Photo by James Faro

James Faro received his B.S. and M.S. degrees in wildlife management at Humbolt State College. He has worked in Alaska for several years, and is currently area game management biologist on the Alaska Peninsula.

## WILDLIFE PROFILE:

## The Emperor Goose

by James Faro Game Biologist King Salmon

STARTLED BY the high-pitched "kla-ha," "kla-ha," the man on the beach turned just in time to watch a flight of seven shortbodied geese pass directly over his head. The non-resident hunter and his guide had landed on the Alaska Peninsula beach to pick up some small Japanese glass fishing floats and the strong wind had carried away all sound of the flock until the birds were almost upon him. His many years of experience in hunting waterfowl did not help him in identification-he was stumped. In response to his question, his guide replied, "Oh, they're beach geese."

This is a typical introduction to a unique Alaskan resident, the emperor goose. Its scientific name, *Philacte canagica*, aptly describes the preferred habitat of the "emperor." Literally translated, it means "seashore loving," so the guide's identification of the birds as "beach geese" was more than just colloquially correct.

The emperor is a medium-sized goose weighing about six pounds and having a wing span of a little over four feet. Its most distinguishing characteristic is a white head which contrasts with its scaled blue-gray body. The tail is white and its legs and feet are a striking yellow-orange. Both sexes are identical in appearance. Many persons believe that the emperor is the most handsome of all North American geese. However, it is not widely known because of its limited distribution.

The emperor goose is primarily a

resident of Alaska. In late May and June, mated pairs of geese arrive in the flat country between the Yukon and Kuskokwim rivers. Their nests are constructed of dead grasses, mosses or pieces of drift gathered by the female. Frequently, the nest is lined with down plucked from the parents. The female lays from three to eight eggs (averaging five or six) and settles into the waiting game of incubation. When the eggs hatch, both parents share in rearing the young birds.

Life is not easy for a young emperor goose. Even before it has the chance to hatch, it faces a host of dangers. If the nest is left unguarded, parasitic jaegers, glaucous gulls and the arctic fox will capitalize on the opportunity to have a meal of eggs or newly hatched goslings. In the past, Eskimos living in the area relied heavily upon the nesting emperor goose for subsistence. Not only did they raid the nests for eggs, but in August when the adults had moulted their flight feathers and could not fly, the Eskimos drove them into traps and killed them for meat. The introduction of technological advances into Eskimo society has lessened their dependence on the emperor goose.

The emperor goose family lives in the tundra and on flat marshy islands close to water. The birds feed primarily upon insects and aquatic life, but switch almost entirely to tundra berries in the fall. By early September, the young

(cont'd. on page 20)

picture worse, the high seas sampling at Adak by the Fisheries Research Institute three months ago showed very poor survival of the once abundant 1969 stocks in the North Pacific. The severe conditions inshore apparently played havoc with production from the 1970 escapement and also effectively reduced marine survival of 1969 immatures.

The unusually poor forecast for 1973 again raises the problem posed by foreign fleets fishing on salmon reared in Alaska.

The Japanese high seas salmon gillnet fisheries, for instance, harvested about 1.2 million sockeye from the 1972 Bristol Bay run. This was nearly 20 per cent of the total return and more than 30 per cent of the total harvest of Bristol Bay sockeye that year. The proportionately large 1972 high seas catch came in a year when the total inshore returns to four major Bristol Bay systems were below established escapement goals.

It is possible that the Japanese will again catch a high percentage of the Bristol Bay run in 1973, and catches of this proportion obviously are a real threat to maximum sustained harvest management of these stocks as returns to a number of systems may well fall below basic escapement requirements.

Despite the concerted and longstanding efforts by the state to halt harvest of Bristol Bay sockeye on the high seas, the catch by foreign fleets continues to be an important factor in the economics of the fishery and in the management of the resource.

Larry C. Van Ray holds a master's degree in wildlife biology from South Dakota State University and since 1969 has served as the Bristol Bay area management biologist for the department's commercial fisheries division.

The terms "boom or bust" have often been used to describe Bristol Bay's commercial red salmon fishery. Consider the last two years for example: the eighth largest catch (nearly 21 million) red salmon in the 78-year history of the fishery was made in 1970, while only two years later, in 1972, the catch (just over two million) was one of the smallest since the fishery began in 1893.

The first wholesale value of commercial fishery products harvested in Bristol Bay averaged more than \$30 million annually during the past 12 years. Although all five species of Pacific salmon are harvested in Bristol Bay, red salmon have made up 87 per cent of the total harvest during this 12-year period. Since 1962, an average of approximately 2,600 units of gill net gear and 1,900 vessels have been registered annually to fish Bristol Bay. Every year, from 10 to 13 shore-based canneries gear up to process the salmon harvest.

While Bristol Bay fishermen are accustomed to the hardships of a rags-to-riches economy, it looks like a long siege of small runs ahead. The great Bristol Bay salmon production potential from 1969 and 1970 brood years probably has been reduced by natural elements. If this has occurred, it may be several years before the salmon resource in Bristol Bay produces a catch that even approaches the \$30.5 million average wholesale value of the last 10 years.

Bob Paulus was employed by the department in 1967 and has worked as commercial fisheries biologist in the Juneau, Anchorage and Bristol Bay areas. He holds B.S. and M.S. degrees from Central Michigan University.

**EMPEROR** (cont'd from page 2) birds that have avoided predators and accidents are flying. About this time, the family group begins its migration south.

The migration route of the emperor goose is primarily along the coast of the Bering Sea. By late September, they have arrived on the Alaska Peninsula where they gather in flocks of tens of thousands along the major bays and river mouths. It is at this time that sport hunters take a limited harvest of the geese. If killed while still feeding on tundra berries, the emperor goose has excellent flavor and makes a fine table bird. Once the birds switch over to a diet of marine life, the meat assumes a flavor unpalatable to "cultivated" taste buds. However, the strong taste doesn't seem to bother native Aleuts that live along the Alaska Peninsula and on the Aleutian Is-

As the season progresses toward winter, emperor geese continue to move west along the Alaska Peninsula. By late winter and early spring, most of the birds are scattered across the 1,100 miles of the Aleutian chain. Some geese, however, cross the Alaska Peninsula and winter on its south side or cross Shelikof Strait to Kodiak Island. In April, the geese begin their return to the coastal areas of the Yukon-Kuskokwim area to repeat the life cycle of the species.

During the winter, a few emperor geese straggle to other areas. Casual observations have been made as far south as California and Hawaii and as far west as Siberia. So restricted is its distribution, even in Alaska, that most residents have never seen one. Nature seems to have placed a high value on the beauty of this marine bird, insisting that those who would enjoy it must travel to the lands of the emperor goose.



## Alaska FISH & GAME

TALES

TRAILS

