THE STATUS OF THE CHACHALACAS OF WESTERN MEXICO

By ROBERT T. MOORE and DON R. MEDINA

The chachalacas of México can be divided into two natural groupings; the larger *"poliocephala-wagleri"* types of western and central México, and the smaller *"vetula"* types of southern and eastern México. In the main they are allopatric, a fact which has undoubtedly contributed to the diversity of opinion regarding their relationships.

In their review of *Ortalis vetula,* Miller and Griscom (1921) gave no indication that they believed the similar species *O. poliocephala* or *O. leucogastra* were closely related to it. They did, however, make extensive comments on the similarity of *O. vetula* and *O. ruficrissa* of Colombia. Later Griscom (1932:104) considered *leucogastra* to be "an obvious representative of *vetula,*" and reduced it to subspecific status. Then Griscom (1934:372) joined *O. poliocephala* with *O. vetula* with the comment that he could "see no reason for keeping this bird specifically distinct . . . ." Peters (1934), Hellmayr and Conover (1942), and Ridgway and Friedmann (1946), without additional comment, followed Griscom in the union of these forms. However, more recently Wagner (1953) considered *poliocephala* to be a distinct species but retained *leucogastra* as a subspecies of *vetula.* Aldrich and Duvall (1955) excluded both *poliocephala* and *leucogastra* from the races of *O. vetula.* Unfortunately the nature of their publication did not permit them to discuss the taxonomy of the forms involved, and neither the reason for this exclusion nor the status of these forms was considered.

Whether or not *leucogastra* has reached a degree of differentiation sufficient to deserve recognition as a species we do not at present feel qualified to say; however, certain characteristics of this form lead us to believe that it may be separate. *O. leucogastra* and *O. v. vetula* evidently come into contact in southern Chiapas. Martín del Campo (1942) cites a record of *O. v. jalapensis* [= *O. v. vetula* (Ridgway and Friedmann, 1946:34)] taken by Dr. Helmuth O. Wagner at Mapastepec, Chiapas, while Friedmann, Griscom, and Moore (1950:70) give the range of *leucogastra* in Chiapas as "Mapastepec to Benito." If both of these records are correct, a point of contact is established and intensive field work in the area will undoubtedly throw light on the relationship of this questionable form.

Specimens in the Moore collection, taken by Chester C. Lamb, and also specimens in the collection of Allan R. Phillips from the northwestern portions of Colima and Jalisco, respectively, have convinced us that certain changes in the nomenclature of the west coast chachalacas are necessary. First, we follow Wagner and Aldrich and Duvall in the exclusion of *poliocephala* as a race of *O. vetula* and suggest with them that it be regarded as a species. Second, the discovery of a population in northwestern Jalisco connecting *O. wagleri* and *poliocephala*-like birds leads us to conclude that these forms are conspecific. Finally, we find that there is a distinct population of *O. poliocephala* from Colima north through western Jalisco which we propose to name

Ortalis poliocephala lajuelae subsp. nov.

Type.—Adult female, no. 36629, collection of Robert T. Moore, Occidental College, from Lajuela, Colima, 1 mi. SE Cihuatlán, Jalisco, México, altitude 75 feet, taken on April 20, 1943; collected by Chester C. Lamb, original no. 8077.

Diagnosis.—Similar to *O. p. poliocephala* but general coloration darker; breast Saccardo's Olive (less ashy); abdomen and thighs darker, more or less heavily washed with Ochraceous Buff to Apricot Buff; flanks and undertail coverts Ochraceous Tawny to Cinnamon Rufous; tips of the rectrices much darker, especially on the dorsal surfaces, proximal portion Chestnut, fading to Ochraceous Buff dis-

tally, the ventral surfaces somewhat lighter; ground color of rectrices darker, with a distinct blue-green sheen (capitalized colors are from Ridgway, 1912).

Lajuelae can be distinguished from *wagleri* by its lighter coloration, much reduced crest and the markings on the tips of the rectrices. In *O. p. wagleri* the central pair of rectrices is uniformly colored, the next lateral pair indistinctly tipped and the lateral pairs well marked. The central pair is indistinctly marked and all the lateral pairs are well marked in *O. p. poliocephala* and *O. p. lajuelae.*

Lajuelae can easily be distinguished from the races of *O. vetula* by its much larger size.

Measurements.—The measurements of *O. p. lajuelae* do not differ significantly from those of *O. p. poliocephala* (see table 1).

Range.—From western Colima north through western Jalisco to the vicinity of Puerto Vallarta where it intergrades with *O. p. wagleri.*

Table 1

Measurements of adult males of *Ortalis poliocephala* and *Ortalis vetula* in millimeters[1]

	Wing	Tail	Culmen	Tarsus
O. p. lajuelae	243–249 (245)	282–292 (288.3)	28.1–29 (28.7)	68.4–70.6 (69.7)
O. p. poliocephala	235–282 (248.4)	263–310 (283.2)	26–33 (29.8)	68–77 (71.5)
O. p. wagleri	250–289 (262.7)	269–307 (287.1)	25–28 (26)	69–80 (74)
O. p. griseiceps	256–272	277–279	26–27	67 .....
O. v. mccalli	197–219 (208.2)	225–255 (239)	22–27 (25)	55–63 (60)
O. v. vetula	177–202 (192.8)	197–225 (214.3)	24–28 (25.9)	58–65 (62)
O. v. pallidiventris	173–204 (188.5)	201–226 (214)	24–28 (25.5)	56–66 (61.3)
O. v. intermedia	181–190 (186.6)	225–258 (237)	23.5–27 (25)	58–65 (61.8)
O. v. vallicola	207–214 (210.3)	234–252 (245.3)	.....	.....
O. v. plumbiceps	189	238	25	66 .....
O. v. deschauenseei	208	225	25.5	58 .....
O. v. leucogastra	207–220 (215.6)	197–212 (202.6)	27 (27)	52–55 (53.6)

[1] Extreme and average measurements from Ridgway and Friedmann (1946) except for *O. p. lajuelae.*

The type locality of *O. p. poliocephala* was restricted to La Salada, Michoacán, by Ridgway and Friedmann (*loc. cit.*); however, recently Stresemann (1954:89) correctly pointed out that Wagler's description was based on material collected by Ferdinand Deppe at "Real Arriba" [= Real de Arriba, México]. The latter is therefore the type locality.

There is good evidence of north-south and west-east color clines when the species as a whole is considered. *O. p. wagleri* of Sinaloa and Nayarit represents the dark extreme, changing rather abruptly to the somewhat intermediate but distinct *lajuelae* of western Jalisco and Colima. Specimens of *poliocephala* from the coastal lowlands of Guerrero and Oaxaca are on the average darker and slightly smaller than the specimens of the same race from higher altitude in west-central and eastern Michoacán. The most pallid specimens examined come from southern Puebla (10 mi. S Tehuitzingo, altitude 4000 feet).

Specimens examined.—O. p. lajuelae: Colima: 1 ♂, 1 ♀, Lajuela; 1 ♀, Manzanillo. Jalisco: 1 ♂, Puerto Vallarta (Arroyo Las Estacas); 1 ♂, 1 ♀, Carboneras, NE (Guapinole +) El Pitillal, N Puerto Vallarta.

O. p. poliocephala: Jalisco: 1 ♀, Los Masos. Michoacán: 2 ♂, 1 ♀, 5 mi. NE Apatzingán; 1 ♀, Tafetan. Guerrero: 3 ♂, Cuajinicuilapa. Oaxaca: 1 ♀, Ostuta River, 5 mi. W Zanatepec; 1 ♀, Río Patos, 6 mi. W Tapanatepec; 2 ♂, Punta Paloma, 10 mi. S Tapanatepec. Puebla: 1 ♂, 1 ♀, Rancho Papayo, 10 mi. S Tehuitzingo.

O. p. wagleri: Jalisco: 1 ♀, Bahía de Banderas. Nayarit: 1 ♂, ½ mi. E San Blas; 1 ♂, Arroyo de Obispo, 5 mi. NW Chapalilla; 1 ♂, 2 ♀, Río Las Canas, 12 mi. N Concha in Sinaloa. Sinaloa: 1 ♂, 2 ♀, Río Las Canas, 12 mi. N Concha; 1 ♂, Rancho Santa Bárbara, 20 mi. NE Rosario; 1 ♂, Chele; 1 ♀,

Iguana on Río Presidio, 3 mi. N San Marcos; 1 ♂, 1 ♀, Sierra Palos Dulces, 15 mi. WSW Cosala; 1 ♂, Palmar; 1 ♂, San Lorenzo; 1 ♂, Arroyo Guayabito, 15 mi. E Quila; 6 ♂, 3 ♀, El Molino; 1 ♀, Rancho El Padre, 3 mi. S Chicorato; 4 ♂, Yecorato. Durango: 1 ♂, Rancho Guasimal, on lat. 25°, 6 mi. W Birimoa.

O. p. griseiceps: Sonora: 2 ♂, 1 ♀, Guirocoba; 1 ♂, 1 ♀, Los Algadones, 17 mi. NE San Bernardo.

O. vetula mccalli: San Luis Potosí: 2 ♂, Rancho Maitinez, 15 mi. S Naranjo; 1 ♂, 1 ♀, 16 mi. E Ciudad del Maíz; 1 ♂, 30 mi. E Ciudad del Maíz. Nuevo León: 1 ♂, 8 mi. NW Montemorelos; 1 ♂, 1 ♀, 15 mi. SW Linares. Tamaulipas: 1 ♀, Río Guayalejo, 20 mi. E El Mante; 1 ♂, 1 ♀, Rancho Acuña, 30 mi. N Gonzales; 1 ♀, Río Corona, 18 mi. N Ciudad Victoria; 1 ♀, Magiscatzín. Veracruz: 1 ♂, 1 ♀, Laguna Tamiahua; 2 ♂, 1 ♀, 17 mi. N Poza Rica.

O. v. vetula: Puebla: 1 ♂, 3 ♀, 30 mi. N Huauchinango. Veracruz: 2 ♂, 2 ♀, 20 mi. W Rodriguez Clara; 2 ♂, Arroyo Claro, 7 mi. E Loma Bonita in Oaxaca. Oaxaca: 1 ♂, Palomares; 1 ♀, Soyaltepec. Chiapas: 2 ♀, Palenque.

O. v. leucogastra: El Salvador, 2 ♂, 9 ♀.

THE STATUS OF O. POLIOCEPHALA AND O. WAGLERI

From a study of measurements of extremes and averages of the races of *O. vetula* and *O. wagleri* given in table 1 and taken from Ridgway and Friedmann (1946) it is evident that *O. poliocephala* can be separated from *vetula* on the basis of its greater size. In adult males there is no overlap at the extremes of the wing or tarsal measurements, but some overlap is observable in the lengths of tail and culmen. Nevertheless, these parts average considerably larger than in any of the races of *O. vetula*. In addition to the greater length of the tail, Ridgway and Friedmann (*loc. cit.*) point out that the tips of the rectrices are much broader in *poliocephala*, "45–60 mm.," while those of *O. v. mccalli* range from "15–20 mm." The tips of the rectrices of *O. wagleri* are listed as ranging from "35–50 mm." We cannot account for the disparity in the width of the tips of the rectrices between *wagleri* and *poliocephala* in Ridgway and Friedmann's figures, for we have many specimens of the former that equal or exceed the latter in this dimension. Neither can we wholly agree with Ridgway and Friedmann's diagnosis that *poliocephala* is similar to *vetula* except for size and coloration. The feathers of the foreneck and malar region of *poliocephala* are distinct; they are rigid and acuminate-lanceolate, a condition shared by *wagleri* but not seen by us in any of the races of *vetula* examined.

In addition to the morphologic dissimilarities just mentioned, Wagner (1953) points out that the two forms differ with respect to voice, breeding biology, and habitat requirements. Although the habitats overlap at various points on the Isthmus of Tehuantepec, no intergradation or hybridization is known.

Considering the foregoing evidence collectively, we can see no reason for the retention of *poliocephala* as a race of *O. vetula*.

Until recently it was believed that the ranges of *O. poliocephala* and *O. wagleri* were separated by most of the state of Jalisco; however, through the efforts of Allan R. Phillips in northwestern Jalisco, it has become evident that not only do *poliocephala* and *wagleri* meet but that they interbreed. We have examined a small sample of this intergrade population and feel that additional comment is warranted.

An adult female from Bahia de Banderas, Jalisco, designated as *wagleri,* shows an interesting combination of characters. The ventral coloration is much lighter than in typical *wagleri,* especially on the upper abdomen and yet it is darker than in *O. p. lajuelae*; the crest, although worn, is intermediate between that of *O. wagleri* and *O. poliocephala*; the central pair of rectrices is uniform except for the slight markings on the abraded tips; the next pair is clearly marked as in *poliocephala.*

An adult male and adult female from Carboneras, Jalisco, while representative of

lajuelae, are intergrades toward *wagleri.* The upper abdomen of the male is slightly darker and the lower abdomen, flanks, thighs, and crissum much darker than in typical *lajuelae*; the female falls within *lajuelae* in this respect; a small frontal crest is present in both specimens; the central pair of rectrices is uniform in the female and indistinctly marked in the male; both specimens exhibit more chestnut on the tips of the rectrices than does *lajuelae.*

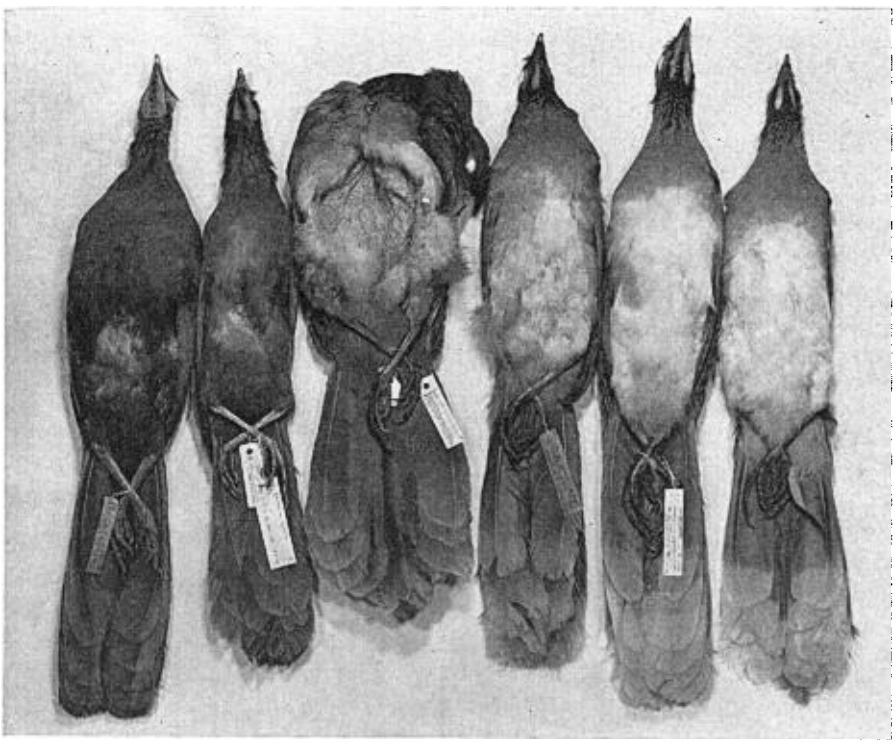

Fig. 1. *Ortalis poliocephala* (specimens from the Moore Collection unless otherwise indicated), left to right: *O. p. wagleri,* El Molino, Sinaloa; *O. p. wagleri* x *lajuelae,* Bahía de Banderas, Jalisco (Amer. Mus. Nat. Hist. 471461); *O. p. lajuelae* x *wagleri,* Carboneras, N Puerto Vallarta (A. R. Phillips Coll. 3867); *O. p. lajuelae* (type), Lajuela, Colima; *O. p. poliocephala,* 5 mi. NE Apatzingán, Michoacán, and Ostuta River, 5 mi. W Tapanatepec, Oaxaca.

The variable nature of the intermediate specimens and the limited area of their occurrence in northwestern Jalisco indicates a sharp gradient and further suggests introgression, or allopatric hybridization (Mayr, Linsley, and Usinger, 1953). Miller (1949) contends that there is no clear-cut distinction between intergradation and hybridization, and the material examined tends to support this view.

On the basis of this intergradation and the similarities mentioned we can only conclude that these forms are conspecific. Since *Penelope poliocephala* Wagler, 1830 has priority over *Ortalida wagleri* G. R. Gray, 1867, the forms should stand as:

Ortalis poliocephala poliocephala (Wagler)
Ortalis poliocephala lajuelae Moore and Medina
Ortalis poliocephala wagleri (G. R. Gray)
Ortalis poliocephala griseiceps van Rossem.

The validity of *O. p. griseiceps* has been questioned in recent years; however, until more comparative material becomes available, it seems desirable to recognize this form.

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