the inner web of the same colour; the next feather is similar, with more black at the base, and on both webs; the next black, with the terminal half of the outer web, a bar on the inner, and its tip white; the lower surface is white, but much soiled and of a dull greyish-brown tint, the lower tail-coverts with a slightly dusky spot toward the end.

Length to end of tail  $6\frac{8}{12}$  inches; bill along the ridge  $\frac{8\frac{1}{12}}{12}$ ; wing from flexure  $3\frac{10}{12}$ ; tail  $2\frac{1}{2}$ .

Between this and *P. pubescens* there is no difference as to colour, only the spots on the wings of the latter are much larger. Most individuals of *P. pubescens* have the same number of spots on the longer quills, but others have an additional pair.

A figure of this species will, if possible, be given at the end of the work.

## RED-COCKADED WOODPECKER.

+Picus Querulus, Wils.

PLATE CCLXIV .- MALES AND FEMALE.

This species, which was first described by Wilson, is found abundantly from Texas to New Jersey, and inland as far as Tennessee. Pine-barrens suit it best, and it is nowhere more numerous than in those of the Floridas, Georgia, and South Carolina, where, at any time of the year, one is sure to be saluted by its peculiar note, or to see it busily and cheerfully engaged in searching for food, or flitting from one tree to another.

In quickness of motion it approaches more to the Common or Banded Three-toed Woodpecker, than any other with which I am acquainted. It glides upwards and sidewise along the trunks and branches, on the lower as well as the upper side of the latter, moving with astonishing alertness, and at every motion emitting a short, shrill and clear note, which can be heard at a considerable distance. While on wing it also emits this note at the commencement of each curve of its undulated flight. Often when alighted it issues a tremulous note, which is also short, sharp, and shrill, and during the love-season its cries resound through the pine-woods. Near Bayou Sara in



Red-cockaded Woodpecker

A partie to the form of the partie of the parties of the Louisiana, I once slightly wounded two males, which I put into my hat in order to carry them home. The first, on being brought to the ground, was easily secured, but the case was different with the other, for it at once hopped off toward the nearest tree, crying loudly all the while, and on reaching it ascended as if unhurt. However, I obtained it by accidentally knocking off the bark with a clod of earth. It defended itself courageously, and pecked at my fingers with so much vigour that I was obliged to let it drop several times out of my hand. Confined in my hat, they remained still and sullen, and when I looked at them they both hid their heads, as if ashamed of their situation. Whenever I chanced to fire my gun, it alarmed them, and they uttered a plaintive cry, differing from their usual note while at liberty. One of them died before I reached the house, probably through the great heat; the other, however, was well, and I put it into a cage, every part of which it examined, until finding a spot by which it thought it might escape, it began to work there, and soon made the chips fly off. In a few minutes, it made its way out, and leaped upon the floor, uttering its common cluck, hopped to the wall, and ascended as if it had been on the bark of one of its favourite trees. The room being unfinished, the bricks were bare, and as it passed along, it peeped into the interstices, and seized the spiders and other insects which it found lurking in them. I kept this bird two days, but when I found that the poor thing could procure no food, I gave it its liberty, and was glad to find that its wounded wing was so far healed as to allow it to fly thirty or forty yards at a time, so that it had a good chance of being able to reach its favourite pines again, with the scent of which it was strongly imbued.

When on a high tree, it looks as if entirely black. Generally too, even when seen close at hand, the red line over the eye is covered by the adjacent feathers; at least this was the case with the two individuals mentioned above. The one which died had its gizzard crammed with the heads of small ants and a few minute coleopterous insects. It is fond of the company of our small Woodpeckers, as well as of Sylvia pinus and Parus carolinensis.

I have found this bird mated in January in the Floridas, and engaged in preparing a breeding place in February. The nest is not unfrequently bored in a decayed stump about thirty feet high, the wreck of a noble pine, destroyed by the irresistible fury of a hurricane. The eggs, which are usually four, although I have found as many as six, are smooth and pure white. The young, like those of our other species, crawl out of their holes, and on the branches around wait for the food brought by their parents, until they are able to shift for themselves.

In the winter months, I have seen several of these birds enter a hole at

dusk, where they probably remained all night; and in cold drizzly weather I have observed them doing the same at various hours of the day. When wounded, I have several times seen them making toward these retreats. There is little difference between the sexes, excepting that the red line over the eye is wanting in the female. Wilson's measurements are less than those of any individuals which I have examined.

It is generally believed that all Woodpeckers are strictly insectivorous; but this opinion is by no means correct, for many species feed on grain and fruits of various kinds. Some of them even come to the ground to search for those which have fallen from the trees, as I found to be the case with the present species, which I repeatedly observed so occupied in the Pine Barrens of the Floridas. On such occasions it is always silent. It moves in pairs at all seasons, and is extremely pugnacious during the period of incubation, when each male is constantly giving chase to intruders of its own kind. During these encounters, its cries are incessant, and much louder and sharper than on more ordinary occasions.

Red-cockaded Woodpecker, Picus querulus, Wils. Amer. Orn., vol. ii. p. 103.

Picus querulus, Bonap. Syn., p. 46.

RED-COCKADED WOODPECKER, Nutt. Man., vol. i. p. 577.

RED-COCKADED WOODPECKER, Picus querulus, Aud. Orn. Biog., vol. v. p. 12.

Male,  $8\frac{1}{2}$ ,  $14\frac{1}{2}$ . Female,  $7\frac{3}{8}$ ,  $13\frac{1}{4}$ .

From Texas to New Jersey, along the Atlantic districts. Common. In the interior to Lower Mississippi. Resident.

Adult Male.

Bill somewhat shorter than the head, straight, rather slender, tapering, angular, at the point compressed and abrupt; upper mandible with the dorsal line straight, the ridge sharp, the sides sloping, the nasal groove with a prominent narrow ridge, rather nearer the ridge than the edge at its commencement, but joining the latter about a third from the tip, the edges sharp and direct; lower mandible with the angle rather short and narrow, the dorsal line straight, the ridge sharp, the edges convex toward the end, the tip compressed, but abrupt. Nostrils basal, lateral, linear-oblong, broader at the base.

Head of moderate size, ovate, convex above; neck rather short; body moderate. Feet short, rather slender; tarsus short, anteriorly scutellate, laterally covered with angular scales, posteriorly with a row of narrow scutella; toes four; the first short, the second next in length, the fourth directed outwards and backwards, and longer than the third; claws large, strongly arched, compressed, deeply grooved on the sides, tapering to a very acute point.

Plumage very soft and blended; feathers at the base of the bill bristly and directed forwards so as to cover the nostrils. Wings long; the first quill extremely small, being only ten-twelfths long; the second four-twelfths shorter than the third, which is one-twelfth shorter than the fourth, this being the longest. Tail long, cuneate, of twelve feathers, the lateral very small, weak, and rounded, the rest strong, with the barbs worn at the end, the tip emarginate, the shafts being worn.

Bill greyish-blue, with the upper mandible dusky toward the ridge. Iris hazel. Feet greyish-blue, claws of the same colour, dusky along the ridge. The upper part of the head, the hind neck, the loral space, and a band down each side of the neck glossy black; feathers at the base of the bill, a band over the eye, and a large patch on the side of the head white. Margining the black behind the eye is a streak of bright carmine, formed by a series of very slender feathers. All the upper parts, including the wings, are black-ish-brown, transversely banded with white. Tail black; the fourth feather obliquely white on the outer web toward the end, the next with the white extended to the inner webs toward the end, it being barred with black on the inner; the second white, with five black bands on the inner web and one on the outer; the first or lateral feather white, with a black patch near the base of the inner web. The lower parts are white, the sides of the lower part of the neck, and of the body, marked with oblong black spots.

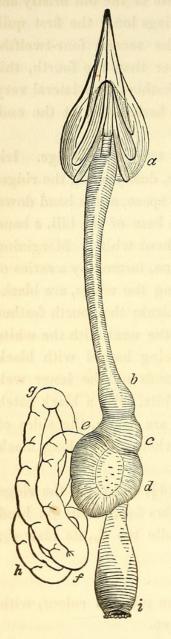
Length to end of tail  $8\frac{1}{2}$  inches; extent of wings  $14\frac{1}{2}$ ; bill along the ridge  $\frac{10}{12}$ ; wing from flexure  $4\frac{8}{12}$ ; tail  $3\frac{5}{12}$ , the lateral feathers  $1\frac{1}{12}$ ; tarsus  $\frac{8}{12}$ ; hind toe  $\frac{2\frac{3}{4}}{12}$ , its claw  $\frac{2\frac{1}{4}}{12}$ ; inner toe  $\frac{5\frac{1}{2}}{12}$ , its claw  $\frac{6}{12}$ ; outer toe  $\frac{7\frac{1}{2}}{12}$ , its claw  $\frac{6}{12}$ .

Female.

The female is somewhat smaller, but resembles the male in colour, with the exception of wanting the red streak behind the eye.

Length to end of tail  $7\frac{3}{8}$  inches, to end of wings  $6\frac{3}{8}$ , to end of claws  $6\frac{3}{8}$ ; extent of wings  $13\frac{1}{4}$ .

The roof of the upper mandible is slightly concave, with a prominent middle ridge; the lower mandible more concave, with two ridges and a median groove. The tongue is  $10\frac{1}{2}$  twelfths long, slender, its breadth 1 twelfth, its sides parallel; it tapers to a point at the end, where it is margined with acicular bristles directed backwards. The hyoid bones curve round the back of the head, converge, and run along the middle of the skull to the base of the bill, without curving to either side. The palate is flattened, the posterior aperture of the nares linear, with an anterior slit, which is margined with papillæ. The aperture of the mouth is  $4\frac{1}{2}$  twelfths in width.



The œsophagus, a b, is 2 inches 8 twelfths long, narrow, uniform, its breadth 2 twelfths. The proventricular belt, b, is  $4\frac{1}{2}$  twelfths long. The stomach, c d e, is of moderate size, oblong,  $8\frac{1}{2}$  twelfths in length, 6 twelfths in breadth; its muscles rather strong, its tendons large, the epithelium dense, longitudinally rugous, and of a reddish colour. The intestine, e f g h, is 9 inches long, its upper portion 2 twelfths in diameter, its narrowest part  $1\frac{1}{4}$  twelfths; the rectum 3 twelfths in diameter, gradually enlarging into the cloaca, i.

The trachea, which is 1 inch 8 twelfths long, and of about 65 rings, measures 1 twelfth across at the upper part, gradually contracts a little, and is furnished with strong contractor and sterno-tracheal muscles. The bronchi are of moderate length, with about 15 half-rings.

The contents of the stomach were remains of insects, and small round very hard dark brown seeds. During the autumnal and winter months, this species is wont to feed on the berries of several species of Smilax, on grapes, and at times even on the common *poke-berries*. I am also persuaded that whilst the *pines* are in bloom, much of their flowers is used, perhaps more as a relish, than as an essential article of food.



Red-cockaded Woodpecker



Audubon, John James. 1842. "Red-Cockaded Woodpecker, Picus querulus, Wils. [Pl. 264]." *The birds of America : from drawings made in the United States and their territories* 4, 254–258. https://doi.org/10.5962/p.319379.

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