

Manitoba's Species At Risk

Threatened



Any native Manitoba species likely to become endangered or at risk due to low or declining numbers in Manitoba if the factors affecting it don't improve. Threatened species are declared as such by regulation under the *Endangered Species Act*.

Great Plains toad

Bufo cognatus

The Great Plains toad (*Bufo cognatus*) is a provincially Threatened amphibian found in grasslands and dry brushy areas of the central plains, from southern Canada to central Mexico. It is a relatively large toad, with a body length of up to 11 cm (4 inches). Its upper side ranges in colour from greyish-yellow to light brown or green. It is covered with small tubercles or warts and large dark brown to olive blotches with well-defined white borders. Its underside is cream-coloured, usually with no markings.

Breeding males have a black, sausage-shaped vocal sac that is covered by a flap of lighter coloured skin. It extends above and beyond the snout when they call. Breeding calls are loud, pulsating trills that last from five to 50 seconds. The call is described as sounding metallic, mechanical or riveting and similar to a loud hydro transmission line. The Great Plains toad is similar in appearance to the more common American toad (*Bufo americanus*) and Canadian toad (*Bufo hemiophrys*). The Great Plains toad however, is larger in size, and has the large, light-bordered dark blotches and a V-shaped cranial ridge that extends from behind the eyes and converges to form a boss, or a bump, on the snout.

Habitat

Great Plains toads are generally found in dry, open grasslands. They require soft ground to burrow into during cold or dry periods. They breed primarily in temporary wetlands that only contain water in years with heavy spring or early summer rains. The edges of some permanent or semi-permanent wetlands may also be used. These shallow, clear pools are often in imperfectly drained, sandy areas in grasslands, pastures, ditches or agricultural fields and range in size from large wetlands to small puddles.

Life History

Breeding activity is triggered by warm, heavy rains in late spring or early summer. In dry years, breeding may not occur. They often form large assemblages built up by the reaction of males to one another's call. Males and females may move several hundred metres to join such an assemblage. A calling male will clutch any toad that touches him, and once a female is clasped she is held until egg laying is completed up to 24 hours later. The male gathers the eggs as they are laid and fertilizes them before they are released. Eggs are deposited on debris and vegetation near the bottom of the pool, where they hatch in one to five days, depending on temperature.

Newly hatched larvae, or tadpoles, are black, and grow to a length of 11 to 25 mm (0.5 to 1 inch) before they transform into adult toads 18 to 49 days after hatching, depending on temperature. Many tadpoles perish due to predation, competition for food, and pools drying up prior to transformation. Young toads are able to reproduce when they are three to five years old.

Great Plains toads eat flying insects, cutworms, ants, spiders and beetles. Tadpoles eat algae, suspended matter, organic debris and plant tissue. Adults are active mainly at night, especially in extended hot or dry periods. They spend the daytime under rocks, buried in the mud or hidden in the shade. In winter, they are inactive, burrowing below the frost line. They burrow by backing into the ground using a shuffling motion, and are aided by a tough spade-like projection on their hind feet.

Distribution

The Great Plains toad is found from southern Manitoba, Saskatchewan and Alberta, south to central Mexico, and from



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Cool Facts

Great Plains toads call for up to three hours after sunset and can be heard up to two kilometres away. They often congregate in large numbers where their calls can be deafening.

Females produce up to 45,000 eggs, with an average-sized female producing about 10,000 eggs laid in long, double-stranded strings.

Great Plains toads are considered beneficial to agriculture, because they eat a variety of insects that feed on, and damage, crops. In Oklahoma, the value of this insect control to producers was estimated at \$25 per toad per year.

Great Plains toad tadpoles are often eaten by the larger tadpoles of the Plains spadefoot (*Scaphiopus bombifrons*), a slightly more common grassland toad with a similar distribution and habitat.

Observations in the Melita area in mid-May 1999 differed from previous reports of Great Plains toads in Manitoba in that they were widespread and exceptionally early (temperatures had not risen to levels where the species is normally recorded). The breeding pools were leftovers from spring runoff, mostly in cultivated areas. These observations suggest that the species may be more common in Manitoba than previously thought.



Iowa and Missouri, west to California and Nevada. This toad was first found in southwestern Manitoba in 1983, near Lyleton. Additional observations in the area from 1986 to 1991 verified that the species occurred regularly in Manitoba. They were found in high numbers in flooded agricultural fields near Melita in mid-May 1999.

Status

The Great Plains toad has been assigned a rank of rare to uncommon (S2S3) by the Manitoba Conservation Data Centre. The species is also rare in Alberta and a number of American states, but it is common in many areas, and thus is considered secure rangewide (G5) by NatureServe. Threats to the species include loss of habitat due to drainage of temporary pools preferred for breeding. However, its use of flooded agricultural fields suggests that it can handle a certain amount of disturbance. Application of pesticides and herbicides may also be a concern, given the sensitivity of amphibians to chemicals and pollutants. Roadkill by vehicles has been identified as a leading cause of mortality.

The Great Plains toad was listed as Threatened in 2001 by regulation under

Manitoba's *Endangered Species Act*, and is also protected under Manitoba's *Wildlife Act*. It has been assigned a status of Special Concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

Stewardship and recovery

To date, activities in Manitoba have been focused on gathering information such as population size and distribution in southwestern Manitoba. Water management and wetland conservation programs could prove beneficial to Great Plains toads by providing habitat for regular breeding in Manitoba. Conservation agreements with landowners that maintain natural wildlife habitat could ensure that shallow depressions are allowed to fill with water during wet years.

Get involved in recovery

Please contact Manitoba Conservation at one of the numbers below if you would like more information on what you can do to further enhance your land for this and other native Manitoba plant and animal species. You can help by maintaining wetlands and the low-lying depressions which form temporary wetlands during wet years. You should also avoid using insecticides near wetlands, as this eliminates some insects used for food. The moist skin of frogs and toads makes them susceptible to being poisoned by pesticides.

Manitoba Conservation Wildlife and Ecosystem Protection Branch

Box 24, 200 Saulteaux Crescent
Winnipeg MB R3J 3W3
(204) 945-7775

www.gov.mb.ca/natres/wildlife/index.htm

Manitoba Conservation Regional Office

Western Region
Brandon
(204) 726-6450

Partners in production of this fact sheet:
Manitoba Conservation,
Wildlife and Ecosystem Protection Branch
Environment Canada, Canadian Wildlife Service
Manitoba Habitat Heritage Corporation

Extirpated Species

Any species once native to Manitoba that has disappeared through all of its Manitoba range. Extirpated species are declared as such by regulation under the *Endangered Species Act*.

Endangered Species

Any native Manitoba species threatened to disappear through all or most of its Manitoba range. Endangered species are declared as such by regulation under the *Endangered Species Act*.

Threatened Species

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Vulnerable Species

Species not regulated under the *Endangered Species Act* but which could eventually be considered Endangered or Threatened if the factors affecting them do not improve.