

Panther tests to be expanded

High level of mercury in dead cat alarming

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Staff Writer

Wildlife researchers are switching from dead laboratory specimens to live subjects to find out whether the mercury poisoning suspected of killing one endangered Florida panther this summer poses a threat to others still roaming the Everglades.

Hair and blood samples will be checked for mercury levels after being taken from all panthers captured this winter and outfitted with radio collars for tracking, said Melody Roelke, a veterinarian with the state Panther Recovery Project.

The samples from live panthers are normally taken to gauge the general health of the big cats. Now researchers plan to look specifically for elevated levels of mercury previously found in at least four of 11 dead panthers, most of them road kills, tested for the toxic metal so far.

"We'll sample every animal we handle this winter," Roelke said.

Researchers think the death of a 4-year-old female near Everglades National Park in July was probably due to an astronomical 110 parts per million of mercury found in its liver. That level of the toxin, detected in a panther known as "No. 27" in a population of 30 to 50 animals, is enough to kill a human, federal wildlife officials have said.

Unlike other panthers that eat white-tailed deer and wild hogs, No. 27 ate primarily raccoons, which biologists suspect eat a large amount of mercury-tainted Everglades fish.

Enough mercury has been found in largemouth bass and warmouth in the Everglades — more than three times the 1 part per million considered a health threat if frequently consumed — to prompt state health officers to issue consumption warnings to anglers.

Low levels of mercury, a slow poison, passed up the food chain can become magnified through a process called "bio-accumulation." To prove that hypothesis of mercury pathway to panthers, biologists plan to test raccoon flesh for the toxin.

The findings for Panther No. 27 startled researchers, who at first refused to believe the numbers. Three other dead panthers checked had potentially harmful levels of about 20 parts per million, while the remaining seven had 13 parts per million or lower.

With almost no scientific data to tap

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PANTHERS

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Florida panthers to be examined for mercury levels

into regarding the effect of different levels of mercury on the big cats, U.S. Fish and Wildlife Service officials are trying to form an ad hoc committee of panther experts to decide the direction of panther-mercury research.

One panther protection idea already has crossed researchers' mind: to move panthers prone to eating raccoons to other parts of the Everglades to force a change in diet.

A kink in that plan, however, is the proven ability of some animals to find their way over great distances back to their original home range, said David Maehr, who tracks panthers for the Florida Game and Fresh Water Fish Commission.

As for establishment of an ad hoc group, it is deemed necessary "so we can attack the problem in a very coordinated fashion," said John Christian, a wildlife service official who sits on a panther technical advisory committee.

"The key thing we need to collectively decide," he said, "is what the numbers mean, especially in the lower, 5 to 6 to 20 [parts per million] range. We're not at the point right now where any of us are confident that we know what it means to a free-ranging, wild Florida panther."

Scientists can "extrapolate," however, from a world-famous case of massive industrial mercury poisoning that occurred in Minamata, Japan, Roelke said. Tons of mercury dumped into Minamata Bay by a giant chemical company 30 years ago gradually killed 700 people.

"Over half the people that died at Minamata had concentrations of 20 parts per million or less, only it took a long time," she said.

While researchers for the time being have "ruled out everything else" but mercury as the cause for No. 27's death, they may never be able to say for certain what killed the cat because of the decomposed state of its body.

The panther had been dead for 36 hours before being discovered. That prevented scientists from looking for lesions in the brain tissue, a mercury poisoning indicator, Roelke said.

Three separate tests of mercury liver samples from No. 27 showed 86, 96 and 110 parts per million.

"Every toxicologist I spoke to just rolls their eyes and says, 'Whoa,' at that," she said.

Roelke said she is especially concerned about another young female panther living in Everglades National Park — panther No. 23 — which "eats nothing but raccoons."

Panther researcher Sonny Bass said he plans to take samples from that panther and another female and her two kittens in the park, either late in November or sometime in December when he replaces radio collars on the animals. The collars transmit for about two years.

In January and February, a game commission panther team will track down other radio-monitored panthers on state-owned and private lands for the same purpose.