

Raising an Eaglet



by Bob Armstrong and Marge Hermans
from Southeast Alaska's Natural World

Peep . . . peep . . . peep. The faint, high-pitched sound is coming from one of two dull white eggs lying in the center of a gigantic jumble of sticks near the top of a large spruce tree. The eggs lie in a small depression lined with soft moss and grass. Crouched just above them, a female bald eagle shelters them with her body, her wings slightly opened. It is enough to shield them from the chilly spring breeze that blows in from the salt water nearby.

The egg “peeps” again, wiggling and jerking as the tiny eaglet inside pecks at the shell. It is hammering with a small bony “egg tooth” on the top of its beak. Soon a crack and then a small hole appear in the egg. A few hours later, the eaglet emerges, wet and bedraggled in a coat of pale gray down.

The newly hatched eaglet is totally helpless. Her eyes are not open. She can barely move around, and she cannot feed herself. She will not be able to maintain her body temperature for several weeks. Right now she weighs about three ounces, but in three months she could well weigh 40 or 50 times that much.

According to Mark V. Stalmaster, author of the fascinating book *The Bald Eagle*, she may eventually gain up to 6.3 ounces a day. That is the fastest growth rate of any North American bird.

Responsibilities of Parenthood

Raising young eaglets and preparing for them is a tremendous investment for bald

This eaglet hatched about May 22 and is in its secondary down plumage. The photo was taken on June 14.

Parents of the eaglet shown on the preceding page. “Mom” is on the right, “Pop” on the left. Eagle parents devote about six months to raising their young.



eagle parents. It means about six months of hard work and staying almost constantly within a limited nesting territory.

If a female bald eagle has survived the winter in good condition, and if she and her mate have successfully built a nest together, she will lay one or more eggs (in most cases, two) in late April or early May.

For the next 35 days the female and her mate must incubate the eggs, keeping them warm, protecting them from predators such as crows or ravens, and turning them approximately every hour to keep them evenly warm and prevent the membranes of the embryos inside from sticking to the shells.

The male does not feed the female during this time, as some birds do. Instead, he forages to feed himself while the female is on the nest, then returns to relieve her so she can fly off and eat.

Even before the eggs hatch, eagle parents begin gathering food for their young. Perhaps alerted by the peeping sound as young eaglets work to break out of their shells, the adults begin caching food in the

nest. They bring small fish—maybe herring or sand lance—and larger ones—a walleye pollock, perhaps—providing the same amount of food they will provide when the nestlings are older, as if to be sure there will be enough.

When the eaglets are young, the parents must tear the food into tiny bits, dangling it from their bills so the hungry chicks will gobble it down. As the eaglets get older, they may squeal and scream for food, grabbing at their parents’ bills, shoving and pecking at each other, and snatching sometimes enormous chunks of fish and gulping them down.

Nesting eagles usually bring food to their young at least once every few hours, and they will need to do so for some 11 to 12 weeks until the eaglets fledge and leave the nest.

The Challenge of Getting a Meal

Nesting eagles stay close to their nest sites—usually within about one square mile. Typically they perch on tall trees or

snags where they can see large areas of water—and that is how we often see them, their white heads clearly visible against the dark green forest behind them. From their perches the birds may wait for hours for fish to swim by near the water's surface, or for dead or dying fish to float by or wash up on the beach. Eagles have incredibly powerful eyesight. We've seen them spot fish and zero in on them from thousands of feet away.

But obtaining fish from the water is no easy task. Watching a bald eagle swoop down from its perch, snatch a large fish from the water, and grandly carry it to a waterside perch is one of the more exciting events Southeast residents and visitors are sometimes privileged to enjoy.

We have watched very carefully to see exactly how eagles perform this difficult feat. We saw that some eagles are better at it than others, and we never saw an immature eagle succeed at it. (The immatures nearly always missed their mark by a considerable distance and usually ended up grabbing talonsful of air several feet above the water.) We believe it must take eagles years of practice to perfect this hunting technique.

Eagles may also pirate their meals from others. We've seen eagles steal fish from river otters, ospreys, mergansers, gulls, and

of course each other. Several times we have seen an otter catch a flounder or a sculpin, then swim ashore to eat it. As the otter tore the fish apart for its meal, a bald eagle swooped down at it with such speed and surprise the otter dropped the fish and fell backwards into the water, while the eagle—still airborne—grabbed the fish and flew off with it.

Eagles also take fish injured by whales and sea lions, or driven to the surface by loons, seals, or salmon. Several times we have watched eagles follow feeding marbled murrelets, swoop to the water's surface, and emerge with talonsful of sand lance that the murrelets had driven up from deeper water. More than once we've seen an eagle swoop down and steal a small duck shortly after it had been taken on the tidal flats by a northern harrier.

Southeast Alaska's widespread commercial, sport, and subsistence fisheries must provide a considerable number of fish carcasses that eagles can pick up for food. Most fishing in Southeast takes place from May through August, the time when bald eagles are nesting and gathering food for their nestlings.

Fish that are injured and thrown back into the water often swim about at the sur-



Beginning in July carcasses of spawning salmon become important food for eagle parents. For newly fledged juvenile eagles, salmon carcasses are probably the most important food available.

On July 9, three and a half weeks after the first photo in this article was taken, the same eaglet now has a complete set of juvenile feathers. Despite its size, it will still need several weeks of care and feeding by the adults. It was spotted flying from the nest in mid-August.



face, where eagles could reach them. Fish that die usually sink to the bottom, beyond reach; but members of the cod family, such as walleye pollock, float because their gas bladder expands when they are pulled up quickly from deep water.

When researchers studied the stomach contents of some 325 nesting eagles (birds killed under Alaska's predator control program, in effect from 1917 to 1952), they found pollock and cod in about a third of them. They also found that pollock were the most frequently consumed fish during May and June before salmon spawning began and during a critical time for eagles nesting and raising young.

Care Until Eaglets Leave the Nest

Besides feeding their youngsters several times a day, eagle parents also must "brood" them, or keep them warm. Even though they go through two different plumages of downy feathers, eaglets are unable to keep

themselves warm for a number of weeks.

For the first month, one or the other parent is seldom away from the nest. Once nestlings are about a month old, they begin sprouting flight and contour feathers amid their down, but still the parents must protect them if there is rain, wind, or too much sun.

When the parents are away from the nest, older eaglets seem to prepare for their adult life by playing. They may flap their wings, jump around in the nest, fight with one another, or play tug of war with sticks. Some eaglets are so aggressive they attack their parents when the adults bring food to the nest; in that case, the parents just fly by the nest and drop food off, faithful to their duties but unwilling to put up with their offspring!

Once eaglets have developed most of their wing and tail feathers (usually when they're 11 to 12 weeks old), they are ready to fledge, or leave the nest. Some leave on their

own. Others need to be lured away, perhaps by a parent flying overhead with food and calling to them.

In *The Bald Eagle* Stalmaster estimates that perhaps half of all fledglings fall to the ground after their first flight. Whether they fall or successfully land in trees near the nest, the parents will often, but not always, bring them food. Some studies found that most fledglings stayed within a mile of the nest for six to eight weeks, and some eaglets returned to the nest to pick up food their parents had cached.

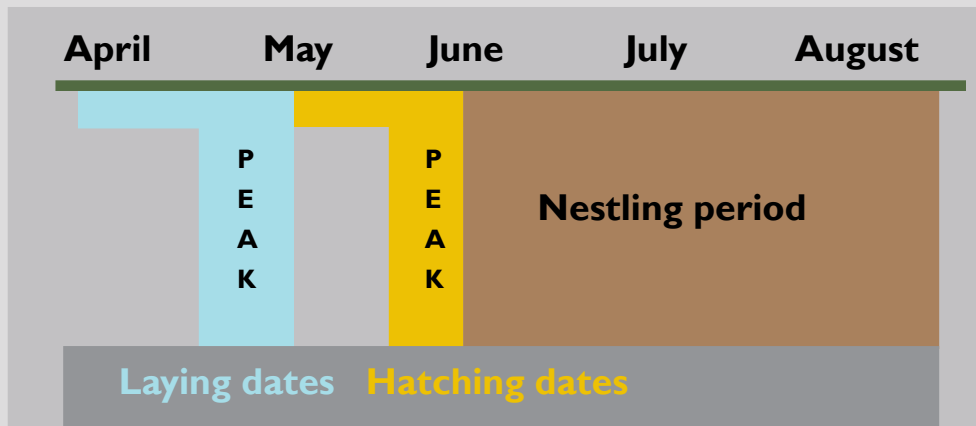
We can hardly overstate the value of spawned out salmon to juvenile eagles that have left the nest but are not yet very skilled at hunting. Juvenile eagles are probably very much dependent for their survival on salmon carcasses washed up on beaches or river banks, or dragged to shore and abandoned by bears.

As winter approaches, juvenile eagles tend to travel more widely than adults. Some young eagles travel as far south as British Columbia or Washington state in search of accessible food. Meanwhile their parents—relieved at last from their tremendous responsibilities—are free to forage beyond their nesting territories, perhaps even traveling to winter feeding grounds such as the Chilkat Valley near Haines. Those that are likely to nest again the next year, however, may remain near their territory or occasionally return to assert ownership throughout the winter. ●

Timeline for Raising an Eaglet

This chart, based on work by Juneau ecologist Scott Gende, shows the timing of egg laying, hatching, and rearing of eaglets at nests in the Juneau area.

Most eaglets, like the one shown in the photo, are ready to leave the nest by mid-August.



The Key to Nesting Success

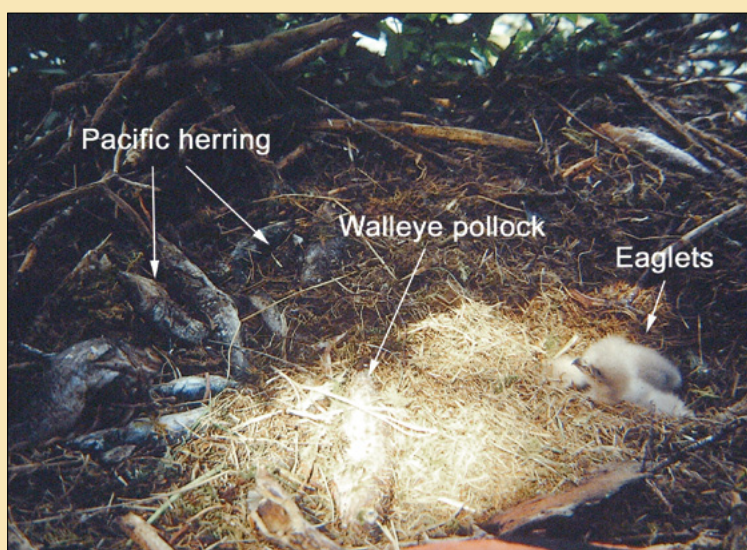


When Scott Gende, an ecologist with the Pacific Northwest Research Station in Juneau, studied nesting eagles in the Juneau area, he found that once eaglets hatched, their parents were usually successful at raising them to leave the nest as fledglings. But among

in their nest even while the eggs are still incubating. In the more than 100 nests he visited Gende found a variety of fish cached: Pacific herring, Pacific sand lance, eulachon, walleye pollock, sculpins, flounders, rockfish, Dolly Varden, and pink salmon.

This photo shows prey cached at one nest Scott Gende climbed to in May, just after the eaglets had hatched. Note the two eaglets huddled together to the right.

Scott Gende



the nests that failed to produce fledglings, 95 percent failed during the incubation period.

Gende believes this indicates how crucial it is that eagle parents find adequate food during the early weeks when they are incubating their eggs.

He found the most successful bald eagle nests were those located where fish could be obtained most easily in April and May—near areas, for example, where herring spawn. But even if food is nearby, eagle parents also have to be skilled enough at hunting to get it, and they have to work together to keep their eggs constantly covered while they each still manage to get enough to eat.

Bald eagles cache food for the young

The kinds of fish depended on what was available at particular times of the year. Gende found herring and eulachon in nests during April and May, when these fish spawn in shallow water. He found walleye pollock most often at nests located along deep-water shorelines where these fish reside.

In July, pink salmon were often the only species cached in nests. (Early July is when pink salmon begin congregating in large schools near shore before they enter streams to spawn.) In a few cases, Gende found carcasses or remnants of birds cached at eagle nests, including the remains of crows, two white-winged scoters, and one raven.