dying trees or dying branches on healthy trees, only a few bore into green wood. Some produce galls; a few live in pine cones or herbaceous plants. (Bellamy & Nelson, 2002).

There are more than 14,600 described species worldwide with 762 species known from America north of Mexico (Bellamy & Nelson, 2002). There are 99 species known from Maryland (Nelson et al., 2008; Paeiro, et al., 2012; Barringer, 2016; MBP, 2026).

Maryland literature: Lugger, 1884; Ford & Cavey, 1979; Guarnieri, 2010; Basham & Guarnieri, 2012; Barringer, 2016; Staines & Staines, 2021f, 2022, 2023a, b, 2024, 2025b.

Family Byrrhidae Latreille, 1804

Most of the North American species are obligate moss feeders as both adults and larvae. Adults of all bryophagous taxa are surface grazers on host mosses and rarely on leafy liverworts. Larvae of most of these species burrow through gametophyte layers and underlying friable substrates (Johnson, 2002a).

There are nearly 500 described species worldwide with 35 species known from America north of Mexico (Marske & Ivie, 2003). Most of the North American species are known from the western mountains, the northeastern mountains, and around the Great Lakes (Johnson, 2002a). Five species are known from Maryland (Staines & Staines, 2019).

Maryland literature: Staines & Staines, 2019, 2025b.

Family Byturidae Jacquelin du Val, 1858

Larvae of *Byturus unicolor* Say, 1823 are known to develop in the fruit heads of species of *Rubus* and *Geum* (Rosaceae), although adults may be found on a wide variety of other flowers (Goodrich, 2002a).

There are 16 described species worldwide with two species known from America north of Mexico (Goodrich, 2002a). There is one species, *Byturus unicolor* Say, known from Maryland (Springer & Goodrich, 1983, 1991; MBP, 2026).

Maryland literature: Staines & Staines, 2023a, 2025b.

Family Callirhipidae Emden, 1924

This small family contains 175 species worldwide (Hájek, 2011) with one species known from America north of Mexico (Young, 2002d). One species, *Zenoa picea* (Beauvois, 1806), is known from Maryland (Staines, 1983d).

Larvae of *Z. picea* are found in old, rotten wood, usually in the presence of fungi. Adults are relatively short-lived, active at night, and are attracted to lights (Staines, 1983d).

Maryland literature: Staines, 1983d; Brown, 2008; Staines & Staines, 2021f, 2023a.

Family Cantharidae Imhoff 1856

Most adult cantharids frequent living vegetation and are often abundant in a wide variety of open and forested habitats. Some species are commonly encountered while they visit flowers. Adults of most species emerge in the spring or summer and are short lived. Most species appear to be predominantly active diurnally, although there is usually a period of inactivity during the hottest part of the day in extremely warm weather. Some adults are attracted to lights at night. (Ramsdale, 2002b).

There are 5700 described species worldwide (Kazantsev & Brancucci, 2007) with 473 species known from America north of Mexico (Ramsdale, 2002b). There are 47 species known from Maryland (Pelletier & Hébert, 2014; MBP, 2026).

Maryland literature: Steury, 2018; Steury & Steiner, 2019; Scarpulla, 2020; Staines & Staines, 2021d, 2022, 2023a, b, 2024, 2025b.

Family Carabidae Latreille, 1802 (includes Cicindelidae)

Most carabids are polyphagous olfactory-tactile predators or scavengers, seeking and eating dead and dying arthropods, or are specialized seeking active prey. Some are day-active optical predators, using primarily eyesight to capture active prey. Many other carabids are phytophagous, eating seeds which have fallen to the ground, or which the beetles obtained on the plants. Some species are myrmecophiles and some are parasitoids, the carabid larva consuming its host over a period of days (Ball & Bousquet, 2000).

There are approximately 42,268 described species worldwide (Lorenz, 2022; Pearson & Wiesner, 2023) with 2439 species known from America north of Mexico (Bousquet, 2012). Maryland has 444 documented species (Glaser, 1976a, 1986a, 1992, 1995, 1996; Erwin, 1981; Stork, 1984; Bousquet, 2012; Pagac et al., 2017; Steury & Messer, 2017; Harden, 2018; MBP, 2026).

Maryland literature: Boyd, 1976; Glaser, 1976a, 1986a, 1992, 1995, 1996; Erwin, 1981; Stork, 1984; Staines, 1985d, 1994b, 2005; Davidson, 1988; Hill & Knisley, 1992; Mawdsley, 2005a,b, 2006, 2007; Brown, 2008; Droege et al., 2009; Guarnieri, 2009, 2010, 2015, 2019; Schaefer et al., 1999; Fritzler & Strazanac, 2012; Staines & Staines, 2012, 2021e, 2022, 2023b, 2024, 2025a,b; Steury et al., 2014; Knisley et al., 2016; Steury & Messer, 2017; Guarnieri & Harden, 2017; Harden & Guarnieri, 2017; Harden, 2018; Steury, 2019; Scarpulla, 2020.

Family Cerambycidae Latreille, 1802

Cerambycidae have always been popular with collectors because of their bright colors, highly adapted and varying morphologies, and interesting habits. Adults feed on wood, roots, leaves, pollen, and are rarely carnivorous. The larvae bore into wood and roots (Turnbow & Thomas, 2002).

There are about 38,800 described species worldwide (Svaha & Lawrence, 2014; Tavakilian & Chevillotte, 2025) with 900 species recorded from America north of Mexico (Turnbow & Thomas, 2002). There are 253 species known from Maryland (Staines, 1987a; Glaser, 1992b; MBP, 2026).

Maryland literature: Lugger, 1884; Glaser, 1986c, 1992b; Staines, 1987a; Brown, 2008; MacRae, 2009; Guarnieri, 2010; Steury, 2019; Scarpulla, 2020; Staines & Staines, 2020d, 2022, 2023a, b, 2024, 2025a, b; Greene, 2024; Staines & Bennett, 2024.

Family Cerophytidae Latreille, 1834

The Cerophytidae is a small family of 22 species in the Americas and Europe (Lawrence, 1991; Costa et al., 2014). There are two species known from North America with one species, *Cerophytum pulsator* (Haldeman, 1845), known from Maryland (Steiner, 2000; MBP, 2026).

Members of this family are seldom collected and there is little published biological information. In America north of Mexico species are found in deciduous forests and leaf litter. They apparently feed on rotten xylem (Steiner, 2000).

Maryland literature: Steiner, 2000; Brown, 2008.

Family Cerylonidae Billberg, 1820

Because of their small size and cryptic habits, cerylonids are still not very well known. Adults and larvae are found under bark and in leaf litter, where they apparently feed on fungi (Thomas, 2002e).

There are about 300 described species worldwide with 19 species in America north of Mexico (Thomas, 2002e). There are three species recorded from Maryland (Staines & Staines, 2022; MBP, 2026; iNaturalist, 2026).

Maryland literature: Staines & Staines, 2022.

Family Chrysomelidae Latreille, 1802 (includes Bruchinae)

Chrysomelidae is one of the largest beetle families and among the phytophagous families is third in number of species only to the Curculionidae and Staphylinidae. Chrysomelids are generally small to medium-sized beetles with most being brightly colored or strikingly patterned.

The adults feed on living plant material, usually consuming leaves or sometimes various flower parts including pollen. Many chrysomelid larvae feed on leaves, but a great number are subterranean attacking roots and underground stems (Riley et al., 2002).

There are approximately 40,000 described species of chrysomelids worldwide with 1720 species known from America north of Mexico (Riley et al., 2022; Kingsolver, 2002). There are 431 species known from Maryland (Kingsolver, 2004; Staines & Staines, 2009; MBP, 2026).

Maryland literature: Lugger, 1884; Duckett, 1920; Ford & Cavey, 1979, 1982, 1985; Cavey, 1987, 1994, 2004; Wheeler, 1988, 2021; Staines & Staines, 1989, 2001, 2009, 2020d, 2022, 2023a, b, 2024, 2025b; Staines, 1991, 2004; Seago & Lingafelter, 2003; Brown, 2008; Steury, 2019; Scarpulla, 2020; Wheeler, 2021; Konstantinov, 2025.

Family Ciidae Leach in Samouelle, 1819

Ciidae adults are small to minute, convex, usually oval or elongate beetles. Adults and larvae feed on fungi, almost all of them internal feeders on fruiting bodies of persistent wood-rotting Basidiomycetes (Lawrence, 1971; Thayer & Lawrence, 2002).

There are about 550 described species worldwide with 88 species known from America north of Mexico (Thayer & Lawrence, 2002). There are 26 species known from Maryland (Lawrence, 1971; MBP, 2026).

Maryland literature: Staines & Staines, 2021b, 2025b.

Family Cimberidae des Gozis, 1882 (sometimes called Nemonychidae)

Cimberidae are rarely collected due to their specialized habits and life history. In America north of Mexico, adults are found on male flowers of *Pinus* species (Pinaceae) very early in the season (Anderson, 2002a).

There are 70 described species worldwide with 15 species known from America north of Mexico (Hamilton, 1994). There are two species, *Cimberis elongatus* LeConte, 1876 and *C. pilosa* LeConte, 1876, known from Maryland (MBP, 2026; iNaturalist, 2026).

Maryland literature: None.

Family Cleridae Latreille, 1804

Most Cleridae are predaceous, as larvae and adults, on other insects. They generally are associated with woody plants and can be found on or under bark, in the tunnels of wood- and cone-borers, form galls or on plant foliage and dead twigs (Opitz, 2022).

There are 3366 described species worldwide with 291 species known from America north of Mexico. Maryland has 28 reported species (Leavengood, 2014; Burke et al., 2015; Opitz, 2015, 2019; Staines & Staines, 2021f, 2023b; MBP, 2026).

Maryland literature: Guarnieri, 2010; Staines & Staines, 2021f, 2022, 2023a, b, 2024.

Family Coccinellidae Latrielle, 1807

Adults and larvae of most species are predaceous on aphids, psyllids, mealybugs, scales, or other soft-bodied insects and mites. The larger, aposematically colored species can usually be found feeding amongst colonies of their prey or basking openly on vegetation (Vandenberg, 2002).

There are nearly 6000 described species worldwide with 475 species known from America north of Mexico (Vandenberg, 2002). There are 78 species known from Maryland (Dozier, 1971; Gordon, 1976, 1985; Wheeler, 1987; Staines, 2008c; Staines & Staines, 2021c, 2022, 2023b; MBP, 2026).

Maryland literature: Dozier, 1971; Wheeler, 1987; Staines et al., 1990; Brown, 2008; Scarpulla, 2011, 2020; Staines & Staines, 2021c, 2022, 2023a, b, 2024, 2025b.

Family Corylophidae LeConte, 1852

Adults and larvae feed on fungal spores and are present in a diversity of habitats. Many species are present on the leaves and flowers of plants and may be found in nests of birds and caterpillars (Bowstead & Leschen, 2002).

There are 400 described species worldwide (Robertson et al., 2013) with 61 species known from America north of Mexico (Bowstead & Leschen, 2002). Three species are known from Maryland (MBP, 2026; iNaturalist, 2026).

Maryland literature: Steury, 2019; Staines & Staines, 2024.

Family Cryptophagidae Kirby, 1837

Cryptophagids typically are fungal feeders and occur in decaying habitats that promote fungal growth. The most effective way to collect these beetles is by sifting leaf litter and rotting wood or using passive flight intercept traps in drier habitats. Some may be collected from their host fungi or with their social insect or mammal hosts (Leschen & Skelley, 2002).

There are about 745 described species worldwide (Gimmel & Leschen, 2022) with 145 species known from America north of Mexico (Leschen & Skelley, 2002). There are 12 species known from Maryland (MBP, 2026; iNaturalist, 2026; Staines & Staines, 2021c, 2022, 2024).

Maryland literature: Staines & Staines, 2021c, 2022, 2023a, 2024.

Family Cucujidae Latreille, 1802

Larvae and adults are found under bark of dead trees. Larvae of the North America species of *Cucujus* are reported to be predaceous, but otherwise there is little information of the biology of these beetles (Thomas, 2002c)

There are 72 described species worldwide (McElrath & Marris, 2026) with three species known from America north of Mexico (Thomas, 2002c). There is one species, *Cucujus clavipes* Fabricius, 1781, found in Maryland (MBP, 2026).

Maryland literature: Guarnieri, 2010; Staines & Staines, 2021c.

Family Cupedidae Laporte, 1836

Larvae are wood-borers, living in firm, but fungal-infested wood. Sometimes they have been found in structural timbers. Adults of some species are attracted to light (Young, 2000).

There are 36 described species worldwide (Rodríguez-Mirón & López-Pérez, 2019) with four species found in America north of Mexico (Atkins, 1979; Young, 2000). Two species are recorded from Maryland (Staines, 1983b; MBP, 2026).

Maryland literature: Staines, 1983b; Brown, 2008; Staines & Staines, 2022.

Family Curculionidae Latreille, 1802 (includes Scolytidae and Platypodidae)

Weevils are one of the most diverse groups of organisms. Over 60,000 species have been described worldwide and their diversity in North America is exceeded by the Staphylinidae. Weevils are associated with virtually all kinds of plants and plant parts. Most feed on living plants but some are saprophagous. Weevils are immediately recognizable by their elongate rostrum (or snout), with mouthparts situated at the apex, geniculate antennae and compact antennal club. Some weevils in the subfamilies Entiminae, Cossoninae and Scolytinae have the rostrum reduced in form and not markedly produced anteriorly. Traditional considerations of the weevils do not include Scolytinae and Platypodinae but increasing evidence suggests these beetles are derived from within Curculionidae (Anderson, 2002c).

There are about 60,000 described species worldwide with 2388 species in the Nearctic region. Maryland has 323 known species (O'Brien & Wibmer, 1982; C. O'Brien, 1997; L. O'Brien, 1989; Staines & Staines, 2021a, 2022, 2023a, b, 2024, 2025b; MBP, 2026; iNaturalist, 2026). This number is probably an underestimate since many naturalists do not attempt to identify weevils.

Maryland literature: Evans, 1959; Ford & Cavey, 1979; Batra, 1980; Hoebeke & Whitehead, 1980; Staines, 1982, 1984a; Staines & Staines, 1988, 1989, 2021a, 2022, 2023a, b, 2024, 2025a, b; Atkinson et al., 1990; Wheeler, 1999; Rabaglia & Williams, 2002; Rabaglia, 2003; Brown, 2008; Guarnieri, 2010; Prena et al., 2014; Steury, 2019; Staines & Bennett, 2024.

Family Dermestidae Gyllenhal, 1808

Most dermestids for which the habits are known are scavengers, feeding on dried animal or plant materials with a high protein content. They are found in animal carcasses in the third or butyric state of decomposition. Many of the smaller species occur in bee and wasp nests, feeding on old pollen stores or on dried insect remains. Others are found in bird nests feeding on old feathers and other organic debris or in mammal nests feeding on hair (Kingsolver, 2002).

There are at least 1954 described species worldwide (Háva, 2015, 2025, 2026) with 123 species in America north of Mexico (Kingsolver, 2002). Maryland has 25 known species (Beal, 1959, 1998, 2003; Staines & Staines, 2021f, 2022; MBP, 2026; iNaturalist, 2026).

Maryland literature: Holloway et al., 2020; Staines & Staines, 2021f, 2022, 2023a.

Family Derodontidae LeConte, 1861

The biology of this small group of beetles is remarkably diverse. Many species are fungal feeders, but adult and larval *Laricobius* are predators of Adelgidae (Hemiptera). Larvae and adults typically occur together in the same habitats and are easy to collect, especially in cool seasons (Leschen, 2002).

There are 22 described species worldwide with nine species known from America north of Mexico (Leschen, 2002). Three species are known from Maryland (MBP, 2026; iNaturalist, 2026).

Maryland literature: Staines & Staines, 2022, 2023a, 2025b.

Family Disteniidae Thomson, 1860 (sometimes treated as subfamily of Cerambycidae)

The Disteniidae are sometimes treated as a subfamily of Cerambycidae. Larvae are borers in deciduous trees. Adults have mostly nocturnal behavior; some species may be collected beating host plants or collected in various traps (Vitali, 2006).

There are about 300 species worldwide with one species in America north of Mexico (Bezark & Monné, 2013). One species, *Elytrimitatrix undata* (Fabricius, 1775), is found in Maryland (Staines, 1987a; MBP, 2026).

Maryland literature: Staines, 1987a; Staines & Staines, 2022, 2023a.

Family Dryopidae Billberg, 1820

Worldwide most of the species are forest litter inhabitants. In the United States these beetles are aquatic mostly as adults, a few being riparian; larvae are generally terrestrial. The adults are covered with a plastron on truly aquatic species. They do not swim, but crawl about upon the stream substrates or on leaf packs and log jams (Shepard, 2002b).

There are over 280 described species worldwide (Kodada et al., 2016b) with 13 species in America north of Mexico (Brown, 1983a). There are three species known from Maryland (Brown, 1975; Staines, 1988a; MBP, 2026).

Maryland literature: Staines 1988a.

Family Dytiscidae Leach, 1815

These beetles are well-adapted to aquatic life. The streamlined shape and flattened, paddle-like hind legs give them a characteristic appearance. Both the larvae and the adults of all our species are aquatic and good swimmers. Many species are found in small ponds, along margins of lakes and streams, others occur in a wide variety of habitats from hot springs to cold mountain streams (Roughley & Larson, 2000).

There are 4820 described species worldwide (Nilsson & Hájek, 2025) with 500 species known from America north of Mexico (Roughley & Larson, 2000). There are 92 species known from Maryland (Staines, 1986c; Shaverdo, 2012; MBP, 2026).

Maryland literature: Spangler, 1962; Staines, 1986c, 2008e, g, h, 2009; Staines & Staines, 2006, 2020a, 2022, 2024; Brown, 2008; Guarnieri, 2010; Shaverdo, 2012.

Family Elateridae Leach, 1815

Adults of most species of click beetles are relatively common and are often collected in various traps, on vegetation, or at lights. They are generally active in afternoon and evening hours when temperatures exceed ca. 16°C (60°F), many species are nocturnal, and most fly well. In cool temperate climates most species overwinter as larvae or post-eclosion adults. Some are predaceous on soft-bodied insects, but many feed on overripe and decaying fruit, nectar, pollen, floral parts, ascomycete fungus fruiting bodies, and at extra-floral nectaries, glandular trichomes, and phloem weeps (Johnson, 2002c)

Elateridae contains about 12,500 described species worldwide (Zurita-García et al., 2014) with 965 species known from America north of Mexico (Johnson, 2002c). There are 136 species known from Maryland (Quate & Thompson, 1967; Becker, 1974; Stibich, 1990; Al Dhafer, 2001;

Douglas, 2003; Etzlar, 2020, 2023; Mathison, 2021; Staines & Staines, 2021d, 2022, 2023b, 2024, 2025b; MBP, 2026; iNaturalist, 2026).

Maryland literature: Lugger, 1884; Becker, 1973; Ford & Cavey, 1979; Guarnieri, 2010; Steury, 2019; Staines & Staines, 2021d, 2022, 2023a, b, 2024, 2025a, b; Staines & Bennett, 2024

Family Elmidae Curtis, 1830

Elmid larvae are aquatic; the adults of Larainae are riparian, those of Elminae are aquatic and seldom leave the water, except for on hot, humid nights mating flights. Pupation is in cells under streamside substrates, and most pupation is associated with post-flood periods. Life cycles are usually univoltine; in cold waters or with poor food they may be longer (Shepard, 2002a).

There are approximately 1600 described species worldwide (Kodada et al., 2016a) with 99 species known from America north of Mexico (Brown, 1983b). There are 12 species known from Maryland (Brown, 1975, 1983b; Staines & Staines, 2020a; MBP, 2026).

Maryland literature: Staines & Staines, 2020a.

Family Endomychidae Leach, 1815

Endomychids are typically mycophagous on spores and hyphae of microfungi or on large Basidiomycetes. The most effective way to collect the smaller species is by sifting leaf litter and rotting wood, while other taxa may be collected from their host fungi under bark (Skelley & Leschen, 2002).

There are approximately 1600 described species worldwide (Shockley et al., 2009; Tomaszewska et al., 2022) with 45 species known from America north of Mexico (Skelley & Leschen, 2002). There are 12 species known from Maryland (Strohecker, 1986; Shockley et al., 2009; MBP, 2026; iNaturalist, 2026).

Maryland literature: Scarpulla, 2020; & Staines, 2022, 2023b.

Family Erotylidae Leach, 1815

Larvae and adults feed on the fruiting bodies of the larger Basidiomycete fungi growing in decaying wood or in mycorrhizal associations with tree roots (Skelley & McHugh, 2002).

There are approximately 3500 described species worldwide (Węgrzynowicz, 2002; Leschen et al., 2010) with 49 species known from America north of Mexico (Skelley & McHugh, 2002). There are 25 species known from Maryland (Boyle, 1956; Skelley, 1998; Staines & Staines, 2021c, 2022, 2023b, 2024; MBP, 2026).

Maryland literature: Guarnieri, 2010; Staines & Staines, 2021c, 2022, 2023a, b, 2024; Staines & Bennett, 2024.

Family Eucinetidae Lacordaire, 1857

Eucinetidae are found in debris or under fungus covered bark of trees. Larvae are mycophagus on a variety of fungi (Young, 2002b).

There are 62 described species worldwide (Jałoszyński & Wakimura, 2023) with 11 species known from America north of Mexico (Young, 2002b). There are four species reported from Maryland (Staines & Staines, 2021f, 2024; MBP, 2026).

Maryland literature: Staines & Staines, 2021f, 2024.

Family Eucnemidae Eschscholtz, 1829

The larvae of most of the species develop in rotten wood. The larvae most likely feed on the fungus rather than the wood (Muona, 2002).

There are approximately 1900 described species worldwide (Muona, 2010; Otto, 2016) with 88 species known from America north of Mexico. There are 27 species documented from Maryland (Otto 2020, 2021, 2022; MBP, 2026).

Maryland literature: Ford & Cavey, 1979; Ford & Spilman, 1979; Staines & Staines, 2021d, 2022, 2023b, 2024, 2025a.

Family Geotrupidae Latreille, 1802

Life histories of the geotrupids are diverse, and food habits vary from saprophagous to coprophagous and mycetophagous, and some adults apparently do not feed. Adults of most species are secretive, living most of their life in burrows. Although adults do not tend larvae, adults provision food for larvae in brood burrows (Jameson, 2002b).

There are 1123 described species worldwide (Schoolmeesters, 2026) with 18 species known from America north of Mexico (Jameson, 2002b). There are seven species reported from Maryland (Staines, 1986a; Price & Ratcliffe, 2023; MBP, 2026).

Maryland literature: Staines 1986a, 2020c; Brown, 2008; Guarnieri, 2010; Guarnieri & Harpootlian, 2013; Fritzler & Strazanac, 2012; Price et al., 2012; Rentz & Price, 2016; Simons et al., 2018; Hagadorn et al., 2021; Staines & Staines, 2022, 2023a, 2024; Price & Ratcliffe, 2023; Staines & Bennett, 2024.

Family Glaphyridae MacLeay, 1819

Little is known about the biology of Glaphyridae. Adults are strong, active fliers, and are found on flowers and foliage. Larvae are found in sandy soil and feed on decaying leaf litter and debris (Carlson, 2002b).

This family contains about 215 described species worldwide (Schoolmeesters, 2026) with eight species known in America north of Mexico (Carlson, 2002b). One species, *Lichanthe vulpina* (Hentz, 1827), is known from Maryland (Staines, 1986a; Price & Ratcliffe, 2023; MBP, 2026).

Maryland literature: Staines, 1986a; Price & Ratcliffe, 2023).

Family Gyrinidae Latreille, 1810

Some gyrinids cling to roots of undercut stream banks, whereas most members of this family glide or skate on the surface of the water. Swimming may be aided by use of a surfactant secreted from the pygidial glands. Adults cluster together and often swim rapidly in circles when alarmed. Also, when disturbed they will dive and scatter widely. Some species inhabit standing water, others moving water (Roughley, 2000a).

There are 877 described species worldwide (Beutel & Roughley, 2016) with 56 species known in America north of Mexico (Roughley, 2000a). There are 22 species known from Maryland (Staines, 1986c; Oygur & Wolfe, 1991; Gustafson & Miller, 2005; MBP. 2026).

Maryland literature: Staines, 1986c, 2008g, 2009; Staines & Staines, 2020a, 2023a.

Family Haliplidae Aubé, 1836

Haliplids are an aquatic family of beetles. Swimming is effected by alternate movement of the legs and is therefore feeble and is assisted by the natatory setae on the tibiae and tarsi of all legs; crawling is a more normal form of locomotion. Some species are known to fly. Adults are known to eat insect eggs, algae and polyps of Hydrozoa. Larvae are almost exclusively algophagous. Adults are active the year round when weather permits (Roughley, 2000b).

There are 238 described species worldwide (van Vondel, 2016) with 64 species known from America north of Mexico (van Vondel, 2021). There are 15 species known from Maryland (Staines, 1986c; van Vondel, 2021; MBP, 2026).

Maryland literature: Staines, 1984b, 1986c, 2008g, 2009; Staines & Staines, 2022.

Family Helophoridae Leach, 1815 (sometimes treated as subfamily of Hydrophilidae)

Most species inhabit shallow aquatic environments including the periphery of rivers and streams, stagnant pools, and temporary water bodies. Some species occupy terrestrial habitats. Specific habitat preferences vary by species (van Tassell, 2000).

There are about 210 described species worldwide with 41 species known from America north of Mexico (van Tassell, 2000). Four species are recorded from Maryland (Smetana, 1985; Staines, 1986d; MBP, 2026).

Maryland literature: Staines, 1986d, 2008d; Brown, 2008.

Family Heteroceridae MacLeay, 1825

Natural history information is available for relatively few species, however, Heteroceridae appear to be homogeneous in adult and larval habitats. In general, adults are commonly associated with riparian habitats, although they are strong flyers and can be found some distance from water. Adults feed in shallow, horizontal tunnels excavated in mud or moist organic sand. Adult stomach contents suggest this family feeds on algae, plankton, and organic material (Katovich, 2002b).

There are about 300 described species worldwide with 34 species known from America north of Mexico (Katovich, 2002b). There are 11 species documented from Maryland (Brown, 1975; Pachero, 1978; Staines, 1985c; MBP, 2026).

Pacheco (1964) in monographing the family for the New World described 20 new species and 15 new genera based almost exclusively on male characters. Pacheco (1978) cataloged the North American species in ten genera. Subsequent molecular analysis reduced the number of genera found in North America to three (King et al., 2011).

Maryland literature: Staines, 1985c; Staines & Staines, 2020a, 2022, 2023a.

Family Histeridae Gyllenhal, 1808

Histeridae is a distinctive group of mostly small, black, mainly predaceous beetles on soft-bodied insect larvae and eggs, primarily Diptera. Substrates on which flies develop in numbers are among the best places to look for these beetles- dung, carrion, rotting vegetation, and rotting fungi. There are many North American histerids which are obligate inhabitants of the burrows of reptiles,

mammals, and even birds. Adults of most burrow-dwelling histerids feed on fly eggs and larvae which develop on dung deposits in the burrow (Kovarik & Caterino, 2000).

There are about 4822 described species worldwide with 425 species known from America north of Mexico (Kovarik & Caterino, 2000, 2016). There are 30 species documented from Maryland (Bousquet & Laplante, 2006; Staines & Staines, 2021f, 2022, 2023b, 2024, 2025b; MBP, 2026).

Maryland literature: Staines & Staines, 2021f, 2022, 2023a, b, 2024, 2025a, b.

Family Hybosoridae Erichson, 1847

Little life history information is known for hybosorids. Adults feed on both invertebrate and vertebrate carrion in the early stages of decomposition; some species are found in dung, and others are attracted to lights at night (Jameson, 2002c)

There are about 707 described species worldwide (Schoolmeesters, 2026) with two species known from America north of Mexico (Jameson, 2002c). Two species are known from Maryland (Staines, 1986a; Price & Ratcliffe, 2023; MBP, 2026).

Maryland literature: Staines 1986a, 2020c; Staines & Staines, 2022; Price & Ratcliffe, 2023.

Family Hydraenidae Mulsant, 1844 (sometimes treated as subfamily of Hydrophilidae)

These minute aquatic or humicolous beetles superficially resemble small hydrophiloids, with which they can be found at the margins of aquatic habitats. Adults are aquatic, most species being found at the margins of streams and ponds. Some Nearctic species prefer brackish water or stagnant water with emergent vegetation or decaying leaves, a few are found associated with wet moss, and one species is intertidal (Perkins, 2000).

There are about 2203 described species worldwide (Newton, 2022) with 67 species known in America north of Mexico (Perkins, 2000). There are eight species known from Maryland (Perkins, 1980; Staines, 1986d; MBP, 2026).

Maryland literature: Staines, 1986d; Brown, 2008.

Family Hydrochidae Leach, 1817 (sometimes treated as subfamily of Hydrophilidae)

All species apparently have a similar univoltine life cycle. Adults overwinter, probably in terrestrial habitats, and in early to mid-spring fly to aquatic sites where they mate and oviposit along the margins. Larvae complete development in riparian habitats from late June through August, and adults enter overwintering sites by early October. Adults, which have only sparse long setae on their tarsi and swim poorly, were collected from aquatic vegetation with nets. Many species are attracted to lights. Male genitalia are necessary for species identifications (Hilsenhoff, 1995).

There are 273 described species worldwide (Newton, 2022) with 26 species known in America north of Mexico (van Tassell, 2000). There are 13 species known from Maryland (Staines, 1986d).

Identification of Hydrochidae is difficult. Not only are the species small and need male genitalia but the nomenclature is muddled by poor quality species descriptions (Jäch, 2006).

Maryland literature: Staines, 1986d, 2008a, d, g, 2009; Steiner et al., 2003; Brown, 2008; Staines & Staines, 2020a.

Family Hydrophilidae Latreille, 1802

Most members of this family are aquatic as both adult and larva and are adapted for aquatic life. There are two major groupings, the aquatic and the terrestrial scavengers. The terrestrial members belong to a single subfamily, the Sphaeridiinae (van Tassell, 2000). Specimens are collected with aquatic nets, at lights, in dung, and in mushrooms

There are 3513 described species worldwide (Newton, 2022) with 260 species known from America north of Mexico (BugGuide, 2026). There are 88 species reported in Maryland (Wooldridge, 1966; Miller, 1974; Smetana, 1974, 1978, 1980; Staines, 1986d; Short & McIntosh, 2003; MBP, 2026).

Maryland literature: Staines, 1986d, 2008d, g, 2009; Brown, 2008; Staines & Staines, 2006, 2020a, 2022, 2023b, 2024; Guarnieri, 2010.

Family Ischaliidae, Blair, 1920

This group of beetles has been placed in the Pedilidae, Pyrochroidae, Anthicidae, and Scraptiidae before being elevated to family status. Little is known about their biology other than they feed on fungi (Ciegler, 2014; Evans, 2014).

There are 34 described species worldwide with three species known from America north of Mexico (Ciegler, 2014; Evans, 2014; BugGuide, 2026). MBP (2026) does not record any species of Ischaliidae. BugGuide (2026) has a record of *Ischalia costata* (LeConte, 1862) from Maryland, Washington County, High Rock, 1700 feet, 6 July 1986, R. D. Ward, captured in a canthardin jar trap.

Maryland literature: None.

Family Kateretidae, Kirby, 1837 (formally part of Nitidulidae, some authors place it in the family Brachypteridae Erichson, 1845).

Adults are found on flowers where the adults feed on pollen and flowers. The larvae develop in seed pods of various plants (Habeck, 2002a; Evans, 2014).

There are approximately 120 described species worldwide (Jelink & Cline, 2010) with 13 species known from America north of Mexico (Evans, 2014; BugGuide (2026). MBP (2026) contains no records of this family. iNaturalist (2026) has three records of *Brachypterus* which appear to represent two species from Maryland: Maryland, Anne Arundel County, Edgewater; Maryland, Harford County, Bel Air; and Maryland, Montgomery County, Potomac.

Maryland literature: None.

Family Laemophloeidae Ganglbauer, 1899

Little has been published on the biology of the non-economic laemophloeids, except that they are subcortical in habitat. They often have been reported to be predaceous, although this is doubtful in many cases. Most appear to feed on fungi, especially ascomycetes. However, a few

genera with subcylindrical adults are associated with scolytid burrows and may be predaceous on bark beetles (Thomas, 2002d).

There are 533 described species worldwide (McElrath, 2026a) with 51 species known from America north of Mexico (Thomas, 2002d). There are eight species documented from Maryland (Thomas, 1993; MBP, 2026; Staines & Staines, 2023b).

Maryland literature: Staines & Staines, 2021c, 2023a, b, 2024.

Family Lampyridae Latreille, 1817

Adult American fireflies will usually be recognized by their flashes in the night; by their lantern, in males commonly appearing as two pale ventrites beneath the posterior abdomen; and by their large, flattened and flanged pronota which typically cover the eyes like a sunshade, unless the head and neck are extended as when walking or climbing. Common lantern-less species active in daylight typically have totally, black elytra, many with ridges (costae), and pronota marked with red or orange. The integument of adult fireflies is soft and pliable, and with handling sometimes releases droplets of pale blood, especially from the elytra, which in some species is known to be poisonous when ingested by some predators — even lethal in some instances. Odor is often plant-like, and taste, bitter, astringent. Larvae are most often found and recognized by the intermittent glows they emit, especially on damp nights (Lloyd, 2002).

There are more than 2629 described species worldwide (Keller, 2024) with about 170 species known from America north of Mexico (Lloyd, 2002). There are 39 species known from Maryland (Barber, 1951; Green, 1956, 1957, 1961; Staines & Staines, 2022; MBP, 2026). The Maryland fauna may be larger than is reported since some species can only be determined by their flash pattern.

Maryland literature: Brown, 2008; Costin & Boulton, 2016; Scarpulla, 2020; Spaid et al., 2020; Staines & Staines 2021d, 2022, 2023a, b, 2024, 2025b.

Family Latridiidae Erichson, 1842

Adults and larvae feed on the conidia of fungi and Myxomycetes. Members of the subfamily Latridiinae are generally associated with leaf litter in nature and can be collected by sifting or Berlese techniques. Adult Corticariinae can be collected by sweeping dead, low-lying vegetation. They are most prevalent in wetter seasons of the year (Andrews, 2002).

There are about 1050 described species are known worldwide, with 140 species recorded from America north of Mexico (Andrews, 2002). MBP (2026) lists four taxa from Maryland, of which two are identified to species. The first not identified to species is a *Melanophthalma* sp. which is probably *M. americana* (Mannerheim, 1844). The second is merely identified to family without an accompanying photograph so it cannot be identified. Staines & Staines (2021c, 2024) recorded two additional species. iNaturalist (2026) records an additional species. Downie & Arnett (1997) reported another species. This brings the total number of recorded species in Maryland to eight.

Maryland literature: Steury, 2019; Staines & Staines, 2021c, 2022, 2024.

Family Leiodidae Fleming, 1821

Many leiodids are scavengers in leaf litter and moist decaying matter. Some occur in mammal or bird nests and burrows, tortoise burrows, in caves, and with harvester ants. Most can be trapped with dung or carrion baits. Several genera feed on spores or other tissue of various fungi (Peck, 2000).

There are about 4364 described species worldwide (Newton, 2022) with 328 species known from America north of Mexico (Peck, 2000). There are 30 species recorded from Maryland (Peck & Cook, 2002; Peck & Newton, 2017; Staines & Staines, 2022)

Maryland literature: Brown, 2008; Staines & Staines, 2022, 2023a.

Family Limnichidae Erichson, 1846

The adults are generally riparian, on streamside plants, emergent vegetation and wood or on windrows of debris. Larvae live in damp soil or humus near streams or other water bodies. The life cycle is probably univoltine. Most species are thought to be herbivorous (Shepard, 2002d).

There are 345 described species worldwide with 28 species known from America north of Mexico (Shepard, 2002d). There are three species known from Maryland (Spangler et al., 2001).

Maryland literature: None.

Family Lucanidae Latreille, 1804

Lucanids are usually associated with decaying wood and logs in coniferous and deciduous forest habitats. Adults of some species are attracted to lights at night and some feed at sap flows on trees. Adults of some smaller species have been observed feeding on flowers (Ratcliffe, 2002).

There are about 1500 described species worldwide (Maes, 1992) with 24 species known from America north of Mexico (Ratcliffe, 2002). There are eight species documented in Maryland (Staines, 1986a; Price & Ratcliffe, 2023; MBP, 2026).

Maryland literature: Staines, 1986a, 1994a, 1999; Staines & Staines, 2022, 2023a; Price & Ratcliffe, 2023.

Family Lutrochidae Kasap and Crowson, 1975

These beetles are aquatic as adults and larvae and are found on submerged and emergent substrates in rapids and other flowing areas of streams. Pupae are found under cover just above the water level. The life cycle is univoltine with the larvae overwintering. Adults and larvae feed on algae and waterlogged wood (Shepard, 2002c).

There are 21 described species worldwide (Maier & Short, 2014) with three species known from America north of Mexico (Spangler et al., 2001). There is one species, *Lutrochus laticeps* Casey, 1893, is known from Maryland (Spangler et al., 2001). MBP (2026) has no records for this family. iNaturalist (2026) has one record identified as *Lutrochus* sp.

Maryland literature: None.

Family Lycidae Laporte, 1836

Larvae are found in rotten fallen timber, leaf litter, or under bark. Most larvae feed on fungi. Adults are found on leaves and flowers and feed on nectar and honeydew. Both larvae and adults are distasteful and often aposematically colored (Miller, 2002).

There are more than 4600 described species worldwide (Bocak & Bocakova, 2010) with 76 species known from America north of Mexico (Miller, 2002). There are 17 species recorded from Maryland (Green, 1949, 1950, 1951, 1952, 1953; Staines & Staines, 2024; MBP, 2026).

Maryland literature: Staines & Staines, 2021d, 2023b, 2024.

Family Lymexylidae Fleming, 1821

The larvae are borers of both heartwood and sapwood of forest trees. Adults are found on decaying wood and are also attracted to lights. As the female lays eggs, each are coated with fungal spores that will help the larva to digest the wood (Young, 2002e).

There are 87 described species worldwide (Li et al. 2022) with two species known from America north of Mexico (Young, 2002e). There are two species documented from Maryland (Wheeler, 1986; MBP, 2026).

Maryland literature: Staines & Staines, 2022, 2023b, 2025a, b.

Family Melandryidae Leach, 1815

Melandryids have two major feeding strategies- fungivory and xylophagy (though many of these species probably feed on fungi). Adults are primarily active at night and can often be seen crawling on fungi or dead logs (Pollock, 2002a).

There are approximately 430 described species worldwide with about 60 species known from America north of Mexico (BugGuide, 2026). There are 15 species documented from Maryland (Staines & Staines, 2021b, 2022; MBP, 2026).

Maryland literature: Guarnieri, 2010; Staines & Staines, 2021b, 2022, 2023a, b, 2024, 2025a.

Family Meloidae Gyllenhal, 1810

Adult meloids are phytophagous and feed on leaves and flowers of several families of plants, particularly Asteraceae, Leguminosae, and Solanaceae; only a few specialzed species do not feed. Larvae are parasitoids. Larval hosts of the parasitoid subfamilies include the provisions and immature stages of wild bees and the eggs of grasshoppers (Pinto & Bologna, 2002).

There are approximately 2500 described species worldwide with 410 species known from America north of Mexico (Pinto & Bologna, 2002). There are 23 species recorded from Maryland (Staines, 1983a, 1985a; MBP, 2026).

Maryland literature: Guarnieri, 2010; Staines, 1983a, 1985a; Scarpulla, 2020; Staines & Staines 2021b, 2022, 2023a, b, 2025b.

Family Melyridae Leach, 1815

Most adult Melyridae are, at least potentially, polyphagous, feeding on both plant and animal material. Many feed preferentially on pollen of various cone bearing or flowering plants, gathering in rather large, inconspicuous aggregations. Others, particularly members of the subfamily Malachiinae, are omnivorous scavengers or predators, feeding primarily on small arthropods, pollen and nectar (Mayor, 2002).

There are about 6000 described species worldwide with 520 species known from America north of Mexico (Mayor, 2002). There are 10 species recorded from Maryland (MBP, 2026).

Maryland literature: Steury, 2019; Staines & Staines, 2021f, 2022, 2023a, b.

Family Monotomidae Laporte, 1840

This family of small beetles is usually considered to be closely related to the Nitidulidae based on adult similarities. Most species of this family live under tree bark; some species occur in decaying vegetable matter and are often found in man-made habitats such as compost heaps and haystacks. A few species live in ant nests (Bousquet, 2002).

There are about 220 described species worldwide with 55 species known from America north of Mexico (Bousquet, 2002). There are seven species reported from Maryland (MBP, 2026; iNaturalist, 2026).

Maryland literature: Ford & Cavey, 1979.

Family Mordellidae Latreille, 1802

Adults are phytophagous, apparently feeding on pollen of many plants, especially in Apiaceae and Asteraceae flowers. Adults are commonly collected on flowers but there does not seem to be any association between adult food plants and larval host plants. Larvae are primarily herbivores feeding in living herbaceous stems, decaying wood, and fungi (Jackman & Lu, 2002).

There are about 2300 described species worldwide (Lawrence & Ślipiński, 2010) with approximately 205 species known from America north of Mexico (Jackman & Lu, 2002). There are 47 species documented from Maryland (Liljebald, 1945; Bright, 1986; MBP, 2026).

Maryland literature: Steury, 2019; Staines & Staines, 2021b, 2022, 2023a, b, 2025a, b.

Family Mycetophagidae Leach, 1815

Mycetophagids feed largely upon fungi, and are commonly found under fungus-grown bark, in shelf-fungi, and on moldy vegetative material. *Mycetophagus* spp. are common in decaying fruiting bodies of mushrooms and fleshy polypores, especially those that have begun to dehydrate (Young, 2002f).

There are about 200 described species worldwide with 26 species known from America north of Mexico (Young, 2002f). There are 13 species reported from Maryland (Parsons, 1975; Staines & Staines, 2022; MBP, 2026).

Maryland literature: Staines & Staines, 2021b, 2022, 2023a, 2024.

Family Mycteridae Blanchard, 1845

Little is known about the biology or natural history of Mycteridae. Larvae and adults of *Hemipeplus* are associated with grasses and palms (where they feed on unexpanded vegetative material). Adults of most species of *Mycterus* are mainly collected at flowers of numerous plants where they can be very abundant (Pollock, 2002b). *Lacconotus* adults are collected in mixed coniferous and hardwood forests (Pollock & Majka, 2012).

There are approximately 160 described species worldwide with 12 species known from America north of Mexico (Pollock, 2002c). No species has been documented from Maryland but at least one species, *Lacconotus punctatus* LeConte, 1862, may occur in Maryland (published range from Nova Scotia to Georgia west to Ontario and Texas) (Pollock & Majka, 2012).

Maryland literature: None.

Family Nitidulidae Latreille, 1802

Nitidulids are primarily saprophagous and mycetophagous. Although some live in flowers the majority live in decaying fruits, or fermenting fungi. Some genera live in a particular fungus specific to that genus (Habeck, 2002b).

There are about 4500 described species worldwide (Jelink et al., 2010; Cline et al., 2014) with approximately 165 species known from America north of Mexico (Habeck, 2002b). There are 41 species documented from Maryland (Parsons, 1943; Vogt, 1950; Staines & Staines, 2022, 2023; MBP, 2026).

Maryland literature: Vogt, 1950; Staines, 1996; Scarpulla, 2020; Staines & Staines, 2021c, 2022, 2023a, b, 2025a; Staines & Bennett, 2024.

Family Nosodendronidae Erichson, 1846

Nosodendrids are most likely fungus feeders, living in association with fermenting sap flows or fungus infested wood. The larvae and adults of North American *Nosodendron* have been taken repeatedly in slime fluxes, which are rich in yeasts, other fungi, bacteria and fermentation products (Ivie, 2002b).

There are 120 described species worldwide (Yoshitomi, 2023) with six species known from America north of Mexico (Ivie, 2002b). One species, *Nosodendron unicolor* Say, 1824, is found in Maryland (Vogt, 1950; Staines, 1983c; MBP, 2026).

Maryland literature: Vogt, 1950; Staines, 1983c; Staines & Staines, 2022.

Family Noteridae Thomson, 1857

Both the larvae and the adults are aquatic and are commonly collected in water bodies with aquatic vascular plants. Pupation takes place under water in an airtight pupal cell prepared by the larva. Larvae and adults burrow through the substrate on the bottom of ponds and marshes as well as more temporary, lentic habitats. Some larvae are known to use the last abdominal segment to obtain air from aquatic plants. Larvae and adults are primarily carnivorous, although they may also scavenge on dead insects (Roughley, 2000c).

There are about 280 described species worldwide (Nilsson, 2011) with 14 species known from America north of Mexico (Roughley, 2000c). There are four species known from Maryland (Staines, 1986c, 1988b; MBP, 2026).

Maryland literature: Staines, 1986c, 1988b, 2009; Staines & Staines, 2020a.

Family Ochododaeidae Mulsant & Rey, 1870

There is little known on the biology of the Ochododaeidae. Adults are nocturnal, prefer sandy habitats, and are attracted to lights (Ratcliffe & Paulsen, 2008).

The family contains 151 described species worldwide (Schoolmessters, 2026) with 35 species known from America north of Mexico (Carlson, 2002a). One species, *Xenochodaeus musculus* (Say, 1835), is known from Maryland (Staines, 1986a; Price & Ratcliffe, 2023; MBP, 2026).

Maryland literature: Staines, 1986a; Price & Ratcliffe, 2023.

Family Oedemeridae Latreille, 1810

Most oedemerids are uncommonly encountered. Many adults are occasionally attracted to light. Adults are found on flowers and foliage, under driftwood, or in moist to wet, rotten logs (Kriska, 2002).

There are approximately 1500 described species worldwide with 87 species known from America north of Mexico (Kriska, 2002). There are nine species documented from Maryland (MBP, 2026).

Maryland literature: Guarnieri, 2010; Staines & Staines, 2022, 2023a, b.

Family Omethidae LeConte, 1861

Omethidae is a small and poorly known family of soft-bodied beetles which do not conform to any current superfamily. Omethids are rarely collected but are usually found on foliage. Almost nothing is known about the ecology of omethids. Adults emerge in the spring and summer and are probably all short-lived. All species are presumably univoltine. Nothing is known about their feeding habits (Ramsdale, 2002a).

There are 32 described species worldwide with 10 species known from America north of Mexico (Ramsdale, 2002a). There is one species, *Omethes marginatus* LeConte, 1861, known from Maryland (Evans & Schnepp, 2011; MBP, 2026).

Maryland literature: Evans & Schnepp, 2011.

Family Orsodacnidae Thompson, 1859

Adults of Orsodacnidae feed on pollen and other floral parts of a wide range of mostly woody plants. Larval habits are unknown (Clark & Riley, 2002).

There are 54 described species worldwide with 13 species known from America north of Mexico (Clark & Riley, 2002). One species, *Orsodacne atra* (Aherns, 1810), is documented from Maryland (Staines & Staines, 2001; MBP, 2026).

Maryland literature: Staines & Staines, 2001, 2009; Staines, 2004; Brown, 2008.

Family Passalidae Leach, 1815

Passalid adults live in well decayed logs and stumps with their larvae and subsocial family groups. All stages are found in galleries in wood that are excavated by the adults (Schuster, 2002).

There are about 800 described species worldwide (Boucher, 2006) with four species known from America north of Mexico (Schuster, 2002). There is one species, *Odontotaenius disjunctus* (Illiger, 1800), known from Maryland (Staines, 1986a; Price & Ratcliffe, 2023; MBP, 2026).

Maryland literature: Staines 1986a; Guarnieri, 2010; Staines & Staines, 2020c, 2023a; Price & Ratcliffe, 2023.

Family Passandridae Erichson, 1845

Larvae of these beetles are unusual because they seem to be exclusively ectoparasites on other wood-inhabiting insects, especially pupae of Cerambycidae. Adult feeding habits are unknown (Thomas, 2002b).

There are 114 described species worldwide (McElrath, 2026b) with three species known from America north of Mexico (BugGuide, 2026). One species, *Catogenus rufus* (Fabricius, 1798), has been documented from Maryland (Thomas, 1993; Staines & Staines, 2023a).

Maryland literature: Staines & Staines, 2022, 2023a.

Family Phalacridae Leach, 1815

Most Phalacridae are fungus feeders, but some feed on the flower heads of Asteraceae. Adults are often collected on flowers, under bark, or by general sweeping (Steiner, 1984).

There are 635 described species worldwide (Lawrence et al., 2010) with 122 species known from America north of Mexico (Steiner, 2002). There are eight species documented from Maryland (Steiner, 1984; Staines & Staines, 2021c, 2022, 2023a; MBP, 2026).

Maryland literature: Staines & Staines, 2021c, 2022, 2023a.

Family Phengodidae LeConte, 1861

Adult males are easily identified by their short, leathery, often narrowed elytra, 12-segmented, bipectinate antennae, and large, strongly convex eyes. The adult females are larviform and possess bioluminescent organs. Phengodid adult females and larvae feed on millipedes (O'Keefe, 2002).

There are over 250 described species worldwide with 23 species known from America north of Mexico (O'Keefe, 2002). There are two species documented from Maryland (Wittmer, 1975).

Maryland literature: None.

Family Psephenidae Lacordaire, 1854

Adults, which occur only in the summer months, are generally riparian, except females may lay eggs on rocks below the water. Larvae are aquatic, found creeping over stones in swiftly flowing water or on submerged wood (Shepard, 2002e).

There are approximately 288 described species worldwide (Lee et al., 2016) with 16 species known from America north of Mexico (Brown, 1983c). There are three species known from Maryland (Brown, 1983c; MBP, 2026).

Maryland literature: None.

Family Ptiliidae Erichson, 1845

These are the smallest beetles (0.4-1.2 mm) which live in a variety of moist habitats including rotten wood, mammal dung, fungus covered logs, tree holes, ant nests, banks of rivers and streams, forest litter and decaying organic detritus. Some groups are myrmecophiles or termitophiles. Ptiliids are microphagous feeding mainly on spores and hyphae of fungi plus other organic particles (Hall, 2000).

There are 1016 described species worldwide (Newton, 2022) with approximately 120 species known from America north of Mexico (Hall, 2000). There are two species known from Maryland (Vorst, 2012; MBP, 2026).

Maryland literature: Vorst, 2012.

Family Ptilodactylidae Laporte, 1836

Known ptilodactylid larvae feed on decaying vegetation or wood in damp or aquatic situations. Adults are commonly taken at lights, but can be beaten from vegetation (Ivie, 2002a).

There are approximately 500 described species worldwide with 19 species known from America north of Mexico (Ivie, 2002a). There are four species known from Maryland (Brown, 1975; Johnson & Freytag, 1978; Stribbing, 1986; iNaturalist, 2026).

Maryland literature: Staines & Staines, 2020a, 2025a; Staines & Bennett, 2024.

Family Ptinidae Latreille, 1802

Adults are seldom collected with mass sampling methods. Individuals are found by beating dead branches and twigs of hardwood trees. Larvae are typically bore in bark, dry wood, twigs, vines, pods, seeds, fruits, galls, fungi, and dead flower stalks. Some species are found in bird or mammal nests (Philips & Bell, 2000).

There are approximately 3000 described species worldwide (Zahradnik & Háva, 2014) with approximately 400 species in America north of Mexico (Philips & Bell, 2010; BugGuide, 2026). There are 27 species documented from Maryland (Ford & Cavey, 1979; Ford, 1984; Staines & Staines, 2021f, 2022, 2024; MBP, 2026).

Maryland literature: Ford & Cavey, 1979; Ford, 1984; Staines & Staines, 2021f, 2022, 2023a, b, 2024, 2025b.

Family Pyrochroidae Latreille, 1807

Larvae are associated with the somewhat cool, moist subcortical conditions beneath slightly loosened bark and to some extent decaying wood of dead deciduous and coniferous trees. Adults are attracted to lights or found on forest vegetation while collecting at night, some species are commonly collected from flowers (Young, 2002i).

There are approximately 200 described species worldwide with 50 species known from America north of Mexico (Young, 2002i). The are 10 species reported from Maryland (Young, 1975; MBP, 2026).

Maryland literature: Guarnieri, 2010; Staines & Staines, 2021b, 2022, 2023a, b, 2024.

Family Pythidae Solier, 1834

The larvae of Pythidae live in the subcortical area of dead deciduous trees or sapwood of conifers. The ecology and food requirements of species is poorly known. The family is primarily boreal, but species are known as far south as Georgia and Arizona (Pollock, 2002d).

There are 23 described species worldwide with eight species known from America north of Mexico (Pollock, 2002d). MBP (2026) does not record any species from this family. iNaturalist (2026) has one record of *Pytho* species- Maryland, Dorchester County, Cambridge, 19 February 2020.

Maryland literature: None.

Family Rhipiceridae Latreille, 1834

Adults of Nearctic *Sandalus*, the only North American genus of Rhipiceridae, are active primarily from late September to early October. When encountered, they are often found aggregating in large numbers during the day. Larvae are ectoparasites of cicadas while adults do not feed (Katovich, 2002a).

There are 57 described species worldwide with five species known from America north of Mexico (Katovich, 2002a). There are two species documented from Maryland (Staines, 1983d; MBP, 2026).

Maryland literature: Staines, 1983d; Staines & Staines, 2024.

Family Rhipiphoridae Gemminger & Harold, 1870

The ripiphorid beetles form a small group of special interest because of their remarkable biology: the larvae are phoretic in one subfamily, hypermetamorphic in at least two subfamilies and are parasitoids of other insects in all known cases. Life history studies are lacking for almost all species (Falin, 2002).

There are more than 400 described species worldwide with 51 species known from America north of Mexico (Falin, 2002). There are nine species documented from Maryland (Staines, 1985b; MBP, 2026).

Maryland literature: Staines, 1985b.

Family Salpingidae Leach, 1815

Salpingidae, like most tenebrionoids, are most often associated with living and dead plant material and fungi, although known fungal associations appear to be restricted to Ascomycetes and Hyphomycetes. Both larvae and adults are carnivorous. Some are found under bark of dead trees, on fungi on dead trees, on flowers, a few in the intertidal zone of marine waters (Lawrence et al., 2010).

There are about 300 described species worldwide with 20 species known from America north of Mexico (Johnston & Pollock, 2025). Two species are recorded from Maryland (MBP, 2026; iNaturalist, 2026).

Maryland literature: None.

Family Scarabaeidae Latreille, 1802

Scarab beetles comprise a speciose group, and they are a conspicuous component of the beetle fauna in the Nearctic region. Adults of many scarab beetles are noticeable due to their relatively large size, bright colors, often elaborate ornamentation, and interesting life histories. Life histories of scarab beetles are incredibly diverse and include adults that feed on dung, carrion, fungi, vegetation, pollen, fruits, compost, or roots. Some scarab beetles live in the nests of ants (myrmecophiles), in the nests of termites (termitophiles), or in the nests of rodents or birds (Ratcliffe et al., 2002).

There are about 36,781 described species worldwide with about 1700 species known from the Nearctic region (Ratcliffe et al., 2002). There are 221 species documented from Maryland (Staines, 1986a; Price & Ratcliffe, 2023; Staines & Staines, 2025b; MBP, 2026).

Maryland literature: Cartwright, 1972; Glaser, 1976b, 1986c, 1987; Ford & Cavey, 1979; Steiner, 1980; Young, 1982; Staines, 1986a, 1986b, 1989, 1990, 2025; Staines & Staines, 1999, 2022, 2023a, b, 2024, 2025b; Brown, 2008; Fritzler & Strazanac, 2012; Steiner, 2014; Neems & Price, 2015; Rentz & Price, 2016; Simons et al., 2018; Simons & Price, 2019; Steury, 2019; Hagadorn et al., 2021; Price et al., 2012; Scarpulla, 2020; Price & Ratcliffe, 2023; Staines & Bennett, 2024; Becnal & Price, 2025.

Family Scirtidae Fleming, 1821

Larvae are aquatic, although they can withstand significant fluctuations in water levels, and they have occasionally been found in moist wood and damp decaying leaves. Scirtid larvae frequent both stagnant and flowing water including ground pools in the forest floor and a diversity of marsh types (Young, 2002c).

There are approximately 1900 described species worldwide (Bradford et al., 2022) with 50 species known from America north of Mexico (Young, 2002c). There are 17 species known from Maryland (Gimmel & Epler, 2024; MBP, 2026).

Maryland literature: Staines & Staines, 2020a, 2022, 2023a.

Family Scraptiidae Gistel, 1848

Adults of Scraptiinae and especially Anaspidinae are found on flowers and may be taken in very large numbers from blossoms of Apiaceae and Rosaceae. Larvae have been found in dead logs and lichens (Pollock, 2002e).

There are about 500 described species worldwide (Johnston et al., 2024) with 46 species found in America north of Mexico (Pollock, 2002e). There are five species documented from Maryland (Liljebald, 1945; MBP, 2026).

Maryland literature: Steury, 2019; Staines & Staines, 2022, 2023a.

Family Silvanidae Kirby, 1837

The biology and immature stages of the great majority of species and most genera are unknown, but the following generalizations can be made: Brontinae are found primarily under bark, where both adults and larvae probably feed on ascomycete and other fungi or they are found primarily on plants, especially withered, pendant leaves, and in plant debris, where they also probably feed predominantly on fungi; Silvaninae are found under bark or in leaf litter or soil (Thomas, 2002a).

There are 535 described species worldwide (McElrath et al., 2026) with 32 species known from America north of Mexico (Thomas, 2002a). There are nine species documented from Maryland (Thomas, 1993; Staines & Staines, 2021c; MBP, 2026; iNaturalist, 2026).

Maryland literature: Staines & Staines, 2021c, 2022, 2023b, 2024.

Family Sphindidae Jacquelin du Val, 1858

Sphindidae are found in moist forest habitats where slime molds grow on decaying wood, leaf litter, and other organic substrates. They are typically collected from rotting logs, stumps, and accumulated forest debris. They are occasionally taken in flight intercept traps, at black lights, or by Berlese funnel extraction. Information is lacking on the ecology of most sphinids. Both adult and larvae feed on sporocarps of myxomycetes (McHugh, 2002).

There are 61 described species worldwide with nine species known from America north of Mexico (McHugh, 2002). There are two species recorded from Maryland (MBP, 2026).

Maryland literature: None.

Family Staphylinidae Latreille, 1802 (includes Silphidae)

Staphylinids occur in almost every type of habitat and eat almost everything except living tissues of higher plants. A majority are predators of other insects and invertebrates, but all species of several subfamilies and some members of others feed on fungi or decaying organic matter. The casual observer frequently finds staphylinids on carrion or dung, but most species live in forest leaf litter and mosses and in all sorts of decaying plant matter, where they are seldom found without special searching. They also abound under stones and plant debris, in marshes and bogs and along the shores of lakes, ponds and streams, where some species can "skim" over water; others are restricted to ocean shores, where a few species are routinely submerged by high tides. Some species live in fungi where many are fungivores and others prey on flies and other fungus inhabit ants, while others occur on flowers and eat pollen, and still others inhabit caves or occur only in high-altitude talus slopes. Many of the most unusual species are found only in ant and termite nests and may be highly modified to live and travel with their host (Newton et al., 2000).

There are more than 68,866 described species worldwide (Newton, 2022) with 4100 species known from America north of Mexico (Newton et al., 2000). There are 418 species documented from Maryland (Brattain et al., 2019; Staines, 1987b, 1989; Staines & Staines, 2020b, 2022, 2023a, b, 2024, 2025a, b; MBP, 2026).

Maryland literature: Steiner, 1981; Shubeck & Blank, 1982; Staines, 1987b, 1989, 2008f; Wolf & Gibbs, 2004; Brown, 2008; Fritzler & Strazanac, 2012; Roble & Hoffman, 2012; Brattain et al., 2019; Staines & Staines, 2020b, 2022, 2023a, b, 2024, 2025a, b; Guarnieri, 2010; Fritzler & Strazanac, 2012; Dyer & Price, 2013; Scarpulla, 2020; Staines & Bennett, 2024.

Family Stenotrachelidae Thomson, 1859

Little is known about the habits of adult Stenotrachelidae. Adults are very short-lived and probably feed on pollen. They are sometimes collected on flowers or in Malaise, flight intercept or other such traps. Larvae feed and develop in decaying wood (Young, 2002h).

There are about 20 described species worldwide with 10 species known from America north of Mexico (Young, 2002h). There are two species known from Maryland (MBP, 2026).

Maryland literature: Staines & Staines, 2023b.

Family Synchroidae Horn, 1888

Known synchroids feed largely upon fungal material and decaying wood, commonly beneath the bark of dead deciduous trees. Adults are most active at night when they can be collected at light or as they run over the surface of logs. They have also been commonly collected at Malaise and Lindgren traps either unbaited or baited with ethanol (Young, 2002g).

There are eight described species worldwide with two species known from America north of Mexico (Young, 2002g). There is one species, *Synchroa punctata* Newman, 1838, recorded from Maryland (MBP, 2026).

Maryland literature: Staines & Staines, 2021b, 2023a.

Family Tenebrionidae Latreille, 1802

Most tenebrionids are heavily sclerotized, dark in color, long lived, mostly crepuscular or active at night (although some Old World forms are day active), on the ground, logs or tree trunks. Brachyptery and aptery are found in many species. Adaptation to arid environments is also highly developed. Habitats of tenebrionid beetles can be divided into two major groups: those that are associated with trees, usually found in forest or savannas and those that are associated with soil or sand, usually found in plains or deserts as well as in forests and savannas. Some species are associated with nests of vertebrates or insects (Aalbu et al., 2002).

There are more than 30,000 described species worldwide (Bouchard et al., 2021) with 1303 species known from America north of Mexico (Aalbu et al., 2002). There are 134 species known from Maryland (Steiner, 2008; Bousquet et al., 2018; MBP, 2026).

Maryland literature: Ford & Cavey, 1979; Brown, 2008; Steiner, 2004, 2008; Guarnieri, 2010; Fritzler & Strazanac, 2012; Steiner, 2014; Steiner & Swearingon, 2014; Steury, 2019; Staines & Staines, 2021b, 2022, 2023a, b, 2024, 2025a.

Family Tetratomidae Billberg, 1820

Tetratomidae are found under bark where they feed on fungi and on softer shelf fungi, where adults tend to browse on the surface. Adults are active at night and are collected in Lindgren funnel traps set in forested areas (Young & Pollock, 2002).

There are 155 described species worldwide with 26 species known from America north of Mexico (Young & Pollock, 2002). Nine species have been documented from Maryland (MBP, 2026).

Maryland literature: Staines & Staines, 2021b, 2025b.

Family Throscidae Laporte, 1840

Little is known about throscids. Adults are usually captured in traps or netted in late afternoon flights, at light traps, in flowers, recovered from duff and litter samples, near mammal burrows, in rotted wood, in grain storage facilities, and on foliage. Adults may be generalist pollen and mold feeders (Johnson, 2002b).

There are 152 described species worldwide with 20 species known from America north of Mexico (Johnson, 2002b). There are six species documented from Maryland (MBP, 2026).

Maryland literature: Staines & Staines, 2022, 2024.

Family Trogidae MacLeay, 1819

Trogids are most diverse in temperate and subtropical regions and are most common in drier habitats. Adults and larvae are among the last scavengers that visit the dry remains of dead animals where they feed on feathers, fur, and skin. They also feed on organic matter found in nests of mammals and birds (feces, feathers, and fur). Adults of many species are attracted to lights at night. The life histories of many species remain poorly known because of specialized associations with bird and mammal nests (Jameson, 2002a)

There are about 300 described species of Trogidae worldwide with 51 species known from America north of Mexico (Jameson, 2002a). Maryland has 18 documented species (Staines, 1986a; Price & Ratcliffe, 2023; MBP, 2026).

Maryland literature: Ratcliffe, 1983; Staines, 1986a; Brown, 2008; Fritzler & Strazanac, 2012; Staines & Staines 2020c, 2023a, b; Guarnieri, 2010; Price & Ratcliffe, 2023.

Family Trogossitidae Latreille, 1802

Most Trogossitidae are predatory and can be found under bark and in galleries of wood boring beetles. Some species may also feed on fungi.

There are approximately 600 described species worldwide with 59 species present in America north of Mexico (Leschen, 2002b). There are 12 species documented from Maryland (Barron, 1971; Staines & Staines, 2022; MBP, 2026).

Maryland literature: Guarnieri, 2010; Staines & Staines, 2021f, 2022, 2023a, 2024, 2025a.

Family Zopheridae Solier, 1834

Adults are usually taken under bark or at light, but may also be taken on bark, in the galleries of ambrosia beetles or other wood boring beetles, by beating dead branches and twigs, or by Berlese funnels from forest duff. Larvae are found in a variety of habitats, depending on the group involved. Some species feed on fungi but others are predaceous. Other species are phytophagous (Ivie, 2002d).

There are approximately 1700 described species worldwide with more than 100 species found in America north of Mexico (BugGuide, 2026). There are 18 species documented from Maryland (MBP, 2026).

Maryland literature: Steiner, 1992; Staines & Staines, 2022, 2023a, b, 2024.

DISCUSSION

Maryland, despite its small size, hosts a high number of ecological communities. It contains diverse landscapes, from coastal wetlands, freshwater wetlands, streams, ponds, coniferous and deciduous forests, agricultural fields, and urban parks, supporting numerous insect species. Maryland's position in the Mid-Atlantic region places it at the crossroads of several biogeographic zones, including the Atlantic Coastal Plain, Piedmont, and Appalachian Plateau. The state's climate, with hot summers and cold winters, and its mix of deciduous and mixed forests, wetlands, and farmland, create niches for both generalist and specialist insects (MDNR, 2026). MBP (2026) records over 22,000 plant and animal species documented from Maryland.

This is the first summary of the Order Coleoptera in Maryland. A total of 3674 species in 104 families are documented. Thirteen families contain 75.3% of the recorded biodiversity (Fig. 1). They are in order of species richness Carabidae (12.4%), Chrysomelidae (11.7%), Staphylinidae (11.4%), Curculionidae (8.8%), Cerambycidae (6.9%), Scarabaeidae (6.0%), Elateridae (3.7%), Tenebrionidae (3.6%), Buprestidae (2.7%), Dytiscidae (2.5%), Hydrophilidae (2.4%), Coccinellidae (2.1%), and Mordellidae (1.3%).

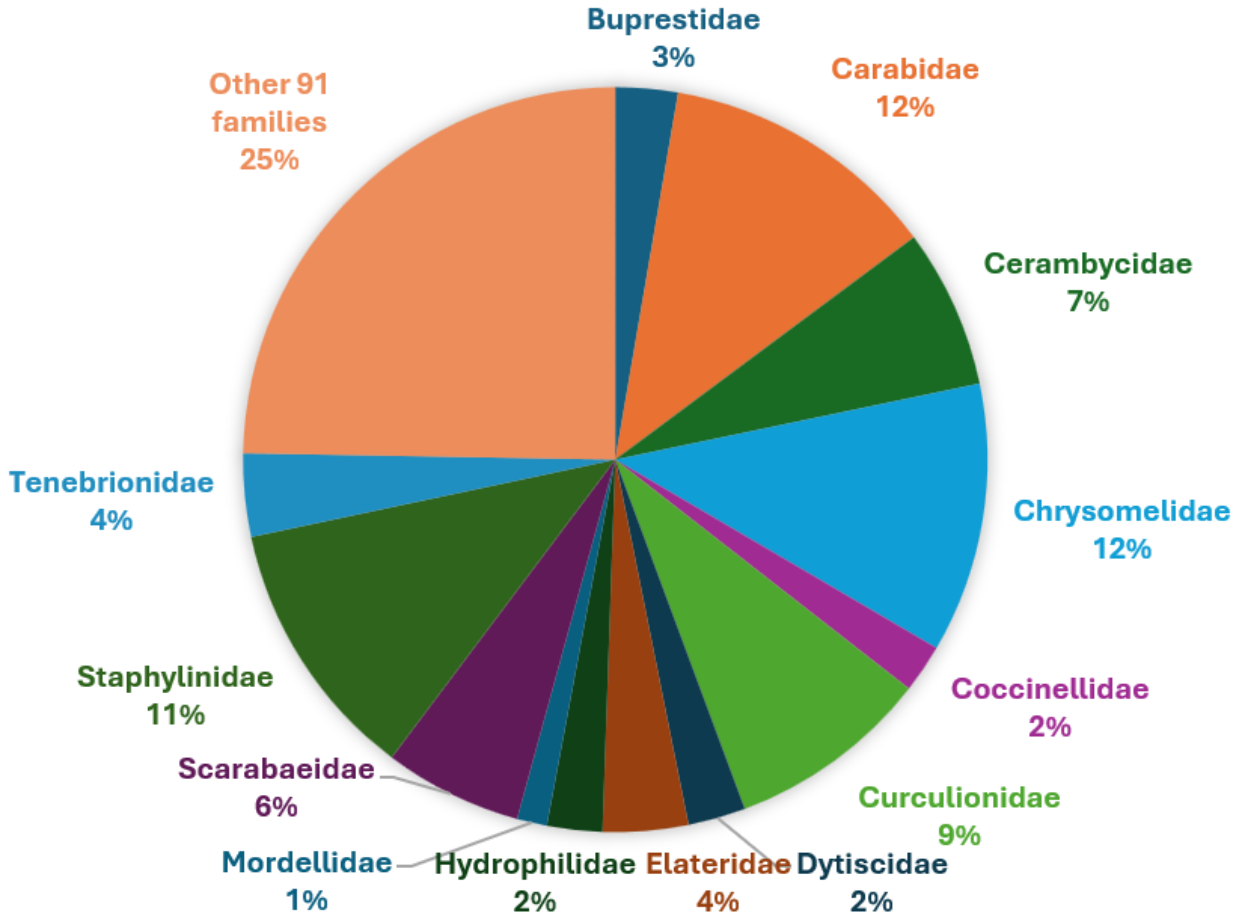


Figure 1. Relative richness of Coleoptera families in Maryland.

This differs slightly from Downie & Arnett's (1996) list of the most speciose families of Coleoptera in northeastern North America. The differences are that Cantharidae and Cleridae are replaced by Dytiscidae and Hydrophilidae. Is some cases, Chrysomelidae, Curculionidae, and Staphylinidae, the Maryland rankings reflects their global diversity rankings. Others, Dytiscidae and Hydrophilidae, have a higher Maryland diversity score due to extensive field and taxonomic work conducted by researchers.

An analysis of local fauna acquires importance when compared to similar studies of adjacent areas. Unfortunately, these types of studies are lacking. The only adjacent state with a listing for the entire state is New Jersey (Smith, 1910). Other adjacent states have lists of species from specific regions: southwestern Pennsylvania (Hamilton, 1895), southwestern Virginia (Horn, 1868), and Washington, DC and vicinity (Ulke, 1902).

The 3674 Coleoptera species reported is probably an underestimate of the Maryland fauna. Numerous records are present in private and public collections or unpublished field notes. Examination of museum collections and additional field work will identify species not reported from Maryland. For example, two recent inventory projects have reported 68 species from 16 families for the first time from Maryland (Staines & Bennett, 2024; Staines & Staines, 2019, 2021b, d, f, 2022, 2023a, b, 2024, 2025b).

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