



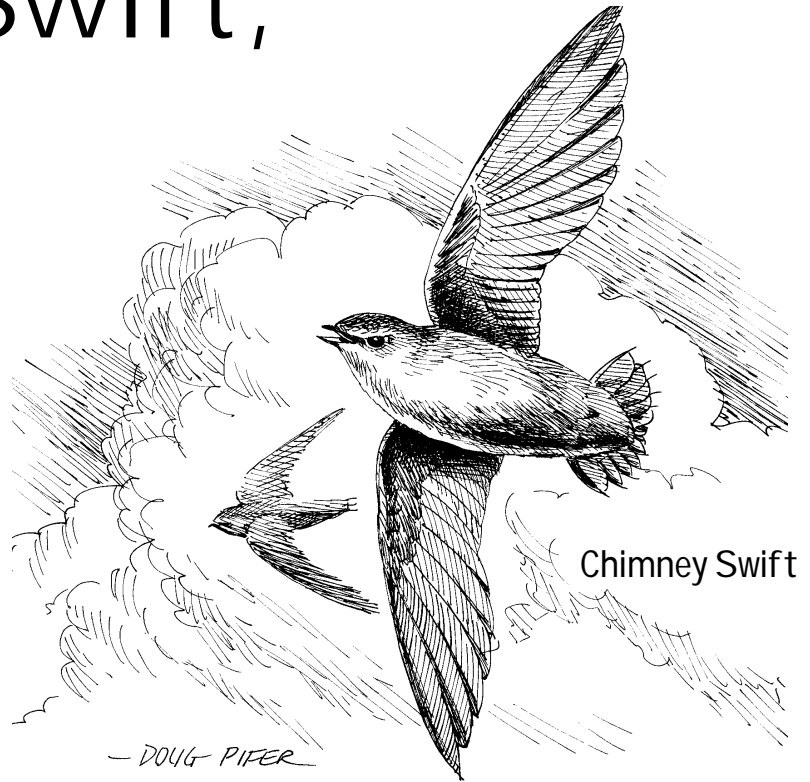
Wildlife Note — 53
LDR0103

Chimney Swift, Purple Martin and Swallows

by Chuck Fergus

Swifts, martins and swallows are built for life in the air. They have long tapering wings and light-weight bodies. Their short, wide bills open to expose gaping mouths for scooping up insect prey. The chimney swift belongs to Family Apodidae, with 90 species worldwide. The purple martin and the swallows are in Family Hirundinidae, also with about 90 species around the globe. The chimney swift has tiny, vestigial feet with four clawed toes facing forward, letting it cling to upright surfaces; the feet of the purple martin and the swallows have three toes forward and one to the rear, for perching on branches and wires.

Many of these birds are social and breed in colonies. Purple martins usually nest in artificial boxes with multiple chambers, put up by people wanting to attract these insect eaters; the other swallows build or occupy different sorts of nests, depending on their species. Most swallows do not defend territories. The males sing mainly to attract and communicate with females. Both parents usually share in incubating eggs and feeding young. Swifts, martins and swallows often forage in groups, soaring above forests, farms and urban areas. During wet weather they hunt at lower altitudes, where insects fly under damp conditions. These birds undertake long migrations. The seven species that breed in Pennsylvania winter in the Gulf states, Central America and South America.



Chimney Swift

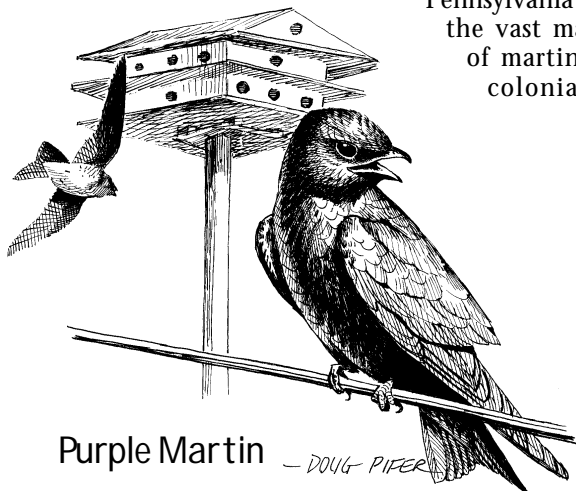
Chimney Swift (*Chaetura pelagica*) — The common name comes from the bird's favorite nesting habitat and the speed of its flight. A chimney swift is sooty gray, about five inches long, and has a one-foot wingspan; the body looks stubby between the long, narrow wings. The bird spends most of the daytime hours in the air; its flight is bat-like, with shallow wingbeats and erratic stalls and turns as the bird singles out insects or sweeps through clouds of prey. A loud clicking call is uttered in flight. Chimney swifts eat flies, leafhoppers, flying ants, mayflies, stoneflies, beetles, leaf bugs and other flying insects. They take spiders, mainly small ones floating on strands of silk borne aloft by air currents. Chimney swifts drink on the wing, skimming low over ponds, and they even gather materials for their nests while in flight, using their feet to break tips off dead branches and carry them back to the nest site.

Chimney swifts are thought to be monogamous and to mate for life. Pairs sometimes glide in tandem with their wings raised in a V. In the past, chimney swifts nested in hollow trees and caverns. Today they use manmade structures almost exclusively: factory and house chimneys, silos, air shafts and old wells, where they are protected from storms and predators. The nest is shaped like

a half-saucer and cemented to a vertical surface, the twigs held together by the adults' glutinous saliva, which solidifies and binds as it dries. Females lay three to six eggs (four or five are usual), which are white and unmarked. Both sexes participate in the 18- to 21-day incubation. The newly hatched young are altricial and are fed regurgitated insects. Sometimes a third "parent," probably a yearling offspring of the adults, helps to feed and brood nestlings. The young fledge a month after hatching and join feeding flocks. In late summer swifts gather in the evening before flying into large factory chimneys, where they roost by the thousands.

Chimney swifts are not common in the densely wooded parts of Pennsylvania, where trees may not be mature enough to offer cavities for nesting and roosting. Swifts arrive in the Northeast in May, raise a single brood in June and July, and head south in August and September. They winter mainly in the Amazon Basin. The average lifespan is four years.

Purple Martin (*Progne subis*) — At eight inches in length, the martin is the largest North American swallow. Adult males are a glistening blue-black; females and yearlings are grayish with pale bellies. Both sexes have a notched tail. Martins, less maneuverable than other swallows, glide in circles punctuated with short periods of flapping flight. Before Europeans came to the New World, native Americans were hanging gourds around their villages to attract purple martins, which also nested in caves and hollow trees. In Pennsylvania today, the vast majority of martins nest colonially in



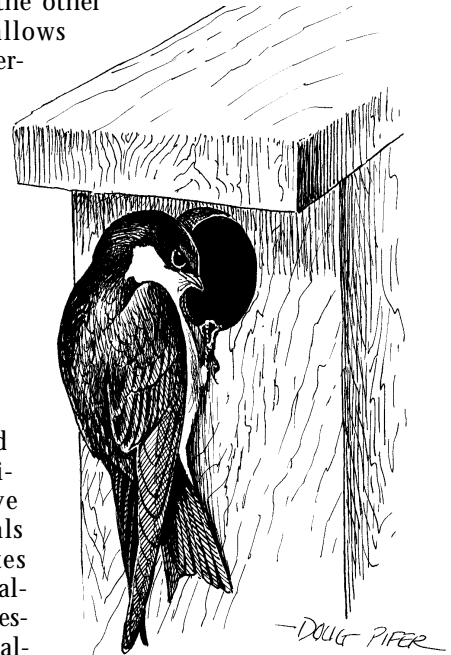
Purple Martin — DOUG PIFER

compartmented boxes that people put up for them. Martins inhabit open areas near water, meadows and farmland. They feed on winged ants, wasps, bees, flies, dragonflies, beetles, moths and butterflies. Males arrive first in the spring, followed by females. The call is a throaty, gurgling *tchew-wew*. One male may mate with more than one female. The four or five eggs are white and unmarked, laid on a nest of grass, twigs and leaves inside the nest chamber. Flocks of martins gather by the thousands in August and September prior to migration. The female incubates them for 15 to 18 days. The species winters in the Amazon Basin.

Tree Swallow (*Tachycineta bicolor*) — Tree swallows nest across Canada and most of the northern United States. They are five to six inches long, an iridescent green-black or blue-black above and bright white below. They nest in tree cavities, woodpecker holes and bluebird houses put up by humans. The earliest of our swallows to return north, they arrive in late March and April; unlike the other

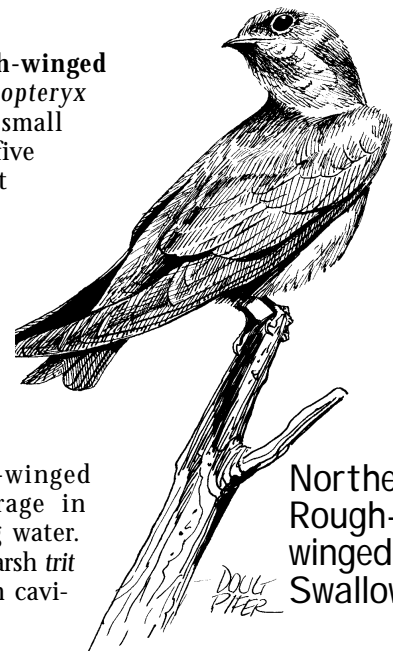
Tree Swallow

species, tree swallows switch to eating berries and seeds to survive cold periods when insects become torpid. They often breed near the still waters of lakes, ponds and marshes, competing for nest cavities with bluebirds, starlings, house sparrows and house wrens. Ornithologists believe that individuals choose new mates each year. Tree swallows are more aggressive than other swallow species and defend an area within a radius of about 15 yards from the nest.



The female lines the nest cavity with grass, weeds, rootlets and pine needles; after the four to seven pinkish-white eggs are laid, she often adds feathers (usually white ones) from other birds. Incubation takes 14 to 15 days. The young fledge three weeks after hatching. Tree swallows migrate in flocks to wintering grounds in the Gulf states and Central America.

Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) — This small (body length, about five inches), nondescript brown and white swallow is named for small serrations in its outermost wing feathers. The species breeds across the United States and in Central America. Rough-winged swallows often forage in flight above moving water. The call is a short, harsh *trit bit*. The birds nest in cavi-



Northern Rough-winged Swallow — DOUG PIFER

ties in rock faces, quarries and stream banks, frequently in abandoned kingfisher burrows, drainpipes and culverts; sometimes they excavate their own burrows. At the end of a one- to six-foot tunnel, the birds heap up twigs, bark, roots and weeds, and line a central cup with fine grasses. The four to eight pure white eggs hatch after about 16 days of incubation. Rough-winged swallows nest throughout Pennsylvania, rarely in colonies. They winter along the Gulf Coast and in Central America.

Bank Swallow (*Riparia riparia*) — About 5½ inches long, this small brown-backed swallow has a dark band across its pale breast. Although they have small feet and tiny bills, bank swallows usually dig their own burrows, up to five feet deep in dirt banks, piles of gravel or sand and roadcuts. Nest entries of neighboring pairs may be only a foot apart. Colonies arise and die out as banks of

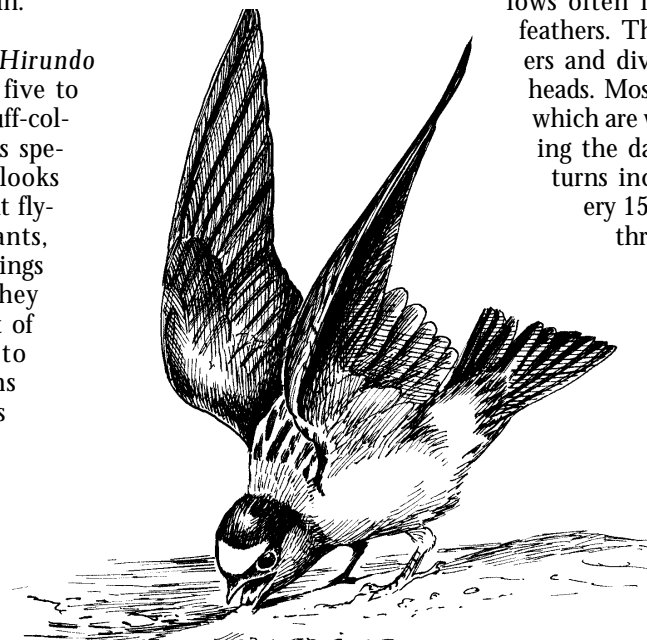
Bank Swallow



suitable burrowing materials become available and then lose qualities that bank swallows require, such as steepness and height. Bank swallows forage over fields and wetlands and along rivers and ponds, taking flies, beetles, wasps, winged ants, dragonflies, stoneflies,

moths and other flying insects. They nest from May until July. The clutch averages four or five eggs. In late summer bank swallows may gather in large flocks before departing for wintering grounds in South America. The species also breeds in Europe and Asia, where it is known as the sand martin.

Cliff Swallow (*Hirundo pyrthonota*) — Body length, five to six inches; a pale rusty or buff-colored rump distinguishes this species. From below, the tail looks squared-off. Cliff swallows eat flying beetles, flies, winged ants, bees, wasps, mayflies, lacewings and many other insects. They build gourd-shaped nests out of pellets of mud, attached to cliffs, bridge supports, dams and walls of unpainted barns and derelict buildings under eaves that protect against rain. A typical nest takes one to two weeks to build and requires more than 1,000 mud pellets. Colonies can be dense: in one

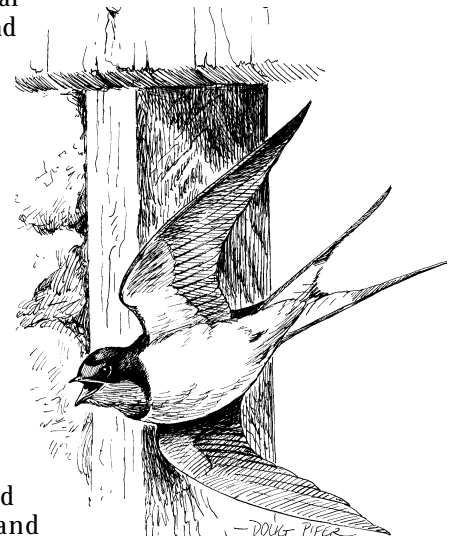


Cliff Swallow

instance, 800 nests were clustered on the side of a barn. The adults line the inside of the nest with grass, hair and feathers. The three to six eggs are white spotted with brown. Both sexes incubate for about 15 days. A female cliff swallow will sometimes lay an egg in another swallow's nest, or carry an egg in her bill to a neighboring nest. Cliff swallows winter in southern South America. The population is thought to be increasing in North America.

Barn Swallow (*Hirundo rustica*) — The flight of these sleek, long-tailed blue-and-buff swallows can look like an aerial ballet, with the birds sideslipping, stalling, twisting and turning low over water or fields in pursuit of their prey: house flies, horse flies, beetles, wasps, bees, winged ants and others. In bad weather, barn swallows may land and eat spiders, snails, berries or seeds. Pairs nest on their own, or near a few other pairs. Barn swallows are common, abundant breeding birds in Pennsylvania and the Northeast. They build bowl-shaped nests out of mud and straw, fixing them to walls, beams and eaves of barns and other outbuildings; in culverts and under bridges; and rarely on the cliff faces and caves which were the species' original habitat before

Barn Swallow



Europeans settled North America. Barn swallows often line their nests with poultry feathers. The adults scold human intruders and dive at them, zipping past their heads. Most females lay four or five eggs, which are white spotted with brown. During the day both male and female take turns incubating, switching about every 15 minutes. Young leave the nest three weeks after hatching. Some pairs raise a second brood.

Barn swallows from eastern North America winter in Panama, Puerto Rico and throughout South America. *Hirundo rustica* is the most widespread swallow species in the world, breeding in North America, Europe and Asia.

Wildlife Notes

Allegheny Woodrat
Bats
Beaver
Black Bear
Blackbirds, Orioles, Cowbird and Starling
Blue Jay
Bobcat
Bobwhite Quail
Canada Goose
Chickadees, Nuthatches, Titmouse and Brown Creeper
Chimney Swift, Purple Martin and Swallows
Chipmunk
Common Nighthawk and Whip-Poor-Will
Cottontail Rabbit
Coyote
Crows and Ravens
Diving Ducks
Doves
Eagles and Ospreys
Elk
Finches and House Sparrow
Fisher
Flycatchers
Foxes (Red & Gray)
Gray Catbird, Northern Mockingbird and Brown Thrasher
Herons
Kingfisher
Mallard
Mice and Voles
Minks & Muskrats
Northern Cardinal, Grosbeaks, Indigo Bunting and Dickcissel

Opossum
Otter
Owls
Porcupine
Puddle Ducks
Raccoon
Rails, Moorhen and Coot
Raptors
Ring-necked Pheasant
Ruby-throated Hummingbird
Ruffed Grouse
Shrews
Snowshoe Hare
Sparrows and Towhee
Squirrels
Striped Skunk
Tanagers
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Vultures
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White-tailed Deer
Wild Turkey
Woodchuck
Woodcock
Wood Duck
Woodpecker
Wood Warblers
Wrens

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