

# A Key to the Snakes of Dallas County, Texas

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This Key has been prepared as a means of identifying the twenty-nine species and subspecies of snakes definitely recorded from Dallas County, Texas. A previous publication (Curtis, 1949)<sup>2</sup> contains the present-known county distribution, bionomics, and other information of forms here listed.

The key is arranged in dichotomous form. For simplicity, color and pattern characters have been used wherever feasible, but occasionally certain scale characters have necessarily been included. The user is referred to the illustrations when confronted with a choice based on scale characters. Particular care should be taken in counting scale rows. The procedure is to begin at the middle of the body length, starting at the ventral plates and counting diagonally around the body to the ventral plates on the opposite side (as indicated in Fig. 1).

In using the key, one must begin at No. 1, where the alternatives *a* and *b* are given. Taking whichever one fits the snake, proceed to that number indicated at the right-hand margin; and follow in similar fashion the key until the snake has been "keyed" to its correct name. A full description is given at this point so that a positive identification is confirmed.

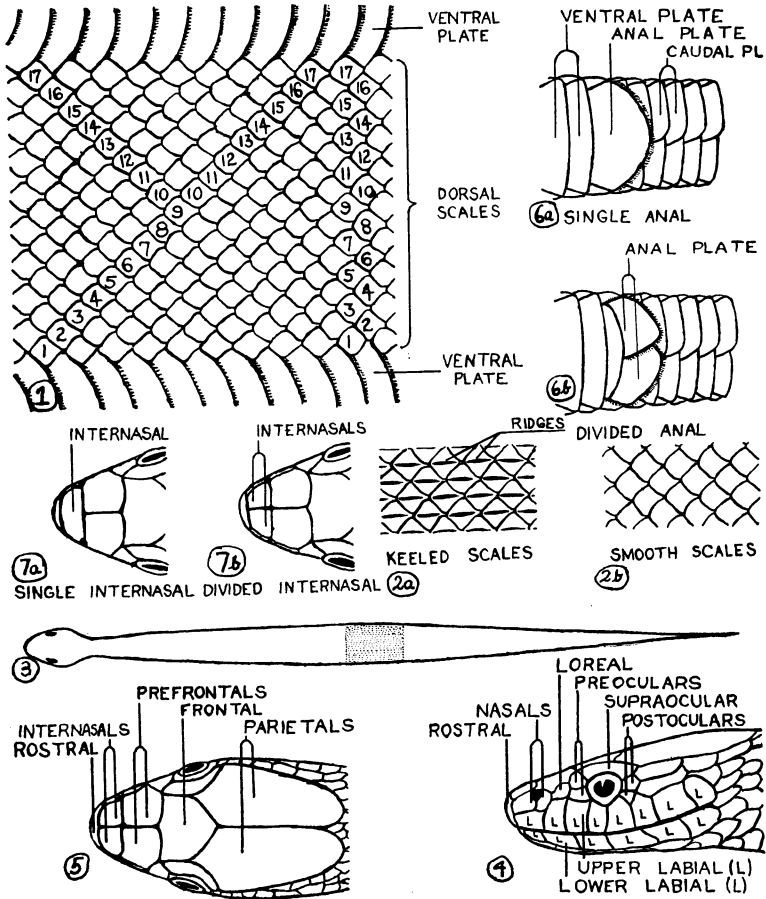
Occasionally an atypical specimen is found that cannot be identified correctly with the key. Also, forms new to the faunal list of the county may be found that are not included in the key. In such cases the specimen should be examined by an authority for identification. Methods of preserving and shipping snakes may be found in Schmidt & Davis *Field Book of Snakes of the United States and Canada*, 1941.

Snakes may be distinguished externally from other reptiles by a number of characteristics: long, slender body covered with scales; and an absence of movable eyelids, ear

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<sup>2</sup>Subsequently to the appearance of my paper, certain nomenclatorial changes have been made (Copeia, 1948), which have been followed in this Key.

openings, and limbs. The glass snake [*Ophisaurus ventralis* (Linnaeus)], a limbless lizard found in Dallas County, may be mistaken for a snake, but is readily differentiated on the basis of the characters listed above.



KEY

- 1 a. Ventral scales same size as dorsal; eyes concealed beneath scales; terminal scale on tail sharply pointed; color tan or silverish. . . Texas Blind Snake—*Leptotyphlops dulcis* (Baird & Girard)
- b. Ventral scales larger than dorsal and elongated transversely . . . . . 2
- 2 a. Deep pit (loreal pit) between nostril and eye; elliptical pupil in eye . . . . . 3
- b. No deep pit between nostril and eye; pupil round . . . . . 7
- 3 a. Rattle or button present at end of tail . . . . . 5
- b. No rattle or button present at end of tail . . . . . 4
- 4 a. Scale rows at mid-body 23; eye separated from upper labials by

- scales (suboculars); no post-parietals; loreal scale present; pattern of hour-glass-shaped crossbands strongly constricted mid-dorsally . . . Intergrade Copperhead (Northern with Broad-banded)—*Agkistrodon contortrix mokesen* (Daudin) x *laticinctus* Gloyd & Conant
- b. Scale rows at mid-body 25; eye in contact with upper labials; a pair of post-parietals present; loreal scale absent; pattern of broad cross-bands, slightly constricted mid-dorsally (adults are sometimes black or brown with only traces of pattern) . . . Western Cottonmouth Water Moccasin—*Agkistrodon piscivorus leucostoma* (Troost)
- 5 a. Enlarged plates present on top of head; small size (24 inch maximum); series of oval black blotches dorsally with similar but smaller markings along the side on a ground color of light gray . . . Western Pygmy Rattlesnake—*Sistrurus miliarius streckeri* Gloyd
- b. Small scales present on top of head, instead of enlarged plates
- 6 a. Dorsal pattern of diamond-shaped markings; tail banded with black and white . . . Texas Diamond-Back Rattlesnake—*Crotalus atrox* Baird & Girard
- b. Dorsal pattern of chevron-shaped crossbars; tail all black; often a reddish mid-dorsal streak down anterior part of body; . . . Cane-brake Rattlesnake—*Crotalus horridus atricaudatus* Latreille
- 7 a. A single internasal shield (*see* Fig. 7a); no preocular; loreal in contact with eye; uniform brown or gray dorsally, often tinged with red; light gray beneath; 17 scale-rows at mid-body . . . Southern Ground Snake—*Haldea striatula* (Linnaeus)
- b. Two internasal shields (*see* Fig. 7b) . . . 8
- 8 a. Dorsal scales keeled (rough) (*see* Fig. 2a) . . . 9
- b. Dorsal scales smooth (*see* Fig. 2b) . . . 22
- 9 a. Anal plate divided (*see* Fig. 6) . . . 10
- b. Anal plate entire (*see* Fig. 6a) . . . 19
- 10 a. Rostral (snout) turned up; pattern of light cross-bars on body; (adults usually are black or brown with only traces of pattern) . . . Common Hog-Nosed Snake—*Heterodon platyrhinos platyrhinos* (Latreille)
- b. Rostral not turned up . . . 11
- 11 a. Scale rows at mid-body 17 (*see* Fig. 1) . . . 12
- b. Scale rows at mid-body more than 17 . . . 14
- 12 a. Color dorsally a uniform light green, whitish yellow ventrally; extremely slender. . . Keeled Green Snake—*Ophedryx aestivus* (Linnaeus)
- b. Color dorsally not light green . . . 13
- 13 a. Uniform brown or gray dorsally, often tinged with red; light gray beneath; loreal plate in contact with eye; no preocular. . . Southern Ground Snake—*Haldea striatula* (Linnaeus)
- b. Dorsal color brown with faint light stripe down middle of back bordered by black spots; whitish ventrally; loreal plate absent. . . Texas DeKay's Snake—*Storeria dekayi texana* Trapido
- 14 a. Scales strongly keeled; 3 postoculars (or, if 2, lateral stripes present) . . . 15
- b. Scales weakly keeled; 2 postoculars (no lateral stripes present) . . . 18
- 15 a. Wide light-colored lateral stripe present (2-3 scales in width); a single median row of dark spots on belly. . . Graham's Water Snake—*Natrix grahamii* (Baird & Girard)
- b. No stripes on body . . . 16
- 16 a. Series of squarish blotches on back with alternating row of

- similar but smaller ones on the side; belly yellowish or whitish with clouding along the anterior edges of ventral scutes. . . Yellow-Bellied Water Snake—*Natrix erythrogaster transversa* (Hallowell)
- b. Pattern not as above; belly spotted..... 17
- 17 a. Pattern of alternating dorsal and lateral spots with oblique connecting bars; belly yellowish, marked with semilunar dark spots, especially towards tail. . . Diamond-Backed Water Snake—*Natrix rhombifera rhombifera* (Hallowell)
- b. Pattern of wide transverse bands; belly yellowish with large spots; usually brightly colored with red and yellow. . . Blanchard's Water Snake—*Natrix sipedon confluens* Blanchard
- 18 a. Neck bands traversing parietals and uniting on frontal; fewer than 222 ventrals; scales weakly keeled mid-dorsally or not at all; pattern of squarish blotches with alternating row of similar but smaller ones on the side; belly white with distinct black squares. . . Emory's Rat Snake—*Elaphe laeta laeta* (Baird & Girard)
- b. No neck bands traversing parietals and uniting on frontal; head mostly black in adults; more than 222 ventrals; scales noticeably keeled mid-dorsally; pattern of rectangular blotches mid-dorsally with alternating row of similar but smaller ones on the side; belly whitish, sometimes with dark clouding. . . Gray Rat Snake—*Elaphe obsoleta confinis* (Baird & Girard)
- 19 a. Pattern of blotches along back; very pointed nose; tail banded dorsally with yellow and black; scale rows 29 or more at mid-body. . . . . Common Bull Snake—*Pituophis catenifer sayi* (Schlegel)
- b. Pattern of longitudinal stripes..... 20
- 20 a. Double row of spots on belly; light colored stripe on midline of back and similar but fainter lateral stripe on the 2nd and 3rd scale rows .....  
. . . Lined Snake—*Tropidoclonion lineatum* (Hallowell)
- b. Belly without spots..... 21
- 21 a. Upper labials with dark markings along sutures; light lateral stripes on 2nd, 3rd, or (rarely) 4th scale rows; red or yellow dorsal stripe. . . Common Garter Snake—*Thamnophis ordinatus ordinatus* (Linnaeus)
- b. Upper labials without dark markings along sutures; light lateral stripes on 3rd and 4th scale rows; distinct light spot on top of head anterior to beginning of dorsal stripe . . . Western Ribbon Snake—*Thamnophis sirtalis proximus* (Say)
- 22 a. Dorsal pattern of continuous blotches, saddles, or narrow crossbands ..... 23
- b. Dorsal pattern not of continuous blotches, saddles, or narrow crossbands ..... 28
- 23 a. Scale rows at mid-body 18 or less; with or without red, yellow, and/or black crossbands, but not completely encircling body.. 24
- b. Scale rows at mid-body more than 18; with or without red, yellow and black crossbands, remnants of which completely encircle body ..... 25
- 24 a. Scales in 17 (rarely 18) rows at mid-body; more than 50 dorsal saddles; belly partly speckled, particularly anteriorly. . . Eastern Blue Racer (juvenile)—*Coluber constrictor flaviventris* Say
- b. Scales in 15 rows at mid-body; less than 50 dorsal saddles; belly sometimes partly speckled, not particularly in one area, however; loreal scale present; color and pattern, if present, highly variable . . . Great Plains Ground Snake—*Sonora episcopa* (Kennicott)
- 25 a. Pattern of dorsal blotches with alternating row on sides..... 26
- b. Pattern not of dorsal blotches with alternating row on sides.. 27
- 26 a. Blotches on back squarish; belly whitish with distinct small

- dark squares; occasionally scales along mid-dorsal line faintly keeled. . . Emory's Rat Snake—*Elaphe laeta laeta* (Baird & Girard)
- b. Blotches on back rectangular, concave before and behind; belly yellowish with indistinct dark spots. . . Prairie King Snake—*Lampropeltis calligaster calligaster* (Harlan)
- 27 a. Red and yellow bands touching each other; red and black bands of about equal width; all three types of bands completely encircling body. . . Texas Coral Snake—*Micrurus fulvius tener* (Baird & Girard)
- b. Red and black bands touching each other; red and black bands of vastly unequal width; some bands not completely encircling body . . . Cope's Milk Snake—*Lampropeltis dobiata amaura* Cope
- 28 a. Dorsal color black with yellow or white specks on most of the scales; belly yellow or white with distinct black spots . . . Intergrade King Snake (Sonoran with Speckled)—*Lampropeltis getulus splendida* Stejneger x *holbrooki* (Baird & Girard)
- b. Not as described above..... 29
- 29 a. A well defined orange or yellow ring encircling the neck; body bluish or black; belly orange or yellow with distinct black spots; underside of tail reddish. . . Prairie Ring-Necked Snake—*Diadophis punctatus arnyi* Kennicott
- b. No well defined ring encircling neck..... 30
- 30 a. Body bluish or greenish; belly yellow; underside of chin white; scales in 17 rows at mid-body; black bar behind eye. . . Eastern Blue Racer (adult)—*Coluber constrictor flaviventris* Say
- b. Body not bluish or greenish..... 31
- 31 a. Scale rows more than 16 at mid-body; dorsal color black or brown, sometimes becoming lighter posteriorly; often a few faint wide transverse bands on anterior half of body and/or a few narrow transverse bands on neck; sometimes a double row of spots under the neck . . . Intergrade Coachwhip (Eastern with Western)—*Masticophis flagellum flagellum* (Shaw) x *testaceus* (Say)
- b. Scale rows 16 or less at mid-body..... 32
- 32 a. Loreal scale absent; belly often pinkish or reddish; top of head darker than body; body color uniform light-tan. . . Slender Tantilla—*Tantilla gracilis* Baird & Girard
- b. Loreal scale present; belly usually not pinkish or reddish; color and pattern, if present, highly variable; sometimes all black, brown, or tan, with or without median dorsal stripe, black crown on head, black collar, or saddles. . . Great Plains Ground Snake—*Sonora episcopa* (Kennicott)