

## FROM FIELD AND STUDY

**Starling-Piñon Jay Associations in Southern Colorado.**—Starlings (*Sturnus vulgaris*) and Piñon Jays (*Gymnorhinus cyanocephala*) exhibit similar behavior in the sense that both species are highly gregarious, may walk and feed on the ground, and may move across the ground as a flock in a peculiar "rolling" flight. Bent noted this similarity between the two birds in his life history sketch of the Piñon Jay (U. S. Nat. Mus. Bull. 191, 1946:307): "It spends much time on the ground, where it often feeds in rolling flocks; its gait is a dignified walk or easy run, with its body more or less erect and its head held high, more like that of the starling than like the bouncing hops of the jays." Obviously this behavioral pattern developed independently in these unrelated species, representing an instance of parallel evolution.

Bent offered another pertinent comment when he observed that the Starling was "apparently fond of association with other species of similar habits" (U. S. Nat. Mus. Bull. 197, 1950:210). At the time this was written, Starlings had not to any extent penetrated the western realm of the Piñon Jays, and the statement could not be specifically applied to relations between these two species, despite a similarity of certain habits. Within the last few years, however, Starlings have become increasingly common in the Pikes Peak area of Colorado where Piñon Jays do occur. And there have indeed been several recent observations of the two species together.

On December 27, 1963, in the ponderosa pine-grassland ecotone between the Black Forest and the Great Plains about ten miles northeast of Colorado Springs we saw an integrated flock containing at least 31 Starlings and 50 Piñon Jays. Most of the birds were feeding together on the ground in the grass (mainly grama) but some were perching in the interspersed pines. The Starlings and Piñon Jays on the ground moved together in the "rolling" pattern, the back part of the mixed flock rising from the short grass and dropping back to the ground in front of the flock.

Paul Nesbit of Colorado Springs, who lives at the edge of the piñon-juniper woodland in the Garden of the Gods, reported that he had seen similar mixed flocks of Piñon Jays and Starlings around his home periodically over the past two years. The two species would associate during daylight and then apparently separate into single-species flocks at night, to recongregate the next morning.—RICHARD G. BEIDLEMAN and JAMES H. ENDERSON, *Department of Zoology, Colorado College, Colorado Springs, Colorado, January 14, 1964.*

**Remarks on the South American Furnariid *Phacellodomus rufifrons*.**—The Rufous-fronted Thornbird, *Phacellodomus rufifrons*, occurs throughout much of South America, in northern Argentina, Paraguay, Brazil, Perú, and Venezuela, and it has been known from one specimen taken from extreme northern Colombia (Carriker, *Novedades Colombianas*, 1, 1954:14-19). Peters (*Birds World*, 7, 1951:111-112) summarizes the range of the species, first described from southern Brazil in 1821, and recognizes six distinct subspecies.

In May of 1960, in the course of routine collecting near the pueblo of Trinidad, Departamento de Boyaca, Colombia, two birds of this species were taken in mist nets. They constitute the second and third records of the species from that country. The birds are somewhat different from the Venezuelan specimens and the single specimen from Colombia; the latter was obtained much to the north of Trinidad but in the same department near the Venezuelan border.

The pair of birds, male and female, were taken in a heavily forested stream bed similar to those found over a vast expanse of the Llanos Orientales of eastern Colombia and extending into Brazil in the Amazon drainage. It may be assumed that these rather retiring birds follow the vegetation along such waterways through the otherwise unrelieved plains or llanos; typical climax type plants here are grasses which are probably unsuited for these thornbirds.

The male had well developed testes, indicating breeding condition, and the female showed old scar tissue on the ovary and an old brood patch. The birds could represent a mated pair that were feeding young at the time of collection. No nest was found, although numerous bulky stick nests that appeared old were to be seen in the brushy areas surrounding the stream bed, which was dry at the time. These nests correspond to the description of the nest of this species by Mitchell (*Birds of South-eastern Brazil*, 1957:133).

The specimens have been deposited in the Los Angeles County Museum (nos. 39518, 39519). Comparisons were made with skins in this Museum, and with specimens from the National, American, and Carnegie museums; grateful thanks are extended to the officials of the respective institutions for loan of materials.

In all, 94 specimens of the various races of *Phacellodomus rufifrons* were examined critically, as well as examples of *Phacellodomus dorsalis*, *ruber*, *erythrophthalmus*, *striaticollis*, *striaticeps* and *sibilatrix*. Certain differences exist between the two specimens from Boyaca, Colombia, and other known examples of the various subspecies of *rufifrons*.

The Colombian birds are placed with some doubt in the subspecies *inornatus* since in coloration there is greatest similarity with this Venezuelan form. There seems clearly to be a greater size in these two Colombian birds, in all measurements taken; however, in size they conform more closely to the race *sincipitalis* from Bolivia and northern Argentina. Certain features are baffling in the birds; they possess a larger bill in relationship to their overall size than do others, and they show a distinct flaring at the base of the bill similar to that shown in the species *P. ruber* and *striaticollis*. The rather complete lack of rufous coloration on the frontal and crown feathers is consistent with that in *inornatus*, but the feathers in this area are more distinctly lanceolate in the Colombian birds, again in common with other members of the genus rather than with *P. rufifrons* generally, in which there is but a suggestion of such stiffened feather structure. The superciliary line, quite distinct in all specimens of the species, including most adult birds from Venezuela, is represented by a simple trace in the Colombian birds.

AVERAGE MEASUREMENTS AND STANDARD DEVIATION OF RACES OF PHACELLODOMUS RUFIFRONS

Sample	No.	Wing	Tail	Culmen	Tarsus	Middle toe
Colombian	2	68.4	81.9	15.5	21.9	22.0
<i>specularis</i> (Brazil)	2	63.1	73.8	14.1	20.9	19.3
<i>peruvianus</i> (Perú)	6	66.6±1.2	72.3±2.1	12.4±1.0	21.2±1.1	18.9±1.3
<i>rufifrons</i> (Brazil)	7	63.9±1.3	78.5±2.9	12.8±1.1	19.9±1.4	19.4±1.1
<i>fargoi</i> (Paraguay)	5	63.4±1.4	76.4±2.6	12.8±.4	20.4±.8	17.9±.6
<i>inornatus</i> (Venezuela)	58	64.1±2.4	70.7±2.6	14.4±1.5	21.8±2.5	19.7±2.3
<i>sincipitalis</i> (Bolivia)	13	68.6±2.0	84.2±1.3	13.6±.9	22.1±1.3	18.6±1.1

Further collection of this interesting bird is needed to determine the true ranges of the various forms and to determine more exactly the limits of variability.—M. DALE ARVEY, *National Science Foundation, Washington D.C., January 6, 1964.*

**Additional Records of the Scissor-tailed Flycatcher in Arizona.**—The first and second records of the Scissor-tailed Flycatcher (*Muscivora forficata*) in Arizona were of two single birds seen by me (Condor, 38, 1936:121) in northeastern and central Arizona, respectively. I next saw the Scissor-tailed Flycatcher in Arizona in farmland of the Asel East ranch, about one mile north of Pomerene in the San Pedro Valley, near Benson, in the southeastern part of the state. With Mr. East's assistance the bird was collected on May 8, 1957, and is no. H1066 in my collection. This flycatcher is an adult female with ovaries measuring  $9 \times 3.5$  mm., the largest egg being about 1 mm.; there was little fat. On September 16, 1961, I again saw a Scissor-tailed Flycatcher; this time in the town of Pomerene, only about one mile south of the sighting of May 8.—LYNDON L. HARGRAVE, *National Park Service, Southwest Archeological Center, Globe, Arizona, January 14, 1964.*

**An Observation on the Song of the Black-capped Chickadee.**—An excellent study of the Willow Tit (*Parus montanus*) by Thönen (Ornith. Beob., 59, 1962:101-172, English summary) has prompted me to publish the following note on the song of a population of the Black-capped Chickadee (*Parus atricapillus*) which seems to have escaped the attention of American ornithologists.

A few words should be said first about the status of the group *Parus atricapillus* and *Parus montanus*. The latter has been recently given specific rank mainly on the ground of voice differences and some variance in ecological requirements. It is true that the Black-capped Chickadee is more eclectic in North America than is *montanus* in Eurasia. I do not consider this to be a specific attribute but solely the result of lesser competition between closely related species. To illustrate this viewpoint, I would cite the case of the Horned Lark (*Eremophila alpestris*) which in Eurasia is confined