



Chickadees, Nuthatches, Titmouse and Brown Creeper

These woodland birds are mainly year-round residents in their breeding areas. They become most apparent in fall and winter when all four types may occasionally be seen together, along with downy woodpeckers and kinglets, in mixed-species foraging flocks. In these groupings, the greater number of eyes may improve foraging efficiency and detect potential predators. Pennsylvania's two chickadee species and the tufted titmouse belong to Family Paridae—omnivorous feeders that cache excess seeds in holes or bark crevices, remember the locations, and return later to eat the food. The two nuthatch species are in Family Sittidae. They glean insect food from the trunks of trees and also eat nuts. Their common name derives from the way they “hack” nuts apart using their stout pointed bills. Taxonomists place the brown creeper in Family Certhiidae, a group that includes ten species, eight of which inhabit Europe and Asia and another India and Africa. The brown creeper is the only species of this family found in North America.

Black-capped Chickadee (*Poecile atricapillus*) — A black cap and bib, buffy flanks, and a white belly mark this small (five inches long), spunky bird. Chickadees have short, sharp bills and strong legs that let them hop about in trees and cling to branches upside down while feeding. They fly in an undulating manner, with rapid wingbeats, rarely going farther than 50 feet at a time. The species ranges across northern North America, living in deciduous and mixed forests, forest edges, thickets, swamps, and wooded areas in cities and suburbs. Black-capped chickadees are common throughout Pennsylvania, except for the state's southern counties, where they are replaced by the similar Carolina chickadee.

In spring, summer and fall, the majority of a chickadee's diet consists of animal protein: moth and butterfly caterpillars (including early growth stages of gypsy moths and tent moths), other insects and their eggs and pupae, spiders, snails and other invertebrates. Chickadees also eat wild berries and the seeds of various plants including ragweed, goldenrod and staghorn sumac. Seeds and the eggs and larvae of insects are



black-capped chickadee

important winter staples. In the fall, chickadees begin storing food in bark crevices, curled leaves, clusters of pine needles, and knotholes. The birds rely on these hoards when other food becomes scarce. Chickadees also eat suet from feeding stations and fat and meat bits from dead animals.

In winter, chickadees live in flocks, generally comprised three to 12 birds made up of mated pairs as well as individuals. There is a social structure and hierarchy within these flocks with dominant pairs. Listen for the *chick-a-dee-dee-dee* calls that flock members use to keep in contact while foraging around a territory of 20 or more acres. A flock will defend its territory against other chickadee flocks. At night, chickadees roost individually in tree cavities or among dense boughs of conifers. A roosting bird tucks its head under a wing to conserve body heat. On cold nights, a chickadee's body temperature drops as much as 20 degrees, causing the

bird to enter a state of regulated hypothermia, which saves significant amounts of energy. Chickadees lose weight each night as their bodies slowly burn fat to stay alive. They must replace those fat stores by feeding the next day.

In spring, the winter flocks break up as pairs and claim nesting territories ranging from 3 to 10 acres in size. Chickadees nest in May and June. The usual site is a hole in a tree, excavated by both sexes. Birch is a favorite, because this tree's tough outer bark stays intact after the inner wood rots and becomes soft enough for chickadees to excavate.

Chickadees also clear out cavities in pine, aspen, alder, willow, and cherry trees, and use abandoned woodpecker holes. The cavity is usually 4 to 10 feet above the ground. The female assembles the nest by laying down a base of moss, then adding softer material such as animal fur or plant fiber. House wrens compete for nest cavities and may destroy chickadee eggs and broods. Raccoons, opossums and squirrels raid nests. Chickadees will renest if a first attempt fails. Only one brood is raised per year. Chickadees will use nest boxes with small entrance holes (a diameter of 1¼ inch is recommended).

The five to nine eggs are white with reddish brown dots. The female incubates them, and the male brings her food. The eggs hatch between 11 and 13 days. Juveniles beg loudly and are fed by both parents. Young fledge 12 to 16 days after hatching. Three to four weeks after fledging, the young suddenly disperse, moving off in random directions. As winter approaches, they join feeding flocks. Some become "floaters," moving between three or more flocks, ready to pair should another bird's mate die.

Chickadees are taken by many predators including sharp-shinned hawks, American kestrels, eastern screech owls, northern saw whet owls, and domestic and feral cats. Sometimes chickadees mob these enemies while sounding zee-zee-zee alarm calls. The average life span for a chickadee is roughly one and a half to two years, and the oldest known chickadee lived 12 years, five months. Every few years, long distance movements take place within the population. These "irruptions" may be launched by failure of seed crops or high reproductive success.

Carolina Chickadee (*Poecile carolinensis*) — Similar to the black-capped chickadee in appearance and life history, this species lives in milder climates across the southeastern United States. The Carolina chickadee breeds in southern Pennsylvania, but its range has been creeping northward in recent decades. The song and calls of the Carolina chickadee differ from the black-capped chickadee which helps distinguish the two where their ranges overlap. They are extremely similar in appearance with Carolina chickadees having less white on their wings and relatively shorter tails. These species interbreed and the resultant hybrid chickadees are difficult to tell apart from their parent species. The Carolina chickadee seems to be displacing black-capped chickadees as it moves northward.

Tufted Titmouse (*Baeolophus bicolor*) — This trim bird has gray and white plumage, a prominent head crest, and black

"shoe button" eyes. The species ranges through eastern North America into southern New York and New England. It has steadily extended its range northward, perhaps because of climatic warming, changes in forest habitat, and an increase in bird feeding by humans. In the early 1900s the tufted titmouse was absent from northern Pennsylvania. Today, it breeds statewide. At higher elevations, it is more likely to be found near wetlands, streams or human habitations.

Titmice eat insects (caterpillars, wasps, bees, sawfly larvae, beetles and many others, as well as eggs and pupae), spiders, snails, seeds, nuts and berries. Like the chickadee, the titmouse forages by hopping about in tree branches, and often hangs upside down while inspecting the underside of a limb. To open a nut or seed, the bird holds the object with its feet and pounds with its bill. Titmice cache many seeds; with sunflower seeds, the birds usually remove the shell and hide the kernel within 120 feet of the feeding station, under loose bark, in cracks or furrows in bark, on the ground, or wedged into the end of a broken branch or twig.

Winter flocks are often made up of parents and their young of the previous year. Titmice are early breeders. Males start giving their *Peter Peter* territorial song in February. In Pennsylvania, pairs begin building nests in late March and early April. Titmice are believed not to excavate their own nest cavities; instead, they use natural cavities or abandoned woodpecker holes. Breeding territories average 10 acres. The female lays an average of five or six eggs, which are white with dark speckles, and incubates them for 12 to 17 days. The young fledge about 18 days after hatching. Occasionally a yearling bird may stay on its natal territory and help its parents rear the next year's brood.

White-breasted Nuthatch (*Sitta carolinensis*) — The white-breasted nuthatch has a slate gray back, a white breast and face, and a cap that is black in the male and ashy gray in the female. Nuthatches inhabit deciduous forests throughout Pennsylvania and the East. They climb around in trees, walking in a herky jerky manner up and down and around the trunks, along branches and the undersides of limbs. Both sexes sound a nasal *ank ank* call. Pairs live in home territories of 20 to 35



tufted titmouse

acres in wooded habitats with some large trees. A pair may occupy larger territories in semi-wooded habitat.

White-breasted nuthatches feed on insects and spiders in summer and on nuts and seeds in winter. They relish suet at feeding stations and carry away sunflower seeds for caching. Sometimes they forage on the ground. Nuthatches wedge acorns and hickory nuts into tree bark and then hammer the shells off with blows from their awl-like beaks.

During courtship, the male bows to the female, spreading his tail and drooping his wings while swaying back and forth; he also feeds her morsels. Before building the nest, the birds rub or sweep crushed insects back and forth over the inside and outside of the nest cavity. Ornithologists speculate that this sweeping behavior leaves chemical secretions behind that may repel predators or nest competitors. The female builds a nest inside the cavity (commonly a rotted out branch stub or an abandoned squirrel or woodpecker hole) using twigs, bark fibers, grasses and hair. She lays five to nine white, brown spotted eggs and incubates them for 12 to 14 days while her mate brings her food. Both parents feed insects and spiders to the young, which fledge in about 26 days, usually in June.

Red-breasted Nuthatch (*Sitta canadensis*)— In Pennsylvania, this species is found mainly in the northern part of the state; it ranges through New England and across Canada. Slightly smaller than the white-breasted nuthatch, the red-breasted has a rusty tinge to its breast and a prominent black eye stripe. The species lives primarily in coniferous forests including pine plantations but may also be found in mixed forests. Red breasted nuthatches feed mainly on insects during summer, feeding their young a diet of flies, spiders, beetles and caterpillars. During fall and winter they rely on seeds, particularly those of conifers. They excavate a nest cavity 5 to 40 feet above the ground, typically in a dead tree or decaying part of a tree. Red-breasted nuthatches nest in native conifer stands, but are opportunistic in their use of ornamental conifers, sometimes nesting in old Christmas tree plantations or other plantings. Five or six young are produced in a single annual brood. In some autumns, large numbers of red-breasted nuthatches show up south of their normal range; biologists believe that poor cone production in northern forests drives these movements. If there are abundant cone crops, they sometimes will stay to nest at locations at lower elevations or otherwise outside their normal nesting grounds.



white-breasted nuthatch

Brown Creeper (*Certhia americana*) — Brown creepers are inconspicuous birds whose intricately patterned backs help blend them in with the tree bark that is their near perpetual home. Creepers blend into the forests where they live. Brown creepers breed across a huge range extending from Alaska east across southern Canada to Newfoundland and south through the United States to Nicaragua in Central America. They favor larger, closed-canopy forests with many large trees for foraging and nesting, especially trees with deeply furrowed, loose or flaking bark. Although uncommon and rare, the species is widely distributed in heavily forested regions of Pennsylvania. It is one of the birds that are considered “area-sensitive” forest species that live in unfragmented forest tracts. Breeding Bird Surveys show that their numbers are lower in the state’s southeastern and southwestern corners. Braced by their long stiff tails, brown creepers climb slowly up tree trunks, following a spiral course. They inspect bark furrows and niches, using their decurved bills to tease out insects, pupae and eggs. They also eat spiders and seeds.

The call is a long, thin *seeee*; the male also voices a subtle and high-pitched, but beautiful breeding song. As part of their courtship, creepers do a spiraling chase flight around tree trunks. In some flights, they seem more like falling brown leaves than live birds. The species nests under peeling bark, often in a shagbark hickory or a dead or dying tree, less frequently in a cavity.

A hammock-like twig nest is built to fit the available space. The female lays four to eight eggs, which are whitish and dotted with reddish brown. Incubation takes 13 to 17 days, and young leave the nest 14 to 20 days after hatching. Brown creepers from the Northeast may migrate south to Florida and the Gulf Coast. In winter, brown creepers sometimes mix in with foraging flocks of chickadees; perhaps these are residents, or northern birds that have shifted southward.



brown creeper