Dozens of cane toads
(Bufo marinus)
pile on top of one another.

**CASE STUDY 2**

**The March of the Toads**

They don’t belong in Australia, but there are already 200 million of them there. They can travel as far as 50 km (31 miles) a day and continue to spread across large areas of the country. They may feed as often as 200 times in a night, but almost everything that tries to eat them dies of heart failure. Who are these invaders? These are cane toads.

The cane toad (*Bufo marinus*) is a large and poisonous animal that is native to Central and South America. Because the toad had been introduced to various regions in the world in an attempt to control pests in cane fields, Australian authorities in 1935 approved the importation of cane toads to the Australian province of Queensland. About 100 were shipped in, allowed to breed in captivity, and were released into several sugar cane plantations where two types of beetles were ruining the crop.

Although the cane toads would certainly eat the beetles, it turned out that they didn’t encounter the beetles frequently enough to eat many of them. One reason is that the beetles lived mainly in the higher parts of the sugar cane plants out of the toads’ jumping range. Another reason is that the beetle only
invaded the sugar cane fields at the time of year when the cane toads didn’t go there because of the lack of protective plant cover. In addition, the beetles were most active during the day, but the cane toads fed mainly at night. The toads didn’t go hungry though, as they ate pretty much anything that would fit into their mouths—including insects, frogs, small reptiles, mammals, and birds—eventually diminishing the biodiversity of the areas they were invading.

A female cane toad can produce around 35,000 eggs every time she mates, which can happen several times a year. They lay their eggs in almost any body of water, large or small, fresh or salt. Because cane toads can survive in a wide range of conditions, they adjusted well to the environment in Queensland and began to spread to other parts of Australia. Australia has no natural predator that can control the cane toad populations, but the cane toad has made its mark on populations of many other animals. The cane toad adult has poison glands in its skin, and the tadpoles are highly toxic to most animals. Most of the Australian predators that eat them die of heart failure. Even crocodiles are not immune, and since 2005, after cane toads invaded the Victoria River district of Australia’s Northern Territory, there has been a 77% decline in the freshwater crocodile population.

Also, where cane toads are present, local populations of northern quoll have disappeared. Rabbit-sized marsupials that eat a wide variety of prey, quoll often die from eating cane toads. The population of northern quoll is particularly vulnerable to extinction because the males die after mating when they are one year old. When this natural loss is accelerated by the losses caused by the cane toads, quoll populations quickly become unsustainable.

Cane toads are causing yet other problems. They are suspected in reducing the numbers of animals that aboriginal bushmen traditionally rely on as food sources. The toads are known to eat pet food and feces, the latter leading them to carry diseases, such as salmonella. In 2001 the cane toads reached the carefully conserved Kakadu National Park, raising fears that the toads will disturb the delicate balance of species in the park and reduce its biodiversity. Local economies may be affected if tourism suffers as a result of changes to the park.