

ABOUT THE COVER

Tree Swallow


Few avian spectacles are as impressive as watching tens of thousands of Tree Swallows (*Tachycineta bicolor*) swirling around like a gigantic swarm of bees over the dunes and marshes of Plum Island in the fall. A stocky swallow with broad wings and a shallow forked tail, adult males and older females are shiny green or blue above and white below, giving them their species name, *bicolor*. They are reported to be the only North American passerine in which females do not attain full breeding plumage by one year of age. Juveniles are brown above and white below with the tinge of a dusky collar on their upper breasts, thus giving them a resemblance to the smaller Bank Swallow. The Tree Swallow is a widely distributed monotypic species (no subspecies), with a breeding range that extends across Canada from Alaska to Labrador north to the tree line, south to southern California in the west and the Carolinas in the east, and throughout much of central and northern United States. They winter from southern California south to central Mexico and in the east from coastal South Carolina, through Florida, Cuba, and along the Gulf Coast to Panama.

In Massachusetts, Tree Swallows are a locally common breeder, a very common spring migrant, and an abundant fall migrant. They arrive earlier than other swallows in the spring, a characteristic that is related to their intense competition for nesting hollows and their ability to survive on seeds and berries during cold weather. They also sunbathe and may aggregate in cavities to keep warm. Tree Swallows are a highly social species, often nesting in loose colonies; during migration and the nonbreeding season they may roost in flocks of several hundred thousand birds. They arrive in early April, and many are breeding by the end of the month. They migrate south in August and September, with a high of 300,000 recorded at Plum Island, a favored location with abundant bayberries and late-season insect swarms.

Tree Swallows nest in open areas, usually near water, such as swamps with standing dead trees that provide nest cavities. They are usually monogamous but extra-pair copulations are frequent. In one study up to fifty percent of nests had chicks that were not sired by the resident male. The song and call repertoire of these birds is impressive, with fourteen different calls and song types identified. The “dawn song” and “day song” are given by the male only and consist of a repetition of two or more phrases described by various authors as *chee-tit*, *chip*, *cheet-tit*, *chi-wu* or *tsip-prrup*, *tsip-prrup*, *prrup*, and *chrit*, *pleet*, *euree*, *cheet*, *chrit*, *pleet*. Other authors have described their song as clear, sweet whistles. They have alarm, contact, distress, and anxiety calls, along with assorted chirps, twitterings, and gurgles. Although they often nest in loose colonies, Tree Swallows are highly territorial, defending thirty to forty-five feet of space around the nest cavity. The contest for nest cavities can be fierce: both males and females will attack Tree Swallows or other competitors for nest sites. Their opponents include House Wrens, House Sparrows, bluebirds, and European Starlings, although they often lose fights with these birds. They dive on intruders, uttering *zjht* or *tick-tick* calls and grapple with them inside the nest cavity, in the air,

or on the ground. They peck the intruders on the back of the head in fights that often lead to death. In skirmishes over water the loser is sometimes drowned. If a male dies, the replacement male will often kill the chicks of the previous male before starting his own family. In courtship a male may assume a vertical posture, singing with his bill pointed to the sky, wings drooping, and tail spread. A receptive female pounces on the male's back and is then led to the nest cavity by the singing male.

Nests are in either natural tree cavities, such as old woodpecker holes, or in man-made nest boxes. On one Canadian nest-box trail of 1169 boxes, for example, 549 were occupied by Tree Swallows. Males establish the territory around the cavity, but the female does most of the nest building. The nest is usually a grass cup lined with feathers supplied by the male, mostly from other bird species. The clutch is four to seven white eggs (the usual color for hole-nesting birds) that the female incubates for about two weeks until hatching. The female alone has a brood patch, and she broods the chicks for about three weeks until fledging. The chicks are helpless (altricial), with sparse down and closed eyes, and they are totally dependent upon the adults for food. Parents share about equally in the chick-feeding duties, supplying a diet primarily of insects. Tree Swallows forage by coursing over water, marshes, grassy, or shrubby habitat, sweeping up flying insects as they dart about in flight at speeds of five to twenty miles per hour. They sometimes pick insects off the water's surface and also drink in flight. Foraging occupies most of their day; they are usually below 150 feet in the air. They have been reported to flutter against vegetation, thus startling up swarms of insects. Tree Swallows take a wide variety of prey, including flies, beetles, grasshoppers, dragonflies, and spiders, and will eat berries, particularly bayberries.

Tree Swallows are a well-documented species, partly because they so readily breed in nest boxes, and they have proved to be wonderful study subjects in fields such as evolutionary biology and population ecology. It appears that nest site availability may limit population size, and that the species has probably suffered from forestry practices in which dead snags are removed. An estimated 20,000 pairs use nest boxes in Canada alone, but this is only about two percent of the population. Tree Swallows are plagued by nest predators, including snakes, mammals that range in size from chipmunks to black bears, and blowfly larvae that frequently parasitize nestlings. Avian nest predators include crows, grackles, and jays, and both adults and fledglings are fair game for falcons, accipiters, and owls. Only an estimated twenty percent of young birds survive their first year. Nevertheless, the vast breeding range of Tree Swallows and the remoteness of much of the boreal forests of Canada make the Tree Swallow a secure species that in some areas is expanding its breeding range. 

William E. Davis, Jr



COMMON MERGANSER BY DAVID LARSON

About the Cover Artist

Julie Zickefoose is a widely published natural history writer and artist. Educated at Harvard University in biology and art, she worked for six years as a field biologist for The Nature Conservancy before turning to a freelance art career. Her observations on the natural history and behavior of birds stem from more than three decades of experience in the field. She has presented illustrated lectures for nature organizations and festivals across the country, and exhibited her paintings at universities, museums, galleries, and in juried shows. Illustration credits include *The New Yorker*, *Smithsonian*, *Spider*, *Cricket*, and *Ladybug*. She has written and illustrated articles for *Country Journal*, and *Bird Watcher's Digest* has published more than 30 of Julie's articles and 17 of her cover paintings. With her husband, Bill Thompson III, editor of *Bird Watcher's Digest*, Julie lives on an 80-acre nature sanctuary in the Appalachian foothills of southeast Ohio. A 42-foot-tall birdwatching tower atop their home helps them enjoy and catalogue the wildlife they protect, including 180 bird species and 66 butterfly species to date. 🦉



EASTERN SCREECH OWL ROOSTING UNDER THE EAVES OF A HOUSE IN NEWBURYPORT, BY DAVID LARSON