



Saving the Vancouver Island Marmot

CEF CONSERVATION
ENDOWMENT
FUND

The Vancouver Island marmot is one of the world's most endangered mammals and is found only on the alpine meadows of Vancouver Island, Canada. In the late 1990s the population crashed to fewer than 100 animals largely due to habitat disruption from clear-cut logging operations. In order to stave off extinction of this unique and charismatic mammal, the government developed a recovery plan that included initiating a captive breeding and reintroduction program. A total of 55 wild marmots were captured and housed in four participating institutions across Canada - Calgary Zoo, Toronto Zoo, Mountain View Conservation and Breeding Society and the Tony Barrett Mount Washington Marmot Recovery Centre.

The captive breeding and reintroduction effort has matured over the past ten years and is considered to be a success. Currently, there are approximately 170 marmots in captivity, more than 200 marmots in the wild and 2nd generation pups have been born to marmots that were reintroduced to the wild from captivity. However, not all is rosy in the land of marmots. Like an AZA Species Survival Plan® (SSP), one of the goals of the recovery plan is to maintain the genetic diversity of the population. To do this it is important that animals from all founder lineages contribute to the next generation equally and while some individual marmots appear to breed quite readily in captivity others are not as successful. The big question is why? To help answer this question it is important to develop methodologies that can give some insight into the reproductive physiology of the marmots.

Our recent AZA Conservation Endowment Fund (CEF) funded study allowed the purchase of electroejaculation equipment and the development of a protocol for collecting sperm from male marmots to help assess male fertility. Preliminary results suggest



the Vancouver Island marmot has semen parameters similar to its cousin the groundhog. With this initial trial in three males, the Vancouver Island Marmot Recovery Team has been reassured of the safety and effectiveness in using electroejaculation for sperm collection in marmots and as a result several more males are scheduled for sperm collection and assessment in the 2010 breeding season.

Hopefully by using this technique we can gain some insight into the relationship between semen parameters and fertility in this species. The successful collection of sperm is also an important first step towards developing assisted reproductive techniques like sperm cryopreservation and artificial insemination that may be used to overcome infertility problems in captive marmots. With a successful captive breeding and reintroduction program the Vancouver Island marmot has a real chance at being pulled back from the brink of extinction but it still has a long fight ahead of it.

For more information about the Vancouver Island marmot and how you can help, go to www.marmots.org.