

DOWNY WOODPECKER - DRYOBATES PUBESCENS

Despite their close resemblance, downy and hairy woodpeckers are not very closely related, and they are likely to be separated in different genera; the outward similarity is a spectacular example of convergent evolution. Why they evolved this way cannot be explained with confidence; it may be relevant that the species exploit rather different-sized foodstuffs and do not compete very much ecologically. Some taxonomic authorities, including the American Ornithological Society, continue to place this species in the genus **Picoides**.

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Piciformes Family: Picidae Genus: Dryobates
Species: D. pubescens

Habitat:

Biomes: Open woodlands, particularly deciduous woods and along streams. Also found in created habitats including orchards, parks, and suburbs. You may also find Downy Woodpeckers in open areas, where they can nest along fencerows and feed amid tall weeds.

Distribution:

In US: Downy woodpeckers are native to forested areas, mainly deciduous, of North America. Their range consists of most of the United States and Canada, except for the deserts of the southwest and the tundra of the north. Mostly permanent residents, northern birds may migrate further south; birds in mountainous areas may move to lower elevations.

In Other Countries: NONE

Holistic Description: The active little Downy Woodpecker is a familiar sight at backyard feeders and in parks and woodlots, where it joins flocks of chickadees and nuthatches, barely outsizing them. An often acrobatic forager, this black-and-white woodpecker is at home on tiny branches or balancing on slender plant galls, sycamore seed balls, and suet feeders. Downies and their larger lookalike, the Hairy Woodpecker, are one of the first identification challenges that beginning bird watchers master.

Species Richness: 7 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: NONE

Systematics: Geographic variation in size is broadly clinal across North America, with larger birds to the north and at higher elevations, and smaller birds to the south and at lower elevations, thus generally conforming to Bergmann's Rule. This variation is most strongly correlated with climatic factors that incorporate both temperature and humidity, such as wet-bulb temperature, vapor pressure, and relative humidity.

Number of Species: 7 SUBSPECIES

Number of Genera: 7 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 5.5-6.7 in (14-17 cm) Weight: 0.7-1.0 oz (21-28 g)

Wingspan: 9.8-11.8 in (25-30 cm)

Coloration: Downy Woodpeckers give a checkered black-and-white impression. The black upperparts are checked with white on the wings, the head is boldly striped, and the back has a broad white stripe down the center. Males have a small red patch on the back of the head. The outer tail feathers are typically white with a few black spots.

General Body Features: Downy Woodpeckers are small versions of the classic woodpecker body plan. They have a straight, chisel-like bill, blocky head, wide shoulders, and straight-backed posture as they lean away from tree limbs and onto their tail feathers. The bill tends to look smaller for the bird's size than in other woodpeckers.

Special Features of the Body: The woodpecker's beak is strong and sturdy, with a chisel-like tip for drilling holes in wood. Woodpeckers use their stiff tail as a prop while climbing in order to balance themselves.

Special Features of the Head and Sensory Organs: Woodpecker tongues, however, vary based on their diet. Some species have a tongue that is longer than their bill in order to extract insects from a hole. Woodpeckers also have a lengthened hyoid apparatus (bones, muscle, cartilage connected to the tongue), allowing their tongue to extend incredible lengths.

Woodpeckers have bristly feathers over their nostrils to prevent inhalation of wood particles as they chisel.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: Their strong “zygodactyl” feet are specifically adapted to cling and grasp onto trees. Two toes face forward, and two face backward. Most songbirds have three forward-facing toes, and one backward-facing. They may peck a total of 8,000-12,000 pecks per day! Luckily, a woodpecker’s skull is built to absorb this shock. Sinewy attachments at the base of a woodpecker’s bill and around the brain help to minimize damage to the brain.

Any Special Internal Anatomy: Woodpeckers are often characterized as “chisel-billed” because they peck into living or dead wood to find grubs or build a nest. Cells in the tips of their beaks are constantly replaced, preventing them from wearing down over time. The woodpecker’s long tongue has a barbed tip and is covered in sticky saliva. These features help the bird capture and extract insects from the holes the bird drills.

Sexual Dimorphisms: Adult males have a red patch on the back of the head. Sexes alike except that male has red patch on nape.

Differences Between Juvenile Stage and Adult: Adult males have a red patch on the back of the head whereas juvenile birds display a red cap. Juveniles of both sexes are duller, have longer outer primaries, and show mostly black crown (lacking red nape) with some red-tipped feathering centrally.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: An active woodpecker that moves quickly over tree trunks, branches, and stems of grasses and wildflowers, characteristically leaning against its stiffened tail feathers for support. Downy Woodpeckers move horizontally and downwards on trees much more readily than most other woodpeckers. You may also see them perched atop tall weeds such as goldenrod in late summer, hammering away at a plant gall to get at the larva inside. Occasionally hops on the ground for food. Downy Woodpeckers have the undulating flight pattern typical of many woodpecker species, alternating quick wingbeats with folding the wings against the body. When having a dispute with another bird, Downy Woodpeckers fan their tails, raise their head feathers, and jerk their beaks from side to side. In spring you may see courtship displays in which males and females fly between trees with slow, fluttering wingbeats that look almost butterfly-like.

Locomotion: Typically hitches upward on, laterally on, or along tree surfaces using stiff rectrices both as a support and as a spring to aid forward momentum. Less commonly backs downward. In motion, releases both feet simultaneously. When clinging to a surface like a seed balls of sycamore. Characteristic flight is intermittent, showing characteristic flap-bounding (undulation); pectoralis muscles include red muscle fibers through-out, but have intermediate fibers restricted to lateral regions.

Communication and Perception: The Downy Woodpecker’s whinnying call, made by both sexes, is a typical sound of deciduous forests during the breeding season. It’s a somewhat excited string of hoarse, high-pitched notes that descend in pitch toward the end; the call lasts about 2 seconds. Excited birds also give a very sharp pik note, occasionally repeated several times.

Home Range: Matthysen suggested that, among nonbreeders, individual territoriality is not typical, noting that individuals tend to maintain some minimal distance between others of the same sex—a mini-moving territory—while tolerating individuals of the opposite sex, with neither overt aggression nor specific associations among individuals. Nesting territories reported in deciduous forest in Illinois averaged 4.4 ha.

Degree of Sociality: Members of a Downy Woodpecker pair or a parent and recent fledglings often forage in loose association. Otherwise, no tendency to form monospecific flocks.

Level of Aggression: Male usually defends a territory against other males, female against females, although apparent territorial defense by a male toward a female was reported in the fall in Ohio. Both sexes use similar threat displays: tail fanned, crest raised, bill held high and waved back and forth jerkily as if dueling with an invisible foe with a sword, flight exaggerated and slow in a Butterfly Flight, but rapid in pursuit. Crest-raising identifies sex, exaggerates size, and reflects aggression. Wing Flicking—a rapid slight extension and raising of the wings—is a mild threat display that with increased intensity becomes the Wing Spreading Display.

Migration: NONE

Predators:

Predators: American Kestrel, Sharp-shinned Hawk, Cooper’s Hawk, Downy Woodpecker, Eastern Screech Owl, Rat Snakes, Eastern Gray Squirrel, Flying Squirrel, Red Squirrel, Douglas Squirrel, Domestic Cats, Hairy Woodpecker.

Anti-Predator Defenses: Responds to the appearance of an accipiter or American Kestrel by immediately ducking to the opposite side of a tree trunk or limb, except that the wings are not always extended. When pursued by a Sharp-shinned Hawk, a male Downy Woodpecker flew evasively as described above, but was caught. When dealing with potential mammalian predators such as the Red Squirrel, Downy Woodpecker employs a dynamic balance of escape/attack behaviors. When a nest

is threatened, Downy Woodpecker at first watches the potential predator, may stalk it, physically attack, or take up a strategic position within the nest cavity.

Diet and Nutrition:

Adult Diet: Downy Woodpeckers eat mainly insects, including beetle larvae that live inside wood or tree bark as well as ants and caterpillars. They eat pest insects including corn earworm, tent caterpillars, bark beetles, and apple borers. About a quarter of their diet consists of plant material, particularly berries, acorns, and grains. Downy Woodpeckers are common feeder birds, eating suet and black oil sunflower seeds and occasionally drinking from hummingbird feeders.

Juvenile Diet: ^^^^^^

Special Adaptations for Getting Prey: Very active in moving over tree, shrub, and large weedy stem surfaces to glean from surface, probe into crevices, and excavate for shallow subsurface prey. Eats small fruits whole, takes pulp and suet or peanut butter-cornmeal mixtures at feeders by pecking and seizing chunks, occasionally drinks sugar water from hummingbird or oriole feeders. Usually hitches upward on vertical surfaces; often clings to side or bottom of fruit/seed clusters to probe and feed. Uses zygodactyl feet to grip substrate; strong rectrices as a prop and spring that enhance efficiency of pecking; sharply pointed bill as a pick and probe for opening and investigating small excavations; long barbed tongue as a rake for removing arthropods from crevices and tunnels; sticky saliva to enhance capture and facilitate prey manipulation.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Socially monogamous, though there are no genetic data available to confirm or dispute monogamy. Mating of siblings documented.

Mating Season: May to August

Courtship: The Butterfly Flight, one of the most spectacular displays of the Downy Woodpecker, is typically performed on sunny, warm spring days prior to nesting. Male and female follow (or chase) one another in a flight characterized by holding the wings high and flapping them slowly and weakly like a butterfly, moving dancelike through open spaces between trees, sometimes on a level course and at times in long, deep loop.

Territoriality: HOME RANGE

Mating: The female "invited" copulation by flying to the male and perching crosswise, or occasionally lengthwise on a limb near the nest hole. Then she would rise on her legs, tail pointing straight out, head up and tilted back, breast out, with wings slightly dropped and motionless. The male would then approach from behind, hovering somewhat before landing on her back. Copulation is achieved as the male slides gradually to the left as his tail is moved under the female's and is turned to achieve cloacal contact. From mounting to completion, successful copulation lasted 10–16 s.

Nesting: Downy Woodpeckers nest in dead trees or in dead parts of live trees. They typically choose a small stub (averaging around 7 inches in diameter) that leans away from the vertical, and place the entrance hole on the underside. Nest trees are often deciduous and the wood is often infected with a fungus that softens the wood, making excavating easier. Both male and female excavate the nest hole, a job that takes 1 to 3 weeks. Entrance holes are round and 1-1.5 inches across. Cavities are 6-12 inches deep and widen toward the bottom to make room for eggs and the incubating bird. The cavity is lined only with wood chips.

Egg-Laying: Clutch Size: 3-8 eggs Number of Broods: 1 brood Egg Length: 0.8-0.8 in (1.9-2 cm) Egg Width: 0.6-0.6 in (1.4-1.5 cm) Incubation Period: 12 days Nestling Period: 18-21 days Egg Description: Completely white.

Hatching and Incubation/Gestation: Naked, pink skin, a sharp egg tooth at the tip of bill; eyes closed, clumsy. ALTRICIAL

Development: Skin pink and translucent, emergent spiny tips of rectrices and barely visible dots of feather papillae in the posterior part of the ventral tract are the only evidence of feathers; claws and bill pinkish white, upper mandible tipped with large shiny-white covering on which there is a smaller, sharp egg tooth; lower mandible is pinkish white, whiter at tip, and about 1 mm longer than upper mandible and with large white to pale pinkish-brown oral flanges forming a "receiving platform" for food brought by parents; tongue tipped with shiny white, lacks barbs of adult tongue; large calluses on heels.

Parental Care: Nearly constant for first 4 d after hatching; decreasing thereafter, though increasing during periods of cold or wet weather. As with all known woodpeckers, male broods young at night and roosts in the nest until young are near fledging.

Lifespan: Around 5 years old.

Conservation:

Official Federal Status: Least Concern

Special Statutes in Individual States: NONE

Threats: Downy Woodpeckers are numerous and their populations were stable between 1966 and 2015 according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 14 million, with 79% living in

the U.S. and 21% in Canada. The species rates an 7 out of 20 on the Continental Concern Score. Downy Woodpecker is not on the 2016 State of North America's Birds Watch List. These birds sometimes nest along fences, and the shift from wooden to metal fenceposts over the last century may have reduced their numbers. But clearing and thinning forests has had the opposite effect, since Downy Woodpeckers do well in young forests.

Conservation Efforts: ^^^^^

Extra Facts:

1. In winter Downy Woodpeckers are frequent members of mixed species flocks. Advantages of flocking include having to spend less time watching out for predators and better luck finding food from having other birds around.
2. Male and female Downy Woodpeckers divide up where they look for food in winter. Males feed more on small branches and weed stems, and females feed on larger branches and trunks. Males keep females from foraging in the more productive spots. When researchers have removed males from a woodlot, females have responded by feeding along smaller branches.
3. The Downy Woodpecker eats foods that larger woodpeckers cannot reach, such as insects living on or in the stems of weeds. You may see them hammering at goldenrod galls to extract the fly larvae inside.
4. Woodpeckers don't sing songs, but they drum loudly against pieces of wood or metal to achieve the same effect. People sometimes think this drumming is part of the birds' feeding habits, but it isn't. In fact, feeding birds make surprisingly little noise even when they're digging vigorously into wood.
5. Downy Woodpeckers have been discovered nesting inside the walls of buildings.
6. The oldest known Downy Woodpecker was a male and at least 11 years, 11 months old when he was recaptured and rereleased in 1996 during banding operations in California. He had been banded in the same state in 1985.

Notable Species:

1. *D. p. medianus* (Swainson, 1832). - Resident from north-central Alaska east through northern British Columbia and central Alberta to southern Quebec, and south to eastern Kansas east to New England and North Carolina.
2. *D. p. glacialis* Grinnell, 1910. - Resident coastally from the Kenai Peninsula along the shores and islands of Prince William Sound, east along coastal Alaska to the Taku River.
3. *D. p. fumidus* Maynard, 1889. - Resident from south-westernmost British Columbia, including Vancouver Island, south, west of Cascades and Coast Ranges, to the Columbia River.
4. *D. p. gairdnerii* (Audubon, 1839) - Resident coastally from western Oregon south to northwestern California.
5. *D. p. leucurus* (Hartlaub, 1852). - Resident in the Rocky Mountains and Intermountain Ranges from southeastern Alaska south to northeastern California and western Nebraska.
6. *D. p. turati* (Malherbe, 1860). - Resident in Cascades from north-central Washington south to northern California and in Coast Ranges south to southern California.
7. *D. p. pubescens* (Linnaeus, 1758). - Largely resident from southeastern Kansas south to eastern Texas and east to southeastern Virginia south to through peninsular Florida, although it is absent from the Keys.