Elk Island National Park (EINP) is a remnant of native Aspen Parkland located in a landscape dominated by agriculture and rural residences. Although it is a protected area, in the last 20 years the Canadian toad (Bufo hemiophrys) has nearly disappeared in the park. The Canadian Toad was placed on the “Red List” in Alberta in 1996 because it’s distribution in the parkland region had declined dramatically. During this same period the western toad or boreal toad (B. boreas) colonized EINP. Western toad is considered “a species of special concern” in Canada by COSEWIC and listed as “sensitive” in Alberta because it has suffered population declines and extirpations in the northwestern USA. Despite its apparent sensitivity to environmental change, the western toad is found in many ecoregions in Alberta, including the Rocky Mountains, boreal forest, and parkland. In fact, in parts of northern Alberta the western toad is actually expanding its range eastward possibly at the expense of its smaller congener, the Canadian toad.

Expanding upon previous work by MSc student Sara Eaves, we conducted surveys from May to August, 2003 to determine the current distribution of toads and other anurans in EINP. We conducted standardized visual surveys at 232 ponds in EINP and also 7 ponds on sandy grazing land just outside EINP. We walked slowly around the perimeter of each pond searching approximately 1 m to each side or in front for amphibians visible without moving debris. We attempted to capture all amphibians observed for identification and measurement.

Canadian toads were not observed or heard calling anywhere. Besides western toad, we encountered wood frogs (Rana sylvatica) and boreal chorus frogs (Pseudacris triseriata). Wood frogs were found at 223 ponds and chorus frogs at 199 ponds in EINP, both species were found at all 7 ponds on the sandy grazing site and were abundant at all sites. Western toads were common but much less abundant than wood and chorus frogs and patchily distributed in the Park. Toad were found at 40 ponds in EINP and at all 7 ponds on the grazing site. We observed a total of 3026 wood frogs, 2633 chorus frogs, and 669 western toads throughout the summer.

Wood frogs and chorus frogs both appear to have healthy populations in and adjacent to the Park. The western toad was not historically present in EINP but has been expanding its range eastward. The western toad now appears to have well-established populations in some areas of the park. It is not known if western toad’s current distribution is limited by habitat features or whether it will continue to expand its range in the Park. The last record of the Canadian toad in EINP was one calling male in 2002. Our surveys suggest the Canadian toad is now either extirpated or will be very soon.

In the future we plan to radio track western toads in EINP and also radio track both western and Canadian toads near Lac La Biche where both species co-exist. Western and Canadian toads grow large enough that adults can carry a back-pack type radio transmitter. Radio tracking will not only yield data on behavioural differences between ecoregions and between disturbed vs. undisturbed sites, but also important data on critical microhabitat features, movement corridors, home range size, and hibernation locations. We hope to use the western toad as a model for developing proactive conservation strategies for amphibian species that still have healthy populations in Alberta.

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