



Wildlife Note — 45
LDR0103

Sparrows and Towhee

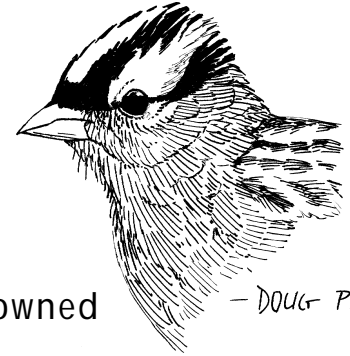
by Chuck Fergus

At first glance, sparrows (Family Emberizidae) may seem to be drab, ordinary birds. Because of their apparent sameness — as well as the dense or grassy cover in which most are found — beginning and casual birdwatchers may find it tough to identify the different species. In fact, the plumage of each is a distinctive, complex blending of shades and streakings of brown, and the birds' habits and adaptations work in fascinating ways to let them take advantage of many habitats. "Sparrow" comes from *spearwa*, an Anglo-Saxon word meaning "flutterer"; English settlers applied the name to New World sparrows. (In England today, birds we would call sparrows are referred to as buntings.) More than 30 species are native to North America. Eleven breed in Pennsylvania, and five more cross the state when migrating.

Sparrows have short thick bills for cracking the hard seeds of grasses, weeds and trees. Most forage on the ground, scratching with their feet to expose food in dense grass and weeds and in low shrubs. They keep in contact with mates or flock members by using short calls, often *chip* or *seep* sounds, which vary between species. Sometimes sparrows make short flights to catch flying insects that they've flushed from the ground. Adults eat insects in summer and nourish their young with this high-protein fare. In late summer and fall, sparrows eat berries and fruits. And they eat many seeds, especially those of grasses and weeds.

Males defend territories mainly by singing from exposed perches, and their songs are often complicated and mellifluous. The males of some grassland sparrows perform flight-and-song displays. Males also chase away rivals. In most species, pairs nest in isolation or in loose colonies brought together less by social tendencies than by attraction to a special habitat. Sparrows usually nest in low bushes or on the ground. The typical nest is an open cup woven out of grass, weeds and twigs, built mostly or entirely by the female. The eggs of the various Northeastern sparrows are spotted or blotched with brown. In most species, the female incubates the eggs; the male may bring food to her. Both parents share in feeding the young. Should a female begin a second brood, her mate may assume the care of first-brood young that have fledged from the nest.

Ornithologists believe that most sparrow pairs are mo-



White-Crowned
Sparrow

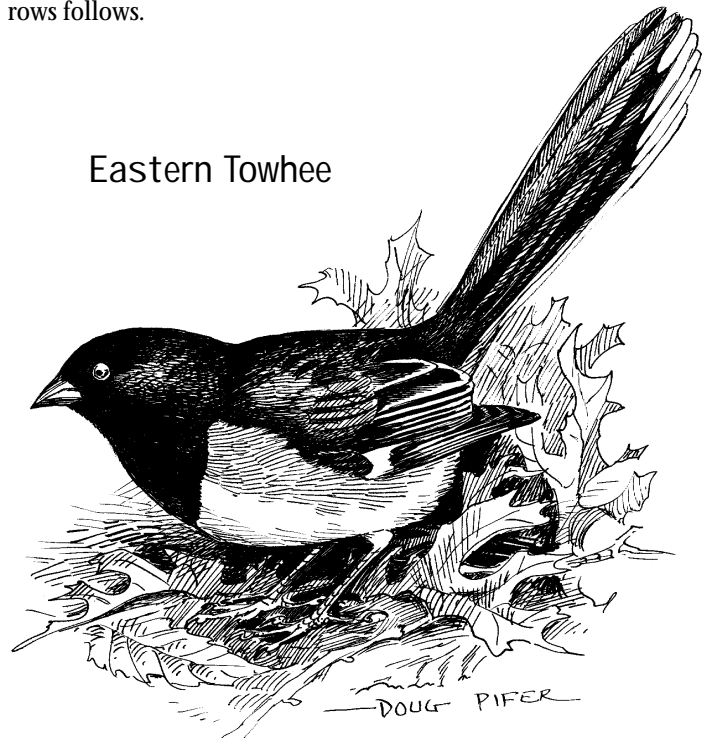
— DOUG PIFER

nogamous, but the breeding biology of many species hasn't been studied carefully enough to allow definite conclusions. In the savannah sparrow, males may have two mates whose broods are staggered, so that the male can help first with one brood and then with the second. Some male swamp sparrows also have two mates.

Sparrows do not make long migrations. Most species winter in the southern United States and northern Mexico, and none go as far as the tropics. In winter, sparrows are often gregarious and travel in flocks when searching for food. In open country, flocks often contain individuals of only one species, but in brushy areas or along woods edges, which offer a more diverse suite of foods, mixed-species flocks are the rule. By far the greatest threat to sparrows is the destruction of their habitat. Draining swamps and converting fields to housing developments relentlessly cuts into the size and diversity of sparrow populations — as well as harming many other kinds of wildlife.

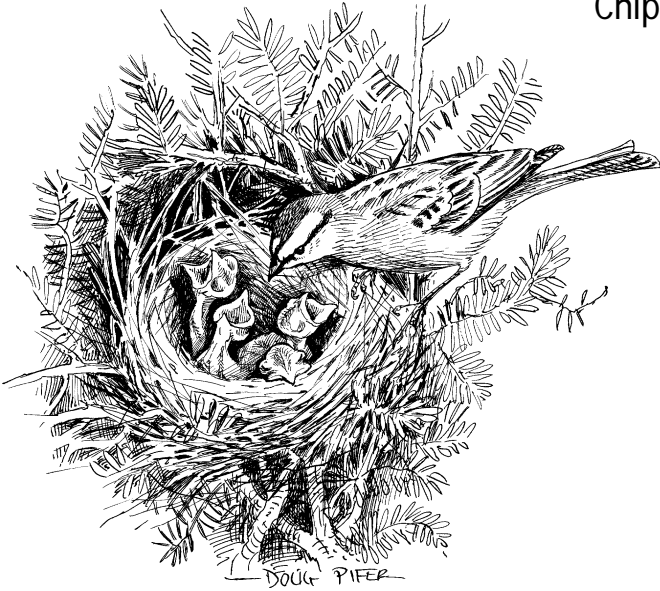
A closer look at five common Pennsylvania sparrows follows.

Eastern Towhee



— DOUG PIFER

Chipping Sparrow



Eastern Towhee (*Pipilo erythrophthalmus*) — Formerly called the rufous-sided towhee, this large (seven to eight inches), long-tailed sparrow breeds statewide in Pennsylvania. Adults have rusty sides, white bellies, and solid-colored backs and heads that are black in the male and brown in the female. The eyes are red. Males sing a distinctive *drink your tea*, with the middle syllable low and the last syllable drawn out and quavering. Both sexes frequently give an emphatic *chewink* or *tow-hee* call. A way to locate the birds is to listen for the rustling they make while scratching for food in the leaf litter. The eastern towhee is sometimes called the “chewink,” for its call, and “ground robin” for its foraging habits.

Eastern towhees are found mainly in second-growth forests, overgrown fields, woods edges, clearcuts, hedgerows, thickets, dense brush, and the understory of open deciduous woods. Rarely do they live in suburban yards, cities or intensively farmed areas. When seeking food, towhees energetically turn up leaves by hopping backwards, scratching with both feet. They pick up beetles, ants, bugs, spiders, millipedes and snails; they eat caterpillars (including late-stage gypsy moth larvae) and moths (adult gypsy moths and others); and they dine on seeds, small fruits, berries and acorns.

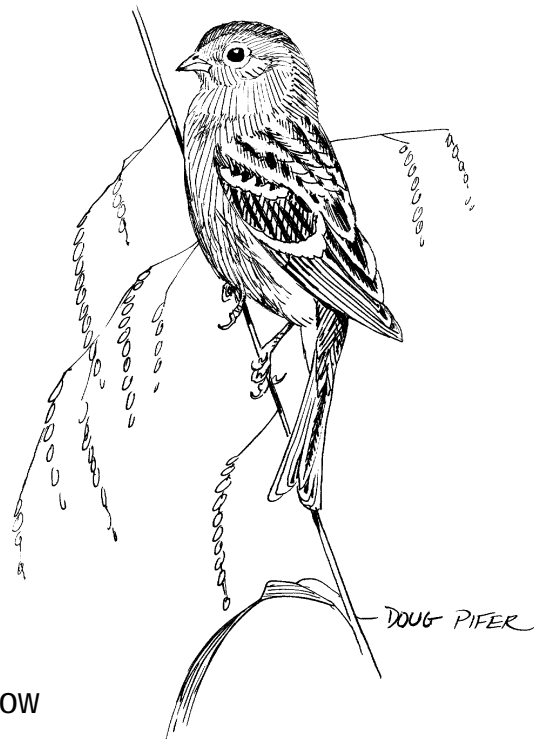
In April, males arrive in the north in small bands; they disperse and, singing from high perches, proclaim individual territories of one-half to two acres. Females show up about a week later. Males and females spread their wings and tails to each other, exhibiting their white patches. The female gathers materials for the nest, while the male sings nearby. She scuffs out a shallow depression in the ground and builds a bulky but well-camouflaged nest of leaves, bark strips and other plant matter, lined with fine grasses and pine needles. Occasionally the nest is built in a bush, as high as five feet above the ground.

The female lays three or four eggs, creamy white with

brown spotting. She incubates them for 12 to 13 days; during the day, she sneaks off to feed about once every half hour. After the eggs hatch, the male brings food for the brooding female and the young. In about a week the female begins leaving the nest to help the male forage and feed the brood. Young leave the nest after 10 to 12 days, and their parents feed them for another month. Most females build a second nest, and most pairs produce two broods. In Pennsylvania, towhees nest from late April into August. After fledging, young birds flock together; adults do not defend their territories against juveniles, even if not their own.

In winter towhees shift southward into the southern states, where they forage in loose flocks averaging 15 to 25 members. Females go farther south than males. The estimated life span is four to six years. The clearing of the Eastern deciduous forests around the turn of the century helped towhee populations to expand. More recently, as old fields have matured into woods, the population of this species has declined noticeably.

Chipping Sparrow (*Spizella passerina*) — This small, slim sparrow is about five inches long and marked with a rusty-colored cap and a line of white above each eye. The Pennsylvania breeding bird atlas survey found the chipping sparrow to be the fourth most widespread bird in the state; only the song sparrow, crow and robin were observed more frequently. Chipping sparrows feed and breed in suburbia, urban parks, gardens, clearings around rural homes, pastures, orchards, shrubby fields, open woodland and woods edges, in openings and roadsides within the deep woods. On a continental scale, they breed from Alaska to Nova Scotia



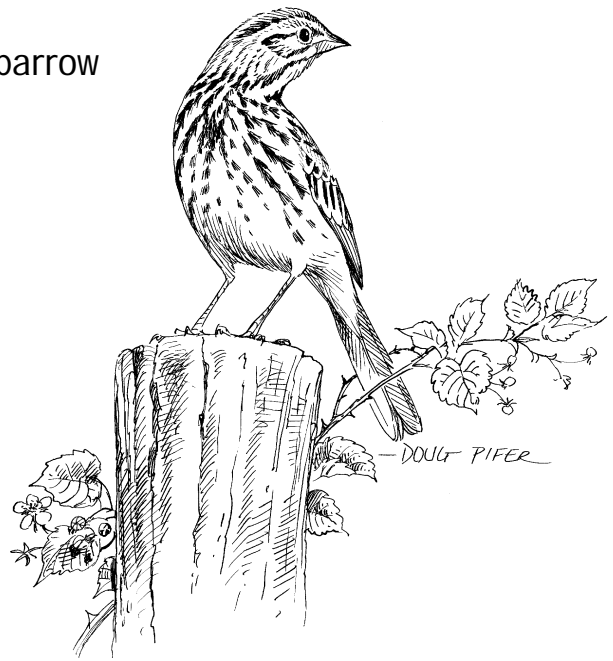
Field Sparrow

Song Sparrow

and south to Nicaragua. They are not very shy of humans. The song is a rattling or buzzing trill: a series of chips in one pitch. Chipping sparrows forage in trees and on the ground. Their diet in early summer may be 90 percent insects, including grasshoppers, caterpillars, beetles and moths. They eat many seeds, especially in fall and winter, of chickweed, pigweed, ragweed, foxtail and other grasses. Males arrive on the breeding range in April, ahead of females, and claim territories of one half to one and a half acres. In early May the females build nests, often in conifers (including suburban plantings) 3 to 10 or more feet above the ground. A female usually lines her nest with fine grasses or animal fur, including horse hair. The three or four eggs are a pale bluish green, marked with brown spots. The female incubates the eggs for 11 to 14 days; young fledge from the nest eight to 12 days after hatching. Chipping sparrows are believed to be monogamous breeders. Most pairs raise two broods per summer.

In August and September, family flocks desert their home territories and wander while searching for food. In late September and October, most chipping sparrows leave the Northeast for wintering grounds in the Gulf States. In the 1800s the chipping sparrow was the common sparrow of American towns and cities, but the introduced house sparrow largely took over that role. Chipping sparrows are preyed upon by blue jays, snakes, domestic cats, and the smaller hawks and owls; brown-headed cowbirds often parasitize first broods, but chipping sparrows raise their second broods after the cowbirds' annual breeding period has ended.

Field Sparrow (*Spizella pusilla*) — Like the closely related chipping sparrow, the field sparrow has a chestnut-colored cap; however, it lacks a white facial stripe and has a noticeably pink or rusty colored bill. The song is a series of sweet



notes speeding up into a trill *sweet-sweet-sweet-sweet-wee-wee-wee-wee*. Field sparrows live in old fields with scattered brush and bramble and sumac clumps, in thickets, fencerows, and Christmas tree plantations; they avoid open meadows, cropland, urban areas and deep woods. The species breeds in every Pennsylvania county but is absent from heavily developed areas around Lancaster, Philadelphia and Pittsburgh. It ranges across the East and winters from southern Pennsylvania southward.

Field sparrows arrive in their breeding habitat in mid-April. Males' territories average two to three acres.

Females build their nests on or near the ground for the season's first brood, then often select a thick shrub, such as a hawthorn, for a second-brood nest. The three to four eggs hatch after about 11 days of incubation. Unlike chipping sparrows, field sparrows rarely nest near human dwellings; like chipping sparrows, field sparrows permit people to come quite close. Field sparrows migrate south in September and October. *Spizella pusilla* was first described and named by ornithologist Alexander Wilson on the basis of specimens collected around Philadelphia.

Song Sparrow (*Geothlypis trichas*) — An accomplished songster, this shy sparrow has a heavily streaked breast with a dark central spot. When in the species' habitat of overgrown weedy areas, thickets or abandoned pasture land, listen for the melodious song: three or four repeated notes, *sweet sweet sweet sweet*, followed by a number of shorter variable notes and a trilled ending. Song sparrows breed across North America and winter in the lower 48 states. They breed statewide and abundantly in Pennsylvania; more song sparrows winter in the southern half of the state than in the northern half. Corn stubble and brushy thickets are prime wintering areas.

Song sparrows nest mainly on the ground in grasses, sedges



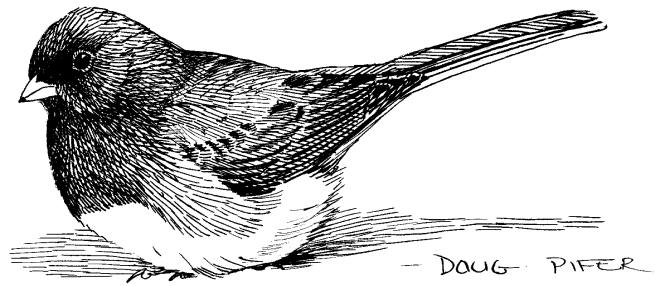
Tree Sparrow

and cattails, with later nests often located in trees or bushes up to 12 feet high; on rare occasions, song sparrows nest in tree cavities. Prolific breeders, they may raise two, three or even four broods per season, sometimes all in the same nest. The normal clutch is four eggs. The eggs of brown-headed cowbirds look very much like song sparrows' eggs (greenish white, heavily dotted and blotched with reddish brown) and, except for the yellow warbler, the song sparrow is the most frequently reported host for the parasitic cowbird. The song sparrow population in Pennsylvania seems to be stable or rising slightly.

Dark-Eyed Junco (*Junco hyemalis*) — Juncos are familiar winter visitors; many people are surprised to learn that juncos breed in Pennsylvania, too. These birds have slate-gray backs and heads, white bellies, pink bills, and white outer tail feathers. The springtime song is a slow musical trill similar to that of the chipping sparrow; what's usual in winter is a string of twittering notes. Ground-loving birds, juncos scratch in the leaf duff, soil and snow to expose their food. In summer, insects make up about half of the diet. Seeds of ragweed, foxtail, crabgrass, smartweed, pigweed, and other grasses and weeds predominate in fall and winter. Juncos also eat springtails, the tiny "snow fleas" that pepper the snow on warm winter days.

Juncos breed across northern North America and south in the Appalachians to Georgia. In Pennsylvania they nest on wooded ridgetops and in hemlock ravines across the forested northern third of the state. In spring, males stake out breeding territories of two to three acres, singing from tall trees — about the only time these birds ascend very far from the ground. Breeding runs from April into August. Females build nests on the ground: on vegetated cutbanks of logging roads, stream banks, and hillsides, or tucked beneath exposed tree roots overhung by dirt or plants. The three to six eggs are pale blue profusely dotted with brown. Some pairs raise two broods. Juvenile birds are streaked with brown.

Juncos move south in flocks, mainly in October. The individuals we see wintering in Pennsylvania probably bred or were hatched farther to the north. Winter flocks tend to have same-age, same-sex members; each flock numbers around 15 to 30 birds who forage together on an area of 10 to 12 acres. In winter, juncos favor hedgerows, brush piles, thickets, weedy fields and shrubbery around houses. At night, flock members roost together in a habitual site, usually in the dense boughs of a conifer.



Dark-Eyed Junco

Six other sparrows breed in Pennsylvania. The vesper sparrow (*Pooecetes gramineus*) is a grassland species that breeds in scattered locales across the state; its numbers have declined in the last 30 years. The shy, inconspicuous savannah sparrow (*Passerculus sandwichensis*) nests on the ground in open grassy areas such as meadows, hayfields and reclaimed surface mines. Another species inhabiting grasslands and meadows is the grasshopper sparrow (*Ammodramus savannarus*). Henslow's sparrow (*Ammodramus henslowii*) breeds mainly in western Pennsylvania, in abandoned weedy fields, damp meadows and reclaimed strip mines. The swamp sparrow (*Melospiza georgiana*) is found in Delaware River tidal marshes, in freshwater marshes in the state's northeastern and northwestern quadrants, and elsewhere in bogs, swamps, and rank growth adjoining ponds and sluggish streams. The white-throated sparrow (*Zonotrichia albicollis*) breeds mainly in the north, often in or near forested wetlands, and its range extends south into Pennsylvania's northern tier; this chunky, colorful sparrow is also frequently seen during migration.

As well as the above-mentioned species, other sparrows move through Pennsylvania in spring and fall. The American tree sparrow (*Spizella arborea*) is a common migrant and a winter resident. The red fox sparrow (*Passerella iliaca*) and white-crowned sparrow (*Zonotrichia leucophrys*) also may winter in Pennsylvania. The saltmarsh sharp-tailed sparrow (*Ammodramus caudacutus*) and Lincoln's sparrow (*Melospiza lincolni*) migrate through our state.

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