

T11.18 RARE AND ENDANGERED ANIMALS

Rare animals are those nonintroduced or nondomesticated species which occur in only a few localities in the province and/or are represented by relatively few individuals. Rarity is a relative concept and is related to the physical size of the individuals as well as the pattern of their distribution. This is particularly true in the case of animals because so many are mobile for much or all of their lives. Plants can only make use of the energy and nutrients that come to them, while mobile animals can go in search of them. The larger the individuals, the more living space and resources will be needed to support each one, and the fewer individuals can occupy a unit area. Although coyotes are almost certainly the most common wild predatory mammals of their size in the province, they are probably much less numerous than most of our smaller mammals that are considered to be uncommon or rare, such as the Arctic Shrew (*Sorex arcticus*).¹

No authoritative list has yet been published of the animals considered to be rare in Nova Scotia, though one is in preparation by staff at the Nova Scotia Museum of Natural History, in consultation with those who have any provincial expertise in the various groups concerned. Our invertebrate fauna (an estimated 10 000 species of insects alone) is much more diverse, and hence much less well known, than are the higher plants. The microinvertebrates are so poorly known that we have no idea how many species occur here, let alone how many of them are rare. COSEWIC has assigned status (endangered, threatened, vulnerable) to a much smaller portion of our animal species (all of them vertebrates) than of our plants (see Table T11.8.1 for a list of land mammals with COSEWIC status). Specific birds, fish, reptiles, and invertebrates are referred to by their COSEWIC status throughout the preceding topics.

ENDEMICS

Our only endemic vertebrate is the Atlantic Whitefish (*Coregonus huntsmani*), once found in the Tusket and Petite Riviere watersheds in southwestern Nova Scotia and now believed to have been extirpated from the Tusket (see T11.13).

On the mainland, our single known endemic invertebrate is a case-bearer moth, *Coleophora vacciniella*, known only from Point Pleasant Park in

Unit 833.² Sable Island (Unit 890) has four endemic invertebrate species: a beetle, *Pyrrhalta sablensis* (Coleoptera: Chrysomelidae), and three species of noctuid moths, as well as an endemic subspecies of a tussock moth that is widespread on the mainland.^{2,3} The freshwater sponge *Heteromeyenia macouni*, previously reported as a Sable Island endemic, has been synonymized with *Anheteromeyenia ryderi* of wider distribution.⁴

DISJUNCT SPECIES

Almost all of Nova Scotia's rare species are also disjunct, separated by many hundreds of kilometers from populations of their kind elsewhere, usually further south in the eastern United States but sometimes to the west or the north of us. This is the result of Nova Scotia's shape and its narrow central connection to the mainland, which allows north-south movement of climate zones to isolate species at either end of the province. Those of our disjunct species that have the main part of their range to the south and west of Nova Scotia are the most likely to expand their ranges here if the climate warms significantly.

Nova Scotia has an extraordinarily high proportion of disjunct animal species, especially among the vertebrates: 14 per cent of the land mammals,⁵ 15.4 per cent of the amphibians 44 per cent of the aquatic and terrestrial reptiles⁶ and 26 per cent of the freshwater fishes.⁷ The exception is in the birds, because they are so mobile; only two of the 170 confirmed breeding species can be considered even marginally disjunct, and both are colonial seabirds

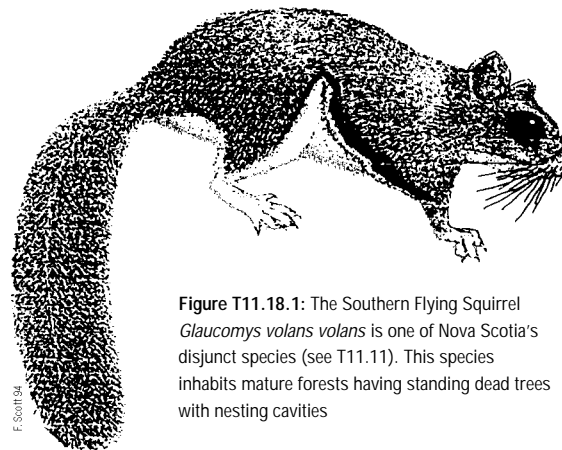


Figure T11.18.1: The Southern Flying Squirrel *Glaucomys volans volans* is one of Nova Scotia's disjunct species (see T11.11). This species inhabits mature forests having standing dead trees with nesting cavities

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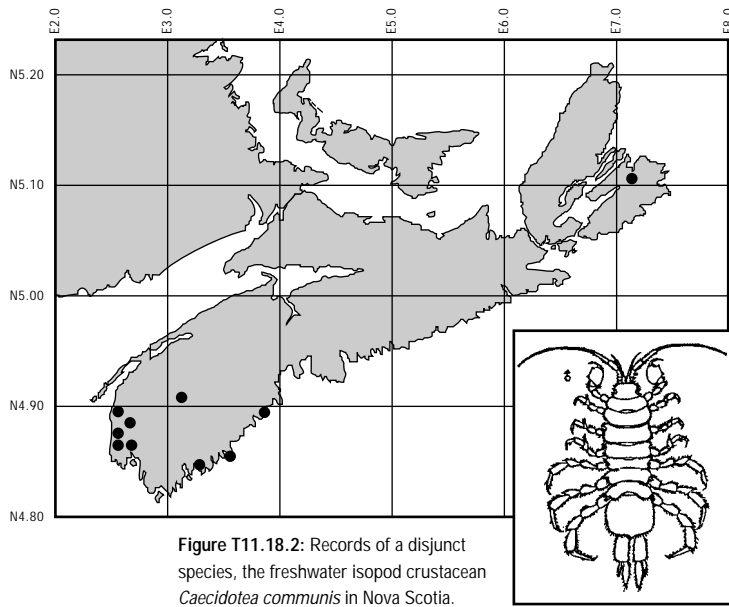


Figure T11.18.2: Records of a disjunct species, the freshwater isopod crustacean *Caecidotea communis* in Nova Scotia.

whose colonies are more often than not widely separated anyway.⁸

Nova Scotia has at least fourteen species of invertebrates with disjunct populations in Nova Scotia. These include a fairy shrimp, *Eubbranchipus intricatus*;⁹ a freshwater isopod, *Caecidotea communis* (see Figure T11.18.2); four species of butterflies and two of moths; six terrestrial or aquatic molluscs;² and two disjunct dragonflies, *Libellula incesta* and *Calopteryx amata*, restricted to central or western Nova Scotia.

PROTECTION

Federal and provincial legislation protects all native birds except the Common Raven, the American Crow and both species of cormorant. The introduced European Starling, Rock Dove and House Sparrow are not protected. In addition, a number of wildlife sanctuaries have been created by federal, provincial and nongovernment agencies specifically to provide protection for breeding and feeding habitats used by waterfowl, seabirds and migrant shorebirds. Most large and moderate-sized mammals are protected (or their harvest is controlled) by provincial legislation, but small mammals, including some of our rarest species, are mostly unprotected. With the exception of the Blanding's Turtle, our amphibians and reptiles are also unprotected. Populations of all wildlife species are protected in national and provincial parks and in ecological reserves established under the Special Places Protection Act.

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Associated Topics

T4.3 Post-glacial Colonisation by Animals, T11.8 Land Mammals, T11.13 Freshwater Fishes, T11.15 Amphibians and Reptiles, T11.16 Land and Freshwater Invertebrates, T11.17 Marine Invertebrates

References

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- 2 Isnor, W. (1982) Provisional Notes on the Rare and Endangered Plants and Animals of Nova Scotia. Nova Scotia Museum. (*Curatorial Report* No. 46).
- 3 Wright, B. (1989) The Fauna of Sable Island. Nova Scotia Museum. (*Curatorial Report* No. 68).
- 4 Ricciardi, A. and H.M. Reiswig (1993) "Freshwater sponges (Porifera, Spongillidae) of eastern Canada: taxonomy, distribution, and ecology," *Can. J. of Zool.* 71:665-682
- 5 Hall, E. R. (1981) *The Mammals of North America*, 2nd ed. Wiley Interscience, Toronto.
- 6 Conant, R. (1975) *A Field Guide to the Reptiles and Amphibians of Eastern and Central North America*, 2nd ed. Houghton Mifflin, Boston.
- 7 Lee, D. S., C. R. Gilbert, C. H. Hocutt, R. E. Jenkins, D. E. McAllister and J. R. Stauffer Jr. (1980) *Atlas of North American Freshwater Fishes*. North Carolina State Museum of Natural History.
- 8 Erskine, A. J. (1992) *Atlas of Breeding Birds of the Maritime Provinces*. Nimbus Publishing and the Nova Scotia Museum, Halifax.
- 9 Daborn, G. R., J. Wolford and P. Taschereau (1991) "*Eubbranchipus intricatus* Hartland-Rowe 1967: first confirmed record of a fairy shrimp (Crustacea: Anostraca) from Nova Scotia." *Can. Field-Nat.* 105(4):571-572.

Additional Reading

- Federal-Provincial-Territorial Biodiversity Working Group (1994) *Draft Canadian Biodiversity Strategy* (Discussion Paper). Biodiversity Convention Office, Hull, Quebec.