

SCARLET TANAGER - PIRANGA OLIVACEA

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Cardinalidae Genus: Piranga
Species: P. olivacea

Habitat:

Biomes: Scarlet Tanagers breed in mature deciduous forests and mixed deciduous-coniferous forests in eastern North America. They nest in oak, pine-oak, oak-hickory, beech, hemlock-hardwood, and occasionally pure eastern hemlock forests. In Canada they sometimes extend into boreal forests in stands of aspen, balsam poplar, and birch. Breeding Scarlet Tanagers prefer large forest tracts with large trees. During spring and fall they use similar forest habitats as well as open spaces such as parks and gardens. When they arrive in the southern United States coast in early spring they feed in shrubby vegetation, grassy fields, and on the ground. Scarlet Tanagers winter in mature forests and forest edges in northern and western South America, mostly on hills and mountains. They range south as far as the Bolivian lowlands.

Distribution:

In US: Eastern North America. In winter, scarlet tanagers occur in the montane forest of the Andean foothills. Scarlet tanagers migrate to northwestern South America, passing through Central America around April, and again around October.

In Other Countries: NONE

Holistic Description: Male Scarlet Tanagers are among the most blindingly gorgeous birds in an eastern forest in summer, with blood-red bodies set off by jet-black wings and tail. They're also one of the most frustratingly hard to find as they stay high in the forest canopy singing rich, burry songs. The yellowish-green, dark-winged females can be even harder to spot until you key in on this bird's chick-burr call note. In fall, males trade red feathers for yellow-green and the birds take off for northern South America.

Species Richness: NO SUBSPECIES

Population Dynamic: Exposure and starvation can occasionally kill scarlet tanagers, especially when exceptionally cold or wet weather hits eastern North America. They often die from collisions with man-made objects including TV and radio towers, buildings and cars.

Evolution and Systematics:

Evolution: NONE

Systematics: No subspecies recognized. No geographic variation reported in plumage color or body size. Lack of morphological variation consistent with average sequence divergence in mitochondrial DNA.

Number of Species: NO SUBSPECIES

Number of Genera: NO SUBSPECIES

Physical Characteristics:

Size and Length: Length: 6.3-6.7 in (16-17 cm) Weight: 0.8-1.3 oz (23-38 g)

Wingspan: 9.8-11.4 in (25-29 cm)

Coloration: In spring and summer, adult males are an unmistakable, brilliant red with black wings and tails. Females and fall immatures are olive-yellow with darker olive wings and tails. After breeding, adult males molt to female-like plumage, but with black wings and tail.

General Body Features: Scarlet Tanagers are medium-sized songbirds with fairly stocky proportions. They have thick, rounded bills suitable both for catching insects and eating fruit. The head is fairly large and the tail is somewhat short and broad.

Special Features of the Body: NONE

Special Features of the Head and Sensory Organs: The bill of the Scarlet Tanager has a distinctive tooth-like structure on the cutting edge of the upper jawbone. This enables the bird to eat fruits and ariled seeds.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: NONE

Any Special Internal Anatomy: NONE

Sexual Dimorphisms: Adult males are crimson-red with black wings and tail. The male's coloration is intense and deeply red, similar but deeper in shade than the males of two occasionally co-existing relatives, the northern cardinal and the summer tanager, both which lack black wings. Females are yellowish on the underparts and olive on top, with yellow-olive-toned wings and tail. The adult male's winter plumage is similar to the female's, but the wings and tail remain darker.

Differences Between Juvenile Stage and Adult: Young males briefly show a more complex, variegated plumage intermediate between adult males and females.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Scarlet Tanagers are strong fliers, making swift, direct flights and migrating long distances in fall and spring. Males arrive early on their breeding grounds to defend loose territories that include mating, nesting, and foraging areas. Territorial singing battles sometimes can escalate to confrontations, where one or both males spread and droop their wings and raise their tail in threat. If neither backs down, the standoff culminates in one male chasing another. Scarlet Tanagers are monogamous within each breeding season but switch mates from year to year. Parents feed their young for up to two weeks after the birds fledge, and then the family disperses before migrating. On wintering grounds Scarlet Tanagers join up with other species in foraging flocks.

Locomotion: Hops between perches in vegetation and on ground. Walks on branches and ground while searching for food. Climbs vertically on tree trunks while probing bark for insects. Strong flyer, capable of long, continuous flight; e.g., crosses Gulf of Mexico during migration. Flight swift and direct; bursts of wing beats alternate with slight pauses. During pauses, wings held tight to body. When hovering for food, beats wings rapidly. When hawking for insects, alternates flapping with short glides while approaching flying prey.

Communication and Perception: The male Scarlet Tanager sings a burry series of 4–5 chirruping phrases with a hurried quality. Many people liken it to the sound of a robin with a sore throat. He sings from an exposed perch to defend his territory, getting into singing wars with his neighbors. Females sing a similar song but more softly and with fewer syllables. Mates often sing together while foraging or while the female is gathering nesting material.

Home Range: On breeding grounds males defend mating, nesting, and foraging areas. Territorial boundaries not rigid; area used for foraging is largest, but nesting area is most vigorously defended; with onset of nesting, song perches of male are concentrated near nest tree. Territory size not often measured. The few data available suggest birds use relatively large areas for foraging. Size of territory varies substantially with size of forest area, location, and vegetation type; in mature hemlock-maple stands in s. Quebec, territories range from 0.9 to 1.2 ha.

Degree of Sociality: Generally solitary. During breeding season, forms pairs; pair members often forage together early in breeding cycle; much of foraging done alone once nestling stage reached. Adults stay with young until after fledging. May migrate in small loose flocks and feed at fruiting trees in loosely associated groups.

Level of Aggression: Aggressive encounters between conspecifics most common shortly after arrival of male on breeding grounds, during establishment of territories. During this period, countersinging frequently occurs between males in adjacent territories as a means of territory identification and passive defense. Once territories established, boundary disputes usually cause males to sing shorter, more rapid songs interspersed with sharp, scolding chips and Chip-Churrs.

Migration: Long-distance migrant. Twice a year, Scarlet Tanagers fly across the Gulf of Mexico between their breeding grounds in eastern North America and their wintering grounds in South America. They usually migrate at night. Individuals that spend the winter farther south migrate to breeding grounds later, and in more synchronized bursts, than individuals wintering further north.

Predators:

Predators: Adults observed as prey of Eastern Screech Owl (*Otus asio*), Long-eared Owl (*Asio otus*), Short-eared Owl (*Asio flammeus*), and Merlin (*Falco columbarius*). Common avian nest predators include Blue Jay, Grackles (*Quiscalus* spp.), and American Crow (*Corvus brachyrhynchos*). Squirrels, chipmunks, and snakes also likely nest predators (see below), but no observations of nest disturbance by these groups.

Anti-Predator Defenses: Except for Merlin and American Crow, observed to mob predators while vigorously uttering sharp, scolding Chips and Chip-Churrs and diving in quick swooping flights. Presence of American Crow in or near tanager territory causes silence; inconspicuousness appears to be protective reaction of Scarlet Tanagers to crow.

Diet and Nutrition:

Adult Diet: Scarlet Tanagers eat mainly insects along with some fruit and tender buds. Their invertebrate diet includes ants, sawflies, moths, butterflies, beetles, flies, cicadas, leafhoppers, spittlebugs, treehoppers, plant lice, scale insects, termites, grasshoppers, locusts, dragonflies, dobsonflies, snails, earthworms, and spiders. While searching for these tidbits they walk along branches high in the canopy or (rarely) along the ground, or vertically on tree trunks to probe the bark. Scarlet Tanagers perch or hover with fast wingbeats to grab insects from leaves, bark, and flowers, and they catch flying insects like bees, wasps, and hornets from the air. They swallow small larvae whole, but they kill larger prey by pressing it into a branch. In the winter, they forage in mixed-species flocks with woodcreepers, flycatchers, barbets, and tropical tanagers.

Juvenile Diet: ^^^^^^

Special Adaptations for Getting Prey: During the breeding season, individuals forage independently. Captures larval and adult insects from leaf, flower, fruit, and bark surfaces by hovering (grabbing food from surface while hovering) or gleaning (grabbing food from surface while perched) and flying insects by hawking. Consumes small larvae by swallowing whole

without first killing; larger larvae killed first by pressing against a branch. Consumes adult insects by first killing then swallowing head first; occasionally remove troublesome wings and legs of larger insects before swallowing.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Presumed seasonally monogamous, mating with one individual each season, but not with same mate in successive years. No studies of individually banded birds available. No data on sex ratio.

Mating Season: Late-April to Mid-May

Courtship: In courtship, the usually silent male descends to lower perches, 0.25–2.0 m above the ground, where he displays to female (6–10 m) above. Male flies from perch to perch, usually dead limbs, in a large semicircular area relatively clear of brush; at perches, displays his scarlet back to female, flying from perch to perch above, by holding his wings slightly away from his body with the tips held well below the tail and his neck stretched forward to expose and elongate the scarlet back-patch. Female apparently attracted by display of contrastingly colored rectangular scarlet patch, as well as by male's general movements and posture.

Territoriality: HOME RANGE

Mating: Copulation takes place on exposed, horizontal branches at an average height of 8 m (range 1–20 m) at various times during the season, i.e., before egg-laying, during incubation, and during nestling period. Male does not usually display to attract female, but rather copulates with female after an invitation from her. Female indicates she is ready by crouching low on branch with neck curved and bill pointing upward and rapidly fluttering her half-open wings. Male responds by jumping into the air and hovering over her at a steep angle with his tail projecting sharply upward. During copulation, he does not grasp female's crest, but maintains contact with female by very rapid wing beats; copulatory act completed in 2–5 s.

Nest Placement: The female chooses the nest site, usually selecting a shaded spot within a cluster of leaves at a juncture of small branches. Nests are often fairly high (50 feet or more from the ground) on a nearly horizontal branch well away from the trunk. The site usually has an unobstructed view of the ground and open flyways from nearby trees. Scarlet Tanagers tend to nest in mature deciduous trees such as maple, beech, and oak, but they also nest in eastern hemlock.

Nest Description: The female gathers nesting material from the forest floor and builds a flimsy nest in 3–4 days, spending relatively little time on it each day. She drops material onto the nest, hops in, and molds it into shape by pressing her body against the sides and bottom, then getting out and weaving in loose ends. The nest is a loosely woven saucer of twigs, grasses, plant stalks, bark strips, rootlets, and pine needles. It has a shallow and asymmetrical interior space, lined with grass, fine rootlets, fine plant fibers, vine tendrils, and pine needles.

Egg-Laying: Clutch Size: 3-5 eggs Number of Broods: 1 brood Egg Length: 0.8-1.1 in (2-2.7 cm) Egg Width: 0.6-0.7 in (1.5-1.8 cm) Incubation Period: 12-14 days Nestling Period: 9-15 days Egg Description: Greenish blue to light blue speckled with chestnut, purplish red, and lilac.

Hatching and Incubation/Gestation: Helpless, eyes closed, with orange skin and small tufts of grayish white down on the head and back.

Development: Altricial: eye slits closed; small tufts of grayish-white down on head and on dorsal pterygiae. Skin color orange; viscera apparent through skin of abdomen; mouth lining bright orange-yellow; egg tooth present. Young unable to hold head up for more than a few seconds, but able to move from side to side; gape in response to tapping on nest.

Parental Care: Female broods nestlings for 3 d after they hatch; periods on the nest gradually decrease, and periods off nest gradually increase, until day 4, when she spends less time on the nest than off. Feeding by adults begins at hatching and continues through nestling development. During brooding, male assumes burden of feeding young, even when female on nest. Male feeds nestlings directly, or gives food to female who feeds young. Method of feeding during the first 2 d involves both regurgitation and carrying whole food in beak.

Lifespan: 11.9 years

Conservation:

Official Federal Status: Least Concern

Special Statutes in Individual States: NONE

Threats: Scarlet Tanager populations declined by about 14% between 1966 and 2014, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 2.2 million with 93% spending some part of the year in the U.S., and 7% breeding in Canada. The species rates an 11 out of 20 on the Continental Concern Score. Scarlet Tanager is not on the 2014 State of the Birds Watch List. These birds are interior forest species, so changes in land-use—fragmentation by development as well as regrowth as cleared land reverts to forest—may be responsible changes in population trends over time. In fragmented landscapes, nests are in greater danger of being parasitized by Brown-headed

Cowbirds and from predators that operate along habitat edges. To safeguard the Scarlet Tanager population, researchers recommend preserving and restoring mature forest habitat for breeding, migrating, and wintering birds.

Conservation Efforts: ^^^^^^^^^

Extra Facts:

1. On the wintering grounds in South America the Scarlet Tanager joins mixed species foraging flocks with flycatchers, antbirds, woodcreepers, and resident tropical tanagers.
2. The female Scarlet Tanager sings a song similar to the male's, but softer, shorter, and less harsh. She sings in answer to the male's song and while she is gathering nesting material.
3. The response of the Scarlet Tanager to habitat fragmentation varies from place to place. Results from the Cornell Lab's Project Tanager indicate that in the heart of the species' range in the Northeast, it can be found in small forest patches. In the Midwest, similar sized forest patches tend to have no tanagers.
4. Scarlet Tanagers often play host to eggs of the Brown-headed Cowbird, particularly where the forest habitat has been fragmented. When a pair of tanagers notices a female cowbird approaching, they aggressively drive her away. If they don't notice, the cowbird gets rid of a tanager egg and replaces it with one of her own. The tanagers apparently can't tell the difference, either before or after the egg hatches, and they raise the imposter along with the rest of their brood.
5. The oldest Scarlet Tanager on record was a male, and at least 11 years, 11 months old. He was banded in Pennsylvania in 1990, and found in Texas in 2001.

Notable Species: NONE