

Hotheads

APRILE PAZZO WAS ABOUT TO CALL it a day when she noticed that the penguins she was observing seemed strangely agitated. Pazzo, a wildlife biologist, was in Antarctica studying penguins at a remote, poorly explored area

along the coast of the Ross Sea. "I was getting ready to release a penguin I had tagged when I heard a lot of squawking," says Pazzo. "When I looked up, the whole flock had sort of stampeded. They were waddling away faster than I'd ever seen them move."

Pazzo waded through the panicked birds to find out what was wrong. She found one penguin that hadn't fled. "It was sinking into the ice as if into quicksand," she says. Somehow the ice beneath the bird had melted; the penguin was waist deep in slush. Pazzo tried to help the struggling penguin. She grabbed its wings and pulled. With a heave she freed the bird. But the penguin wasn't the only thing she hauled from the slush. About a dozen small, hairless pink molelike creatures had clamped their jaws onto the penguin's lower body. Pazzo managed to capture one of the creatures—the others quickly released their grip and vanished into the slush.

Over the next few months Pazzo caught several of the animals and watched others in the wild. She calls the strange new species hotheaded naked ice borers. "They're repulsive," says Pazzo.

Adults are about six inches long, weigh a few ounces, have a very high metabolic rate—their body temperature is 110 degrees—and live in labyrinthine tunnels carved in the ice.

Perhaps their most fascinating feature is a bony plate on their forehead. Innumerable blood vessels line the skin covering the plate. The animals radiate tremendous amounts of body heat through their "hot plates," which they use to melt their tunnels in ice and to hunt their favorite prey: penguins.

A pack of ice borers will cluster under a penguin and melt the ice and snow it's standing on. When the hapless bird sinks into the slush, the ice borers attack, dispatching it with bites of their sharp incisors. They then carve it up and carry its flesh back to their burrows, leaving behind only webbed feet, a beak, and some feathers. "They travel through the ice at surprisingly high speeds," says Pazzo, "much faster than a penguin can waddle."

Pazzo's discovery may also help

solve a long-standing Antarctic mystery: What happened to the heroic polar explorer Philippe Poisson, who disappeared in Antarctica without a trace in 1837? "I wouldn't rule out the possibility that a big pack of ice borers got him," says Pazzo. "I've seen what these things do to emperor penguins—it isn't pretty—and emperors can be as much as four feet tall. Poisson was about 5 foot 6. To

the ice borers, he would have looked like a big penguin."

PROUD AND FREE,
a fierce ice borer bellows
a challenge.



From *Discover Magazine*
16(4) 14-15 (1995)