

SMALL MAMMALS OF THE GRAND LAKE MEADOWS

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Small mammals are an important part of the Grand Lake Meadows ecosystem. They till and aerate the soil, prey on insects, seeds, and invertebrates, and are a food source for predators such as owls and fox. Studies conducted on public lands in the Grand Lake Meadows area determined the presence of 9 small mammal species, not including bats. Another 3 species likely are present but are rarer and harder to catch. The most common species appear to be deer mouse, meadow jumping mouse, and short-tailed shrew.

The Grand Lake Meadows are New Brunswick's largest wetland complex. From the viewpoint of a small mammal, there are two basic habitat types within the Grand Lake Meadows. These are: flooded meadow (farmland, old farmland, meadows) and flooded forest (silver maple and ash-forested flatlands). Habitat types are characterized based on the tree and plant species present, as well as the amount of moisture in the area. Spring is a difficult time for small mammals in the Meadows because flooding forces them out of their trails and burrows, and up into hollow trees. Drier sites are likely important to the presence of small mammals because these islands can act as refuges until water levels drop.



Flooded meadow and forest in May

Red-backed Vole (*Clethrionomys gapperi*). A common species in the province's softwood forests. It was found in the flooded forest of the Meadows.



Red-backed Vole

Meadow Jumping Mouse (*Zapus hudsonius*) have extremely long, dark-tipped tails that help them balance as they spring away from danger. Many of these were caught in wet grass areas.



Meadow Jumping Mouse

Deer Mouse (*Peromyscus maniculatus*). This species occurs across Canada. Deer mice are omnivores; they will eat plants, insects or invertebrates depending on what is available.



Deer Mouse

Short-tailed Shrew (*Blarina brevicauda*). This is the largest shrew in New Brunswick and is common in many types of forest and open areas. They possess venom which they inject into prey, allowing them to eat items much larger than themselves.



Short-tailed Shrew

Pygmy Shrew (*Sorex hoyi*). This tiny shrew, about the size of a dollar coin, is one of the smallest mammals in the world. They are quite common but are difficult to catch.



Pygmy Shrew

Southern Bog Lemming (*Synaptomys cooperi*). Difficult to separate from other voles except by its short tail and grooved teeth. This species likes wet meadows and bogs.



Southern Bog Lemming

Meadow Vole (*Microtus pennsylvanicus*). Most wide-spread vole in North America. Main diet is grass, sedges and herbs. Found mainly in farmland and meadow communities in the Grand Lake Meadows.



Meadow Vole

Water Shrew (*Sorex palustris*) and **Maritime Shrew** (*Sorex maritimensis*) were not captured during recent studies but are likely present in the Meadows. Water shrew have stiff hairs on their back feet, an adaptation to their aquatic behaviour.



Woodland Jumping Mouse

Woodland Jumping Mouse (*Napaeozapus insignis*). If you see a mouse bouncing up to 1 metre off the ground its likely this species. Though not captured recently, earlier work found them in the forest.

Masked Shrew (*Sorex cinereus*) and **Smoky Shrew** (*Sorex fumeus*). These 2 small shrew species look very similar, and can be found from dry to wet areas of fields and forests. Smoky shrew was found in the dry meadow and the moist forest flatland habitats.



Dry meadow and forest in August