

TAXA TALLY for Great Smoky Mountains National Park



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NUMBER OF SPECIES RECORDED	pre-ATBI (1998)	new since '98	new to science	TOTAL
BACTERIA	0	267	272	539
ARCHAEA	0	0	44	44
VIRUSES	1	18	5	24
PROTISTA slime molds, amoeba, microsporidia	136	195	18	349
PLANTS: VASCULAR	1,598	219	1	1,818
PLANTS: NON-VASCULAR mosses, etc.	634	11	0	645
CHROMISTA water molds, sporozoans	9	39	1	49
ALGAE	358	566	78	1,002
FUNGI (non-lichenous)	2,158	1,280	72	3,510
LICHENS	340	559	66	965
CNIDARIA jellyfish, hydra	0	4	0	4
PORIFERA freshwater sponges	0	2	0	2
PLATYHELMINTHES flatworms	6	42	4	52
BRYOZOA moss animals	0	1	0	1
GASTROTRICHA hairy bellies	0	2	0	2
NEMATOMORPHA horsehair worms	2	3	0	5
NEMATODA roundworms	12	87	4	104
NEMERTEA ribbon worms	0	1	0	1
MOLLUSCA snails, slugs, mussels, etc.	121	66	2	189
ANNELIDA aquatic worms, leeches, earthworms	23	68	7	98
TARDIGRADA waterbears	2	57	26	85
ARACHNIDA: ACARI mites, ticks	43	252	48	343
ARACHNIDA: OPILIONES harvestman	1	22	2	25
ARACHNIDA: ARANEAE spiders	236	274	43	553
ARACHNIDA: SCORPIONS/PSEUDOSCORPIONS	11	10	1	22
CRUSTACEA crayfish, copepods, pillbugs	20	75	28	123
ROTIFERA wheel animals, spiny-headed worms	0	4	0	4
MYRIAPODA: CHILOPODA centipedes	21	41	0	62
MYRIAPODA: SYMPHYLA symphylans	0	1	2	3
MYRIAPODA: PAUROPODA pauropods	7	25	17	49
MYRIAPODA: DIPLOPODA millipedes	39	34	3	77
PROTURA coneheads	7	9	10	26
COLLEMBOLA springtails	89	138	61	288

NUMBER OF SPECIES RECORDED	pre-ATBI (1998)	new since '98	new to science	TOTAL
DIPLURA two-pronged bristletails	4	5	5	14
MICROCORYPHIA jumping bristletails	1	2	1	4
ZYGENTOMA silverfish	1	1	0	2
EPHEMEROPTERA mayflies	81	53	8	142
ODONATA dragonflies, damselflies	58	43	0	101
DERMAPTERA earwigs	2	0	0	2
PLECOPTERA stoneflies	74	52	12	138
ORTHOPTERA grasshoppers, crickets, katydids	63	50	4	117
PHASMIDA walking sticks	2	2	0	4
MANTODEA mantids	2	0	0	2
BLATTODEA cockroaches, termites	2	8	0	10
THYSANOPTERA thrips	0	48	0	48
HEMIPTERA true bugs, hoppers	342	559	5	906
PSOCODEA barklice, booklice, parasitic lice	26	104	5	135
MEGALOPTERA alderflies, dobsonflies, fishflies	4	3	0	7
NEUROPTERA lacewings, antlions, etc.	9	36	0	45
STREPSIPTERA twisted-wing insects	0	2	0	2
COLEOPTERA beetles	557	2,067	84	2,708
HYMENOPTERA ants, bees, wasps	372	1,177	25	1,574
TRICHOPTERA caddisflies	173	67	4	244
LEPIDOPTERA butterflies, moths, skippers	725	1,195	39	1,959
MECOPTERA scorpionflies	15	2	1	18
SIPHONAPTERA fleas (parasitic Mecoptera)	17	9	1	27
DIPTERA flies	915	1,351	79	2,345
FISH	71	5	0	76
AMPHIBIA frogs, salamanders	39	3	3	45
REPTILIA snakes, lizards, turtles	38	2	0	40
AVES birds	233	21	0	254
MAMMALIA bats, elk, rodents, bears, etc.	64	6	0	70
Species known to GSMNP before ATBI (1998)				9,765
Species recorded in GSMNP since ATBI				11,245
Species described from material in GSMNP since ATBI				1,092
Species currently known to GSMNP				22,102



TOTAL

Help study biodiversity in the Great Smoky Mountains

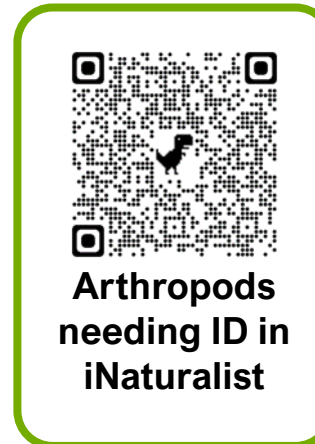


For more, scan or visit
dlia.org/entomology-2024



Identify Smokies arthropods via iNaturalist

Visitors to Great Smoky Mountains National Park have contributed nearly 200,000 observations through the iNaturalist app. Among them are **260 new species for the park!** You can help discover more by helping identify the myriad unidentified Smokies arthropods on iNaturalist. It's fun, it's helpful, it's SCIENCE!



Help identify a backlog of arthropod samples

Over 25+ years, we've accumulated a backlog of roughly 500K arthropods, mostly in alcohol and sorted to order. You can help us by identifying a batch of this material. We can send material from the Smokies to you and we may be able to pay you for your time and effort. **Ask us about available funding.**



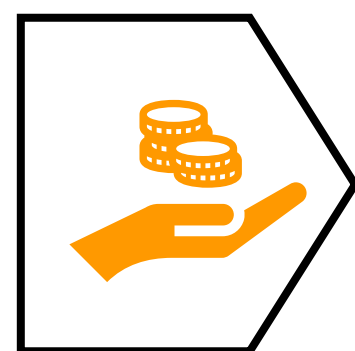
Species richness surveys

As part of a study of the "completeness" of the Smokies All Taxa Biodiversity Inventory, we're asking taxonomists to estimate the total species richness (documented + undocumented) of their taxon-of-interest in the Smokies. Familiar with an arthropod taxon listed on the right? **Help by taking a survey.**



Conduct your own biodiversity work

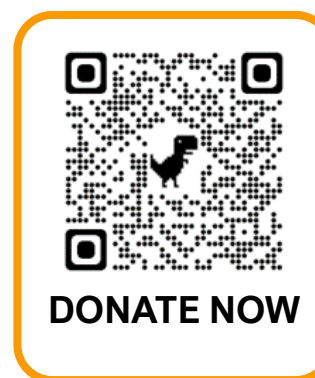
Despite 26 years of study, there's SO MUCH MORE to learn about the biodiversity of Great Smoky Mountains National Park. Interested in conducting research in this ancient and biologically-fascinating park? **We're here to help!**



Donate to Discover Life in America

We're a 501(c)(3) nonprofit and partner of Great Smoky Mountains National Park. Your monetary support helps us:

- Manage a massive biodiversity survey in the Smokies
- Educate students and the public about the value of biodiversity
- Train the next generation of nature advocates through engaging internships
- Conserve life in the Smokies and beyond



Taxonomic priorities for arthropods in the Smokies

These taxa are special interest for further study in Great Smoky Mountains National Park, but there's always more to learn even for taxa for that relatively well-studied.

INSECTS

- ZORAPTERA** – probably present but undocumented in GSMNP
- DERMAPTERA** – help ID material; needs additional study in GSMNP
- EMBIOPTERA** – maybe present but undocumented in GSMNP
- BLATTODEA** – Take a survey to estimate richness in GSMNP
- ISOPTERA/TERMITOIDEA** – help ID material
- THYSANOPTERA** – help ID material; take survey to estimate richness
- HEMIPTERA** – help ID material sorted to order level
 - Coccoidea, Fulgoroidea, Anthocoridae, Miridae, Nabidae, Psyllidae, Tingidae** – understudied in GSMNP; take survey to estimate richness
- PSOCODEA** – help ID material
- NEUROPTERA** – help ID material
- STREPSIPTERA** – understudied in GSMNP
- COLEOPTERA** – help ID material
- HYMENOPTERA** – help ID material sorted to order level
 - Chalcidoidea, Cynipoidea, Ichneumonoidea, Platygastroidea** – understudied in GSMNP; take survey to estimate richness
- LEPIDOPTERA** – help ID adults & caterpillars sorted to order level
- MECOPTERA** – help ID adults & larvae
- SIPHONAPTERA** – understudied in GSMNP; help ID material; take survey to estimate richness
- DIPTERA** – help ID material sorted to order level
 - Asiloidea, Muscoidea, Oestroidea** - understudied in GSMNP

OTHER ARTHROPODS

- ARACHNIDA**
 - Acari** – understudied in GSMNP; help ID material
 - Pseudoscorpiones** – understudied in GSMNP
 - All orders** – take survey to estimate richness
- MYRIOPODA**
 - Chilopoda** – help ID material
 - Diplopoda** – understudied in GSMNP
 - Symphyla** – understudied in GSMNP
- CRUSTACEA: Isopoda** – help ID material
- COLLEMBOLA** – help ID material

Full priorities list here

