

## ABOUT THE COVER: ATLANTIC PUFFIN

The Atlantic Puffin (*Fratercula arctica*), one of three puffin species, is a striking bird, decked out in tuxedo black and white and, during the nesting season, sporting bright orange-red legs and feet, and an outlandish yellow, orange, and grey bill. The bill of all three puffin species earned puffins the nickname "seaparrot." Standing on the rocks near its nest with a half dozen sand-eels neatly lined up in its beak, the puffin is an elegant yet comic sight. After the breeding season they lose much of their color, their legs and beak fading to yellow, their white faces turning dull grey. They shed some of the bright plates from their bills, and immature birds have much smaller, duller, and less triangular bills, but otherwise resemble adults in winter plumage. The sexes are alike in plumage.

Atlantic Puffins breed on rocky coastal cliffs or islands around the North Atlantic from France north to Great Britain, Scandinavia, Iceland, Greenland, and south to the Maritime Provinces of Canada and coastal Maine. They are pelagic during most of the year, wintering as far south as Massachusetts. They leave Massachusetts waters in March and arrive on their breeding grounds in late March to early May. They are highly gregarious and, in the waters of the breeding grounds, they congregate several weeks before egg laying commences. They swim in groups, where males display by rising out of the water, flapping their wings, and snapping or flicking their heads. In the colonies antagonistic behavior is common, with birds walking hunched forward in threat displays, or actually fighting, bill grappling and tumbling downslope. Open bills display their bright yellow mouth lining. Site ownership displays include the "Pelican walk" with bill tucked into breast feathers. Their vocalizations consist of various grunting and purring noises, and trisyllabic growls. Puffins are monogamous and often do not breed until their fifth or sixth year. They may live several decades.

All puffin species dig burrows up to a yard in length ending in an expanded nest chamber. Their toenails are well adapted for digging into grassy slopes atop cliffs or islands. If suitable habitat for burrowing is not available they often nest in crevices and crannies on cliffs or in boulder rubble. The nest is lined with grass with some leaves and feathers mixed in. They raise a single brood. Females lay a single white egg, and both birds incubate although the female does most of the work. They sometimes give moaning calls during nest relief (i.e., when one parent leaves the other at the nest). The incubation period and the time to fledging are each about six weeks.

Both adults feed the chick on a diet of fish, often capelin or sand-eels. The adults have a more varied diet which includes crustaceans and squid. They forage mostly at shallow depths up to fifty feet, and swim by "flying" through the water with wings beating, and feet trailing behind, a characteristic of all alcids.

Puffins tend to be tame and suffered population declines in the nineteenth century from eggng and overhunting. Although many of their colonies have stabilized, many puffins are killed each year in fishing nets, and overfishing can reduce the local food supply and disrupt reproduction. Atlantic Puffins have been reintroduced to several islands off the Maine coast where they had previously bred. This ambitious program, sponsored in part of the National Audubon Society, involves translocating and hand-rearing puffin chicks from established colonies to islands where puffins previously bred. Puffins tend to be faithful to their natal island, and hence some of the translocated chicks have returned to breed at their new home. The National Audubon Society sponsors boat trips to Eastern Egg Rock and Seal Island, Maine, where puffins have been successfully reintroduced. In addition, several commercial trips are available which allow viewing puffins at close range from blinds on Machias Seal Island, Maine. The photographic possibilities are virtually endless, and few ornithological treats can match a visit to a puffin colony. It can only be hoped that a global conservation strategy will ensure the continued survival of these marvelous birds.

W. E. Davis, Jr.

### MEET OUR COVER ARTIST

Paul Donahue's artwork has been widely published in the bird literature. Paul spends about half of the year leading tours or working in the rainforest canopy of Manu Lodge in Manu National Park, Peru. The remainder of the year he resides in Machias, Maine, where he paints during the winter after a fall of hawkwatching. Paul can be reached at P.O. Box 554, Machias, Maine 04654.

The Atlantic Puffin drawing first appeared in a catalog of Victor Emanuel Nature Tours, Inc. (VENT). This is the fourth time that Victor Emanuel has kindly given Bird Observer permission to use one of Paul's drawings that had previously appeared in his catalog. VENT conducts birding tours around the world. Their address is P.O. Box 33008, Austin, Texas 78764.

M. Steele