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GEOGRAPHICAL VARIATION IN THE PIÑON JAY

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ALTHOUGH no races of the piñon jay (*Gymnorhinus cyanocephalus* Wied)¹ are currently recognized, the species exhibits a certain amount of geographical variation.

Before considering this variation, however, it may be well to point out that Ridgway was mistaken in assuming that there is a pronounced sexual dimorphism in the piñon jay.² In a series which I recently dissected the females are on the average only slightly duller blue than the males. On the other hand there is a decided age difference, for one-year-old birds, regardless of sex, are much duller throughout than are fully mature specimens, the general color being bluish gray instead of blue, with the primaries brown instead of blackish. This subadult plumage is the one usually described as that of the "adult" female.

The following diagnoses will serve to distinguish the three subspecies which it is proposed to recognize.

Gymnorhinus cyanocephalus cyanocephalus Wied

Gymnorhinus cyanocephalus Wied, *Reise Nord-Am.* 2, 1841: 21 (Missouri River in Montana, between the Marias and the Yellowstone).

¹ Under the "one-letter rule" (Article 35 of the International Code) *Gymnorhinus* Wied, 1841, is not a homonym of *Gymnorhina* Gray, 1840, and therefore must replace *Cyanocephalus* Bonaparte, 1842.

² "Birds of North and Middle America," *Bull. U. S. Nat. Mus.*, 50, (3), 1904: 284.

Cyanocephalus wiedi Bonaparte, *Osserv. Stato Zool. Eur. Vertebr.*, 1842: 17 (new name for *Gymnorhinus cyanocephalus* Wied).

SUBSPECIFIC CHARACTERS.—Coloration dull; bill stubby and decurved, usually shorter than tarsus. Culmen from base, 33–35.5 mm. (average of 13 males 34.2), female 29.5–33 mm. (average of 6 females 31.2).

RANGE.—Northern Rocky Mountains and Black Hills, wandering to adjacent plains after the breeding season.

SPECIMENS EXAMINED.—Total number, 20; from South Dakota (Beaver Creek, 7; Buffalo Gap, 1), Wyoming (Meriden, 2; Newcastle, 4; Weston County, 2), Colorado (Cedar Edge, 1; Custer County, 1), and Kansas (Oberlin, 2).

Gymnorhinus cyanocephalus cassinii (McCall)

C. [yanocorax] cassinii McCall, *Proc. Acad. Nat. Sci. Phila.*, 5, 1852: 216 (Santa Fé, New Mexico).

CHARACTERS.—Similar to *G. c. cyanocephalus*, but deeper blue, especially on pileum and posterior underparts; bill somewhat straighter and about equal to tarsus in length. Culmen from base, 35–38 mm. (average of 7 males 36.4); female 33–37.5 mm. (average of 5 females 35.1).

RANGE.—Southern Rocky Mountains of western Texas, New Mexico, Arizona, and southern Utah.

SPECIMENS EXAMINED.—Total number, 15; from Texas (Glass Mountains, 2), New Mexico (Colfax County, 2; Gallina, 3; Santa Fé, 2), Arizona (Anita, 1; Fort Verde, 2; Granite Mountain, 1; Salmon Lake, 1), and Utah (Rockville, 1).

Gymnorhinus cyanocephalus rostratus, subsp. nov.

TYPE.—No. 85701, University of Michigan Museum of Zoology, fully adult male, Big Bear Valley, 7000 feet, San Bernardino Mountains, San Bernardino County, California; 18 September, 1914; Wright M. Pierce, original number 340.

CHARACTERS.—Similar in coloration to *G. c. cyanocephalus*; bill longer than tarsus, straighter, and more attenuate than in the other races. Culmen from base, 38–42 mm. (average of 7 males 39.4), female 36.5–38.5 mm. (average of 4 females 37.3).

RANGE.—Mountains of California and Nevada, south into northern Lower California. As might be expected, skins from eastern Oregon are intermediate toward *G. c. cyanocephalus*, but nevertheless they seem to be somewhat closer to the new form. Their bills measure 36 and 38 mm. (males), 33.5 mm. (female).

SPECIMENS EXAMINED.—Total number, 18; from Lower California (San Pedro Mártir Mountains, 3), California (Fort Crook, 1; San Bernardino Mountains, 6; San Jacinto Mountains, 1; Summit, 1), Nevada (Carson City, 3), and Oregon (Des Chutes River, 1; Fort Klamath, 2).

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