

## [Page 21 - The Whales in Cape Breton's Waters](#)

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tiin vestigial bones that were once hind legs, and remnants of body hair. But the ifclic is also specially adapted to its ??lter world. Its body is streamlined-- etcD the mother's teats do not protrude iDd it is believed breast muscles squirt the milk into the calf's throat\* It is propelled by the fluke, the separate tones of the forelimbs fleshed over into itibilizing appendages. The bouyancy of silt water and abundant food plus few predators encouraged enormous size. It cannot get a drink of fresh water and thus in all the ocean is actually a sort of desert creature~it extracts fresh wa? ter from the things it eats. The milk the aother provides for the young is a thick, cheesy substance, high in fats • and when the fats break down they provide, among other things, water. Ttt mammalian need for air has put the ??hale in man's way. iWhen it "blows" from the one or two nostrils atop the head, it is not blowing out water at all. It can DO Dore tolerate water in its lungs than cm a man. It is the body-warmed air va- pourizing as it hits the cold air that Bikes the familiar visible spout. VWhen a lAale is born the mother supports it to the surface to take its first breath; and 4ien she suckles her young, the ivhale generally turns on her side with her breasts just below the water line. The calf can suckle with the blowhole exposed to air, Ommanney writes: "The lungs. • .are siali for the size of the body, compara? tively only about half as big as those of other mammals. They lie high up in the ifidest part of the thoracic cavity with their longest surfaces pressed against the backbone, not extending downwards to? wards the breasts as the lungs do in land naamals or man. Thus the lungs of a whale occupy a position similar to that of the s-rim bladder of a fish and act as a bouy? ancy chamber...." Though proportionally sialler than the lungs of other mammals they have a much more efficient exchange of air, able almost completely to fill isd then collapse the lung at every in? spiration and expiration. And it "can store larger quantities of inspired oxy? gen in their muscles, using it very eco- nooically when beneath the surface."\* There seems to be no sense of smell as the nasal passages have no sensory linings but some scientists are not convinced of this. The eyesight is considered excellent but because of murkiness of water and the location of the eyes at the sides of the head, it is not the primary sense, v'arshall in Mind in the Waters writes: "Sound is the primary sense in the life of Cetaceans.... Most Cetaceans have evolved two kinds of voices. One voice is used predominately for social communication. The other voice is used for navigation and location of sub- acrged objects by echoi-location • inter? preting echoes made by the Cetacean voice. ...They send out an extremely powerful click or ping that moves through the water until it encounters an object of a differ? ent density than the water. The sound then bounces back in the form of an echo. The echoes are received by the whales or dol? phins throtigh their jaws and melon. They are then synthesized by the brain into im? ages and information • the distance, direc? tion, speed, shape, texture, density, and even the internal structure of the object." Peter Beamish told us of his recent experi? ments with a Humpback Whale, indicating that Baleen Whales probably don't have the food-finding sonar. "vVe



had a whale in captivity for a month last summer. It was a small Humpback Whale in a state of shock in a fisherman's net and would have died fairly quickly had we either left it or let it go free. It probably would have been predated on by Killer Whales. We kept it in a pen and got the best vet we could get hold of • Dr. Joe Geraci • and we were actually able to get it feeding after a couple of weeks. It was the only captive Baleen Whale in the world at the time, I studied the behaviour of the animal and the acoustics. Many other Humpback Whales came in and sort of visited during the month, and we made recordings. I don't think in northern waters you'll get songs like the record of the Humpback whale • that's a tropical warm-water thing • but we heard quite a few sounds similar to parts of the song. They certainly communicate back and forth. But we found no evidence at all that they have biological sonar. This opens up real complications as to how they find food, perhaps why they have such large brains. Remember, this is not a Toothed Whale. This is a Baleen Whale. It is generally agreed that all the Toothed Whales do have sonar and it has been suspected that the Baleen Whales don't--and our evidence indicates they probably don't have it. To show that's the case, we temporarily blindfolded this whale and ran it through a maze of different sized poles, and 32 times the animal could not negotiate the maze with the blindfold on but could with the blindfold off. At night, with the blindfold off, he could not navigate the maze • the same as with the blindfold on in the daytime. And this evolutionary divergence is a real mystery. No one really knows why the Baleen Whales don't have it and the Toothed Whales do." Whales communicate, and there is a considerable history of interpersonal whale relations. Scammon (1874) reports the whales with calves were easy to take because they would not abandon the young. "Another danger is, that in darting the lance at the mother, the young one, in its gambols, will get in the way of the weapon, and receive the wound, instead of the intended victim. In such instances, the parent animal, in her frenzy, will chase the boats, and overtaking them, will overturn them with her head, or dash them to pieces with a stroke of her ponderous flukes." Lacking eyebrows, fingers and so Cape Breton's Magazine/21