

ABOUT THE COVER

Boreal Chickadee

Boreal Chickadees (*Parus hudsonicus*) are denizens of the boreal forests of Canada and northernmost United States that occasionally descend to our latitude in winter. They are easily distinguished from Black-capped Chickadees by their brown cap and back, rufous flanks, and overall brownish appearance. The Boreal Chickadee is most closely related to the two other brown-capped chickadees, the Siberian Tit (*P. cinctus*) and the Chestnut-backed Chickadee (*P. rufescens*), the three forming a superspecies. The taxonomic status of the Boreal Chickadee is uncertain, with 3-5 subspecies recognized by some workers and a complete reevaluation with fresh specimens recommended by others.

The breeding range of the Boreal Chickadee extends from the boreal forests of Alaska across Canada to Newfoundland, dipping south in suitable habitat into New England, the Great Lakes states, and the Pacific northwest. The species is generally sedentary, but local migrations and periodic irruptions southwards occur during winter. Irruptions typically occur from October to May, and in Massachusetts six major irruptions have occurred since the mid-1950s. Although during irruptions Boreal Chickadees tend to stay in coniferous woodlands and forests, many invade different habitats, and it is not unusual for these tame little chickadees to show up at bird feeders, some staying for the entire winter. Irruption years correlate with major southern movements of Black-capped Chickadees and irruptions of other seed-eating species. Hence irruptions may result from poor pine-seed crops in their boreal lands.

Boreal Chickadees are monogamous and may mate for life. Their favorite habitat is boreal forest dominated by spruce or balsam fir, but they do utilize mixed deciduous/coniferous forest. The song is highly varied, with various *chit*, *seep*, *see-see-see-see*, *dit dit dit*, and *chirp* notes and musical trills, but they do utter the typical *chick-a-dee*. Males have an aggression and courtship "gargle" call, and there are *zee* alarm calls, hiss notes, and squeals. Courtship displays feature chases, sometimes with a male spiraling down and around a tree after the female. Females exhibit a wing-fluttering food-begging display. Most nests are cavities in a stump or branch, usually with side entrances. They are excavated mostly by the female, who lines them with moss, fur, or feathers. The clutch is typically a half dozen white eggs, spotted red-brown. The female alone develops a brood patch and she does all the incubation, with the male providing her with food. The eggs hatch in about two weeks, with the altricial young naked, eyes closed and helpless. Adults may mob predators such as owls and have been observed giving spectacular distraction displays — hanging upside-down from a branch or falling into the snow and fluttering as if injured. Fledging takes about eighteen days, after which the young remain with the parents for about two weeks before dispersing. Both parents feed the young and have been recorded making as many as two dozen feeding trips per hour during a fifteen-hour day. Birds join single- or mixed-species foraging flocks following fledging until the next breeding season.

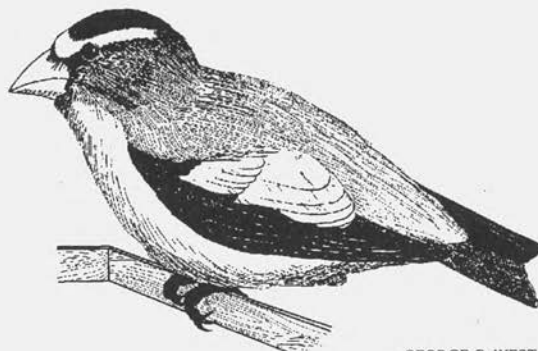
Boreal Chickadees are versatile foragers, hovering, gleaning, or hang-gleaning foliage, or probing bark. They are opportunistic and may experience a seasonal diet shift—a common occurrence for birds that overwinter in the north. They eat seeds of conifers and birches, some fruit, and a wide variety of insects and spiders, particularly in breeding season. They frequently cache food — a winter survival strategy — usually in bark crevices or under lichens, often cementing the food in place with saliva or spider web. Their favored location is in dead branches near the trunk where snow is not likely to accumulate. Studies suggest that foraging activities can be influenced by competition between species. When Boreal and Black-capped chickadees are sympatric (overlap in distribution), they may segregate by habitat, with Black-capped Chickadees utilizing more the deciduous forest. Where both occur in the same habitat, they may partition the food resources, with Boreal Chickadees foraging higher in the trees. This is supported by studies that indicate that, when Boreal Chickadees occur alone, they use all parts of the tree about equally.

Boreal Chickadees are not abundant in any of their broad geographic range, and populations have year-to-year fluctuations in numbers that suggest that winter mortality may be a major factor in limiting population levels. Their broad geographic range, however, together with their preference for boreal forests that are sparsely inhabited by humans, make their conservation status favorable. There is some question, however, about a possible future negative impact on northern coniferous forests from global warming. But for the present, birders can look forward to seeking out these nifty little birds in their boreal forest homes, or await the occasional irruption that brings them to us in winter.

William E. Davis, Jr.

About the Cover Artist

The work of noted wildlife artist Paul Donahue has appeared many times on the cover of *Bird Observer*. Some of our readers may also have enjoyed the experience of visiting the rain forest canopy walkway at the Amazon Center for Environmental Education and Research off the Rio Napo in the Department of Loreto in northeastern Peru. This canopy walkway, the world's longest, is the creation of Paul Donahue and Teresa Wood. Paul can be reached at PO Box 554, Machias, Maine. 🦜



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