

species and substrate type (e.g., Willson 1970), by social environment (e.g., Kilham 1970, Morse 1970), and by climatic condition (Grubb 1975, present paper). We do not know how intercompensation (*sensu* Wilson 1975) among these factors might structure any given foraging niche. For example, consider a hypothetical male Downy Woodpecker hammering at a living twig in the top of a green ash. It could be foraging there because: (A) it prefers to forage on ash twigs; (B) it has been excluded from other tree species and lower substrates by its more powerful congener, the Hairy Woodpecker (*Picoides villosus*), by some other species, or even by female Downy Woodpeckers; (C) it wants to receive the thermal benefits of maximum exposure to solar radiation; or (D) some combination of the above.

LITERATURE CITED

- GRUBB, T. C., JR. 1975. Weather-dependent foraging behavior of some birds wintering in a deciduous woodland. *Condor* 77:175-182.
- KILHAM, L. 1970. Feeding behavior of Downy Woodpeckers. I. Preference for paper birches and sexual differences. *Auk* 85:544-556.
- LUSTICK, S. 1969. Bird energetics: effects of artificial radiation. *Science* 163:387-390.
- MORSE, D. H. 1970. Ecological aspects of some mixed-species foraging flocks of birds. *Ecol. Monogr.* 40:119-168.
- SIEGEL, S. 1956. Nonparametric statistics for the behavioral sciences. McGraw-Hill Book Co., New York.
- WILSON, E. O. 1975. Sociobiology. Belknap Press (Harvard), Cambridge, Mass.
- WILLSON, M. F. 1970. Foraging behavior of some winter birds of deciduous woods. *Condor* 72:169-174.

Department of Zoology, Ohio State University, Columbus, Ohio 43210. Accepted for publication 8 July 1976.

TAXONOMY AND RANGE OF *PIONUS* "SENILOIDES" IN PERÚ

JOHN P. O'NEILL

AND

THEODORE A. PARKER, III

In 1961 Maria Koepcke (Am. Mus. Novit. No. 2028, 1-31) reported four specimens of the Plum-crowned Parrot (*Pionus tumultuosus*; three males, Am. Mus. Nat. Hist. nos. 235769-771, and one female, Museo de Historia Natural "Javier Prado" no. 1953), from Hacienda Taulis, Depto. Cajamarca in northwestern Perú. In 1974, J. P. Richard Thomas of the Louisiana State University Museum of Zoology collected a *Pionus* ca. 33 km NE of Ingenio on the road to Laguna Pomacochas, Depto. Amazonas, Perú. We identified this specimen (LSUMZ 77986, ad. female, collected 22 December 1974, ovary 7 × 10 mm, wt. 229 g) as a White-capped Parrot (*P. seniloides*), a species not previously reported from Perú (Meyer de Schauensee, R., A guide to the birds of South America, Livingston Publ. Co., Wynnewood, Pennsylvania, 1970). In comparing it with the one in the Museo de Historia Natural "Javier Prado" in Lima and with the three in the American Museum of Natural History, we determined that the four specimens reported by Koepcke are all representative of *seniloides* and not *tumultuosus*.

P. seniloides is now known in Perú south on the western slope of the western Andes to Taulis in the Depto. Cajamarca (6°54'S, 70°58'W) and south in the eastern Andes to the southern portion of the large and mainly unexplored mountain massif that is situated to the south of the Río Marañón between the Río Utcubamba and the Río Chiriaco (5°52'S, 77°56'W). The easternmost Andes in Northern Perú lie to the east of the Río Chiriaco, and thus to the east of the mountains in which the recently collected *P. seniloides* was taken. O'Neill visited this area in September 1976, and although members of the genus *Pionus* were seen, none were collected or identified.

In the LSUMZ are five unreported specimens of *P. tumultuosus* from the Carpish region (9°40'S, 76°4'W) of the Depto. Huánuco in central Perú (LSUMZ 75116 and 73808-73811) that apparently represent the northernmost records of this form. Additional field work is needed in the area intervening between the known ranges of *seniloides* and *tumultuosus* to see if they make contact with each other or not.

After careful scrutiny of the specimens available to us we have come to the conclusion that the only difference between *P. seniloides* and *P. tumultuosus* is the amount of rose or plum color present in the plumage of the head and belly. The northern birds, "*P. seniloides*," have only a wash of this color present on their otherwise whitish head plumage and have the belly with a variable amount of rosy color, but the southern birds, "*P. tumultuosus*," have the head strongly marked with this color and have solid green bellies. The older birds of either form apparently have the greatest saturation of the rosy coloration in their plumage.

Although the locality northeast of Ingenio is slightly drier than the Carpish region, both areas are covered with tall, humid cloud forest and both of the two forms of parrots inhabit the "upper sub-tropical" zone at the 1800-2100 m level.

We believe, in the absence of evidence to the contrary, that the two forms of *Pionus* under discussion do not differ enough morphologically or ecologically to warrant their being retained as separate species. Since *P. tumultuosus* was described first, the two should be known as *P. t. seniloides*, ranging from Venezuela to northern Perú, and *P. t. tumultuosus*, ranging from central Perú to Bolivia.

We gratefully acknowledge the continued interest and financial support of John S. McIlhenny in making possible the fieldwork of the LSUMZ. A research visit by O'Neill to the AMNH was supported by a grant from the Frank M. Chapman Memorial Fund.

Museum of Zoology, Louisiana State University, Baton Rouge, LA 70893. Accepted for publication 5 July 1976.