

## Chickadees

Chickadees are among the most widely recognized birds of Alaska forests. Their constant action and agile movements, combined with their appearance, suggests a perky and cheerful disposition. We are able to view them closely because they are relatively tame and easily attracted to feeders.

Chickadees are small songbirds—5 to 5½ inches long (12.7-14 cm) with an 8-inch (20 cm) wingspan and a weight of only 1/3 to 1/2 an ounce (9-14 gms)—with round bodies, short pointed bills, long tails, black bibs, and generally conservative gray, brown, black, and white plumage. Five species occur in Alaska. The **black-capped chickadee** (*Parus atricapillus*) is a resident of deciduous and mixed deciduous/coniferous forests throughout the state. It has a black cap and throat, gray back and pale sides. **Boreal chickadees** (*P. hudsonicus*) are found in the coniferous forest of central and western Alaska. Like the dark spruce forests they inhabit, boreals have relatively drab colors—brown cap, brownish gray back, and reddish brown sides. The **chestnut-backed chickadee** (*P. rufescens*) lives in the spruce-hemlock forests of coastal southeastern and southcentral Alaska and sports a dark brown cap and chestnut brown back and sides. **Siberian tits** (*P. cinctus*), formerly called gray-headed chickadees, are a rarely seen Asian species that has become established in forest and stream-side habitats near treeline in central and northern Alaska. Though often described as a slightly larger and paler version of the more common boreal chickadee, the Siberian tit superficially looks like a black-capped with a grayish brown cap. Its white cheek patches are larger than those of the other four species. The **mountain chickadee** (*P. gambeli*) is an occasional visitor and possible breeder in Southeast Alaska. A white eyebrow stripe sets it apart from other chickadees.

“Chick-a-dee-dee-dee” is the common call of the black-capped and is the source of the birds' name. The calls of the boreal and mountain are similar, but the boreal's is slower and more nasal, and the mountain's is buzzier. The other two species' calls are less recognizable as “chick-a-dee-dee.” Chestnut-backs make a rapid, hoarse “tseek-adee-dee” and Siberian tits utter a “dee-deer” or “pee-vee.” On bright days in later winter, male black-cappeds sing a loud, clear “fee-bee” or “bee.”

Chickadees nest in cavities. They may excavate a nest for themselves in well-rotted wood or use an old woodpecker hole, natural cavity, or nest box. The nest at the bottom of the cavity is lined with plant fibers, animal hair, moss, and other soft materials. Six to eight eggs are the normal clutch. The eggs hatch after 12-15 days incubation, and the young leave the nest 14-15 days later. Young birds remain with their parents for about three weeks after fledging and then, as defense of breeding territories by the parents diminishes, the young disperse rapidly from their birthplaces.

The small flocks of chickadees commonly seen from late summer through winter are generally not composed of family groups but of several adult pairs and unrelated juveniles. These groups of six to 12 chickadees roam over winter feeding ranges of about 40 acres, regularly visiting sites of known food resources. Flocks of chickadees sometimes cross the paths of kinglets, creepers, nuthatches, and downy woodpeckers and form temporary associations. Members of a flock normally return each evening to a certain patch of trees to roost overnight. Roosts are usually in dense conifers, but individual birds may roost in cavities, under eaves of houses, or other protected sites.

When feeding, chickadees flit from tree to tree in a slow, bobbing flight and hop from branch to branch. They perform remarkable acrobatics as they glean insects, their eggs and larvae from leaves, twigs, branches, and bark. Most of their diet is caterpillars and eggs of moths, aphids, scale insects, beetles, and other insects and spiders. Seeds and berries are occasionally eaten, and fat may be scavenged from animal carcasses.

While most songbirds we see in the summer depart for the south each fall, the chickadees are year-round residents in the north. It is remarkable that such a small bird can endure our long, cold winters. At times the difference between its core body temperature and the air temperature just outside of its feathers can be 150°F! Chickadees have a few special adaptations to help them survive in this rigorous environment. First, they have much denser plumage than other songbirds of their size. This heavy down coat allows them to trap warm air close to the body to insulate them from the cold. Second, chickadees have a special ability to put on fat quickly. Birds use fat as fuel to keep them warm during the long winter nights in Alaska. Chickadees can put on 8 percent of their body weight in fat each day (equivalent to 12 pounds (5.5 kg) of fat on a 150-pound (68 kg) human). They use that fat overnight when food is unavailable and then replace it the next day. Each winter day the chickadees go through the same cycle: eat and put on fat in the daylight and then burn up fat to keep warm through the long night. To help them conserve this valuable fat, chickadees have one more physiological trick. They drop their body temperature at night, much like woodchucks and ground squirrels. By producing less heat, they burn less fat.

The average life span of adult chickadees is probably 2 to 3 years, although one banded black-capped lived to at least 12 years and 5 months. The oldest reported boreal chickadee is a Fairbanks bird that was recaptured and released in 1993, 8 years and 5 months after it was first banded. Chickadees are preyed upon by sharp-shinned hawks, northern shrikes, merlins, and other avian predators. Red squirrels take eggs and young from nests. Dispersing juveniles in mid-summer are probably most vulnerable to predation because they are inexperienced and in unfamiliar surroundings.

Chickadees are of considerable value to humans. They are one of the most popular visitors to bird feeders and among the most easily drawn in. These merry sprites may be attracted simply by tacking a piece of animal fat to a tree. Their favorite foods at feeders are suet, fat mixed with peanut butter, and unshelled sunflower seed hearts or whole black oil sunflower seeds. In addition to the cheer they bring to bird watchers, chickadees serve a valuable function in the natural environment by preying on insects, including several that are considered forest pests.

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