



Horned Puffin

Natural History Notes: Puffins



Tufted Puffin

The horned and tufted puffins (*Fratercula corniculata* and *F. cirrhata*) shown in breeding plumage in this mobile belong to the auk family (Alcidae), a group of diving seabirds that also includes razorbills, murres, dovebies, guillemots, murrelets, and auklets. Both species are residents of the northern Pacific Ocean. The third member of the genus, the Atlantic puffin (*F. arctica*, a slightly smaller bird resembling the horned puffin), inhabits the northern Atlantic Ocean. Sailors often call puffins “sea parrots” because of their large bills and colorful appearance.

Horned puffins breed from the Queen Charlotte Islands of British Columbia and Kurile Islands in the Russian Far East, north to Cape Lisburne, Alaska and Kolyuchin Bay in northeastern Siberia. Tufted puffins are found throughout the same range, but they also nest as far south as central California and northern Japan. Nesting is restricted to islands and precipitous coastal sea-cliffs and headlands.

Most horned puffins nest in natural cracks and crevices in sea-cliffs and cavities in seaside rock slides and boulder piles. However, some birds use their sharply clawed webbed feet and large, powerful, blade-like bills to dig nesting burrows up to about 3-4 feet (1-1.2 meters) deep. In contrast, most tufted puffins excavate burrows in sparsely vegetated areas on islands and coastal headland terraces. Typical burrows measure about 8-10 feet (2.4-3.0 meters) long, but after several years use, some may eventually reach lengths of 25 feet (7.6 meters). Some tufted puffins also nest in cracks and crevices in sea-cliffs, particularly at the northern limits of their breeding range, where summers are short and permafrost helps keep soil-cover frozen. Both species lay single white eggs that hatch in about 40-45 days. The chicks leave their nest sites and go to sea when they are about 40-50 days-old.

Puffins are capable of flying 100 miles (160 kilometers) or more from their nesting colonies to search for food. However, many birds forage much closer to their nest sites in nearshore environments where cold, nutrient rich waters are forced to the surface by winds and tidal currents. The upwelling waters attract and concentrate prey, and when upwelling conditions are strong, thousands of puffins and other seabirds converge on these areas to feed.

Like other members of the auk family, puffins obtain their food by diving. They use their short, powerful, cupped wings to literally “fly” underwater to find and pursue prey; their webbed feet act as rudders, allowing them turn quickly. Small forage fish, particularly Pacific sand lance (*Ammodytes hexapterus*) and capelin (*Mallotus villosus*), are primary food items. However, these agile divers also take a variety of invertebrates, including small squid and euphausiids.

Horned and tufted puffins are much less colorful during the nonbreeding season. Their bright reddish-orange feet become paler, the immaculate white sides of their heads turn dark dusky gray, and they shed the bright, yellowish, basal portions of their bills. Tufted puffins also lose their distinctive, long, creamy yellow head-plumes.

Because puffins are divers and spend most of their lives at sea, they are particularly vulnerable to oil spills and monofilament gillnets used in high-seas driftnet fisheries. Burrow-nesting individuals are also vulnerable to introductions of predators, such as foxes and rats, in their insular nesting habitats.

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