

Appendix 3d. Wildlife Diversity Sources of Information

This appendix provides additional information on how species numbers in Maryland were estimated for each taxonomic group. Numbers for state-listed species (see Table 3.1) were pulled directly from the Code of Maryland Regulation (COMAR), section 08.03.08. Cited ranks (i.e., G-ranks and S-ranks), protections (i.e., state and federal listings), and other various listings (i.e., CITES and IUCN) for all species came from MD DNR’s Natural Heritage Program database. Though pulled from MD DNR, global ranks or G-ranks are *maintained* by NatureServe; December 2025 data were used for this document. Finally, Northeast regional statuses (i.e., RSGCN) were pulled from the Northeast RSGCN database, which is maintained by the Northeast Fish and Wildlife Diversity Technical Committee (NEFWDTTC).

The values for the total number of native species that occur in Maryland for each of the taxonomic groups came from a number of different sources. These values are known to have varying degrees of accuracy in relation to “true” or “absolute” values. In general, more is known about the distribution of vertebrates than of invertebrates, and within these two main groups, more is known about certain species groups (e.g., birds) than others (e.g., fishes).

Counts of native Maryland species for most invertebrate taxonomic groups are virtually unknown. For example, the number of species of beetles that have been documented as occurring in Maryland is only 2,863, as reported on the [Maryland Biodiversity Project website](#) as of April 2026. Although this may be the most comprehensive single source of compiled, publicly available information for this insect order, it is estimated by Maryland coleopterists that the actual number of species within the State may exceed 15,000 species. Also, the confidence in the accuracy of the numbers of some of these taxonomic groups is often not very well known. These numbers continually change as field researchers discover new species within Maryland’s borders. Taxonomists are relying more and more on the use of DNA analysis to determine the taxonomic classification of species and subspecies (i.e., which ones should be split into separate species or lumped together into a single species). Thus, the total species numbers cited throughout the Plan (particularly in Chapter 3) serve as estimates based on our best knowledge of what has been reported or documented to date, even for the best-known species groups.

These values are intended to include only native species; however, it is often difficult to determine with certainty, especially among invertebrates, which are native or exotic. Subspecies are generally not included; some may be included when the subspecies are considered rare in Maryland. Major sources of data listed in the table below include the [Maryland Biodiversity Project \(MBP\)](#) website and the [NatureServe Explorer \(NSE\)](#) website. Please refer to the “Citations and Sources” section of Chapter 3 for the full citations of any publications listed below.

Taxonomic Group	Sources for Taxonomic Totals and Comments
VERTEBRATES	
Mammals	Terrestrial: MD DNR; NSE; MBP; American Society of Mammalogists (ASM) Bats: MD DNR; NSE; MBP Marine: MBP
Birds	Maryland Ornithological Society (MOS)
Reptiles	MD DNR; MBP; Natural History Society of MD
Amphibians	MD DNR; MBP; Natural History Society of MD
Fishes	Freshwater: MD DNR Marine/estuarine: MD DNR; Atlantic States Marine Fisheries Commission (ASMFC); Chesapeake Bay Program (CBP)
SELECT INVERTEBRATES	
INSECTS	
Bees	USGS Bee Lab (Droege et al., in prep.); Discover Life
Butterflies	MBP
Dragonflies and Damselflies	MBP; Dr. Richard Orr; White et al. 2024
Fireflies	Xerces Society for Insect Conservation, Firefly Working Group; MD DNR
Hoverflies	Canadian National Collection of Insects, Arachnids, and Nematodes (CNC); Skevington et al. 2019

Taxonomic Group	Sources for Taxonomic Totals and Comments
Mayflies, Stoneflies, and Caddisflies (EPT)	Mayflies: MD DNR Stoneflies: Hogan & Grubbs 2022 Caddisflies: Rasmussen & Morse 2023; Hogan et al. 2025 All: MBP
Moths	“Macromoths of Maryland: An Annotated List” (Glaser et al., unpublished, 2005); Bob Patterson’s Moth Photographers Group (2026); North Carolina Biodiversity Project moth database (Hall et al. 2026); MBP
Tiger Beetles	MBP
OTHER INVERTEBRATES	
Cave and Groundwater Invertebrates	MD DNR
Freshwater Mussels	MD DNR; Freshwater Mollusk Conservation Society (Williams et al. 2017, as amended in 2023 and 2025); NSE. Total includes only species in the Unionidae family.
Others	This category contains a few additional taxonomic groups with known rare or declining SGCN, including wasps, ants, mites, and other beetles. Because these orders were not extensively researched to determine all potential GCN species, totals have not been included.