

The Curious Case of the Puffin Face By Morgan Barnes

When most birds hear the word “winter”, they think of migrating several thousand miles to the warm tropics, or finding a nice, well-stocked bird feeder...but not the puffin. For these birds, winter means something a little different: part of their face is going to fall off! While that may sound concerning, it’s actually a normal part of the puffin’s life history. Before we delve into how and why these birds lose part of their face, let’s learn a bit more about puffins.

There are four species of puffin: the Atlantic Puffin, Horned Puffin, Tufted Puffin, and the Rhinoceros Auklet. These birds live a double life, spending their summers nesting on rocky cliffs and islands, and spending their winters foraging out to sea. Puffins are round, stocky birds, often described as “flying footballs”.



An adult Horned Puffin in breeding plumage; inset: adult Horned Puffin after shedding bill, and losing breeding plumage.
Photo credit: Morgan Barnes

During spring and summer, puffins display their characteristic brightly colored bills, with oranges, yellows and reds. Their feathers, called plumage, are a handsome solid black, with varying amounts of white plumage that differs between species. Unlike many birds, both male and female puffins show this combination of brightly colored bill and contrasting body plumage.

When puffins return from the open ocean in spring, their colorful bills can only mean one thing: it’s time to settle down and raise a chick. After a swim together, a pair of puffins will touch beaks. With a nod from both birds, they will mate for life.

One of the purposes of the large, orange bills is to show that the individual has reached sexual maturity. Recent findings show that these abnormally large bills also help to regulate the birds’ temperature in the warm summer. The larger bills also help puffins to bring back fish to their young chicks, carrying as many as 10 fish at once.

When the chick leaves the nest, both parents prepare for the upcoming winter by shedding the outer part of their bill, leaving a smaller, less colorful bill. Additionally, puffins lose their strong contrasting plumage, and revert to a more mottled, gray color. It is currently unknown why puffins shed part of their bill each winter, only to regrow it in the spring for the next breeding season.

One theory is that the bright colors of the bill make a puffin more obvious to predators, so losing it in the winter makes them harder to spot. Puffins are famously mediocre fliers (although they make up for it by being fantastic swimmers), and perhaps having a heavy bill on your face makes it more difficult to take off from the water.

While you won’t find any of these birds here in the Gulf, some familiar faces here in Texas show similar changes for the breeding season! The American White Pelican, for example, grows a

horn on its bill to indicate a breeding individual. The male mallard has its characteristic green head during breeding season, but reverts to a less showy brown head during non-breeding times. Keep an eye out for other breeding birds as spring comes, and be thankful that you don't have to lose part of your face to attract a mate!