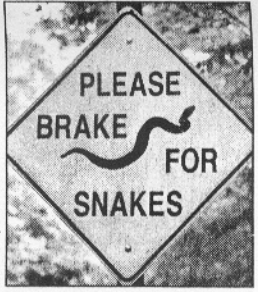
Where rattlesnakes work at not being seen



Research shows that Ontario's only viper is shy, unaggressive and wary of people

By Lillian Newbery
Special to the Star

KILLBEAR PROVINCIAL PARK

AMID PREDICTIONS that the Eastern Massasauga rattlesnake could be extinct within a century everywhere except the shores of Georgian Bay, researchers and naturalists are trying to change public opinion about Ontario's only venomous snake.

At Killbear Provincial Park, radio transmitters surgically implanted in 40 rattlesnakes, enabling daily tracking, reveal that far from being aggressive, rattlers in heavily populated areas modify their behaviour to avoid being seen.

Many of the 250,000 annual visitors to the peninsular park near Parry Sound unknowingly pass within a metre or so of Massasaugas, says Chris Parent, leader of the snake research team. Near hiking trails and in campsites, rattlers move around less than they do in undisturbed areas. "The reality is that they are shy, unaggressive animals that work at not being seen."

If visitors do spot a rattlesnake, it is probably slithering slowly across a road or basking on a rock. Radiotelemetry shows they actually spend a great deal of time hiding.

The Eastern Massasauga *(Sistrurus catenatus)* was listed as threatened in Canada in 1991. As recently as 100 years ago, its range covered southwestern and central Ontario. Clearing and draining land for farms and cities, bisecting it with roads and deliberate destruction shrank their range to a few "islands." Now that rattlers are rarer, they're in danger from poachers.

By far the two biggest of the four remaining populations live on the Bruce Peninsula and on the eastern shore of Georgian Bay from Honey Harbour to Manitoulin. One tiny group lives in the Wainfleet peat bog near Port Colborne, surrounded by agricultural land. Several small groups survive in pockets of tall grass prairie, including the Ojibway Nature Preserve, within Windsor city limits.

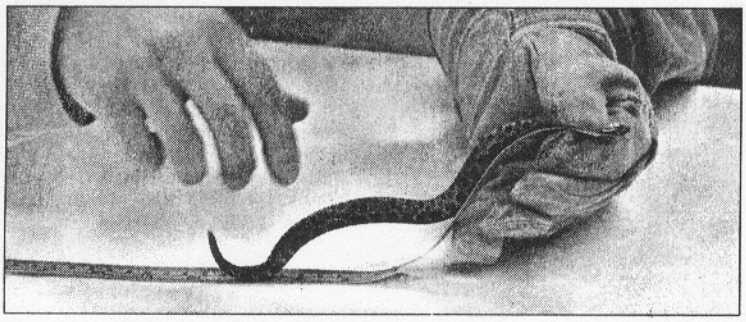
Rattlesnakes, which are deaf and can't see much beyond five metres, are not attracted to people, says Parent, who is conducting the largest study ever of the movement of Eastern Massasaugas. If snakes go to a cleared area, it's to warm up in the sun. When they feel vibrations of human footfalls, they seem to interpret them as belonging to predators to avoid.

An average of three people are treated with anti-venom in Ontario annually; the number has ranged from zero to seven since 1990. Since the health ministry started keeping data in 1980, no one has died from a snake bite.

At Killbear, there are 200 to 300 rattlesnakes in the 1,740-hectare park. No visitors have been bitten in at least nine years. "What we're demonstrating is that humans and rattlers can safely co-exist," Parent says.

PHOTOS BY BILL SANDFORD FOR THE TORONTO STAR

WIRED RATTLERS: Snake researcher Chris Parent uses a radiodetector to find one of the 40 rattlesnakes in Killbear Provincial Park with an implanted transmitter and, below, measures a baby rattler.



Greg Wake, assistant superintendent at Killbear, says as recently as 20 years ago it was park policy to kill rattlesnakes. Today, under the park's mandate to protect the natural landscape and promote research and education, visitors are encouraged to report sightings to park staff.

"If campers see a snake, they're not sure how to take it so they look to the staff," says Parent. "The cue they get from us is respect and tolerance. Our attitude is that it's a wonderful opportunity to see one."

A visitor who finds a snake gets to name it. One called hers Theo after her husband. Thirty members of the Muskoka Field Naturalists, who spent a September weekend at Killbear learning about snakes, called one of three they found MFN (pronounced Muffin). Park staff give the ones with radio transmitters such names as "Dirty Harry" (he hates everyone), Casanova (seen with multiple females) and Aphrodite (she had 18 babies).

The World Wildlife Fund and Ontario Parks paid for three workers last summer to augment Parent's research. Using a pillowcase as a carrier bag, the team transported every snake spotted by campers to an on-site lab.

To find out if they are pregnant, female rattlers are given ultrasound. Babies are photographed. Hourglass blotches on a rattlesnake form a pattern as unique as a human fingerprint. Adults without radio transmitters have a chip inserted so when recaptured, they can be identified quickly by scanner. Blood samples are sent to McMaster University for genetic studies by biologist Lisle Gibbs.

In the fall, Parent tracks rattlers right to their underground hibernation site. While they migrate up to a kilometre in summer, they return to the same hibernation sites.

In a study by the Metro Toronto Zoo at Georgian Bay Islands National Park, rattlesnakes relocated just three kilometres survived the summer but not the next winter, possibly because they were too far from their hibernation sites. The finding has implications for any future project to augment snake populations or reintroduce them to former ranges.

A Killbear snake is usually released within 50 metres of where it was captured. "We spend a lot of time talking with campers and they do have a veto," says Parent. "I tell them I can't guarantee they won't step on it and get bitten. But having the research here is a tremendous advantage and we can give some reassurance."

Parent deliberately involves the public in his research.

"It's amazing how many visitors come in terrified and end up in half an hour handling a snake," says Barbara Burke, head of Killbear's interpretative centre staff. "Snake talks are one of our biggest draws. There were 900 people at one snake show this year. . . . You can see attitudes changing right in front of you."

Janet Barnes' husband was transferred to Parry Sound this year. On discovering the district has rattlesnakes, she gave him an ultimatum. "I gave him a year to get me out of here. It was a real fear for me."

At one of Parent's talks, she was surprised to learn rattlers "aren't predators waiting to jump up and bite you. I'm using the trails now and I'm not afraid to walk in grass or the bush. I know people who see one on the road and veer to run over it, but I won't purposely destroy one now."

Science North at Sudbury and the Metro Toronto Zoo are striving to change perceptions of the Massasauga from threatening to threatened.

Besides mounting a permanent exhibit at the zoo, Bob Johnson, curator of reptiles and amphibians, produced a video, showing a 6-year-old cheerfully sweeping a rattlesnake into a garbage pail so it could be moved. This fall, Johnson led a "rattlesnake safari" to Killbear. The public event was sold out.

Kent Prior of the Canadian Wildlife Service in Ottawa chairs the recovery team for the Massasauga rattler. He says it would be a shame to lose this species for lack of trying: "Our grandkids may have Killbear or the Bruce Peninsula as the only place in the world in which to see an Eastern Massasauga rattlesnake in the wild."

Lillian Newbery is a Toronto freelance writer.