

# THE BEAVER ON PRINCE EDWARD ISLAND

by Randy Dibblee

The beaver is the world's second largest rodent — only the capybara (found in South America) is larger. Adult beavers average from 40 to 60 pounds and in rare instances can reach 100 pounds. As might be expected, their physiology is well suited to their lifestyle.

Rotund and awkward on land, the beaver's shape is "aqua-dynamic" in water, as it propels itself with powerful, webbed hind feet and tail. The beaver uses its most characteristic feature, the large, dorsally-flattened tail, to manoeuvre in water, to balance itself on land, to signal alarm, and as a heat exchange organ. Eyes, ears and nostrils are adapted to exclude water. The beaver's lips can be closed behind the incisor teeth to allow it to chew while submerged. Other physiological adaptations enable the beaver to remain submerged for up to 15 minutes. These include a low heart rate, high tolerance to carbon dioxide, highly efficient oxygen exchange in the lungs, and increased oxygen flow to the brain.

The second claw on each of the beaver's hind feet is divided in two and used like a comb in grooming. It helps in spreading an oily secretion from the anal gland that "waterproofs" the beaver's remarkable pelt: the stiff, brown, two inch long guard hairs and the soft, dense, wavy, grey, one-inch-long underfur. Air trapped in the dry underfur provides insulation. Although webless forepaws are not used in swimming, they are suited to digging and carrying sticks, stones, and mud.

The beaver's chisel-like incisors grow constantly, and are kept sharp because the softer inside surface wears faster than the outer orange enamel. With these incisors, beavers have been known to fell trees as large as 46 inches (1.2 m) in diameter.

## Population Variation:

