



**STATUS: HIGH
CONSERVATION
PRIORITY IN IOWA**

Pileated Woodpecker *Dryocopus pileatus*

Introduction

The size of an American Crow, the Pileated Woodpecker is a big, dashing bird with a flaming red crest, and the largest woodpecker found in North America (except for the Ivory-billed Woodpecker of the southeastern United States which is almost certainly extinct). Best recognized by its large, dull black body and eye-catching crest, the Pileated Woodpecker is a permanent resident of deciduous or coniferous forests in southern Canada and in the Western, Midwestern, and Eastern United States. The appearance and vocalizations of this conspicuous woodpecker are obvious.

Because of its large size and strong chisel-shaped bill, the Pileated Woodpecker is particularly adept at excavating, and it uses this ability to construct nest and roost cavities and to find food. Pileated Woodpeckers excavate distinctive rectangular holes – at times a foot or more vertically by 3 to 6 inches horizontally. In its excavating, this species plays a crucial role in many forest ecosystems in Iowa and across North America; as a diverse array of other birds, as well as mammals, reptiles, amphibians, and invertebrates use its cavities for shelter and nesting.



Since settlement, logging and land clearing has reduced the range of this species in Iowa. Availability of suitable woodland habitat with large trees is apparently the factor limiting most populations, but the species has recovered to a certain extent with improved woodland management. Where unmolested, it even lives in parks and woodlots around the edges of cities.

Habitat Preferences

In Iowa the Pileated Woodpecker favors mature deciduous and mixed deciduous-conifer woodlands, and at times smaller woodlots.

Dead trees provide favored sites in which nest cavities are excavated, and hollow trees are typically used for roosting at night and during inclement weather. Pileated Woodpeckers typically excavate only the entrance hole to gain access to the hollow interior of a tree and thus conserve energy. Roost trees typically have 1 to 16 entrance holes in the trunk, providing alternate escape routes should a predator enter the roost. Roosts in live hollow trees with multiple entrances have also been observed in Iowa.

Only large-diameter trees have enough girth to contain nest and roost cavities of this species. Consequently there is concern for populations of this woodpecker where old-growth forests are being converted to younger stands, or are being lost altogether.

Feeding Habits

The diet of Pileated Woodpeckers consists primarily of wood-dwelling ants and beetles extracted from downed woody material and from standing live and dead trees; but fruits and nuts, and termites and other insects are also foraged.

Carpenter Ants may make up 60% of diet in some habitats. And at times about 25% of the diet may be from wild fruits, berries and nuts.

Foraging is mainly by probing, prying, and excavating dead wood in search of edible items. Deep holes may be gouged in rotten wood to reach ant nests, and stumps and big sections of rotten logs may sometimes be torn apart in search of food.

Breeding Biology

A pair of Pileated Woodpeckers occupies and defends its territory year-round, and a pair member will not abandon a territory even if its mate is lost. Territory defense is done with loud drumming and ringing calls that can be heard at considerable distances. At a potential nest site, both sexes may tap or drum on wood. Courtship intensifies beginning in February and March. Courtship displays include spreading wings to show off white wing patches, raising its brilliant red crest, swinging head back and forth, and gliding display flights.

Both sexes excavate the nest site with males doing more of the work. Nests are in a cavity of a dead tree or in a dead branch of a live tree, and are usually located 15 to 80 feet above the ground. Potential nest intruders or are chased off by one or both of mates.

Generally a new nest cavity is excavated each year. When cavity is started, the bird excavates while perched on the tree trunk; as the cavity gets deeper, excavation is inside with tail sticking out of hole; and the bird excavates from inside the cavity when nearing completion.

Pileated Woodpeckers lay 3 to 5 eggs, and historical records show that clutches of 4 eggs is most common. Incubation is by both parents, for about 18 days. Both parents feed nestlings by regurgitating food items. The young leave the nest 26 to 28 days after hatching, and may remain with the parents for 2 to 3 months.

Concerns and Limiting Factors

Pileated Woodpeckers were regularly shot for food and sport by hunters early in twentieth century. Although now protected by law, shooting has continued (although hopefully a reduced problem).

Timber harvest has been the most significant impact on this species' habitat. Removal of large-diameter live and dead trees, of downed woody material, and of canopy closure eliminates nest and roost sites, foraging habitat, and cover. Forest fragmentation likely reduces population density and makes birds more vulnerable to predation as they fly between forest fragments.

Some individuals of this species are tolerant of humans near roost sites, while others change roost trees if disturbed. Research has shown that birds trapped at roost trees rarely used the same roost again.

Research is needed on population dynamics throughout the range of Pileated Woodpeckers to determine sustainable populations, reproductive success, and genetic variability. Additional information is needed on dispersal of young to determine the preferred locations of woodland management areas for this species. Better management of habitat components within home ranges would result from additional telemetry studies investigating roost and foraging sites, diet, and habitat used by prey.

Habitat Management Recommendations

As a species of high conservation priority in Iowa, there is concern about maintaining and hopefully improving the woodland habitats that Pileated Woodpeckers require. This beautiful, almost iconic species, will benefit when management actions prevent fragmentation of existing woodlands, and maintain as many large trees – both dead

and living – within large woodlands and small woodlots as possible.

This fairly resilient species seems to have responded favorably wherever consolidation and expansion of Iowa's woodlands has taken place in the past. And as sound woodland management practices are planned and implemented more frequently across our state, and more attention is given to IBA Criteria Species, the Pileated Woodpecker should be able to sustain or increase its population.

For general information about habitat management for Pileated Woodpeckers, see the sections on Woodland Management for Birds. For more specific details see Recommended Woodland Management Practices. Both of these sections are in Part 3.