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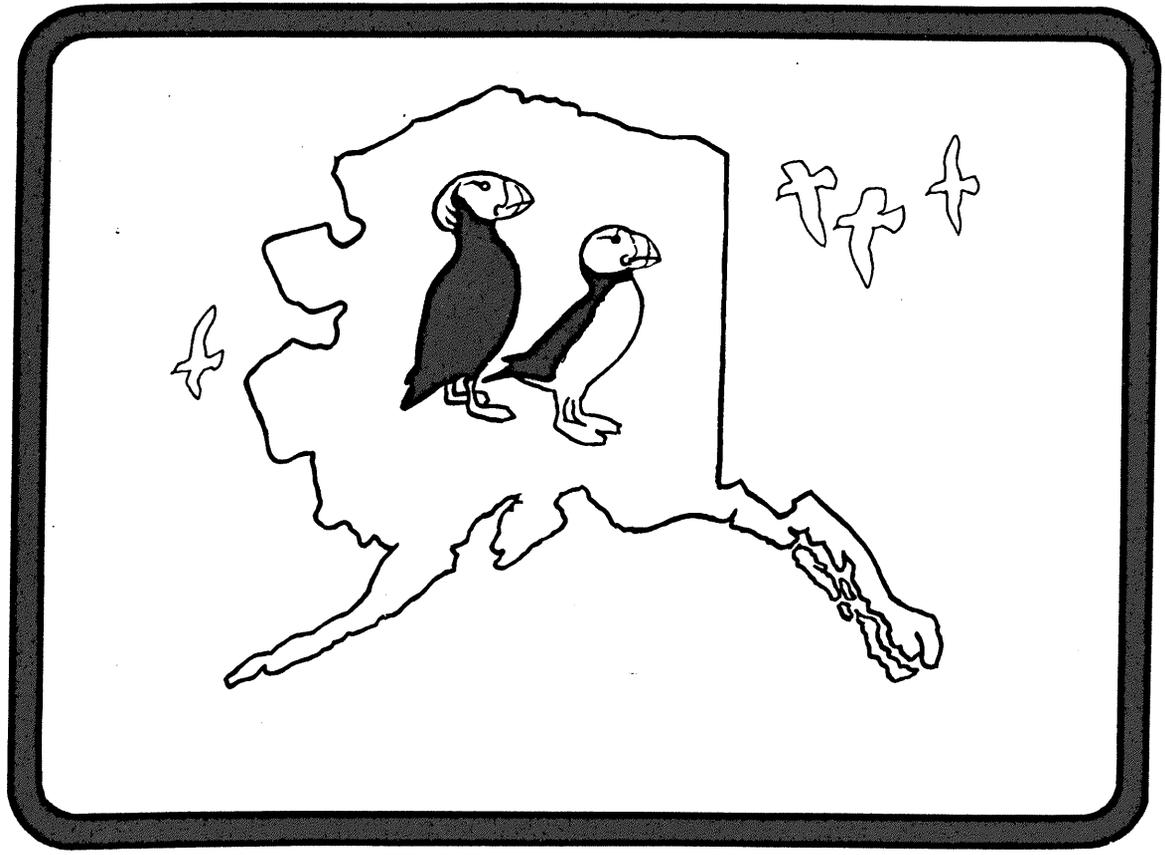
Wildlife Portrait Series No. 4

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A host of sea birds--Alaska
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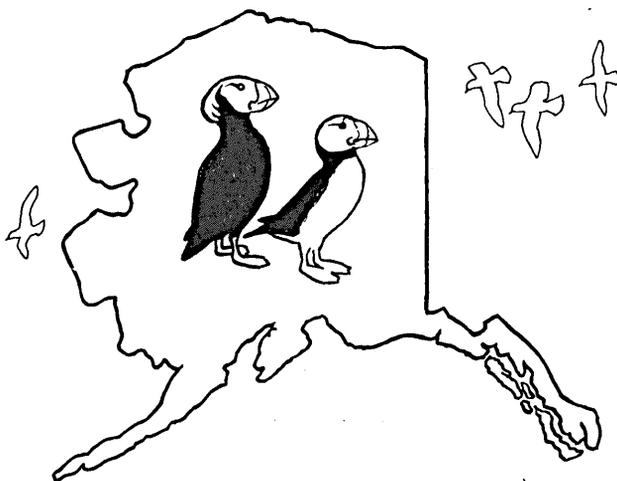
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a host of seabirds Alaska

Reproductions of paintings by Bob Hines



U.S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Washington, D.C. 20240



A HOST OF SEABIRDS - ALASKA

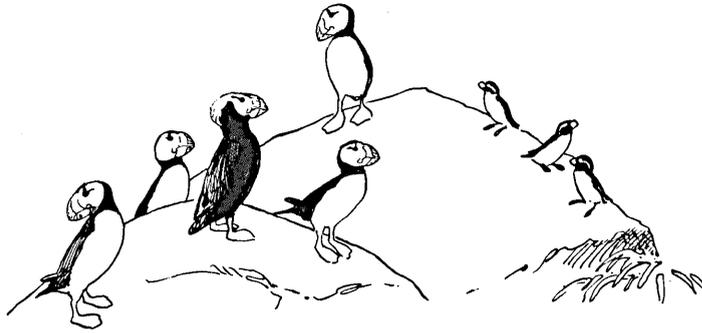
Brightly colored puffins, seldom-seen shearwaters, noisy colonies of gulls — the coastal and marine bird resources of Alaska challenge the limits of our comprehension. In the brief moment of Alaska's summer a host of seabirds are drawn to her rich marine waters in greater numbers of species and individuals than are found in the rest of the northern hemisphere combined.

Each year as many as 140,000,000 seabirds feed from the bountiful waters off the coast of Alaska. Some come ashore briefly, in spring and summer, congregating on sea stacks, islands, and rugged mainland cliffs, to nest and rear their young before returning to their true home, the sea. Many of these nesting birds have come from thousands of miles away; from the South Pacific or even Antarctica.

What lures seabirds are the very rich marine waters off Alaska. Each spring as the Arctic ice pack recedes, turbulent currents, strong winds and high tides cause a welling up of nutrient-rich water from the depths of the seas; a rich food fuel to the marine life at the surface layers of the sea.

The food chain of marine life begins with tiny microscopic plants, the phytoplankton. North of the Arctic Circle summer days may be twenty-four hours long, and Alaska's turbulent waters keep minerals churning to the surface where these phytoplankton combine these elements with sunlight to produce a lush plant growth. Small marine animals feed on these plants and are in turn the food of larger fishes, birds, whales, and other Arctic marine animals. In death, these larger animals return nutrients to the sea, ensuring that the richness of this ecosystem is continued. The waters churn and in their endless motion the fascinating life of the Arctic seas is perpetuated.

In the summer of 1978, National Wildlife Artist Bob Hines travelled the coast of Alaska from the Chukchi Sea through the full length of the Aleutians to the wooded islands of Southeast Alaska. His observations of seabirds on that trip inspired the wildlife portraits of this series.



PARROTS OF THE SEA

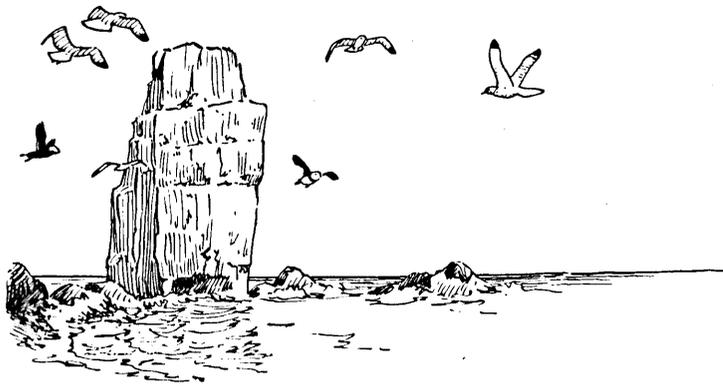
Horned and tufted puffins sport bright colors amid the grey of coastal fogs. These bright colors have earned them the name, parrots of the marine world. Their clown-like behavior also wins the affection of those who will take the time to observe them.

The study of puffins is fascinating. A puffin hatches in an underground burrow, under beach boulders, or in the crevice of a cliff. After about five weeks its parents leave, and it must find its way alone to the sea and to its wintering grounds far offshore.

In flight puffins are awkward. Their stubby wings on such a fat bird make flying difficult; but by vigorous flapping, they can fly short distances. Underwater puffins are more efficient. The large bill is adapted to hold many fish at once. Small projections and grooves on the roof of the mouth and tongue retain the first-caught fish while it continues to chase others. It uses its stubby wings to propel itself underwater.

Puffins are playful and display all sorts of interesting antics. They stroll around idly, pushing and rubbing one another in a friendly fashion and then may take a sudden notion to dig an unnecessary hole, frantically, or pick a mouthful of seaside flowers. Much remains to be learned about these birds but these actions may serve to strengthen the bonds between mates.

The smaller birds in the scene are parakeet auklets. They are of the same family, Alcids, as the puffins. Nesting deep within the rubble of rocky shorelines, they are relatively safe from predators. Most nests are inaccessible to human observers as well. Scientists do not yet know whether they nest in small scattered groups or as solitary pairs. Inaccessibility has enabled seabirds to keep many secrets from men.



MARINE APARTMENTS

High rise sea stacks in rich coastal waters provide protected habitats for a wide variety of cliff-nesting birds. From only a few pairs up to a million birds may crowd onto individual islands and sheer cliffs of headland capes that are protected by the surrounding sea from predators and other disturbance. Isolation at nesting time is vital to the well being of these crowded colonies. Any major disturbance could cause a panicked flight, and the tumbling of eggs and young off the cliffs.

As these offshore sea stacks are particularly desirable nesting sites, one might suppose that competition among the many types of birds present would be great. Actually, the birds share these areas, each occupying its own part of the area. Here, for instance, double-crested cormorants choose nesting sites atop the rocks, while the black-legged kittiwakes and the common murre nest on the narrow ledges of the cliffs and other species nest in burrows under and away from the rocks.

Subtle differences in feeding habits also eliminate competition for food supplies. Even when different bird species feed on the same fish species, they may fish at different times of day, at different water depths or by different methods, so that they take fish of different ages and different sizes and don't overtax the supply.



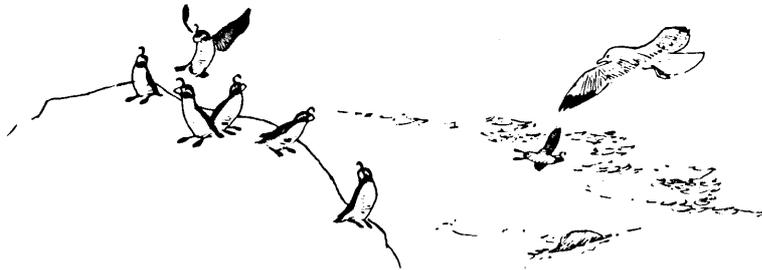
HIGH ARCTIC SUMMER

In the brief Arctic summer, jaegers, terns and other marine and coastal birds rear and feed their young in a minimum period of grace. All too soon, the harshness of the Arctic winter will send them south throughout the Pacific world.

In the foreground parasitic jaegers attempt to raid the nest of Arctic terns. While the adult terns put on an aggressive display to frighten back the jaegers, their tiny, motionless chicks look like three more scattered rocks. If the young survive, by autumn they must be ready for one of the longest seabird migrations. Arctic terns journey all the way to Antarctica for the winter.

With their camouflaged coloring, the tern chicks blend well with their rocky surroundings. Similarly, drab plumage on the upper side of shearwaters and petrels may also camouflage them from the view of aerial predators, both on the sea and on nighttime roosts on land. On the other hand, conspicuous coloring also plays a significant role. Such springtime adornments as enlarged bills, brighter colors, and new plume feathers attract seabirds to one another at mating season.

Other special adaptations of seabirds include oils from special glands which give their feathers a waterproof finish, and a unique gland system to rid the body of high concentrations of the surplus salts they take in with sea water.



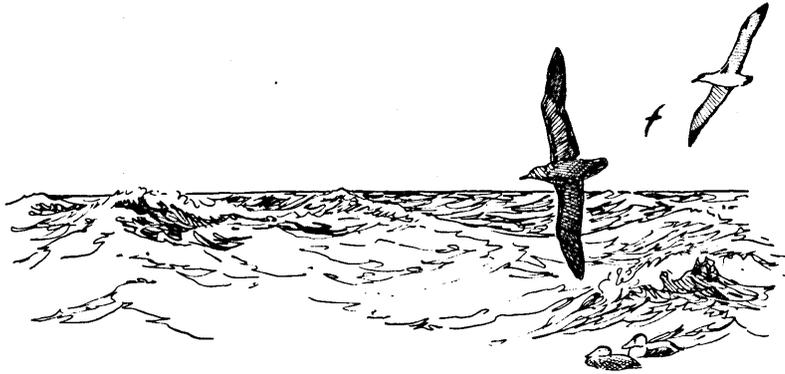
UNIQUE ALASKANS

Alaska hosts several birds that nest nowhere else in this Nation. The red-legged kittiwake nests only on a few islands in the Bering Sea. The crested and least auklets are more scattered, but don't extend south to the lower 48 States. They nest as depicted here in rock crevices, close to the surf.

The Arctic fox on the shore represents the most thoughtless action man has yet imposed on the seabirds. In the late 1800's and early 1900's, ambitious fur farmers released Arctic foxes on almost every sizeable island in Alaska. The food supply on the islands was, of course, seabirds. Foxes ravaged seabird colonies while fur coats were the fashion rage of the 1920's and 30's. Then the Great Depression came. Fur coats became an unaffordable luxury, and fur farming waned, then disappeared. The damage was already done. The foxes are on most islands to stay.

What was the pristine environment like on these islands? Today we have only remnants of the indigenous seabird populations. In many cases, we don't know what birds preceded the fox. We know nocturnal birds not pictured here, such as Cassin's auklets, ancient murrelets and storm petrels, suffered the greatest devastation. They nest in burrows, where they could least resist the foxes. Pairs of most species produce only one egg each year, making population replacement slow, sometimes too slow to maintain the colonies. Today two-thirds of the world's Cassin's auklets nest on tiny islands of the Sandman Reefs, islands that, because they were too small, escaped the introduction of foxes.

How many other islands, now empty, once harbored more varied seabirds? Only empty burrows and nests and foxes tell those stories today. Tomorrow, with wise conservation, these islands may once again host the full, colorful array of Alaska seabirds.



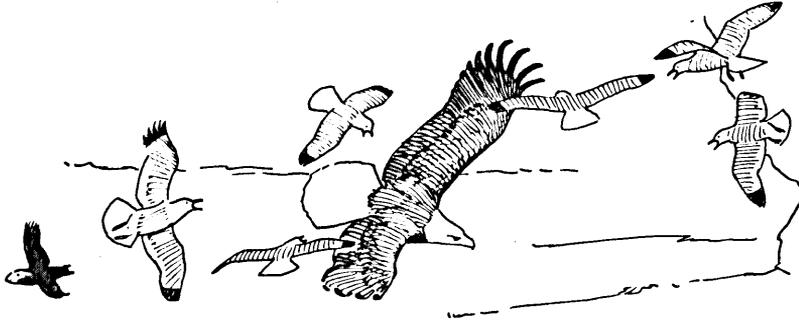
A HOST OF MILLIONS

The midnight sun casts its reflection on the sea alive with birdlife. The storm petrels, shearwaters, and albatross depicted here spend most of their lives far out at sea, well out of the sight of any land. They range across thousands of miles of open water, coming to Alaska's rich summer feeding grounds.

Four fork-tailed storm petrels dance into the scene from the left. Among the smallest and most delicate of the seabirds, they dart in erratic patterns over the water. Skimming along close to the waves searching for food, they frequently lower both legs together and patter along the water's surface, or by lowering one leg at a time, appear to run across the water. As the waters grow rougher, the delicate storm petrels may flock to the smooth wake of a ship to feed out of harm's way. Thus, storm petrels following a ship are thought by mariners to foretell a coming storm.

A black and white Laysan albatross skims in from the right. It glides effortlessly on long slender wings held almost motionless, then settles gently on the water to feed on fish and squid near the surface. In taking off, the albatross runs over the water, flapping its wings at the top of the waves until it soars upward into the wind. The albatross's great ocean wanderings and its long life — it lives thirty to eighty years — have inspired many a poet.

Less graceful than the albatross, the short-tailed shearwater in the foreground flaps its wings periodically as it glides very low over the waves. Shearwaters, with the storm petrels, migrate from the southern hemisphere, congregating in enormous flocks totalling 100,000,000 birds in Alaskan waters. As these shearwaters come across a great concentration of food they churn the water into a froth as they dive beneath the surface to capture their prey.



HOME DEFENSE

Black-legged kittiwakes cascade off the cliffs, mobbing a bald eagle. Through combined effort, they create enough noise and commotion that they succeed in driving away the eagle.

Many eagles, peregrine falcons, and other raptors build their nests on Alaska's rugged marine cliffs, drawn by the abundance of smaller birds and marine life. The eagle pictured here may intend to snatch a kittiwake chick to feed his own young.

Kittiwakes are a very social species. Their rookeries are noisy and conspicuous, and no doubt attract predators. The larger the colony, however, the more productive it is likely to be. There are several reasons why productivity increases with size. At mating time, an abundance of actively courting birds stimulates the entire colony. The more excited these gulls get, the higher the percentage of the birds that breed.

The protective behavior exhibited in the painting is also more effective for larger colonies. The larger the colony, the greater is the proportion of centrally located, protected nests to the number of more vulnerable, outlying nests. Each year the first returning adults claim the safest, centrally located nests. Younger birds and late arrivals take up the less desirable positions on the edge of the colony.

Kittiwakes will crowd together even when alternative nesting sites are plentiful. Crowd is the word. Some Alaskan kittiwake colonies may host 100,000 birds at a time.



DEPARTMENT OF THE INTERIOR U.S. FISH AND WILDLIFE SERVICE

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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