

Muskrat

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Species Description

Scientific name: *Ondatra zibethicus*

AKA: marsh hare; marsh rabbit; musquash; swamp rabbit

Native to: North America

Habitat: Mostly freshwater; slow moving rivers, lakes, ponds and wetlands

The Muskrat is a semi-aquatic rodent, with a rat like appearance. It has dense waterproof fur which can vary in colour but is generally grey to brown. It has a broad head, short ears and a scaled tail which is laterally flattened.

Ondatra zibethicus originates from Canada, USA and northern Mexico and was introduced for the fur trade. It was first introduced into Europe in 1905 in Austria and subsequently spread 550km in 28 years. Further releases occurred in Finland and the former Soviet Union has resulted in established Muskrat populations in 15 European countries. Muskrat is not present in Northern Ireland.

Under the Invasive Alien Species (Enforcement and Permitting) Order (Northern Ireland) 2019 it is offence to intentionally keep; breed; transport to, from or within Northern Ireland, use or exchange Muskrat; or to release it into the environment.



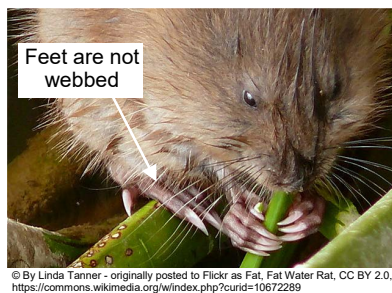
© By James Phelps from USA - Muskrat, CC BY 2.0, <https://commons.wikimedia.org/w/index.php?curid=3424623>

Key ID Features



Laterally flattened
and scaled tail

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Feet are not
webbed

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Well adapted to swimming;

- can close nose and ears,
- swimming bristles on edges of hind feet,
- flattened tail acts as rudder,
- dense fur adds buoyancy,

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Fur usually
grey to brown



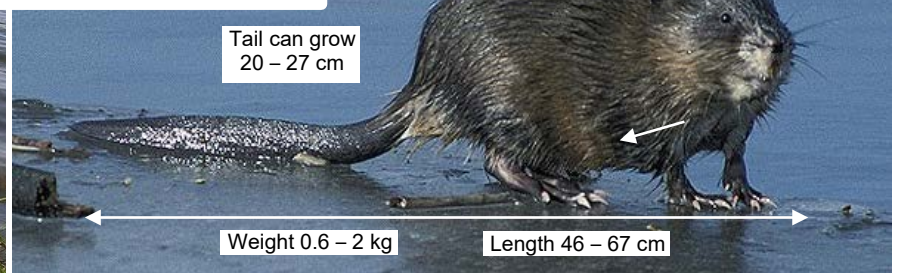
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A Muskrat's lodge can
be used for food at the
end of the winter



Light orange to
yellow incisors

© By USFWS Mountain-Prairie - Muskrat on Seedskaadee NWR, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=46837883>



Tail can grow
20 – 27 cm

Weight 0.6 – 2 kg

Length 46 – 67 cm

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Report any sightings via; CEDaR Online Recording - <https://www2.habitas.org.uk/records/ISI>, iRecord app or Invasive Species Northern Ireland website - <http://invasivespeciesni.co.uk/report-sighting>

Impacts

Where *O. zibethicus* are established they can have a great impact on the environment;

- feeding on reed belt communities they can destroy plant cover (1 individual capable of cropping 1.5m² per night). They also feed on endangered plant species and prey upon rare freshwater bivalves.
- digging far into the banks (up to 15m inland) of water bodies they cause instability and collapse during floods. This undermining of banks, dams, flood dykes, road and railway embankments can have serious economic damage.
- *O. zibethicus* hosts a great number of parasites, some of which are dangerous to humans; such as the dog tapeworm (*Taenia hydatigena*), the cat tapeworm (*Taenia taeniaformis*), and the dwarf tapeworm (*Echinococcus multilocularis*). They can occasionally affect humans directly, defending themselves vigorously when cornered.

Control

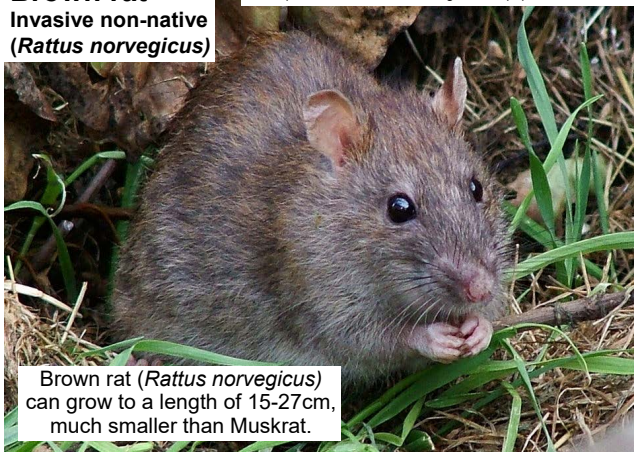
Due to the high population and widespread distribution of *O. zibethicus* throughout mainland Europe, complete eradication is no longer possible. Slowing the rate of spread and controlling the population size in sensitive areas remain the only realistic ways in which this species can be controlled.

Eradication is achievable where there is no flow individuals, for example British Isles. Muskrat farms had increased through the 1920s and escapes were common from inadequate enclosures. Based upon experiences in mainland Europe and Canada (the need to act quickly to prevent *O. zibethicus* spreading), Muskrat farming ended in 1933 and a trapping programme was conducted from 1932 – 1938. 39 trappers covered an area of 300 square miles and caught over 4000 individuals.

Similar Species

Brown rat Invasive non-native (*Rattus norvegicus*)

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Coypu Invasive non-native (*Myocastor coypus*)



References and further reading:

Birnbaum, C. (2013): NOBANIS – Invasive Alien Species Fact Sheet – *Ondatra zibethicus*. – From: Online Database of the European Network on Invasive Alien Species – NOBANIS

CABI *Ondatra zibethicus* (Muskrat) datasheet - available at <https://www.cabi.org/isc/datasheet/71816>

Gosling, Leonard & BAKER, S.. (1989). The eradication of muskrats and coypu from Britain. *Biological Journal of the Linnean Society*. 38. 39 - 51.

Kadlec RH; Pries J; Mustard H, 2007. Muskrats (*Ondatra zibethicus*) in treatment wetlands. *Ecological Engineering*, 29(2):143-153.

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