



Save the Seal!

By Robert L. Pitman and John W. Durban

Last January we sailed from the tip of South America to the Antarctic Peninsula on the sixty-five-foot yacht *Golden Fleece*, in search of killer whales. The kind we were looking for—which potentially constitute a new species—prey on seals that live on and around the sea ice. We hoped to document one of their remarkable hunting techniques: sometimes as many as seven whales swim side by side to make a wave that washes a seal off an ice floe.

The journey brought some surprises.

Early one morning, we located a pod of ten killer whales that we had previously tagged for satellite tracking, and found they had a pair of agitated, adult-size humpback whales in their midst. The humpbacks were bellowing loudly through their blowholes and slapping the water with their tails and fifteen-foot flippers. At first we thought that the humpbacks were under attack, but we saw no overt signs of aggression, so we concluded that they were probably just being harassed. Killer whales often test larger whales, perhaps to check for weaknesses that they might be able to exploit. We ducked below deck to quickly review some video footage of the event, however, and noticed a Weddell seal between the humpbacks—perhaps that's what the killer whales were after.

The killer whales moved on, and fifteen minutes later they spotted a crabeater seal on an ice floe. They created a wave that broke up the floe and left the distraught seal on a piece of ice not much bigger than it was. Just when it seemed the killers were

about to have their way, the same pair of humpbacks charged in, swimming around the floe, bellowing and thrashing the water. The killer whales seemed annoyed and finally left the seal alone, still safe on the floe. We concluded that perhaps this deliberate intrusion by the humpbacks was some jumbo-size form of mobbing behavior, comparable to the way songbirds pester birds of prey to drive them off.

A week later we witnessed a similar event that suggested a somewhat different interpretation. Another group of killer whales was attacking a Weddell seal on an ice floe, and a different pair of large humpbacks had inserted themselves into the fray. At one point, the predators succeeded in washing the seal off the floe. Exposed to lethal attack in the open water, the seal swam frantically toward the humpbacks, seeming to seek shelter, perhaps not even aware that they were living animals. (We have known fur seals in the North Pacific to use our vessel as a refuge against attacking killer whales.)

Just as the seal got to the closest humpback, the huge animal rolled over on its back—and the 400-pound seal was swept up onto the humpback's chest between its massive flippers. Then, as the killer whales moved in closer, the humpback arched its chest, lifting the seal out of the water. The water rushing off that safe platform started to wash the seal back into the sea, but then the humpback gave the seal a gentle nudge with its flipper, back to the middle of its chest [see photo-

graph above]. Moments later the seal scrambled off and swam to the safety of a nearby ice floe.

It occurred to us that in all three of these encounters, the menacing behavior of the killer whales may have triggered a protective maternal response in the humpback whales. Even though they did not have calves that were at risk, they acted immediately and instinctively to counter the threat posed to a smaller animal.

When an animal provides maternal care to another that is not its own offspring, it is termed *allomaternal* care [see “Meet the Alloparents,” April 2009]. Maternal behavior may even cross species boundaries. Perhaps the most common example of that is when humans raise pets, but there are plenty of cases of domestic cats and dogs adopting orphaned animals. Such behavior has been documented less frequently in undomesticated animals—though in 1996 a mother gorilla at the Brookfield Zoo near Chicago made headlines when she gently picked up a three-year-old boy who had fallen into the gorillas' enclosure and carried him to the zookeepers' door.

When a human protects an imperiled individual of another species, we call it compassion. If a humpback whale does so, we call it instinct. But sometimes the distinction isn't all that clear.

ROBERT L. PITMAN and JOHN W. DURBAN are research biologists for the Protected Resources Division of the NOAA Fisheries Service, Southwest Fisheries Science Center, La Jolla, California. The events described here occurred on an expedition in collaboration with a BBC documentary film crew.