

southern part of its breeding range." Harrison B. Tordoff collected a male (KU 32103) on June 20, 1952, 2 miles west of Jiménez. This bird was in full breeding condition, and is the first record of the species in Coahuila.

Vireo solitarius cassinii. Solitary Vireo. A male (KU 31589) was obtained by R. W. Dickerman on July 4, 1954, 20 miles south of Ocampo. The subspecies was previously unrecorded in Coahuila.

Molothrus ater ater. Brown-headed Cowbird. One female (KU 31513), was shot by R. W. Dickerman from a flock of eight birds on May 3, 1954, 21 miles south and 11 miles east of Australia. It measured: wing, 102 mm.; tail, 64 mm.; culmen, 17 mm.; tarsus, 26 mm.; ovary 8×4 mm. I find no previous records of this subspecies in the state.

Passerina cyanea. Indigo Bunting. A male (KU 31544) was collected by R. W. Dickerman on May 5, 1954, in San Marcos. This bird (testes 5×4 mm., moderately fat, in worn plumage) was observed chasing another male, and the pursuer in turn, was followed by a female. The territorial behavior (observed for 2 hours) of this bird suggests the possibility of breeding, but no nest was found. This specimen seems to provide the first record of the species in the state.

Aimophila cassinii. Cassin Sparrow. A male (KU 32158) in breeding condition (testes 7×5 mm.) was obtained by Sydney Anderson, 18 miles south and 14 miles east of Tanque Alvarez, on July 6, 1952. Another male (KU 32157), having testes that measured 5×3 mm., was taken by H. B. Tordoff, 9 miles south and 11 miles east of Sabinas, on June 14, 1952. This species was previously unrecorded in the state.—S. G. VAN HOOSE, *Museum of Natural History, University of Kansas, Lawrence, Kansas, March 12, 1955.*

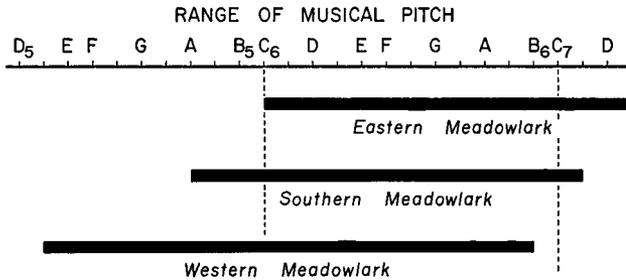
An analysis of the songs of meadowlarks.—In my collection of field records of songs and calls of birds made during the past 40 years, there are 1,050 records of the Eastern Meadowlark (*Sturnella magna magna*). These were obtained largely in Connecticut, but also in several other eastern states. In the years 1950 and 1951 opportunity to travel elsewhere was presented, and I collected 31 records of the songs of the Southern Meadowlark (*S. m. argutula*) in Florida, Georgia, South Carolina, and southern Illinois. I also recorded songs of Western Meadowlarks (*Sturnella neglecta*) on 88 occasions in Oklahoma, Iowa, the Dakotas and Minnesota.

Detailed study of these records leads me to the interesting conclusion that the songs of the southern bird are intermediate between those of the eastern and western birds. This is not particularly apparent in merely listening to the songs, for the qualities of the eastern and southern birds are similar, neither having the gloriously musical voice that the western bird possesses. But details show that the southern bird is closer to the western than is the eastern.

In the matter of time the songs of eastern birds vary from 0.4 to 3.2 seconds in length, averaging 1.55 seconds. The southern bird varies from 0.8 to 1.4 seconds, averaging 1.0 seconds. The western bird varies from 0.6 to 1.8 seconds, averaging 1.2.

The number of notes in songs, counting a slur as two notes, varies from 2 to 9 in the eastern bird, averaging 4.7. The southern bird varies from 3 to 7, averaging 4.6 and the western bird varies from 3 to 11, averaging 6.34.

The pitch of the eastern bird ranges from C₆ to D_#⁷, a range of 7½ tones. The southern bird is distinctly lower, ranging from A₅ to C_#⁷, a range of 7 tones. The western bird ranges still lower, from D_#⁵ to B₆, as shown in the accompanying figure. It is significant that in only 31 records of the southern bird I should find notes 1½ tones lower than the lowest of more than 1,000 records of the eastern bird.



Individual songs of the eastern bird range from 1 to 6 tones in pitch, averaging 2.85 tones. Those of the southern bird range $1\frac{1}{2}$ to 5 tones, averaging 3.17, while those of the western bird range from 2 to 8 tones, averaging 4.3.

In the less exact matter of phonetics, the eastern bird is often entirely clear of phonetic sounds, so far as my ear can determine. Some notes, however, begin with a sound like the letters *ts*, and some link notes together with a sound like the letter *l*. In all of my records only 34 (3.2 per cent) contain the *ts* sound. The *l* sound was found in 112 (10.6 per cent). In the southern bird both *ts* and *l* sounds occur in every song I have recorded. In the western bird *l* sounds occur in every song, and explosive consonants, more like *t* or *k* occur in most of them.

In considering single notes, the eastern bird often sings prolonged notes and slurs, while the southern and western birds sing short, explosive, somewhat staccato notes. However, in the western bird, these are frequently linked together with *l*-like sounds between them.

From these data I would conclude that the Southern Meadowlark is like the Eastern in quality and number of notes, but is intermediate between Eastern and Western in time, pitch and partially in phonetics. It is like the Western Meadowlark in the shortness of notes and the abundant *l*-like consonant sounds. On the basis of certain aspects of the songs, it seems to me that the southern bird is farther removed from the Eastern Meadowlark than its current taxonomic position indicates.

The opportunity to travel and to obtain the data on which this paper is based was afforded by a grant from the American Philosophical Society.—ARETAS A. SAUNDERS, P.O. Box 141, Canaan, Connecticut, March 23, 1955.

Cattle Egret in Virgin Islands.—On the morning of February 21, 1955, Mr. Anton Teytaud and I visited a pasture at Sprat Hall, St. Croix, Virgin Islands, from which Cattle Egrets had been reported. Immediately upon our arrival at this pasture we sighted 26 white herons. These birds were feeding among a small herd of cattle. An adult Little Blue Heron flew up as we stopped our vehicle. This led us to suspect that these reputed "African Tick Herons" were nothing but immature Little Blue Herons (*Florida caerulea*).

A quick-stalking, heavy-jowled heron near us began weaving its neck in a peculiar snake-like fashion. It suddenly grabbed an insect flushed by a browsing cow. This was no Little Blue Heron. A careful look through binoculars convinced us that these birds were actually Buff-Backed Herons, *Ardeola (Bubulcus) ibis*. Here before us was not one lone, wind-tossed straggler cast peradventure on this tiny sea-girt island, but a whole flock of 26 rare birds contentedly feeding as at home as could be. None of these egrets was in breeding plumage and only a few exhibited touches of buff on crown, throat and mantle.