

Friedmann, Griscom, and Moore (Pac. Coast Avif. No. 29, 1950) list *mexicana* as occurring as far north as Chihuahua, México. Although the specimen collected in 1892 was taken on the border, the bird collected in 1957 extends the range of this Mexican race into southern New Mexico.

A review of sight records by Ligon (Wildlife of New Mexico, 1946:20) disclosed the presence of native Turkeys in the Animas Mountains of New Mexico as late as 1908. After 1908, the absence of reports of Turkeys in the area suggested their disappearance. The Animas Mountains extend northward from the San Luis Mountains and both ranges are a few miles east of the Peloncillo Mountains.

Between 1929 and 1939, four separate transplants of Turkeys, totaling nineteen females and nine males of the race *merriami*, were made in the northern portion of the Animas Mountains when it was believed that native Turkeys had been exterminated from that area. It should be noted that the Turkey habitat in the Animas and Peloncillo mountains is quite different from that found in the range of *merriami*. From interviews with ranchers and Game Department personnel, it is surmised that the transplanted *merriami* did not become adapted to this area and disappeared rapidly after the last release. Sight records by ranchers and Game Department personnel since 1940 indicate that *merriami* is not present in southern Hidalgo County but that *mexicana* has moved from adjacent México into suitable areas. Further collections of specimens from both the Animas and Peloncillo mountains are planned in an effort to substantiate this belief.—WAYNE H. BOHL, *Fish and Wildlife Service, Sacramento, California*, and SIDNEY PAUL GORDON, *U. S. Forest Service, Grass Valley, California, February 16, 1958*.

On the Distribution of Day's Barbet.—In August, 1950, I collected a specimen of Day's Barbet (*Capito dayi*) on the upper Rio Teles Pires, the eastern headwaters of the Rio Tapajóz in the northern part of the State of Mato Grosso, Brazil. This locality is about 600 kilometers from the locality on the Rio Madeira from which Cherrie (Bull. Amer. Mus. Nat. Hist., 35, 1916:394) described this species. Since the Madeira-Guaporé and the Teles Pires-Tapajóz river systems are adjacent, the occurrence of this species in the Rio Teles Pires was not surprising. However, the discovery of Day's Barbet on the lower Rio Tocantins, in the State of Pará, was unexpected. A specimen collected by native hunters at Marabá was sold to me by J. Hidasi. In August, 1957, I secured another specimen in the eastern Tapajóz region, on the upper Rio Cururú in the State of Pará. This record partially bridges the gap of about 1000 kilometers in the distribution of the species, between the Rio Teles Pires and the Rio Tocantins.

The three specimens, all adult, correspond closely in size and color with a series of nine birds in the Museu Nacional at Rio de Janeiro. This series was collected by the Comissão Rondon in the Guaporé region (Rio Guaporé, Javari, Jaurú) in 1908, 1909, and 1914. The measurements of the Rondon specimens are as follows: wing, six males, 92.2 mm. (90-94); tail, five males, 52.8 mm. (51-54); for three females, wing, 91.3 mm. (90-94) and tail, 53.0 mm. (52-54). My specimens from the Rio Tapajóz are a male, weighing 65 grams, with a testis 5 mm. long, and a female weighing 66.5 grams, with an ovary 9 mm. long. The male measures: wing, 89, and tail, 54 mm. The female measures: wing, 90, and tail, 52 mm. The wing and tail of the specimen from Marabá, a male, measure 90 and 52 mm., respectively. The white upper breast feathers of all 12 specimens are somewhat stiff. Some of the males have a few scarlet feathers in the dorsal white patch; the female from the Rio Cururú has a scarlet feather over each eye.

The stomach of the specimen from the Rio Teles Pires contained spiders; the bird had a larva of a sucking fly of the genus *Philornis* on its neck and a helminth in its body cavity. Mallophaga were present on its feathers. The stomach of the specimen from the Rio Cururú contained fruit.—HELMUT SICK, *Fundação Brasil Central, Rio de Janeiro, Brazil, December 1, 1957*.

Geographical Variation in the Vocalizations of the Western Meadowlark.—Until recent years our knowledge of the extent of geographical variation in the vocalizations of birds has been limited and generally of a subjective nature. The advent of modern technological advances in the fields of sound recording and analysis has opened up new vistas of research and some progress has already been made. There are now enough observers with access to the necessary field and laboratory equipment to make such geographical comparisons feasible. We submit the following data to illustrate how collaboration among workers in bio-acoustics can contribute toward this goal.

The characteristic call note of the Western Meadowlark (*Sturnella neglecta*), phonetically described as the *chupp*, has been analyzed and interpreted in connection with another study (Lanyon,

Publ. Nuttall Ornith. Club No. 1, 1957). The sound spectrograms in figure 1 are of recordings of this call note made at four different localities. Each locality reflects a different situation with regard to (1) geographical location within the species' range, and (2) potential environmental influence of a sibling species, the Eastern Meadowlark (*Sturnella magna*). The localities represented are: Kern County, California (May 30, 1946), well within the range of *neglecta* with no possibility of *magna*

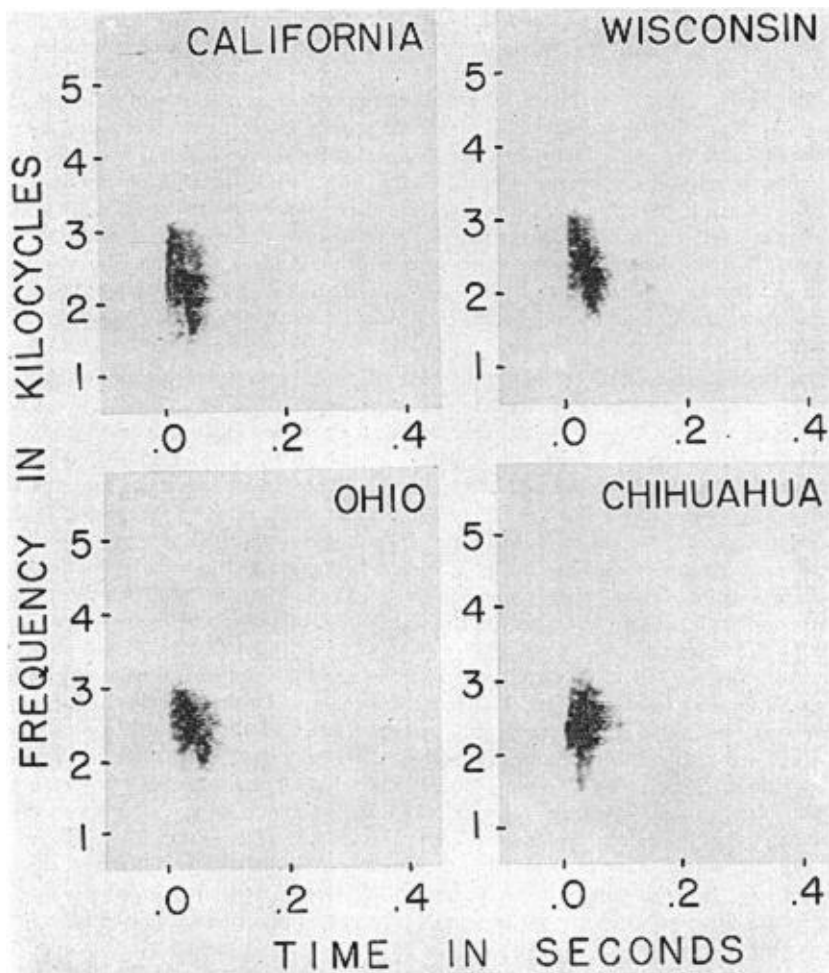


Fig. 1. Sound spectrograms of the characteristic call note of the Western Meadowlark, recorded in four widely separated populations.

influence; Dane County, Wisconsin (May 15, 1953), in the zone of common overlap of *neglecta* and *magna*; Wayne County, Ohio (April 27, 1957), where peripheral breeding *neglecta* are surrounded by *magna*; and Santa Ana Babicora, Chihuahua, México (June 15, 1957), where peripheral *neglecta* breed in the absence of *magna*.

In Wisconsin, this call note (fig. 1) was found to consist of frequencies of 2.0 to 3.0 kilocycles and to last less than 0.1 second (Lanyon, *op. cit.*). The other spectrograms in figure 1 show sound patterns that are essentially identical to this. Collectively, they suggest that Western Meadowlarks render the same characteristic call note regardless of their geographical location within the species' range. They further suggest that the inheritance and/or maturation of this call note is independent of

the presence or absence of the sibling species. In the light of growing evidence that call notes are less influenced by environmental stimuli than is primary song, it might be profitable to focus more attention on the potential use of these simple, explosive types of vocalization in systematic studies.

It has been demonstrated that the development of species-specific primary song in juvenal meadowlarks is highly dependent upon environmental stimuli subsequent to the time of fledging, and that the absence of the appropriate stimuli can result in failure to acquire the characteristic song of the species (Lanyon, *op. cit.*). Presumably, this learned basis of primary song is responsible for the geographical variation or "dialects" that have been reported in various parts of the ranges of meadowlarks (and perhaps in other passerines as well).

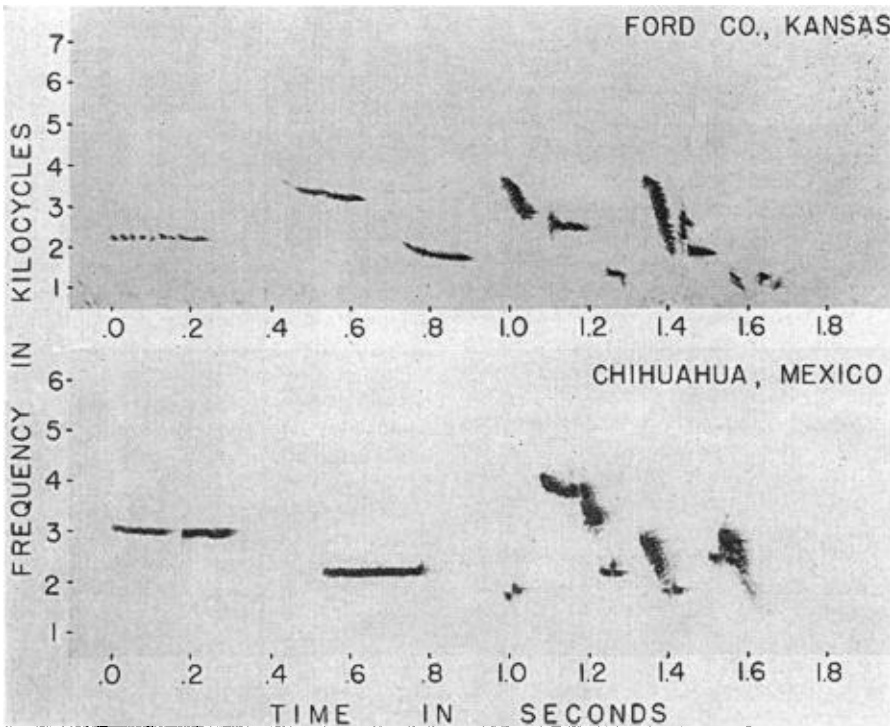


Fig. 2. Sound spectrograms of primary song of the Western Meadowlark, recorded in two different populations.

In spite of this demonstrable geographical variation in the primary song of meadowlarks, widely-separated breeding populations appear to retain certain basic features in their primary song patterns that are characteristic of the species as a whole. For example, primary song in the Chihuahuan population of *neglecta* referred to above, although differing in the detail and arrangement of the component elements, was found to have the same basic features illustrated by *neglecta* breeding in western Kansas: (1) sound energy concentrated in the range of 1 to 4 kilocycles and (2) division into two phases, an introductory group of rather pure tones and a concluding phase of more complex, "steep slope elements." These features are illustrated by the sound spectrograms in figure 2 (made on two different models of sound spectrographs, accounting for the difference in frequency scales).

The sound spectrograms were prepared at the Southwestern Research Station of the American Museum of Natural History and at the University of Wisconsin. We wish to thank Joseph Beatty of Wooster, Ohio, for aid in recording isolated *neglecta* in Ohio. The field work in Chihuahua was supported by funds from the American Philosophical Society.—WESLEY E. LANYON, *American Museum of Natural History, New York, New York*, and WILLIAM R. FISH, *China Lake, California*, January 9, 1958.