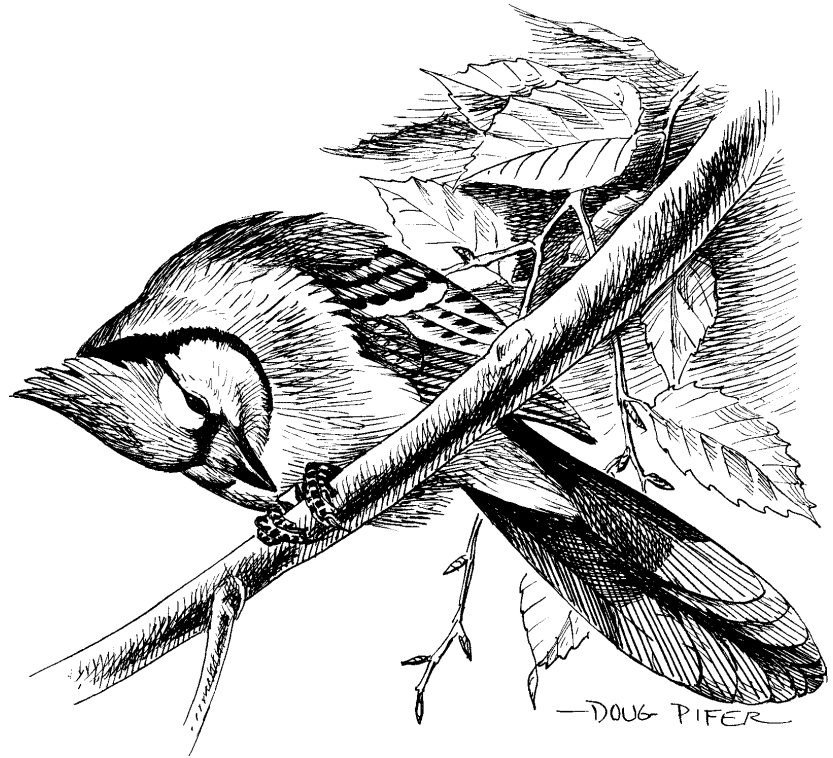




Wildlife Note — 59
LDR0103

Blue Jay

by Chuck Fergus



The blue jay (*Cyanocitta cristata*) belongs to Family Corvidae, the Corvids, which also includes crows, ravens, and magpies in North America, and jackdaws, choughs and rooks in the Old World. Because Corvids have the largest cerebrums, relative to body size, of all birds, scientists believe them to be the smartest. Corvids are social birds, with many species living in flocks when not nesting. The bold, colorful blue jay breeds from southern Canada south to Florida and west to the Rocky Mountains.

Biology

The blue jay is 11 to 12 inches in length (larger than a robin) and has a blue back marked with black and white; its underparts are off-white, and it has a prominent blue crest on its head. The sturdy beak is straight and sharp, well suited for a variety of tasks including hammering, probing, seizing and carrying.

Blue jays live in wooded and partly wooded areas, including extensive forests, farm woodlots, suburbs and towns. About three-quarters of their diet is vegetable matter: acorns, beechnuts, various seeds (including sunflower seeds from feeding stations), corn, grain, fruits and berries. The remaining 25 percent includes insects: ants, caterpillars, beetles, grasshoppers and others, along with spiders, snails, frogs, small rodents, carrion and eggs and nestlings of other birds.

In the spring, blue jays eat caterpillars of the gypsy moth and the tent moth, major forest pests. In autumn, jays cache many acorns under the leaf duff in forest clearings and meadows. They retrieve some of the nuts in win-

ter; ones they don't retrieve help forests to regenerate, particularly on cut-over and burned lands. Confronted with abundant nuts and seeds, a jay may fill its expandable throat; later, it will disgorge the food and cache or eat it. To open an acorn, the bird grips the nut in one foot and hammers the shell apart with its bill.

Blue jays are quite vocal. They sound a raucous *jaay* to attract other jays and as an alarm call. A bell-like *toolool* is given during courtship, as is a *wheedelee* call, sometimes referred to as the "squeaky hinge" call. Blue jays often mimic the *kee-yer* calls of hawks.

Blue jays have an interesting social courtship. In early spring, from 3 to 10 males (thought to be yearling birds) shadow one female, bobbing their bodies up and down and sounding *toolool* calls. Aggressive displaying apparently scares off the competitors one by one until a single male is left as the female's mate. Ornithologists believe that older jays, ones that have bred in the past, pair up earlier and do not participate in courtship flocks. Once paired, birds move about quietly, with the female giving *kueu kueu* calls to the male when he brings her food. The female may make several preliminary or "dummy" nests, using twigs brought by the male. Later the female, with help from her mate, assembles the breeding nest, often in a dense conifer or shrub, 5 to 50 feet above the ground. The nest is seven to eight inches across, built of twigs, bark, mosses and leaves, with a 4-inch central cup lined with rootlets.

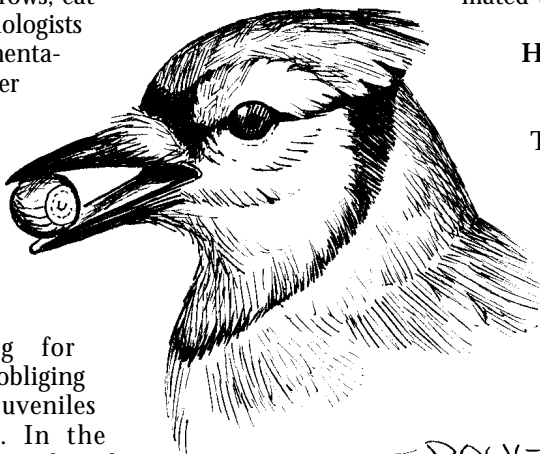
In May or June the female lays three to six eggs, pale olive or buff, spotted with brown or gray. Both sexes incubate. Blue jays are silent and furtive around the nest; one year a pair nested in a white oak next to our house,

and I hardly knew they were there once egg-laying and incubating commenced. Blue jays strongly defend their nest against intruders, calling loudly and diving at and mobbing hawks, owls, crows, squirrels and ground predators. Yet they will allow other jays to land quite near the nest. The eggs hatch after 17 to 18 days. Both parents feed the young, bringing them insects, other invertebrates and carrion. Adult blue jays often raid the nests of smaller birds, including vireos, warblers and sparrows, eating eggs and nestlings. Biologists believe that forest fragmentation is giving jays greater access to the nests of woodland birds.

The young leave the nest after 17 to 21 days. The family stays together for another month or two, with the fledglings clamoring for food and their parents obliging them, even when the juveniles are almost adult-size. In the North, blue jays raise one brood per summer; jays in the South may rear two. When the adults molt in July and August, their new plumage comes in a lustrous, beautiful blue. (In fact, the blue of the birds' plumage is not caused by pigmentation, but by structure: the feathers do not absorb the blue part of the light spectrum and, instead, cause it to scatter, giving an appearance of blue.

In late summer and early fall, family groups merge into larger foraging flocks. As the weather grows colder these groups fragment again into smaller bands. Birds from

Canada shift southward in September and October, and juveniles from the northern United States also drift to the south. In some years — perhaps when wild nuts, or mast, are scarce — blue jays move in large numbers; accipiters, particularly sharp-shinned and Cooper's hawks, accompany the flocks, picking off unwary members. Blue jays are common migrants in Pennsylvania in April and early May. The longevity record for the species is 16 years. Among adults, the annual survival rate is estimated at 55 percent.



— DOUG PIFER

Habitat

Blue jays avoid strictly coniferous forests. They thrive in areas with plentiful nut-bearing oak and beech trees. Although primarily forest birds, blue jays have adapted to living in cities, where they nest in parks and along tree-lined streets, and feed at bird feeders.

Population

The blue jay population in Pennsylvania and the Northeast is healthy. The birds nest over virtually all of the state, and were found to be among the top 10 most widely distributed species when the Pennsylvania Breeding Bird Atlas was being conducted in the late 1980s. On a continental scale, the species is expanding northwest into Canada. Biologists estimate two or three breeding pairs of blue jays per 100 acres of suitable habitat. Blue jays migrate in spring and fall, and more than 5,000 a day can be seen flying over the Lake Erie Shore during the first two weeks of May.

Wildlife Notes are available from the
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