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THE IMPERIAL IVORY-BILLED WOODPECKER,
CAMPEPHILUS IMPERIALIS (GOULD).

BY E. W. NELSON.

Plate III.

AT A meeting of the Zoölogical Society of London, held on August 14, 1832, specimens were exhibited of a previously undescribed Woodpecker, remarkable for its extraordinary size. These specimens, the male of which measured two feet in length, were said to have been obtained by Mr. Gould from "that little explored district of California which borders the territory of Mexico"—a statement which serves as a good illustration of the vague ideas of American geography that prevailed among naturalists in those days. Mr. Gould made a felicitous choice of name when he called this bird *Picus imperialis* for it is by far the largest and most striking member of the Woodpecker family in the world. The authors of the 'Biologia Centrali-Americana' say that Gould's original skins are made up like those of Flores, a mining engineer, who collected birds in the Sierra Madre Mountains near Bolaños, Jalisco, early in the century. My own observations prove that the Imperial Ivory-bill is found near that place, and there is little doubt that it is the type locality. The home of this Woodpecker is in such a remote and rarely visited region that despite the large size and conspicuous plumage of the bird, many years passed after its discovery before any additions



IMPERIAL WOODPECKER ♂ & ♀
(CAMPEPHILUS IMPERIALIS GOULD)

were made to its history and nothing has been published on its habits. In 1890 the British Museum Catalogue enumerated several additional specimens and gave its range as extending from Ciudad in the State of Durango, northward through Chihuahua to within fifty miles of the Arizona border. The latter record, first published in 'The Auk,' was made by Lieut. H. C. Benson, U. S. A., during a scouting expedition after Apache Indians in northern Chihuahua. Afterwards the late Dr. Audley C. Buller secured specimens about 150 miles south of Bolaños, in the Sierra de Juanacatlan, western Jalisco, and Mr. W. B. Richardson took others in the Sierra de Valparaiso in northern Zacatecas.

During my visit to the former locality, in the spring of 1897, the residents told me that Ivory-bills were found sparingly in the surrounding mountains and exhibited the scalp of one that had been killed a few months before. In company with two natives, my assistant and I rode over the undulating mountain summits for an entire day on a fruitless quest for these birds. Several species of pines, oaks and madroños made up the forest, and beautiful little park-like basins open here and there forming ideal spots for the big Woodpeckers, but we failed to see one. The people united in assuring us that the birds live there every summer and it is probable that they lead a more wandering life during the winter months and sometimes absent themselves from their summer haunts; but it is quite certain that they are not in any sense migratory. We found them in the state of Michoacan, considerably farther south than any previous record, and subsequently visited other parts of their range. While collecting in the pine forest near Patzcuaro, Michoacan, during the summer of 1892, a Mexican soldier brought in an Ivory-bill killed a few miles away, but it was not until later in the season that we had the satisfaction of seeing the bird in life. In the autumn of that year three of us left Patzcuaro on horseback to go back twenty-five miles into the forest to the Indian village of Nahuatzin. After leaving the shore of Lake Patzcuaro our trail led through a beautiful upland country of volcanic origin, overgrown with open pine forest, in which grassy parks opened here and there affording charming vistas. We were riding quietly, at an altitude of about 7000 feet, when the flash of bird-wings was noted in the

sunlight. The next instant my listless attitude had vanished, for a pair of Imperial Ivory-bills swung up and alighted near the top of a large dead pine on the border of an Indian cornfield. We stopped at once and after dismounting had no trouble in walking up within easy gunshot. As the male moved out on a large branch a charge of number five shot started him off in an erratic course and the second barrel brought him whirling to the ground. The female was clinging to the trunk near the top of the tree and at the report of the gun flew away over the cornfields and forest as if leaving the neighborhood. The male was only winged and as we approached threw himself over on his tail, with outspread wings, presenting a warlike front of threatening beak and talons. It was impossible not to admire the courage and defiance shown by the fierce glow of his golden-yellow eyes and upraised flaming crest. After stowing the prize carefully away in a saddle-bag we rode on, but chancing to look back saw the female returning at a height of two or three hundred yards looking for her mate. She passed over the tree from which the male was shot and after making a wide circuit again disappeared in the forest.

Soon after sunset we approached Nahuatzin, a picturesque village of steep-roofed houses, situated in a long mountain valley and inhabited by Tarascan Indians. The houses were almost concealed by fruit trees through which rose long, slender columns of smoke that trailed off slowly in the calm evening air and settled in heavy banks in low parts of the valley.

As the shadows of night fell on the bordering wooded hills we scanned with interest the fading outlines of our new field. One of my companions had been here before and his friends received us with much good will and gave us quarters for the night. The following morning our camp was made on the top of a high hill to the west of Nahuatzin, at the border of a little park in the midst of the pines. From the brow of the hill close by was a free outlook across the valley whence a billowy succession of pine covered hills extended away to the blue distance, broken here and there by dull yellow openings of the grassy parks. The first day in camp, just before sunrise, my curiosity was aroused by a succession of queer, nasal, penny-trumpet-like notes from the summit of a rounded hill near by. The notes were new to me and I waited

impatiently for the return of my assistant with the shot-gun so that I might investigate. The calls continued at short intervals until a little after sunrise and were the only sounds audible in the otherwise silent forest. Suddenly a cannon-like roar reverberated from the hillside above camp. A few minutes later my assistant came down the slope and told me that the curious notes were made by Ivory-bills. His attention had been drawn to them as he was coming in, and climbing the hill he found three of the birds close together on the trunk of a pine tree near the summit. In order to make sure of the lot he put two heavy charges in his gun and creeping up close to the base of the tree fired both barrels at once, with the result that the recoil almost kicked him off the hillside and the birds flew away unscathed uttering cries of alarm. A little later we found them again in the same place and several shots were fired without effect. About nine o'clock five of the birds set out from the hill in straggling succession bound for the open pine forest of a neighboring park-like flat where during the day their odd cries were heard at intervals, now distinctly and again barely audible as they moved about among the trees.

During the next few days this entire party fell victims to our guns, but so long as any were left they showed strange persistence in returning to their haunt on the hill. Just at sunrise each morning the notes were heard and between eight and nine o'clock the birds flew out to their feeding ground among the dead pines on the adjacent flat. On the north slope of the hill, near the summit, were several large, prostrate and partly decayed tree trunks with their upper surfaces chipped and dug into for several inches, evidently by the powerful beaks of these Woodpeckers. The birds were suprisingly easy to stalk, even after being hunted and shot at for several days, but were difficult to secure because they are powerful, hard-muscled creatures possessed of remarkable vitality. They showed considerable attachment to one another and when one was shot the other members of the flock remained scattered about on the trees for a short time calling each other at intervals. Wounded birds fought with savage courage. The handsomely contrasted black, white, and scarlet plumage of the male Ivory-bill, with the bright gleam of his golden-yellow eyes make a fit combination for a habitant of one of Nature's wildest

and most secluded regions. They fly from tree to tree with rather slow, heavy wing strokes similar to those of a Crow, and when about to alight, by an added impulse, glide upward along the trunk in a graceful curve and firmly grasp the bark or smooth wood. After a short pause and a glance around, they ascend the trunk in little runs of from one to three feet, with alternating pauses, usually keeping along the main stem of the tree, but when searching for food sometimes traveling out on the larger branches. At such times they were often seen clinging, back down, to the lower side of the branch, chiseling away with powerful blows. Now and then one 'drums' for amusement upon a resonant branch or trunk after the manner of many smaller Woodpeckers, but the strokes are much louder and slower than those of the other species.

For so powerful a bird their notes are weak, and have the peculiar nasal tone that is characteristic of the notes of Sapsuckers, but with a penetrating quality that renders them distinct for a long distance. I am certain they were frequently heard at a distance of a mile; yet when the birds were nearby they did not sound very loud. When we had secured all the birds near camp another party of five or six was found in the hills a mile or so away, and the Indians told us of other places where they were common.

One old Indian led me to a high point overlooking a great expanse of forested country and pointed out a number of park-like openings where he assured me the birds could be found. On the return trip to Patzcuaro, while passing the locality where our first Ivory-bill was taken, the note of another was heard, and riding into the open woods a short distance we came upon a party of eight or ten. My companion winged a fine old male as it flew over and it came down uttering a loud, harsh squall, half in anger and half in fright. Another bird alarmed by the shot flew to a tree near where I stood and alighted about half way up the trunk. After looking at me for a few moments it flew off through the trees.

In this part of the forest we saw a large hole in a dead tree which was evidently an old nesting site of the Ivory-bills. The hole was about forty feet from the ground, in a large Montezuma

pine from which the bark had fallen, and judging from the fresh color of the wood within it could not have been over a year old. The following year one of my companions, Mr. Winton, returned to this district and learned that the Ivory-bills breed there in February. An Indian boy employed by him managed to secure two eggs, one of which he broke descending the tree and the other was placed inside his shirt for safe keeping. On the way home he started to drive some cattle and while running after them fell and thus destroyed the only eggs of this species ever taken. A nest visited the first of March contained newly hatched young, and in April they had flown. One of the striking characteristics of these birds is their general custom of remaining in family parties during the fall and winter. They apparently have strong local attachments as shown by the persistence with which the party near our camp remained in its accustomed haunts although hunted for several days in succession. During our stay in this district these birds passed the middle of the day roaming through thin parts of the forest or about the borders of grassy parks. They seemed particularly partial to the dead trees along the borders of partly cleared cornfields. In the Nahuatzin district we found them only where the forest was almost entirely made up of Montezuma pine (*Pinus montezumæ*) and did not see them alight on any other tree. Their range in this region appears to be restricted to the rather narrow belt along the top of the main central ridge of the Sierra Madre which lies above an altitude of 7000 feet. This belt is more like a rolling and irregular tableland than the summit of a great mountain chain, and its open pine forest, broken by grassy parks, reminds one strongly of the Mogollon plateau of northern Arizona.

While in the northern part of the Territory of Tepic in 1897, we met a trader returning from a trip to the City of Durango who showed us a roughly made skin of a male Ivory-bill which he had secured in the Sierra Madre of Durango and was taking as a great curiosity to his home in the hot country.

The Imperial Ivory-bill is a bird of the pine clad mountains of the Transition life zone and although various naturalists have looked for it without success in the mountains of southern Arizona, there is still a probability of its occurrence there.

Its range, so far as known at present, extends from Patzcuaro, Michoacan, north to within fifty miles of the Arizona border in northern Chihuahua. This covers parts of the Territory of Tepic and of the States of Michoacan, Jalisco, Zacatecas, Durango and Chihuahua.

DESCRIPTIONS OF SUPPOSED NEW GENERA, SPECIES,
AND SUBSPECIES OF AMERICAN BIRDS.

I. FRINGILLIDÆ.¹

BY ROBERT RIDGWAY.

Curator of the Division of Birds, U. S. National Museum.

(By permission of the Secretary of the Smithsonian Institution.)

THE present paper is the first of a series intended for the publication of supposed new forms in advance of the larger work on the birds of North and Middle America upon which the author has been engaged for the past four years, the completion of which must necessarily be long delayed. Only brief diagnoses are here given, detailed descriptions being reserved for the larger work referred to.

Several of the genera included here have usually been placed with the so-called Tanagridæ; but I am fully convinced, after long and careful study, that if it should prove practicable to retain a separate family equivalent, in part, to the usually accepted Tanagridæ, it can only be done by materially restricting its limits. At any rate, it is quite certain that the genera *Pitylus* (restricted to *P. grossus* and *P. fuliginosus*), *Pezopetes*, *Buarremon*, *Arremon*, *Lysurus*, and *Pselliophorus* are true Fringillidæ, and very closely related to such unquestionably fringilline genera as *Cardinalis*, *Pipilo*, *Pyrgisoma*, *Atlapetes*, *Arremonops*, etc. Some doubt is attached to such genera as *Stelgidostomus*, *Heterospingus*, *Mitrospingus*, *Rhodothraupis*, and *Hemithraupis*, which certainly are

[¹An author's edition of 100 copies of this paper was issued May 13, 1898.
—EDD.]