

marl, with some chalk pebbles in marly clay where the terrace overlies the Upper Austin.

Several faults in the northwest part of the quadrangle are interpreted as belonging to the Balcones zone.

There are three dominant joint-trends in the area: N 30° to 55° W, N 55° to 85° E, and N 10° E.

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Biological Notes

FIRST RECORDS OF FOUR EAST-EUROPEAN LINNAEAN PLANTS AT DALLAS, TEXAS.—The following species of plants were recently found by me, growing along a creek that runs through Kidd Springs Park, in the Oak Cliff section of Dallas: *Myagrimum perfoliatum* L. (26Apr1958), *Scandix Pecten-Veneris* L. (16Apr58), *Bupleurum rotundifolium* L. (24Apr58), and *Asperula arvensis* L. (24Apr58). All of the species are native to Europe and the Near East. The first 3 species are "new" to Dallas County; the last species is new to the State of Texas. The soil in which the plants were collected contained limestone and calcareous clay. Collections are deposited in the Southern Methodist University Herbarium.

Myagrimum perfoliatum L. has been reported previously from black clay in fields and along roads in Denton County (L. H. Shinnars, *Spring Flora of the Dallas-Fort Worth Area, Texas*, 1958, 163). My plants were occasional, becoming rare in the latter part of May. *Scandix Pecten-Veneris* L. has previously been reported as adventive near Houston (L. Constance, *Flora of Texas*, 3, 293, 1951). *Bupleurum rotundifolium* L. has been widely introduced in the eastern and central United States, and sporadically introduced in southern Texas (Constance, *op. cit.*, 1951, 283). It is now recorded from Dallas County. *Asperula arvensis* L. (*vide* Gustav Hegi, *Illustrierte Flora von Mitteleuropa*, VI¹, 199, 1913) is a native of middle and southern Europe, north Africa, and western Asia, "extremely widespread and often erratic in loamy and lime-containing fields..." It will be seen above, that the species with us in Dallas County was collected from limy-clay soil. The *New Britton & Brown Illustrated Flora*, 3, 282, 1952 reports this species

as being adventive only in the southern New York area; so it is obvious that this is a new record for the Southwest.—*Ernest Couch*

AMMANNIA TERES RAF. (LYTHRACEAE) IN COASTAL TEXAS.—Previously unreported west of the Mississippi River, *Ammannia teres* Raf. occurs locally in semi-marshy situations on Padre Island off the Texas coast. My collections from Nueces Co. (No. 1191, April 25, 1956) and from Kleberg Co. (No. 1552, Oct. 7, 1957) are deposited in the Herbarium at S.M.U. (Both *A. auriculata* Willd. and *A. coccinea* Rottb. occur in muddy soils along ditches on the mainland.) For making determinations and pointing out that this species had not been reported from Texas, I am indebted to Dr. Lloyd Shinners.—*Fred B. Jones, 521 Vaky Street, Corpus Christi.*

GOLDEN-CHEEKED WARBLERS IN DALLAS COUNTY, TEXAS.—The first recorded observation in Dallas County of the Golden-cheeked Warbler, *Dendroica chrysoparia*, was made April 5, 1958, at a locality in the southwestern part of the county. This was on a juniper-clad ridge, about 300 yards west of Straus Road and 3 miles north of Cedar Hill. Mrs. Hazel Nichols and Edward C. Fritz observed a pair close together shortly before noon.

Since then, the species has been observed there every week by several persons from April 5 to May 31, 1958, the present date.

In all my observations, the male was singing from the top of one of several Mexican cedar trees (*Juniperus mexicana*) within a hundred yards of where I first saw it (except on April 19, May 17, May 24 and May 31 when probably different individuals were seen and heard at different points within a half-mile radius). At the first locality, the male habitually swings in wide, clockwise circuits from ridge-top down a slope, that take about thirty minutes per circuit.

Simmons' *Birds of the Austin Region* states that the Golden-cheeked Warbler is confined, in its northern season, to the Edwards Plateau in Central Texas. Stillwell's *Check List of Birds of Dallas County* (3d ed., 1939) lists the Golden-cheeked Warbler as follows: "Not recorded; possible summer visitant." In A. C. Bent's *Life Histories of North American Wood Warblers* he states (p. 316) that golden-cheeks have been recorded at Waco, Hunt and Commerce, with no indication of breeding. Hunt is in the Edwards Plateau (which, prior to the Dallas discovery herein reported, was considered by most Texas ornithologists as the only breeding area and the northernmost extension of the range of this species). Waco is only half-way from the Edwards Plateau to Dallas, and Commerce is 60 miles northeast of Dallas. Commerce thus would be the furthest extension of the Golden-cheeked Warbler range, but it has no typical Golden-cheeked habitat.

Our Dallas County nesting site is more similar to the Edwards Plateau habitat than any other area around Dallas. The juniper-covered ridge forms a part of the well-known White Rock cuesta or escarpment of Austin chalk and Eagle Ford shale which overlooks the valley of Mountain Creek. Beside Mexican cedar, Texas red oak, shin oak, small-flowered dogwood, Spanish buckeye, and other plants of the Edwards Plateau abound. (Incidentally, this is also the only part of Dallas County where Black-capped Vireos breed.)

While efforts to locate active nests have failed, we are inclined to believe that there are at least three nesting pairs.

Observations of the birds after the first identification include the following: April 5 (later, Geth Osborn); April 12 (Fritz); April 19 (Fritz and Dr. W. B. Stallcup); April 20 (Fritz); May 3 (Fritz, Carroll Kiblinger and Edwin Stearns); May 10 (Fritz, Dr. Eula Whitehouse, and Doris McGuire); May 17 (Fritz and M. M. Straus, owner of the property); May 24 (Fritz, Hazel Nichols, Doris McGuire, Carroll Kiblinger, and Geth Osborn); May 31 (Fritz). Weekly observations will be made as long as the bird remains in the area.—*Edward C. Fritz, 4144 Cochran Chapel Road, Dallas 9, Texas.*

THE RED FOX, *VULPES FULVA*, IN DALLAS COUNTY, TEXAS.—The presence of the red fox, *Vulpes fulva fulva* (Desmarest) (subspecies on basis of range), in Dallas County, has not been reported previously in the literature; although its suggested range (Hall & Kelson, *Mammals of North America*, 1959) includes this area and extends its range south in Texas to the Beaumont area and southwest to near the Big Bend area.

On April 18, 1959, on the Bragg Farm, five miles northeast of Cedar Hill in