

- Smythies, B. E. 1986. *The Birds of Burma*. Nimrod Press, & Silvio Mattachione.
Stanford, J. K. & Mayr, E. 1941. The Vernay-Cutting Expedition to northern Burma. II. *Ibis* (14)5: 56–104.
Stevens, H. 1914. Notes on the birds of upper Assam. Pt. 1. *J. Bombay Nat. Hist. Soc.* 23: 234–268.

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New distributional information on the *Aphelocoma* jays

by A. Townsend Peterson

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Thorough knowledge of patterns of distribution is crucial to understanding the ecology and historical biogeography of species (Mayr 1963). For example, in certain situations, the existence of peripheral isolate populations can lend support to hypotheses of relictual distribution (e.g. Fitzpatrick & O'Neill 1979). Discovery of populations inhabiting unusual habitats can change interpretations of ecological restriction and historical biogeography (e.g. Peterson & Vargas, in press). Thus, documentation of range extensions, especially those providing new information on the range of habitats that a species can utilize, is important.

Pitelka (1951, 1961) summarized the distribution and ecology of the three species of *Aphelocoma* jays. His work, based on virtually all of the specimens in North American museums (4817 in total) and a thorough review of the literature, revealed many interesting geographic patterns. Nevertheless, specimens and other information were insufficient to allow a thorough understanding of the distribution and geographic variation of the jays in several areas. Because the behaviour, ecology, and evolution of the *Aphelocoma* jays is of intense interest (e.g. Woolfenden & Fitzpatrick 1984, Brown & Horvath 1989), accurate information on distribution and ecology of the group is especially important.

This paper is intended to provide new information on the distribution and ecology of the three species of *Aphelocoma* jays. This information has been amassed during extensive field work in the United States and Mexico during 1986–89, discussions with other scientists, and reviews of most major museum collections in the United States and Mexico. Several range extensions are described, and the taxonomic implications of the two most significant are discussed.

Results

Below is a summary of new distributional information for each of the three species, listed in north-to-south order. Several new records were

discussed by Pitelka (1961), including important new specimens of *A. ultramarina* from central Mexico. Abbreviations for museums are as follows: CAS: California Academy of Sciences; FMNH: Field Museum of Natural History, Chicago; LACM: Los Angeles County Museum of Natural History; MZFC: Museo de Zoología, Facultad de Ciencias, Universidad Nacional Autónoma de México; SBCoMNH: San Bernardino County Museum of Natural History, California; and MLVZ: Moore Laboratory of Vertebrate Zoology, Occidental College, California.

SCRUB JAY *A. coerulescens*

Idaho—ranges N to Bannock Co., Pocatello, Scout Mountain, in open juniper-pine woodland (P. E. Lowther, pers. comm.).

Wyoming—range in southern part of state more extensive, with the jays living in open juniper-Mountain Mahogany (*Cercocarpus montanus*) woodland N to central Sweetwater County in the southwest part of the state (Fitton & Scott 1984).

Texas—range more extensive in central part of state (subspecies *texana*), reaching W to between Ozone and Sonora and to between Big Lake and Mertzon, N to just S of Abilene, and E to Bexar Co. and Austin (Dixon 1952, B. Burt, pers. comm.).

California/Arizona—fall and winter records from along the lower Colorado River basin and S of the Salton Sea are now much more numerous, with several specimens (SBCoMNH 36420, LACM 46037), and numerous sight records reported in the past decade in *American Birds*. The apparent increase is most likely due to the presence of more observers in the area. A detailed analysis of the source populations for these individuals is in progress (Peterson, unpubl.).

Mexico, Coahuila—sight records extend the range of the species about 160 km N to the mountains W of Santa Teresa, in the vicinity of Monclova (Fig. 1, A; A. Garza de León, pers. comm.). However, a definite gap of about 420 km remains in the species' distribution between this site and the populations of western Texas (Pitelka 1951, Miller 1955).

Sierra Madre Occidental—extensive new series of specimens and sight records (Miller *et al.* 1957, Peterson, unpubl. data) extend the range of the species S along the full extent of the Sierra Madre Occidental through Durango, Zacatecas (Fig. 1, B) and northeastern Jalisco (Fig. 1, C). Localities include the following: Zacatecas, in the vicinity of Sombrerete (CAS 61718, 61862-3, 62799, FMNH 343462-6), and in the vicinity of Valparaiso (pers. obs.); and Jalisco, in the vicinity of Lagos de Moreno (FMNH 343452-61), at various sites along the road from Lagos de Moreno N to El Puerto, and 2 km N of El Mosco. In contrast to the usual pattern of habitat use (pinyon or oak woodland), the Jaliscan records were in riparian woodlands of a leguminous tree called "pirul", while in Zacatecas, the jays were in low open juniper woodland or very open pinyon-juniper woodland (Peterson & Vargas, in press). Subspecific relationships of these populations are discussed below. A record from Nayarit, 15 mi NW of Lagos (CAS 62800), appears to be erroneous, perhaps actually from Lagos de Moreno, Jalisco, as neither the locality nor other records of the species exist in Nayarit (Escalante 1988, pers. obs.).

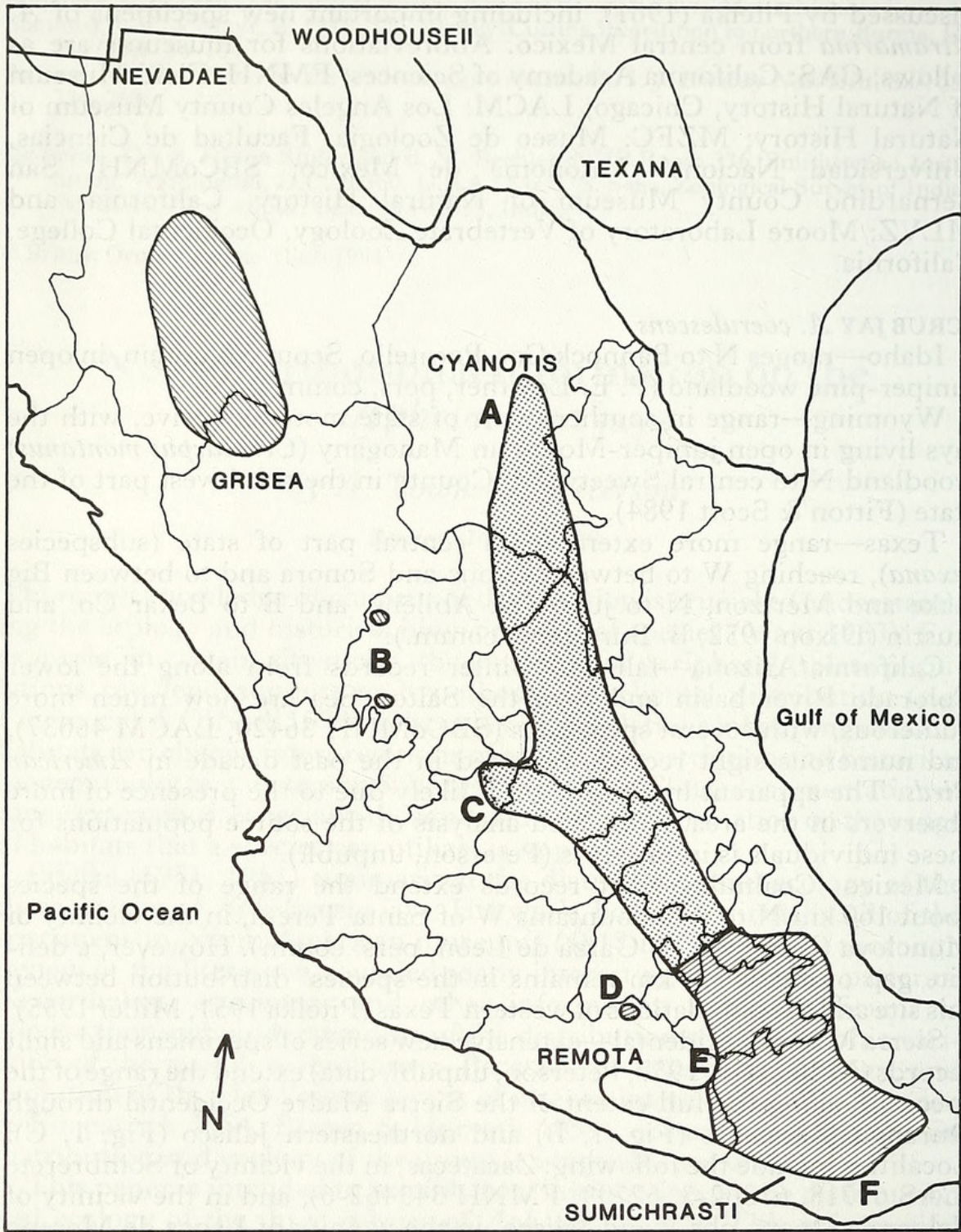


Figure 1. Distribution of Scrub Jays in Mexico. Indicated by letters are new range extensions, north to south, in (A) Coahuila, (B) Sierra Madre Occidental, (C) Jalisco and Guanajuato, (D) Guerrero, (E) Puebla and (F) Oaxaca.

Guanajuato—several specimens now exist from 2–9 km W of Dolores Hidalgo (Fig. 1, C; various specimens in MLVZ). Although no habitat data on these populations are available, these localities lie in open desert with occasional patches of shrubland or riparian woodland (pers. obs.). Subspecific relationships of these populations are discussed below.

Guerrero—three specimens were obtained from the Sierra de Taxco, 5 km N of Taxco, on 30 Dec 1988 in pine-oak woodland, representing the first record of the species from northern Guerrero or from the southern Neovolcanic Belt (Fig. 1, D; Morales Perez 1989). Subspecific relationships of these populations are discussed below.

Puebla—in the southernmost part of the state, 7 km W of Las Sidras, at least three territorial pairs of jays were observed in desert scrub/riparian woodland, filling in a gap in the species' range (Fig. 1, E) and providing an interesting new ecological situation for the species in southern Mexico.

Oaxaca—range extends farther S to the interior slope of the Sierra de Miahuatlán, 10–20 km S of Sola de Vega (Fig. 1, F).

GRAY-BREASTED JAY *A. ultramarina*

Guerrero—recorded from the Sierra de Taxco (Morales Perez 1989, pers. obs.), constituting a southward range extension of about 50 km, and the first record of the species for the state of Guerrero.

UNICOLORED JAY *A. unicolor*

Sierra Madre Oriental—Four specimens (FMNH 343729, three in MZFC uncatalogued) from 5 km E of Tlanchinol, in northeastern Hidalgo, and sight records from Tenango de Dorio, in southeastern Hidalgo (Jerram Brown, pers. comm.), extend the species' range about 150 km NW to near the northeastern limit of true cloud forest habitats in Mexico. These specimens are similar in morphology and colouration to specimens taken in central Veracruz, and are only moderately genetically differentiated from populations in the Zempoaltépetl region of Oaxaca (i.e. frequency differences only; Peterson, in prep.). The status of *unicolor* in Veracruz and Puebla is very uncertain, with few records since a 1948 specimen and a 1985 sight record from near Teziutlán, Puebla (FMNH 187300; T. Davis, pers. comm.). Extensive searching on the slopes of Cofre de Perote above Xico (vicinities of Ticuahutipan, Xico Viejo, Teocelo), Veracruz, in June 1985–June 1986 and January 1989 (A. G. Navarro S., pers. comm.; pers. obs.) yielded neither sightings of this species nor extensive appropriate habitat.

Guerrero—range extends farther W and S into the vicinity of the Sierra de Atoyac, El Iris (specimens: FMNH 343590-3, MZFC 4021-3), but earlier records from Mount Teotepec (Miller *et al.* 1957) may refer to this area, instead of the higher-elevation Mount Teotepec proper (A. G. Navarro S., pers. comm.). In spite of statements to the contrary by Phillips (1986), *unicolor* is still present and common at the type locality of the subspecies *guerrrerensis*, Omiltemi.

Jalisco—a sight record from the Sierra de Manantlán, above El Grullo (Beals & Rusterholz 1981), is apparently erroneous, given extensive field observation and collecting in the area concerned (pers. obs.).

Discussion

In order to understand the implications of these new populations of *Aphelocoma* jays for the overall picture of geographic variation in the

genus, I made comparisons with existing series of specimens in the Field Museum of Natural History and the Moore Laboratory of Vertebrate Zoology. No geographic variation was evident in the newly discovered populations reported here for *A. unicolor* or the United States populations of *A. coerulescens*, and no specimens were available from the new population of *A. ultramarina*. Hence, below, I discuss the implications of range extensions of *A. coerulescens* in southern Mexico for the pattern of geographic variation in the species. The comparisons were made using series of fully adult individuals (after second year; Pitelka 1945) from the following localities: Guerrero, Cuapongo (4); Guerrero, Sierra de Taxco (2); Oaxaca, Mitla (10); Oaxaca, Llano Verde (2); Durango, Ojito (4); Zacatecas, Sombrerete (2); Jalisco, Lagos de Moreno (6); and various localities in San Luis Potosí (7).

Contrary to the statements of Binford (1989), the subspecies *remota* of central Guerrero is relatively well marked and distinct from *sumichrasti*, which extends from the Federal District and Tlaxcala south to Oaxaca. Three characters serve to identify most individuals as one or the other. (1) The pileum is lighter blue in *remota* than in *sumichrasti*. (2) The back is lighter brown in *remota* than in *sumichrasti*, but contra Pitelka (1951), I found individuals of both subspecies with blue suffusion in the brown of the back. (3) The collar of *remota* is considerably less extensive, and the brown underwash of the collar of *sumichrasti* is lacking.

The Taxco specimens appear to be much more similar to *sumichrasti* than *remota*. Although the collar and upper breast of the Taxco birds are slightly lighter than in *sumichrasti*, they are considerably darker than in *remota*. The blue of the pileum and the brown of the back in the Taxco birds are both darker than in *remota*, closely matching *sumichrasti*. Thus, the southern populations of *A. coerulescens* can be interpreted as nearly continuous from the Transvolcanic Belt south to the Sierra Madre del Sur, from Oaxaca, Puebla, and Veracruz west at least to Guerrero. The central Guerrero form, *remota*, appears to be isolated from populations to the north by the arid lowlands of the Balsas Depression and possibly intergrades with *sumichrasti* along the Guerrero-Oaxaca border (Binford 1989).

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References:

- Beals, E. & Rusterholz, K. 1981. Bird list. Sierra de Manantlan, Jalisco, Mexico, 1 January–14 January 1980. *Centzontle* 1: 181–185.
Binford, L. C. 1989. A distributional survey of the birds of the Mexican state of Oaxaca. *Orn. Monogr.* no. 43. American Ornithologists' Union.

- Brown, J. L. & Horvath, E. G. 1989. Geographic variation of group size, ontogeny, rattle calls, and body size in *Aphelocoma ultramarina*. *Auk* 106: 124–128.
- Dixon, K. L. 1952. Scrub Jay in Bexar County, Texas. *Condor* 54: 208.
- Escalante P., P. 1988. *Aves de Nayarit*. Univ. Autón. Nayarit, Tepic.
- Fitton, S. D. & Scott, O. K. 1984. Wyoming's juniper birds. *Western Birds* 15: 85–90.
- Fitzpatrick, J. W. & O'Neill, J. P. 1979. A new tody-tyrant from northern Peru. *Auk* 96: 443–447.
- Mayr, E. 1963. *Animal Species and Evolution*. Belknap Press, Cambridge, Mass.
- Miller, A. H. 1955. The avifauna of the Sierra del Carmen of Coahuila, Mexico. *Condor* 57: 154–178.
- Miller, A. H., Friedmann, H., Griscom, L. & Moore, R. T. 1957. Distributional check-list of the birds of Mexico, part II. *Pacific Coast Avifauna* no. 33.
- Morales Perez, J. E. 1969. Distribución de la avifauna en la Sierra de Taxco, Guerrero. Tesis profesional, Facultad de Ciencias, U.N.A.M., Mexico.
- Peterson, A. T. & Vargas B., N. In press. Ecological diversity in Scrub Jays (*Aphelocoma coerulescens*). In T. P. Ramamoorthy *et al.* (eds), *The Biological Diversity of Mexico*. Oxford Univ. Press.
- Phillips, A. R. 1986. *The Known Birds of North and Middle America*, part 1. Allan Phillips, Denver.
- Pitelka, F. A. 1945. Pterylography, molt, and age determination of American jays of the genus *Aphelocoma*. *Condor* 47: 229–260.
- Pitelka, F. A. 1951. Speciation and ecologic distribution in American jays of the genus *Aphelocoma*. *Univ. Calif. Publ. Zool.* 50: 195–464.
- Pitelka, F. A. 1961. Comments on types and taxonomy in the jay genus *Aphelocoma*. *Condor* 63: 234–245.
- Woolfenden, G. E. & Fitzpatrick, J. W. 1984. *The Florida Scrub Jay: demography of a cooperative breeding bird*. Princeton Univ. Press.

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Observations on nesting and nestling growth in the Rusty-margined Flycatcher *Myiozetetes cayanensis* in southeastern Peru

by Andrzej Dyrce

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Information on the breeding biology of the Rusty-margined Flycatcher is scarce (Haverschmidt 1971). Below I give some new data.

In November and December 1985 I observed Rusty-margined Flycatchers which nested at an oxbow lake (Laguna Chica) in lowland rain forest in Tambopata Reserve, Puerto Maldonado, southeastern Peru. The species was first found there in 1978 (Parker 1982). Two nests were found at the edge of the oxbow. They were situated on small bushes growing in the water, and were 100 and 140 cm above water level. They had a more or less oval shape with a well-formed roof over the top. The



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