

Porpoise 'Pings' in on Target

THE PORPOISE apparently locates fish and objects in the water in much the same manner that a destroyer "pings" in on an enemy submarine.

The porpoise's sight-by-sound process is based on the same principle used by Navy sonar or marine fathometers for locating underwater objects, by sending out a series of noises and then picking up the reflected echoes.

For "auditory glances" the porpoise sends out a series of sound pulses. The experiments proved that the porpoise has a supersensitive auditory mechanism for picking up any reflected noises.

So sensitive is the porpoise's auditory system that it can hear a single BB shot dropped into the water or a half teaspoonful of water dropped from a height of five or six feet, Dr. Kellogg reports. The experiments showed that the porpoise is capable of reacting to sound vibrations in water at least as high in frequency as eighty kilocycles a second—or two full octaves above the hearing threshold for man.

IN THE EXPERIMENTS, an object, such as a fish, was dropped into the water. The noise of the splash provoked "a torrent of sputtering sound pulses" as the porpoise dashed toward the target.

When the object was lowered quietly into the water, there might be a delay of ten or fifteen minutes before the porpoise spotted it with random "auditory glances." The experiments also established that the porpoise uses its echoranging system for avoiding collisions with underwater objects.

By a series of experiments, the scientists ruled out the possibilities that the porpoises were assisted in their underwater detection by sight, smell, temperature or touch.

The experiments, for instance, were conducted in murky water or in the dark of night, but still the porpoise was able to swim through a maze of underwater objects to home in on targets. It also proved capable of avoiding solid but invisible objects such as a glass door.

The experiments, supported in

part by grants from the National Science Foundation, were conducted with two shallow-water porpoises, or bottlenose dolphins, donated by the Marine Studios of Marineland Florida. The porpoise is one of the smaller of the toothed whales, and thus is related to the giant sperm whale.

The porpoises, known for their playfulness and intelligence, proved to be reluctant subjects. The

young male dolphin "appeared to be quite dependent upon the more mature female dolphin and swam immediately to her side in times of stress or excitement," the report said.

The female dolphin, in turn, "displayed a certain reserve or sophistication by withdrawing, of her own choice, from participation" in two of the major experiments.

* * *

To Thy Kingdom Come

"Pilot to tower, pilot to tower: plane out of gas; am one thousand feet and thirty miles over the ocean, what will I do?"

"Tower to pilot, tower to pilot: repeat after me—Our father who art in heaven . . ."

* * *

It's in the Drawer!

"Fasten your seat belt, please," said the stewardess, as they were about to take off.

"Oh, dear!" cried the woman. "I didn't even bring one!"

* * *

What's in a Name?

"Why did Friday wake up at dawn every morning?"

"Because Robinson crew so."

*