

# PILEATED WOODPECKER - DRYOCOPUS PILEATUS

It is the second-largest woodpecker on the continent, after the critically endangered ivory-billed woodpecker.

**Taxonomy:** Kingdom: Animalia Phylum: Chordata Class: Aves Order: Piciformes Family: Picidae Genus: Dryocopus  
Species: D. pileatus

## **Habitat:**

**Biomes:** Pileated Woodpeckers live in mature deciduous or mixed deciduous-coniferous woodlands of nearly every type, from tall western hemlock stands of the Northwest to beech and maple forests in New England and cypress swamps of the Southeast. They can also be found in younger forests that have scattered, large, dead trees or a ready supply of decaying, downed wood. Throughout their range, Pileated Woodpeckers can also be found in suburban areas with large trees and patches of woodland.

## **Distribution:**

**In US:** This insectivorous bird is a mostly sedentary inhabitant of deciduous forests in eastern North America, the Great Lakes, the boreal forests of Canada, and parts of the Pacific Coast.

**In Other Countries:** NONE

**Holistic Description:** The Pileated Woodpecker is one of the biggest, most striking forest birds on the continent. It's nearly the size of a crow, black with bold white stripes down the neck and a flaming-red crest. Look (and listen) for Pileated Woodpeckers whacking at dead trees and fallen logs in search of their main prey, carpenter ants, leaving unique rectangular holes in the wood. The nest holes these birds make offer crucial shelter to many species including swifts, owls, ducks, bats, and pine martens.

**Species Richness:** 2 SUBSPECIES

**Population Dynamic:** The pileated woodpecker occupies a large range and is quite adaptable. Its ability to survive in many wooded habitat types has allowed the species to survive human habitation of North America much better than the more specialized ivory-billed woodpecker. Pileated woodpeckers have a large population size, and despite being nonmigratory, are protected under the U.S. Migratory Bird Act.

## **Evolution and Systematics:**

**Evolution:** Late Pleistocene (Rancholabrean North American Land Mammal Age, <400,000 years before present [ybp]) and Holocene (<10,000 ybp) records for this species are from California, Pennsylvania, Tennessee, and Virginia)

**Systematics:** The woodpeckers constitute a well-resolved evolutionary unit, the family Picidae, characterized by zygodactyl feet, a lack of down feathers at all ages, stiffened rectrices, and chisel-like bills. For a species with so wide a geographic range, geographic variation is unremarkable. Birds in northern populations average larger, in all dimensions, than those in southern populations, but most size variation is smoothly clinal. Compared to birds in eastern North America, those on the Pacific slope tend to have the throat grayer (less white) and the ventrum less distinctly barred. Moreover, birds in Florida may average slightly blacker.

**Number of Species:** 2 SUBSPECIES

**Number of Genera:** 2 SUBSPECIES

## **Physical Characteristics:**

**Size and Length:** Length: 15.8-19.3 in (40-49 cm) Weight: 8.8-12.3 oz (250-350 g)

**Wingspan:** 26.0-29.5 in (66-75 cm)

**Coloration:** Pileated Woodpeckers are mostly black with white stripes on the face and neck and a flaming-red crest. Males have a red stripe on the cheek. In flight, the bird reveals extensive white underwings and small white crescents on the upper side, at the bases of the primaries.

**General Body Features:** The Pileated Woodpecker is a very large woodpecker with a long neck and a triangular crest that sweeps off the back of the head. The bill is long and chisel-like, about the length of the head. In flight, the wings are broad and the bird can seem crowlike.

**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 line from the bill to the throat, in adult females these are black. Adult females have red crests, but black forecrowns and malar stripes. Females have a gray to yellow-brown forehead and no red mustache stripe. Males are 10–15% heavier than females. Body plumage and dark flight feathers are not truly black but are most easily described as such.

*Differences Between Juvenile Stage and Adult:* Juveniles have brownish eyes, but show the same sexual differences as adults in head pattern. Eye color is yellow on adults; dusky brown in juveniles.

### **Behavior:**

*Diurnal, Nocturnal, or Crepuscular:* Diurnal

*Activity:* Pileated Woodpeckers forage in large, dead wood—standing dead trees, stumps, or logs lying on the forest floor. They make impressive rectangular excavations that can be a foot or more long and go deep inside the wood. These holes pursue the tunnels of carpenter ants, the woodpecker’s primary food. The birds also use their long, barbed tongues to extract woodboring beetle larvae (which can be more than an inch long) or termites lying deep in the wood. When hammering into this soft wood, Pileated Woodpeckers use their long necks to pull far back from the tree, then make powerful strikes with their heavy bills, pulling with their feet to increase the strength of the blow. The sound is often audible as a heavy thunk, and large chips of wood collect on the ground below. Pileated Woodpeckers are monogamous and hold large territories; it’s rare to see more than two birds together at a time. When one member of a pair dies, the other often gains a new mate, and this is one of the main ways that new individuals get a chance to breed and hold a territory. Their flight is strong, but slow and slightly undulating; the wingbeats are deep but quick and somewhat unevenly paced.

*Locomotion:* Adapted primarily for climbing on vertical surfaces; occasionally hops on ground. Awkward on small branches, vines. Strong flyer with slightly undulating, strong flight; flight is rather slow but vigorous and direct.

*Communication and Perception:* Pileated Woodpeckers are quite vocal, typically making a high, clear, series of piping calls that lasts several seconds. The sound is quite similar to a Northern Flicker’s rattling call, although it tends to be more resonant and less even in tone, with changing emphasis or rhythm during the call. Pileated Woodpeckers also give shorter calls that sound like wuk, wuk or cuk, cuk to indicate a territory boundary or to give an alarm.

*Home Range:* Individuals commonly acquire a territory by replacing a pair member that has died. When a mate dies, the surviving bird remains in the territory and seeks a new mate from adjacent areas. Once established, the pair defends the territory by drumming, calling, and chasing off intruders.

*Degree of Sociality:* Pairs or family groups often forage in close proximity; floaters are sometimes tolerated within a territory.

*Level of Aggression:* During conflict with conspecifics, much chasing, calling, striking with wings, and jabbing with bill. In Arkansas much chasing and calling but minimal striking and jabbing with bills. Short describes Wing Spreading, Head Swinging, Crest Raising, Head Bobbing, and a Flight Display. Wing Spreading display is frequent in conflict between birds of the same sex or members of a pair; wings are raised and spread showing the white patch. Head Swinging, or bill-waving dance.

*Migration:* Resident (nonmigratory)

### **Predators:**

*Predators:* Northern Goshawk, Cooper’s Hawk, Red-tailed Hawk, Great Horned Owl, American marten, fisher, gray fox, Barred Owl, Martens, Weasels, Squirrels, Black Rat Snake, Red-bellied Woodpecker, Red-shouldered Hawk.

*Anti-Predator Defenses:* When accipiters are spotted, Pileated Woodpeckers either give an alarm call and move up the tree to a better vantage point, or become silent and inconspicuous. An adult and juvenile froze on the side of a tree when a Cooper's Hawk flew by and did not move until the hawk was gone. An adult being pursued by a Northern Goshawk in a forested stand tried to out-manuever it by flying erratically, changing course, and flying up and down. Because of its size and powerful bill, an adult Pileated Woodpecker could be a formidable adversary for many potential predators.

### **Diet and Nutrition:**

*Adult Diet:* The Pileated Woodpecker’s primary food is carpenter ants, supplemented by other ants, wood boring beetle larvae, termites, and other insects such as flies, spruce budworm, caterpillars, cockroaches, and grasshoppers. They also eat

wild fruits and nuts, including greenbrier, hackberry, sassafras, blackberries, sumac berries, poison ivy, holly, dogwood, persimmon, and elderberry. In some diet studies, ants constituted 40 percent of the diet, and up to 97 percent in some individuals. Occasionally, Pileated Woodpeckers visit backyard bird feeders for seeds or suet.

*Juvenile Diet:* Young are fed primarily invertebrates.

*Special Adaptations for Getting Prey:* Primarily a subcambial excavator; also gleans on branches, trunks, and logs; pecks in bark; scales bark off trees. Large rectangular excavations in trees and logs are characteristic; can be >30 cm in length and so extensive as to cause tree to break. Pries off long slivers of wood to expose ant galleries. Occasionally forages on ground. Uses long, extensible, pointed tongue with barbs and sticky saliva to catch and extract ants from tunnels.

### **Reproduction:**

*Mode of Reproduction:* Monogamous

*Mating System:* Monogamous.

*Mating Season:* May to August

*Courtship:* Wing Spreading, Crest Raising, and Head Swinging displays, Wok and Wuk calls, Demonstration Tapping, and drumming are associated with courtship. Oberman describes complex interactions in early Mar in Maryland involving bark stripping, hopping, bowing, and head ducking while facing one another on the ground.

*Territoriality:* Territory is defended by pair all year against other territorial birds. Both males and females react to intruders on territory boundaries by calling and drumming. Floaters are tolerated during winter in Oregon. Intraspecific competition during nesting appears to be low in Arkansas based on only 3 observations of an intruding adult approaching a nest cavity and being chased off by the resident pair during more than 13,000 h of monitoring with a video camera at nest cavities.

*Mating:* Takes place on horizontal branch with female perched crosswise. Wuk Calls and Head Swinging displays may precede copulation. Copulation lasts 6–9 s.

*Nest Placement:* Nest trees are typically dead and within a mature or old stand of coniferous or deciduous trees, but may also be in dead trees in younger forests or even in cities. Dead trees are a valuable resource as nest sites or shelter for birds and other animals, and Pileated Woodpeckers battle for ownership with Wood Ducks, European Starlings, Red-bellied Woodpeckers, Red-headed Woodpeckers, Eastern Bluebirds, and Great Crested Flycatchers. Occasionally bats and swifts share roost cavities with Pileated Woodpeckers.

*Nest Description:* The male begins excavating then nest cavity and does most of the work, but the female contributes, particularly as the hole nears completion. The entrance hole is oblong rather than the circular shape of most woodpecker holes. For the finishing touches, the bird climbs all the way into the hole and chips away at it from the inside. Periodically the adult picks up several chips at a time in its bill and tosses them from the cavity entrance. Pileated Woodpeckers don't line their nests with any material except for leftover wood chips. The nest construction usually takes 3-6 weeks, and nests are rarely reused in later years. Cavity depth can range from 10-24 inches.

*Egg-Laying:* Clutch Size: 3-5 eggs Number of Broods: 1 brood Egg Length: 1.2-1.4 in (3-3.5 cm) Egg Width: 0.9-1.0 in (2.4-2.6 cm) Incubation Period: 15-18 days Nestling Period: 24-31 days Egg Description: White.

*Hatching and Incubation/Gestation:* Naked and helpless. ALTRICIAL

*Development:* Hatchlings are naked and helpless; remains of yolk sack are still attached to abdomen; eyes are covered with membrane with no evidence of slits; auricular openings are just beginning to develop; maxilla is shorter than and nested in the mandible, both tipped with egg tooth; large, fleshy rictal flanges at corners of beak; make squeaky hissing noise.

*Parental Care:* Parents brood nestlings when <7–10 d old; male broods more than female during day. Male returns to nest 1–149 min before sunset to brood young for night. Young are fed by regurgitation; adult inserts bill into throat of young; young sucks and jerks its head while parent regurgitates. Young are fed primarily invertebrates. FEMALE FEEDS MORE.

*Lifespan:* Up to 12.92 years.

### **Conservation:**

*Official Federal Status:* Least Concern

*Special Statuses in Individual States:* NONE

*Threats:* Pileated Woodpeckers are fairly common and numerous. Their populations steadily increased from 1966 to 2014, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 1.9 million with 67% living in the U.S., and 33% in Canada. They rate a 7 out of 20 on the Continental Concern Score and are not on the 2014 State of the Birds Watch List. Pileated Woodpeckers rely on large, standing dead trees and fallen logs—something that property managers may consider undesirable. It's important to maintain these elements both for the insect food they provide and for the many species of birds and mammals that use tree cavities. Historically, Pileated Woodpeckers probably declined greatly with the clearing of the eastern forests but rebounded in the middle twentieth century as these forests came back.

Conservation Efforts: ^^^^

**Extra Facts:**

1. The Pileated Woodpecker digs characteristically rectangular holes in trees to find ants. These excavations can be so broad and deep that they can cause small trees to break in half.
2. The feeding excavations of a Pileated Woodpecker are so extensive that they often attract other birds. Other woodpeckers, as well as House Wrens, may come and feed there.
3. The Pileated Woodpecker prefers large trees for nesting. In young forests, it will use any large trees remaining from before the forest was cut. Because these trees are larger than the rest of the forest, they present a lightning hazard to the nesting birds.
4. A Pileated Woodpecker pair stays together on its territory all year round. It will defend the territory in all seasons, but will tolerate new arrivals during the winter.
5. The oldest known Pileated Woodpecker was a male, and at least 12 years, 11 months old when he was recaptured and rereleased during banding operations in Maryland.

**Notable Species:**

1. Southern pileated woodpecker (*D. p. pileatus*) – the southeastern U.S., except Florida
2. Northern pileated woodpecker (*D. p. abieticola*) – from the Canadian Prairies provinces east through Eastern Canada and the northern United States