

Catalogue of American Amphibians and Reptiles.

Webb, R.G. 2008. *Sceloporus poinsettii*.

***Sceloporus poinsettii* Baird and Girard
Crevice Spiny Lizard**

Sceloporus poinsettii Baird and Girard 1852:126.

Type-locality, "Rio San Pedro of the Rio Grande del Norte, and the province of Sonora," restricted to either the southern part of the Big Burro Mountains or the vicinity of Santa Rita, Grant County, New Mexico by Webb (1988). Lectotype, National Museum of Natural History (USNM) 2952 (subsequently recataloged as USNM 292580), adult male, collected by John H. Clark in company with Col. James D. Graham during his tenure with the U.S.-Mexican Boundary Commission in late August 1851 (examined by author). See **Remarks**.

Sceloporus poinsettii: Duméril 1858:547. *Lapsus*.

Tropidolepis poinsettii: Dugès 1869:143. Invalid emendation (see **Remarks**).

Sceloporus torquatus Var. C.: Bocourt 1874:173.

Sceloporus poinsettii: Yarrow "1882"[1883]:58. Invalid emendation.

S.[celoporus] t.[orquatus] poinsettii: Cope 1885:402.

Sceloporus poinsettiii: Herrick, Terry, and Herrick 1899:123. *Lapsus*.

Sceloporus torquatus poinsettii: Brown 1903:546.

Sceloporus poissettii: Král 1969:187. *Lapsus*.

S.[celoporus] poissettii: Méndez-De la Cruz and Gutiérrez-Mayén 1991:2. *Lapsus*.

Sceloporus poinsettii: Cloud, Mallouf, Mercado-Allinger, Hoyt, Kenmotsu, Sanchez, and Madrid 1994:119. *Lapsus*.

Sceloporus poinsettii aureolus: Auth, Smith, Brown, and Lintz 2000:72. **See Remarks**.

Sceloporus poinsettii mucronatus: Auth, Smith, Brown, and Lintz 2000:72. **See Remarks**.

Sceloporus poinsettii omiltemanus: Auth, Smith, Brown, and Lintz 2000:72. **See Remarks**.

Sceloporus poinsettia: Jones 2005:331. *Lapsus*.

• **CONTENT**. Five subspecies are currently recognized: *poinsettii*, *amydrus*, *axtelli*, *macrolepis*, and *polylepis*.

• **DEFINITION**. The head is either mostly unicolor (pale or dark) without definitive markings, has a contrasting pattern of small white spots/markings, or a distinctive black cruciform blotch posteriorly. The solid black uninterrupted collar (usually 3–5 scales wide) has whitish anterior and posterior borders (both about 2 scales wide), both of which may be narrowly interrupted medially. The collar may be lengthened and curved posteriorly. A pale bluish scale or scales (small spot) usually occurs just above the shoulder within the black collar. A whitish intertympanic band (continuous or interrupted) of variable distinctness may be almost absent. The pattern on the back usually consists of 2–4 crossbands (distinctness variable), but may be of irregularly arranged dark marks



Figure 1. Adult male *Sceloporus poinsettii poinsettii* (UTEP 8714) from the Magdalena Mountains, Socorro County, New Mexico (photo by author).



Figure 2. Adult female *Sceloporus poinsettii axtelli* (UTEP 11510) from Alamo Mountain (Cornudas Mountains), Otero County, New Mexico (photo by author).



Figure 3. *Sceloporus poinsettii macrolepis* from 6 miles southeast Llano Grande, Durango, Mexico (photo by author).

(no crossbands) or be confined to dark vertebral blotches (separated by whitish spots), or the back is patternless. Dorsal body scales may have black edges (crossbands and interspaces) that are aligned to form longitudinal black lines. The tail usually has contrasting black (widest) and white bands that distally form rings (pigment faded ventrally). Juveniles have a dark bluish barred and spotted pattern on the chin and throat, usually with a midventral pale streak. Adults of both sexes have blue throats and ventrolateral, dark-bordered, blue belly patches with dark pigment across the throat, on the chest, and midventrally, but colors are brightest and most extensive in large

males (rarely, ventral coloration is almost absent in both sexes).

The supraoculars are divided, but scales of the medial row may be noticeably enlarged. The frontal is usually transversely divided; the anterior half is either entire or longitudinally divided. The posterior frontal-frontoparietal area is often fragmented into irregularly arranged small scales. Dorsal scales are keeled (but the vertebral rows are mostly smooth in large adults), and vary from 25–43. There are 31–47 scales around midbody, 7–16 (one leg) femoral pores with extremes of 7–7 and 14–16, and 6–17 scales between the pore series. Males have a pair of enlarged postanal scales and attain a larger maximum size (SVL 137 mm) than females (128 mm) (Ballinger (1973).

• **DIAGNOSIS.** Large, undivided supraoculars distinguish *S. jarrovi* populations in western Mexico (including *lineolateralis*) and *S. torquatus* from *S. poinsettii* (divided supraoculars; large medial row of scales often enlarged suggesting undivided supraoculars; see Fig. 1 in Webb 2006). The smaller *S. ornatus* (maximum SVL less than 100 mm) also has divided supraoculars, but also differs from *S. poinsettii* in having tiny dorsal scales that usually number more than 50 (44–67, Axtell 1971; highest number in *S. poinsettii* is 44). *Sceloporus cyanostictus* and *S. oregon* also possess divided supraoculars, and all 5 species differ from *S. poinsettii* in lacking the pale intertympanic band and the contrasting black-and-white tail bands (tails usually have discernable but indistinct bands; tail banding may be moderately distinct in some specimens of *S. ornatus*).

Individuals of *Sceloporus cyanogenys* are frequently confused with *S. poinsettii*. In southeastern Coahuila and adjacent Nuevo León, the rear of the head and the neck in *S. cyanogenys*, anterior to the white-bordered black collar, usually has scattered, distinct, often rather large white spots, not close together or rarely linearly arranged (scattered, large white spots absent, except those arranged close together in a single row as intertympanic band in *S. poinsettii*). The dark banding of the tail is usually indistinct in *S. cyanogenys* (occasionally contrasting); however, distally the dark tail bands do not occur on the unmarked ventral surface in *S. cyanogenys* whereas faded, dark tail bands are present ventrally in *S. poinsettii*. The pattern on the back and the number of dorsal scales may be somewhat similar in the two species. Although the arrangement of supraoculars in some individuals may resemble that in *S. poinsettii*, the supraoculars in *S. cyanogenys* usually are either undivided (4 enlarged) or only 1–2 of the median supraoculars are divided. In eastern Coahuila, the general area of sympatry between the two species, the dorsal head scales in the posterior frontal-frontoparietal area are symmetrically arranged in *S. cyanogenys*, but are often irregularly subdivided in *S. poinsettii*, and the preocular usually is divided in *S. cyanogenys* but undivided in *S. poinsettii*. Hunsaker (1962) noted species discrimination in intermixed captives of *S. cyanogenys* and *S. poinsettii* with the sexes of each



Figure 4. Adult male *Sceloporus poinsettii polylepis* (UTEP 3730) from Huertecillas, San Luis Potosí, Mexico (photo by author).



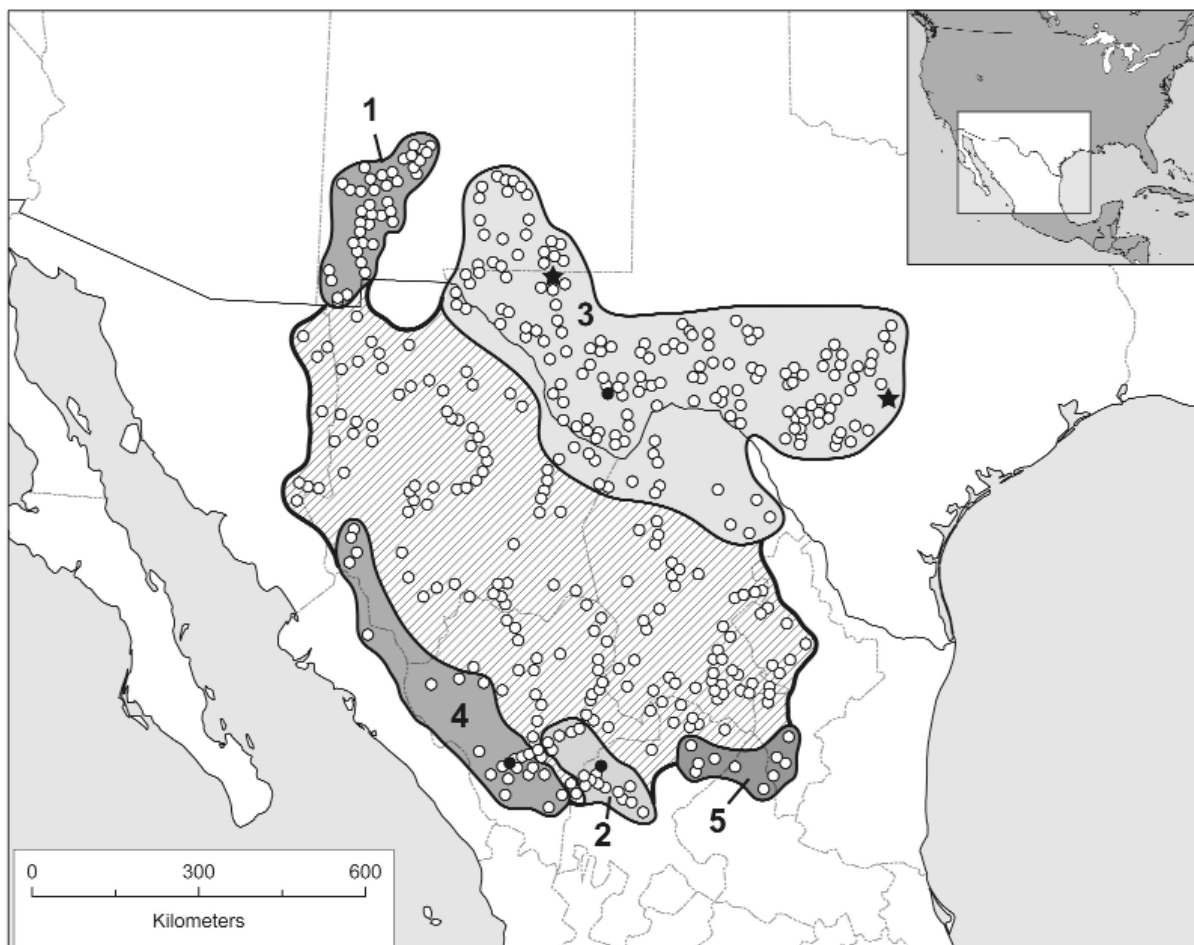
Figure 5. Adult female, *Sceloporus poinsettii* morphologically intermediate variant; near topotypic *S. p. polylepis* [see text] (UTEP 9222) from 20 miles northwest (Hwy 49) Escalón, Chihuahua (photo by author).



Figure 6. Adult female, *Sceloporus poinsettii* morphologically intermediate variant (UTEP 4438) from 4 kilometers north San Juan de los Charcos, Zacatecas (photo by author).

species pairing together.

• **DESCRIPTIONS.** Smith (1936 [1938]) noted that prior descriptions in Boulenger (1885, 1897) and Cope (1900) included specimens of more than one species. Descriptions of adults in field guides include Ballinger and Lynch (1983), Bartlett and Bartlett (1999), Behler and King (1979), Cochran and Goin (1970), Conant (1958, 1975), Conant and Collins (1991, 1998), Garrett and Barker (1987), MacMahon (1985), Smith and Brodie (1982), and Stebbins (1966, 1985, 2003). Other descriptions are in Degenhardt et al. (1996), Ditmars (1936), Smith (1946),



MAP. Distribution of *Sceloporus poinsettii*. Solid circles indicate type-localities (imprecise for *S. p. poinsettii*; see **Remarks** under *S. p. polylepis*); open circles other localities. Some symbols share more than one locality. Stars indicate fossil localities. Guide to subspecies (numbered and demarcated by solid lines; other symbols represent intergrades): 1. *S. p. poinsettii* *poinsettii*; 2. *S. p. amydrus*; 3. *S. p. axtelli*; 4. *S. p. macro-lepis*; 5. *S. p. polylepis*.

Stebbins (1954), Vermersch (1992), and Williamson et al. (1994). Additional descriptive data of varying detail are in Domínguez et al. ("1974"[1977]), Gloyd and Smith (1942), Günther (1890; see Smith, 1987:xxx), Herrick et al. (1899), Köhler and Heimes (2002), Lemos-Espinal et al. (1997, 2000, 2001, 2002, 2004a, 2004b), McDiarmid et al. (1976), Milstead (1953), Olson (1998), Smith (1936[1938], 1939), Smith and Chrapliwy (1958), Smith et al. (2005a, 2005b), Tanner (1987), Taylor (1931), Treviño-Saldaña (1988), Van Denburgh (1922), and Werning (2002). Neonates are described in Axtell (1950), Greene (1970), Pflugmacher (1988), and Ramsey and Donlon (1949). Fitch (1978, 1981) described sexual size differences. The most recent description, including all 5 subspecies, is in Webb (2006). Descriptive features other than external morphology are noted below (**Pertinent Literature**).

• **ILLUSTRATIONS.** **Line drawings** are in Baird (1859, lectotype), Bocourt (1874:Pl. XVIII, Fig. 9c [not 9a], supraoculars), Herrick et al. (1899:Pl. XV [explanation of Figs. p. 148], Figs. 6 [entire animal], 7 [auricular scales], 8 [top of head]), Cope (1900: head [dorsal, ventral, lateral], hindlimb-anal region, and body

scalation), Smith ("1936"[1938]; dorsal [same in Smith 1946] and lateral [same in Smith 1939] head scalation), Stebbins (1954), Ballinger and Lynch (1983), Olson (1998; dentary teeth) and Webb (2006; variation in dorsal head scalation). Wiens and Reeder (1997) also provide a schematic illustration of posterior lingual dentary teeth. **Black-and-white photographs or drawings** are in Aseff-Martinez (1967), Conant (1958, 1975), Ditmars (1936), Greene (1970; neonate), Grenot (1983), Grenot et al. (1978), Pope (1960), Smith (1936 [1938], 1946), Szarski (1960), Webb (1988; lectotype and paralectotypes), and Webb (2006; specimens representing all 5 subspecies and intergrades). **Color photographs or drawings** are in Bartlett and Bartlett (1999), Behler and King (1979), Conant and Collins (1991, 1998), Degenhardt et al. (1996), Garrett and Barker (1987), Jes (1987), Köhler and Heimes (2002), Lemos Espinal and Smith (2007a,b), Lemos-Espinal et al. (2004c), MacMahon (1985), Smith and Brodie (1982), Stebbins (1966, 1985, 2003), Vermersch (1992), Werning (2002), and Williamson et al. (1994). **Photomicrographs of karyotypes** are in Cole et al. (1967) and Hall (1973). **Drawings** of the urogenital system are in Mulaik (1946), of display-action (head-bob) patterns

in Carpenter (1978), Hunsaker (1962), and Martins (1993), and of clavicle-scapulocoracoid, pectoral girdle, sternum, and dorsal aspect of the skull in Etheridge (1964).

• **DISTRIBUTION.** *Sceloporus poinsettii* is associated with rocky, bouldered sites of low, dry hills in desert and grassland, or in mountainous terrain in pine-oak forest, and ranges from New Mexico and central and west Texas south into northern Mexico through most of Coahuila, Chihuahua, and Durango, and the eastern highlands of Sonora and Sinaloa, into northern Zacatecas and San Luis Potosí, and western Nuevo León. Elevations range from near 231 m (700 ft.) in Texas to 2804 m (9200 ft.) in Durango, Mexico.

Prior to Smith (1936[1938]), who questioned some old reports of the species in Arizona, the Stejneger and Barbour checklists (1917, 1923, 1933, 1939) noted the species' range as "Texas to Arizona". Van Denburgh (1922) exclaimed that "among some 5,000 reptiles collected by us in Arizona are no specimens of this lizard". Webb (2006) regarded *S. poinsettii* to be absent from the Peloncillo Mountains in New Mexico and Arizona.

Smith mapped localities rangewide (1936[1938], 1939), but map symbols for *S. cyanogenys* refer to *S. poinsettii*. Morafka (1977a) commented on the occurrence of this species in the Chihuahuan Desert, and (1977b) provided a range map. Tanner (1975) plotted specific localities in Eddy County, New Mexico, and Degenhardt et al. (1996) mapped all localities in New Mexico. Van Devender and Worthington (1977) noted its absence from the Little Hatchet Mountains in southwestern New Mexico, but speculated that it might possibly occur there. Webb (2006) commented on its non-continuous, east-west distribution across southern New Mexico (range boundaries previewed in Axtell 1977). Map symbols herein reflect localities recorded in Webb (2006), as well as other Texas localities (early records compiled in Brown 1950 and Raun and Gehlbach 1972) mapped in Axtell (1987). Localities in Coahuila (Webb 2006) are supplemented by those recorded in Smith et al. (2005a,b). Published localities are mentioned in Webb (2006).

Webb (2006) commented on a specimen from a disjunct locality in Jalisco (see **Remarks**, *S. p. macrolepis*). King and Krakauer (1966) reported that an animal importer had released about 60 *Sceloporus poinsettii* in the vicinity of Hialeah (Dade County, Florida) between May and September 1964; the species has not since been sighted there.

Sceloporus poinsettii is sympatric with *S. jarrovi* (Ballinger 1978, Drake 1958, Ortega et al. 1982, Smith 1936[1938], Van Devender and Lowe 1977, Webb 1967), *S. cyanogenys* (Smith 1939, Smith and Alvarez 1974), *S. ornatus* (Hunsaker 1962, pers. obs., southern Coahuila), *S. cyanostictus* (Axtell and Axtell 1971, Guttman 1970 [as "*S. (?)*"]), *S. torquatus* (pers. obs., Durango, Zacatecas), and the taxa *oberon* (Smith and Brown 1941) and *lineolateralis* (pers. obs., eastern Durango).

• **FOSSIL RECORD.** *Sceloporus poinsettii* is recorded from Pleistocene sites in Texas by Holman (1968) and Logan and Black (1979). Holman (1995) summarized the Pleistocene regional occurrence of *S. poinsettii* as the Southern Plains region. Mead et al. (1999) noted a Pleistocene maxilla and dentary "similar to" *S. poinsettii* from Nuevo León, México. Hester (1982[1983]) reported the occurrence of burned bones of this species with a Paleo-Indian occupation site (9000 ybp) at Baker Cave, Val Verde County, Texas, suggesting this species was occasionally eaten. Applegarth (1979) reported this species from 3 archeological sites (oldest 2930±60 ybp) west of Carlsbad, Eddy County, New Mexico. Rodgers (1976) utilized Recent *S. poinsettii* for comparison with some subfossil species of *Sceloporus*, and Sullivan (1982) noted tooth crown morphology of some Wyoming fossil material as "nearly identical" to that of large individuals of *S. poinsettii*.

• **PERTINENT LITERATURE.** References by topic include **anatomy and morphology** (Beuchat 1986; Beuchat et al. 1985; Blob 2000; Burstein et al. 1974; Costelli 1973; Etheridge 1964; Fox 1976; Gundy and Wurst 1976; Herrel et al. 2002; Holman 1969b; Hunsaker and Johnson 1959; Larsen and Tanner 1974; Lemire 1985; McDowell and Bogert 1954; Meylan 1982; Moody 1983; Mulaik 1946; Olson et al. 1986, 1987; Presch 1970; Renous-Lécuru 1973; Secoy 1971; Tenney and Tenney 1970; Vleck et al. 1982; Yatkola 1976), **behavior** (Ballinger et al. 1995; Carpenter 1978, 1986; Cooper 1984; Cooper et al. 2000; Ferguson 1977; Hunsaker 1962; Köhler and Heimes 2002; Martins 1993; Olson 1990; Ord and Blumstein 2002; Ord et al. 2002; Punzo 2002; Purdue and Carpenter 1972a,b; Pyburn 1955; Wiens 2000), **bibliographies** (Archie 1992; Axtell 1987; Dixon 1987, 1993, 2000; McCranie and Wilson 1990; Raun and Gehlbach 1972; Smith "1936"[1938]); Smith and Smith 1969, 1976, 1993), **checklists, keys and similar compendia** (Aguilar-Olvera 1971; Anonymous 2007; Beltz 1995; Burt 1936, "1936" [1937]; Chrapliwy and Fugler 1955; Cochran 1961; Cope 1875, 1886; Dugès 1888; e²M 2006; Flores-Villela 1993; Flores-Villela et al. 1991, 1995; Liner 1994, 2007; R. Powell et al. 1998; B.F. Powell et al. 2003, 2006; Schmidt 1953; Scudday 1973; Slevin 1934; Stejneger and Barbour 1917, 1923, 1933, 1939, 1943; Szarski 1960; TAES and TWRI 2002; Treviño Saldaña 1980; Van Denburgh 1924; Wilson and McCranie 1979), **commercial trade** (Fitzgerald et al. 2004; Franke and Telecky 2001; Jester et al. 1990), **ecology** (Angilleta et al. 2004; Aseff-Martinez 1967; Axtell 1959, 1987; Axtell and Axtell 1971; Bailey 1905, 1913; Baker et al. 1980; Ballinger 1973, 1978; Barbault 1975, 1976; Barbault and Grenot 1977; Barbault and Maury 1981; Blair 1950; Brown 1950, 1970; Campbell and Boecklen 2002; Camper and Dixon 1988; Carignan 1988; Castañeda-G. et al. 2005; Chaney and Gordon 1954; Clobert et al. 1998; Cole 1963; Contreras 2004; Contreras-Lozano et al. 2007; Cope 1880; Domínguez et al. 1974 [1977]; Drake 1958; Durtsche

et al. 1997; Estrada-Rodriguez et al. 2004; Gadsden et al. 2006; Gehlbach 1979; Gloyd and Smith 1942; Greene 1988; Grenot 1983; Grenot and Serrano 1982; Harper 1982; Jameson and Flury 1949; Jones 2005; Kimmons 1969; Lazcano et al. 2006; Lemos Espinal 1999; Lowe 1955; Maury and Barbault 1981; McCranie and Wilson 1987; McCrystal 1991; Mecham 1979; Milstead 1953, 1960; Milstead et al. 1950; Minton 1959; Morafka 1977a,b; Mosauer 1932; Olson 1973; Ortega et al. 1982; Ramirez-Bautista et al. 2002; Ridenour 2002; Ruthven 1920; Scheibe 1987; Shlefsky 2003; Smith and Buechner 1947; Smith and Sanders 1952; Stinnett 1975; Strecker 1909; Taylor 1931; Tinkle 1976; Vinegar 1975; Wauer 1971; Webb 1970, 1984; Webb and Baker 1962), **evolution and phylogenetics** (Ashton and Feldman 2003; Benabib et al. 1997; Blob 2000; Carpenter 1978; Cox et al. 2003; de Queiroz and Ashton 2004; Flores-Villela et al. 2000; Guillette et al. 1980; Guttman 1970; Harmon et al. 2003; Lang 1989; Larsen and Tanner 1974, 1975; Martinez-Mendez and Méndez-De la Cruz 2007; Martins 1993, 1994; Méndez-De la Cruz et al. 1998; Metzger and Herrel 2005; Mindell et al. 1989, 1990; Murphy and Lovejoy 1998; Ord et al. 2001; Porter et al. 1994; Reeder 1995; Reeder and Wiens 1996; Sanderson 1990; Sites et al. 1992; Smith 1936 [1938], 1939; Smith 2001; Warheit et al. 1999; Wiens 1993, 1999, 2000; Wiens and Penkrot 2002; Wiens and Reeder 1997; Wiens et al. 1999), **food habits** (Alvarez and Polaco 1983; Ballinger 1978; Ballinger et al. 1977; Barbault et al. 1978, 1985; Cooper 1994, 2003; Cooper et al. 2001, 2005, 2006; Knowlton 1948; Méndez-De la Cruz et al. 1992; Pough 1973; Ramírez-Bautista et al. 2002; Smith and Milstead 1971), **general works** (Degenhardt et al. 1996; Köhler and Heimes 2002; Lemos Espinal and Smith 2007a,b; Webb 1988, 2006; Werning 2002), **herpetoculture** (Anonymous 1990, 1991, 1992, 1993, 1995), **karyology** (Arévalo et al. 1994; Cole et al. 1967; Creer et al. 1997; Hall 1973; Král 1969; Lowe et al. 1966; Pennock 1969; Porter et al. 1994; Schwenk et al. 1982; Sites et al. 1992), **parasites** (Brennan 1945; Colwell 1971; Gambino 1958; Gambino and Heyneman 1960; Goldberg et al. 1993, 1995; Jack 1959; Mathewson in Murphy and Myers 1993; McAllister et al. 1994; Telford 1978, 1988, 1996; Wozniak et al. 1996a-c; Zwart et al. 1970), **physiology** (Bogert 1949; Brattstrom 1965 [both cited in Avery 1982, former cited in Andrews 1998]; Brainerd and Owerowicz 2006; Dawson and Poulson 1962 [cited in Dessauer 1970]; Lewellyn et al. 1997; Masters 1956; Murphy 1999; Newlin and Ballinger 1976; Pough 1979; Snyder and Sheafor 1999; Vial 1984; Wyles and Gorman 1978), **predation** (Armstrong and Murphy 1979; Delibes and Hiraldo 1987; Fisher 1901; Hiraldo et al. 1991; Johnson et al. 2000; Lazcano et al. 2006; Marr 1944; Murray 1939; Poulin et al. 2003; Sherrod 1978; Tennant 1984; Thiollay 1981), **reproduction** (Ballinger 1973, 1978; Charnov et al. 1993; Fitch 1970, 1978, 1985; Gadsden et al. 2005; Pianka 1986; Punzo 1982; Shine and Charnov 1992).

• **NOMENCLATURAL HISTORY.** *Sceloporus poinsettii* has been recognized as either a distinct species or a subspecies of *S. torquatus* (see synonymy in Smith, "1936"[1938]). The subspecific relationship, initially implied by Bocourt 1874 and followed by Cope 1885 and Boulenger 1885, was abandoned after Smith's ("1936"[1938], 1939) detailed studies, and recognition as a full species (Stejneger and Barbour 1943; Schmidt 1953). Smith and Chrapliwy (1958) first recognized subspecies of *S. poinsettii*, *S. p. macrolepis* and *S. p. polylepis*. Olson (1998) proposed that *Sceloporus p. poinsettii* and *S. mucronatus* are conspecific, which prompted Auth et al. (2000) to employ appropriate name-combinations (*S. p. aureolus*, *S. p. mucronatus*, and *S. p. omiltemanus*); subsequent study revealed geographic variation in *S. mucronatus* (Webb et al. 2002; Bell et al. 2003; see also comment about *S. poinsettii* and *S. mucronatus* in Smith et al. 2000:128). Webb (2006) described 2 more subspecies, *S. p. amydrus* and *S. p. axtelli*, recognizing a total of 5 with centrifugal differentiation at the periphery of the range.

• **REMARKS.** The double-*i* suffix of *poinsettii* is the correct original spelling of the species name, with *poinsetti* an incorrect subsequent spelling (ICZN (1999, Art. 33.4), but either spelling (suffix *-i* or *-ii*) is correct if it is originally proposed in the description of a species (see example under Art. 31.1.3).

Bell et al. (2003) updated assignment of species of *Sceloporus* to valid species-groups (*S. poinsettii*, *S. torquatus* group). Use of the earlier-used *S. poinsettii* group (Smith 1939) was explained in Smith ("1936"[1938]) and in the brief historical comment in Bell et al. (2003).

An adult female paralectotype has the same collection data as the lectotype and was catalogued with the same number. Taylor (1931) restricted the type-locality to the "Devil's River", and Smith and Taylor (1950a,b) and Schmidt (1953) restricted the type-locality to the "Rio San Pedro [Val Verde County, Texas]" without comment, which is the locality of the 3 additional paralectotypes (Webb 1988).

The generally recognized common name for this species, Crevice Spiny Lizard (Crother et al. 2000; Collins and Taggart 2002), was first used by Conant et al. (1956).

• **ETYMOLOGY.** The name *poinsettii* honors Joel Roberts Poinsett (Moll 2006), born in Charleston, South Carolina, who became the first Minister of the United States to Mexico (appointed in 1825), Secretary of War (1837-1841), and was a museum advocate. Other names derived as follows: *amydrus* (Gr. ἈΜΥΔΡΟΣ, ἈΜΥΔΡ-, indistinct, dim, obscure) in allusion to the reduced or absent dorsal body pattern of adults; *axtelli*, patronym for Ralph W. Axtell; *macrolepis* (Gr. ΜΑΚΡΟΣ, long [here and often used to mean large] and Gr. ΛΕΠΙΣ, f., scale) in reference to

the large dorsal body scales; and *polylepis* (Gr. POLYS, many and Gr. LEPIΣ, f., scale) in reference to the small dorsal body scales.

**1. *Sceloporus poinsettii poinsettii* Baird and Girard
New Mexico Crevice Spiny Lizard**

Sceloporus poinsettii Baird and Girard 1852:126.
See species synonymy.

S[celoporus]. p[oinsettii]. poinsettii: Smith and Chrapliwy, 1958:268. First use of trinomial.

Sceloporus poinsettii poinsettii: Cochran 1961:141.
Emendation.

• **DEFINITION.** Top of head dark (often near black) and white-speckled; dark body crossbands usually not of solid color, consisting mostly of pale black-edged scales; medium-sized dorsal scales, averaging 31.9 (29–35); anterior frontal longitudinally divided (98%). See **Figure 1**.

**2. *Sceloporus poinsettii amydrus* Webb
Clouded Crevice Spiny Lizard**

Sceloporus poinsettii amydrus Webb, 2006:79. Type-locality, “3.7 road miles (unpaved) south of Gonzalez Ortega [site is ca. 23°54'30"N, 103°27'25"W], Zacatecas.” Holotype, Univ. Texas at El Paso (UTEP) 6190, female, collected by Robert G. Webb, 15 July 1977.

• **DEFINITION.** Head brownish, mostly patternless (indistinct pale postocular blotches and intertympanic band, or absent); narrow black collar (2–3 scales wide); dorsal body pattern absent, or having indistinct crossbands or scattered small dark marks; large dorsal scales averaging 28.9 (26–33); anterior frontal entire (88%), not longitudinally divided; high average number of femoral pores (12.2, 9–16, one leg).

**3. *Sceloporus poinsettii axtelli* Webb
Texas Crevice Spiny Lizard**

Sceloporus poinsettii axtelli Webb, 2006:82. Type-locality, “21 road miles south (St. Hwy 118) Alpine, Brewster County, Texas.” Holotype, Univ. Texas at El Paso (UTEP) 10613, adult male, collected by Jerry D. Johnson, 17 May 1985.

• **DEFINITION.** Dark postocular streaks, and pale postocular blotch-like areas that indent sides of a dark cruciform blotch on rear of head; body patterns sexually dimorphic in adults with females crossbanded (vertebral areas may be darkened) and males with faded crossbands except for prominent black vertebral blotches separated by white spots; medium sized dorsal scales averaging 33.6 (30–37). See **Figure 2**.

**4. *Sceloporus poinsettii macrolepis* Smith and Chrapliwy
Largescale Crevice Spiny Lizard**

Sceloporus poinsettii macrolepis Smith and Chrapliwy, 1958:268. Type-locality, “El Salto, Durango.” Holotype, Univ. Illinois Mus. Nat. Hist. (UIMNH) 35455, adult male, collected by Barden and I.L. Firschein, 1952–1953 (examined by author).

Sceloporus poinsettii macrolepis: Cochran 1961:141. Emendation.

S[celoporus]. p[oinsettii]. microlepis: Dominguez, Alvarez, and Huerta, “1974”[1977]:134. *Lapsus*.

Sceloporus p[oinsettii]. robisoni Tanner 1987:398. Type-locality, “Cuiteco, Chihuahua.” Holotype, Monte L. Bean Life Sci. Mus., Brigham Young Univ. (BYU) 14287, adult male, collected by Wilmer W. Tanner and W. Gerald Robison, Jr., 19 July 1958 (examined by author).

• **DEFINITION.** Head uniformly dark (often black) lacking prominent pale postocular blotches and intertympanic band in adults; black collar usually lengthened posteriorly; usually 2–3 broad, unicolor body crossbands; large dorsal body scales averaging 28.6 (25–31); anterior frontal entire (93%), not longitudinally divided. See **Figure 3**.

• **REMARKS.** Paratypes are listed in Cochran (1961), Duellman and Berg (1962), Smith et al. (1964), Tanner (1970), and Marx (1976), some of which have been reassigned to either *S. p. amydrus* or morphological intermediate variants (Webb 2006). Webb (2006) mentioned an adult male from an isolated locality in the Sierra Manantlán, Jalisco, some 395 air km to the south of the closest locality in the Sierra Madre Occidental (not depicted here on **Map**); descriptive features are most like those of *S. p. macrolepis*.

**5. *Sceloporus poinsettii polylepis* Smith and Chrapliwy
Smallscale Crevice Spiny Lizard**

Sceloporus poinsettii polylepis Smith and Chrapliwy 1958:269. Type-locality, “18 miles N Escalón, Chihuahua [Mexico].” Holotype, Univ. Illinois Mus. Nat. Hist. (UIMNH) 21464, adult male, collected by David H. Dunkle and Hobart M. Smith, 25 June 1934 (examined by author). See **Remarks**.

Sceloporus poinsettii polylepis Cochran, 1961:141. Emendation (see **Remarks** under species above).

• **DEFINITION.** Rear of head black (no cruciform blotch) with short white postocular bars and other small whitish marks; body patterns sexually dimorphic in adults, with irregular pattern of pale and dark marks in females and black vertebral blotches (separated by white spots) in males; small dorsal body scales averaging 37.5 (33–41); anterior frontal entire (90%), not longitudinally divided; maximal SVL not exceeding 100 mm. See **Figure 4**.

• **REMARKS.** Webb (2006) regarded the holotype of *S. p. polylepis* as an intermediate morphological vari-

ant and the surrounding topotypic area a region of intergradation, and reassigned the name *polylepis* to a distinctive population (sharing in part features of topotypic material) having geographic and morphological integrity that lacked any other previous name.

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LITERATURE CITED

- Aguilar-Olvera, V. 1971. Anfibios y Reptiles Existentes en la Colección del Departamento de Zoología del Instituto de Biología de la Universidad Nacional Autónoma de México. Tesis Resendiz, Univ. Nac. Autón. Méx., Facultad Cien., Depart. Biol. México, D.F.
- Alvarez-S., T., and O.J. Polaco. 1983. Herpetofauna de La Michilía, Durango, México. An. Esc. Nac. Cienc. Biol. Méx. 28:73–97.
- Andrews, R.M. 1998. Geographic variation in field body temperature of *sceloporus* lizards. J. Therm. Biol. 23:329–334.
- Angilleta, M.J., Jr., R.H. Niewiarowski, A.E. Dunham, A.D. Leaché, and W.P. Porter. 2004. Bergmann's clines in ectotherms: illustrating a life history perspective with sceloporine lizards. Am. Nat. 164: 168–183.
- Anonymous. 1990. Reptiles bred in captivity and multiple generation captive births 1988/1989. Intl. Zoo Yrbk. 30:326–342.
- . 1991. Species of reptiles bred in captivity during 1990 and multiple generation births. Intl. Zoo Yrbk. 31:270–277.
- . 1992. Species of wild animals bred in captivity during 1991 and multiple generation captive births. Intl. Zoo Yrbk. 32:363–529.
- . 1993. Reptiles bred in captivity and multiple generation births 1992. Intl. Zoo Yrbk. 34:305–312.
- . 1995. Reptiles bred in captivity and multiple generation births 1993. Intl. Zoo Yrbk. 34:357–365.
- . 2007. Checklist of amphibians and reptiles of Carlsbad Caverns National Park January 2007. USDI, Natl. Park Serv., Carlsbad Caverns Natl. Park, Carlsbad, New Mexico.
- Applegarth, J.S. 1979. Environmental implications of herpetofaunal remains from archeological sites west of Carlsbad, New Mexico, p. 159–168. In H.H. Genoways and R.J. Baker (eds.), Biological Investigations in the Guadalupe Mountains National Park, Texas. Nat. Park Serv. Proc. Trans. Ser. (4):xviii + 442 p.
- Archie, J.W. 1992. Electronic Bibliography of the Lizard Genus *Sceloporus*. Assembled by James Archie, Dept. Biol., California St. Univ. Long Beach, 2 disks.
- Arévalo, E., S.K. Davis, and J.W. Sites, Jr. 1994. Mitochondrial DNA sequence divergence and phylogenetic relationships among eight chromosome races of the *Sceloporus grammicus* complex (Phrynosomatidae) in central Mexico. Syst. Biol. 43:387–418.
- Armstrong, B.L. and J.B. Murphy. 1979. The natural history of Mexican rattlesnakes. Spec. Publ. Univ. Kansas Mus. Nat. Hist. (5):1–88.
- Aseff-Martinez, A. 1967. Notas sobre la herpetofauna del centro de Nuevo Leon, Mexico. Diss. Univ. Nuevo Leon, Monterrey, Nuevo Leon, Mexico.
- Ashton, K.G. and C.R. Feldman. 2003. Bergmann's Rule in nonavian reptiles: turtles follow it, lizards and snakes reverse it. Evolution 57:1151–1163.
- Auth, D.L., H.M. Smith, B.C. Brown, and D. Lintz. 2000. A description of the Mexican amphibian and reptile collection of the Strecker Museum. Bull. Chicago Herpetol. Soc. 35:65–85.
- Avery, R.A. 1982. Field studies of body temperatures and thermoregulation, p. 93–166. In C. Gans and F.H. Pough (eds.), Biology of the Reptilia, Vol. 12, Physiology C (Physiological Ecology). Academic Press, New York.
- Axtell, C.A. 1971. Parameters of variation between populations of *Sceloporus ornatus* (Sauria: Iguanidae). M.A. Thesis, Southern Illinois Univ. Edwardsville.
- Axtell, R.W. 1950. Notes on a specimen of *Sceloporus poinsettii* and its young. Herpetologica 6: 80–81.
- . 1959. Amphibians and reptiles of the Black Gap Wildlife Management Area, Brewster County, Texas. Southwest. Nat. 4:88–109.
- . 1977. Ancient playas and their influence on the recent herpetofauna of the northern Chihuahuan Desert, p. 493–512. In R.H. Wauer and D.H. Riskind (eds.), Transactions of the Symposium on the Biological Resources of the Chihuahuan Desert Region. U.S. Dept. Interior, Natl. Park Serv. Trans. Proc. Ser. (3):xxii + 658 p.
- . 1987. *Sceloporus poinsettii*. Interpretive Atlas of Texas Lizards (3):1–16 + 1 map. Privately published.
- and C.A. Axtell. 1971. A new lizard (*Sceloporus jarrovi cyanostictus*) from the Sierra Madre of Coahuila. Copeia 1971:89–98.
- Bailey, V. 1905. Biological survey of Texas. North Amer. Fauna (25):1–222, 1 map.
- . 1913. Life zones and crop zones of New Mexico. North Amer. Fauna (35):1–100 + 1map.
- Baird, S.F. 1859. Reptiles of the boundary, with notes by the naturalists of the survey. In W.H. Emory, Report on the United States and Mexican Boundary Survey, made under the direction of the Secretary of the Interior. House Rep. Exec. Doc. No. 135, 34th Congress, 1st Session, 2(2):1–35, pl. I–XLI.
- and C. Girard. 1852. Characteristics of some new reptiles in the museum of the Smithsonian Institution. Second Part. Proc. Acad. Nat. Sci. Philadelphia 6:125–129.
- Baker, R.H., M.W. Baker, J.D. Johnson, and R.G. Webb. 1980. New records of mammals and reptiles from northwestern Zacatecas. Southwest. Nat. 25:568–569.
- Ballinger, R.E. 1973. Comparative demography of two viviparous, iguanid lizards (*Sceloporus jarrovi*

- and *Sceloporus poinsetti*). *Ecology* 54:269–283.
- . 1978. Reproduction, population structure, and effects of congeneric competition on the Crevice Spiny Lizard, *Sceloporus poinsetti* (Iguanidae), in southwestern New Mexico. *Southwest. Nat.* 23: 641–649.
- , J. Lemos-Espinal, S. Sanoja-Sarabia, and N.R. Coady. 1995. Ecological observations of the lizard, *Xenosaurus grandis* in Cuautlapan, Veracruz, Mexico. *Biotropica* 27:128–132.
- and J.D. Lynch. 1983. How to Know the Amphibians and Reptiles. The Pictured Key Nature Series. Wm. C. Brown Co., Publ., Dubuque, Iowa.
- , M.E. Newlin, and S.J. Newlin. 1977. Age-specific shift in the diet of the Crevice Spiny Lizard, *Sceloporus poinsetti*, in southwestern New Mexico. *Amer. Midl. Nat.* 97:482–484.
- Barbault, R. 1975. Dynamique de populations de lézards. *Bull. Ecol.* 6:1–22.
- . 1976. Contribution a la théorie des stratégies démographiques: recherches sur leur déterminisme écologique chez les lézards. *Bull. Soc. Zool. France* 101:671–693.
- and C. Grenot. 1977. Richesse spécifique et organisation spatiale du peuplement de lézards du Bolson de Mapimí (Désert de Chihuahua, Mexique). *C.R. Acad. Sc. Paris, Sér. D.* 284:2281–2283.
- , –, and Z. Uribe. 1978. Le partage des ressources alimentaires entre les especes de lezards du Desert de Mapimi (Mexique). *Terre et Vie* 32:135–150.
- and M.E. Maury. 1981. Ecological organization of a Chihuahuan Desert lizard community. *Oecologia* 51:335–342.
- , A. Ortega, and M.E. Maury. 1985. Food partitioning and community organization in a mountain lizard guild of northern Mexico. *Oecologia* 65:550–554.
- Bartlett, R.D. and P.P. Bartlett. 1999. A Field Guide to Texas Reptiles & Amphibians. Gulf Publ. Co. Houston, Texas.
- Behler, J.L. and F.W. King. 1979. The Audubon Society Field Guide to North American Reptiles and Amphibians. Alfred A. Knopf, Inc. New York.
- Bell, E.L., H.M. Smith, and D. Chiszar. 2003. An annotated list of the species-group names applied to the lizard genus *Sceloporus*. *Acta Zool. Méx.* (n.s.) (90):103–174.
- Beltz, E. 1995. Citations for the original descriptions of North American amphibians and reptiles. *SSAR Herpetol. Circ.* (25):vi + 44 p.
- Benabib, M. 1994. Reproduction and lipid utilization of tropical populations of *Sceloporus variabilis*. *Herpetol. Monogr.* (8):160–180.
- , K.M. Kjer, and J.W. Sites, Jr. 1997. Mitochondrial DNA sequence-based phylogeny and the evolution of viviparity in the *Sceloporus scalaris* group (Reptilia, Squamata). *Evolution* 51:1262–1275.
- Beuchat, C.A. 1986. Phylogenetic distribution of the urinary bladder in lizards. *Copeia* 1986:512–517.
- , E.J. Braun, and D. Vleck. 1985. An ephemeral urinary bladder in neonatal lizards. *Herpetologica* 41:282–286.
- Blair, W.F. 1950. The biotic provinces of Texas. *Texas J. Sci.* 2:93–117.
- Blob, R.W. 2000. Interspecific scaling of the hindlimb skeleton in lizards, crocodylians, felids and canids: does limb bone shape correlate with limb posture? *J. Zool. Lond.* 250:507–531.
- Bocourt, F. 1874. Livr. 3, pp. 113-192, 5 pls. in A.H.A. Duméril, F. Bocourt, and M.F. Mocquard (1870-1909), *Mission Scientifique au Mexique et dans l'Amérique Centrale Recherches Zoologiques. Part 3, Sect. 1, Études sur les Reptiles.* Imprimerie Nationale, Paris (reprinted Arno Press, Inc. 1978; years of publication and authors of livraisons 1–17 in Smith and Smith 1973:x).
- Bogert, C.M. 1949. Thermoregulation and ecritic body temperatures in Mexican lizards of the genus *Sceloporus*. *Anal. Inst. Biol.* 20:415–426.
- Boulenger, G.A. 1885. Catalogue of the Lizards in the British Museum (Natural History). 2nd ed., Vol. 2. Trustees of the British Museum (Nat. Hist.), London.
- . 1897. A revision of the lizards of the genus *Sceloporus*. *Proc. Zool. Soc. Lond.* 1897:474–522, 1 pl.
- Brainerd, E.L. and T. Owerkowicz. 2006. Functional morphology and evolution of aspiration breathing in tetrapods. *Respir. Physiol. Neurobiol.* 154:73–88.
- Brattstrom, B.H. 1965. Body temperatures of reptiles. *Amer. Midl. Nat.* 73:376–422.
- Brennan, J.N. 1945. Field investigations pertinent to Bullis Fever: preliminary report on the species of ticks and vertebrates occurring at Camp Bullis, Texas. *Texas Rep. Biol. Med.* 3:112–121.
- Brown, A.E. 1903. Texas reptiles and their faunal relations. *Proc. Acad. Nat. Sci. Philadelphia* 55: 543–558.
- Brown, B.C. 1950. An Annotated Check List of the Reptiles and Amphibians of Texas. Baylor Univ. Press, Waco, Texas.
- Brown, T.L. 1970. Ecological distribution of spiny lizards (*Sceloporus*) in Big Bend National Park, Texas. M.S. Thesis, Univ. New Mexico, Albuquerque.
- Burstein, N., K.R. Larsen, and H.M. Smith. 1974. A preliminary survey of dermatoglyphic variation in the lizard genus *Sceloporus*. *J. Herpetol.* 8:359–369.
- Burt, C.E. 1936. A key to the lizards of the United States and Canada. *Trans. Kansas Acad. Sci.* 38: 255–305.
- . 1936 [1937]. Contributions to Texan herpetology V. Spiny and scaly lizards (*Sceloporus*). *Pap. Michigan Acad. Sci. Arts Lett.* 22:533–540.
- Campbell, S.P. and W.J. Boecklen. 2002. Are plant hybrid zones centers of vertebrate biodiversity? A test in the *Quercus grisea* x *Quercus gambelii* species complex. *Biodivers. Conserv.* 11:443–467.
- Camper, J.D. and J.R. Dixon. 1988. Evaluation of a microchip marking system for amphibians and reptiles. *Texas Parks and Wildlife Dept. Res. Publ.* (7100-159):1–22.
- Carignan, J.M. 1988. Ecological survey and eleva-

- tional gradient implications of the flora and vertebrate fauna in the northern Del Norte Mountains, Brewster County, Texas. M.S. Thesis, Sul Ross St. Univ., Alpine, Texas.
- Carpenter, C.C. 1978. Comparative display behavior in the genus *Sceloporus* (Iguanidae). *Contrib. Biol. Geol. Milwaukee Pub. Mus.* (18):1–71.
- . 1986. An inventory of the display-action-patterns in lizards. *Smithson. Herpetol. Info. Serv.* (68):1–18.
- Castañeda-G. G., C. Garcia-De la Peña, D. Lazcano, and A. Salas-Westphal. 2005. Notes on herpetofauna 7: herpetological diversity of the low basin of the Nazas River in Durango, Mexico. *Bull. Chicago Herpetol. Soc.* 40:34–37.
- Chaney, A.H. and R.E. Gordon. 1954. Notes on a population of *Sceloporus merriami merriami* Stejneger. *Texas J. Sci.* 6:78–82.
- Charnov, E.L., D. Berrigan, and R. Shine. 1993. The M/k ratio is the same for fish and reptiles. *Am. Nat.* 142:707–711.
- Chrapliwy, P.S. and C.M. Fugler. 1955. Amphibians and reptiles collected in Mexico in the summer of 1953. *Herpetologica* 11:121–128.
- Clobert, J., T. Garland, Jr., and R. Barbault. 1998. The evolution of demographic tactics in lizards: a test of some hypotheses concerning life history evolution. *J. Evol. Biol.* 11:329–364.
- Cloud, W.A., R.J. Mallouf, P.A. Mercado-Allinger, C.A. Hoyt, N.A. Kenmotsu, J.M. Sanchez, and E.R. Madrid. 1994. Archaeological testing at the Polvo Site, Presidio County, Texas. *Texas Hist. Comm., U.S. Dep't. Agric. Soil Conserv. Serv.. Office St. Archaeol., Rept.* (39):xvi + 169 p.
- Cochran, D.M. 1961. Type specimens of reptiles and amphibians in the U.S. National Museum. *Bull. U.S. Natl. Mus.* (220):xv + 291 p.
- and C.J. Goin. 1970. *The New Field Book of Reptiles and Amphibians.* G.P. Putnam's Sons, New York.
- Cole, C.J. 1963. Variation, distribution, and taxonomic status of the lizard, *Sceloporus undulatus virgatus* Smith. *Copeia* 1963:413–425.
- , C.H. Lowe, and J.W. Wright. 1967. Sex chromosomes in lizards. *Science* 155:1028–1029.
- Collins, J.T. and T.W. Taggart. 2002. *Standard Common and Current Scientific Names for North American Amphibians, Turtles, Reptiles & Crocodylians.* Fifth Ed. Center North Amer. Herpetol. Lawrence, Kansas.
- Colwell, D.A. 1971. Some biological aspects of lizard eimerians, with a description of *Eimeria poinsetti* n. sp. from *Sceloporus poinsetti*. Ph.D. Diss. Central Washington Univ., Ellensburg.
- Conant, R. 1958. *A Field Guide to Reptiles and Amphibians of the United States and Canada East of the 100th Meridian.* Houghton Mifflin Co. Boston, Massachusetts.
- . 1975. *A Field Guide to Reptiles and Amphibians of Eastern and Central North America.* Second Ed. Houghton Mifflin Co., Boston, Massachusetts.
- , F.R. Cagle, J. Goin, C.H. Loew, Jr., W.T. Neill, M.G. Netting, K.P. Schmidt, C.E. Shaw, and R.C. Stebbins. 1956. Common names for North American amphibians and reptiles. *Copeia* 1956:172–185.
- and J.T. Collins. 1991. *A Field Guide to Reptiles and Amphibians of Eastern and Central North America.* Third ed. Houghton Mifflin Co., Boston.
- and –. 1998. *A Field Guide to Reptiles and Amphibians: Eastern and Central North America,* 3rd Edition (expanded). Houghton Mifflin Co., Boston.
- Contreras, S. 2004. Small mammal, herpetofauna, and avian communities of the 02 Ranch, Brewster and Presidio counties, Texas. M.S. Thesis, Sul Ross St. Univ. Alpine, Texas.
- Contreras-Lozano, J.A., D. Lazcano, and A.J. Contreras-Balderas. 2007. Notes on Mexican herpetofauna 10: the herpetofauna of three plant communities in the Sierra de Picachos, Nuevo León, Mexico. *Bull. Chicago Herpetol. Soc.* 42: 177–182.
- Cooper, W.E., Jr. 1984. Female secondary sexual coloration and sex recognition in the Keeled Earless Lizard, *Holbrookia propinqua*. *Anim. Behav.* 32:1142–1150.
- . 1994. Multiple functions of extraoral lingual behaviour in iguanian lizards: prey capture, grooming and swallowing, but not prey detection. *Anim. Behav.* 47:765–775.
- . 2003. Correlated evolution of herbivory and food chemical discrimination in iguanian and ambush foraging lizards. *Behav. Ecol.* 14:409–416.
- , G. Castañeda, and C. García-De la Peña. 2006. Phylogenetic constraints do not block food chemical discrimination in the omnivorous phrynosomatid lizard *Uma exsul*. *J. Herpetol.* 40:329–335.
- , J.J. Habegger, and R.E. Espinosa. 2001. Responses to prey and plant chemicals by three iguanian lizards: relationship to plants in the diet. *Amphib.-Rept.* 22:349–361.
- , J.H. Van Wyk, P. Le F.N. Mouton, A.M. Al-Johany, J.A. Lemos-Espinal, M.A. Paulissen, and M. Flowers. 2000. Lizard antipredatory behaviors preventing extraction from crevices. *Herpetologica* 56:394–401.
- and L.J. Vitt. 2002. Distribution, extent, and evolution of plant consumption by lizards. *J. Zool. Lond.* 257:487–517.
- , –, J.P. Caldwell, and S.F. Fox. 2005. Relationships among foraging variables, phylogeny, and foraging modes, with new data for nine North American lizard species. *Herpetologica* 61:250–259.
- Cope, E.D. 1875. Check-list of North American Batrachia and Reptilia; with a systematic list of the higher groups and an essay on geographic distribution. Based on the specimens contained in the U.S. National Museum. *Bull. U.S. Natl. Mus.* (1): 1–104.
- . 1880. On the zoological position of Texas. *Bull. U.S. Natl. Mus.* (17):1–51.
- . 1885. A contribution to the herpetology of Mexico. VI. A synopsis of the Mexican species of the genus *Sceloporus* Wieg. *Proc. Amer. Philos. Soc.* 22:393–403.
- . 1886. Thirteenth contribution to the herpetology of tropical America. *Proc. Amer. Philos. Soc.* 23:

- 271–287.
- . 1900. The Crocodylians, Lizards, and Snakes of North America. Ann. Rep. U.S. Natl. Mus. 1898: 153–1270 + 36 pl.
- Costelli, J. 1973. Iguanid trigeminal musculature and its role in the phylogeny of the Iguanidae. Ph.D. Diss., City Univ. New York.
- Cox, R.M., S.L. Skelly, and H.B. John-Alder. 2003. A comparative test of adaptive hypotheses for sexual dimorphism in lizards. *Evolution* 57:1653–1669.
- Creer, D.A., K.M. Kjer, D.L. Simmons, and J.W. Sites, Jr. 1997. Phylogenetic relationships of the *Sceloporus scularis* species group (Squamata). *J. Herpetol.* 31:353–364.
- Crother, B.I., J. Boundy, J.A. Campbell, K. de Queiroz, D.R. Frost, R. Highton, J.B. Iverson, P.A. Meylan, T.W. Reeder, M.E. Seidel, J.W. Sites, Jr., T.W. Taggart, S.G. Tilley, and D.B. Wake. 2000. Scientific and standard English names of amphibians and reptiles of North America north of Mexico, with comments regarding confidence in our understanding. *SSAR Herpetol. Circ.* (29):iii + 82 p.
- Dawson, W.R. and T.L. Poulson. 1962. Oxygen capacity of lizard bloods. *Amer. Midl. Nat.* 68:154–164.
- Degenhardt, W.G., C.W. Painter, and A.H. Price. 1996. The Amphibians and Reptiles of New Mexico. Univ. New Mexico Press, Albuquerque.
- Delibes, M. and F. Hiraldo. 1987. Food habits of the bobcat in two habitats of the southern Chihuahuan Desert. *Southwest. Nat.* 32:457–461.
- de Queiroz, A. and K.G. Ashton. 2004. The phylogeny of a species-level tendency: species heritability and possible deep origins of Bergmann's Rule in tetrapods. *Evolution* 58:1674–1684.
- Dessauer, H.C. 1970. Blood chemistry of reptiles: physiological and evolutionary aspects, p. 1–72. *In* C. Gans and T.S. Parsons (eds.), *Biology of the Reptilia*, Vol. 3, Morphology C. Academic Press, New York.
- Ditmars, R.L. 1936. *The Reptiles of North America*. Doubleday & Co., Inc., Garden City, New York.
- Dixon, J.R. 1987. *Amphibians and Reptiles of Texas with keys, taxonomic synopses, bibliography, and distribution maps*. Texas A&M Univ. Press, College Station.
- . 2000. *Amphibians and Reptiles of Texas with keys, taxonomic synopses, bibliography, and distribution maps*. Second ed. Texas A&M Univ. Press, College Station.
- . 1993. Supplement to the literature for the “Amphibians and Reptiles of Texas” 1987. *Smithson. Herpetol. Info. Serv.* (94):1–43.
- . 1996. Ten year supplement to Texas herpetological county records published in “Amphibians and Reptiles of Texas, 1987.” *Texas Herpetol. Soc. Spec. Publ.* (2):1–64.
- Domínguez, P., T. Alvarez, and P. Huerta. 1974 [1977]. Colección de anfibios y reptiles del noroeste de Chihuahua[,] Mexico. *Rev. Soc. Mex. Hist. Nat.* 35:117–142.
- Drake, J.J. 1958. The Brush Mouse *Peromyscus boylii* in southern Durango. *Publ. Mus. Michigan St. Univ. Biol. Ser.* 1:97–132.
- Duellman, W.E. and B. Berg. 1962. Type specimens of amphibians and reptiles in the Museum of Natural History, The University of Kansas. *Univ. Kansas Publ. Mus. Nat. Hist.* 15:183–204.
- Dugès, A. 1869. Catálogo de animales vertebrados observados en la República Mexicana. *La Naturaleza* 1:137–145, errata p. 414.
- . 1888. *Erpetología del Valle de México*. *La Naturaleza* 1:97–146, 2 pl.
- Dunham, A.E. and D.E. Miles. 1985. Patterns of covariation in life history traits of squamate reptiles: the effects of size and phylogeny reconsidered. *Am. Nat.* 126:231–257.
- , –, and D.N. Reznick. 1988. Life history patterns in squamate reptiles, p. 441–522. *In* C. Gans and R.B. Huey (eds.), *Biology of the Reptilia*, Vol. 16, Ecology B, Defense and Life History. Alan R. Liss, Inc. New York.
- Durtsche, R.D., P.J. Gier, M.M. Fuller, W.I. Lutterschmidt, R. Bradley, C.K. Meier, and S.C. Hardy. 1997. Ontogenetic variation in the autecology of the Greater Earless Lizard *Cophosaurus texanus*. *Ecography* 20:336–346.
- Duvall, D., L.J. Guillette, Jr., and R.E. Jones. 1982. Environmental control of reptilian reproductive cycles, p. 201–232. *In* C. Gans and F.H. Pough (eds.), *Biology of the Reptilia*, Vol. 13, Physiology D (Physiological Ecology). Academic Press, New York.
- engineering-environmental Management, Inc. (e²M). 2006. Stakeholder Draft of the Military Munitions Response Program Historical Records Review, Fort Bliss, Texas. U.S. Army Corps Engineers Contr. No. (DACA-63-03-D0009), Englewood, Colorado.
- Estrada-Rodriguez, J.L., H. Gadsden, S.V. Leyva-Pacheco, and H. López-Corrujedo. 2004. A new capture technique for the Coahuilan Fringe-toed Lizard (*Uma exsul*) and other desert lizards. *Herpetol. Rev.* 35(3):244–245.
- Etheridge, R. 1964. The skeletal morphology and systematic relationships of sceloporine lizards. *Copeia* 1964:610–631.
- Ferguson, G.W. 1977. Variation and evolution of stereotyped behavior in reptiles. Part II. Social displays of reptiles: communications value, ultimate causes of variation, taxonomic significance, and heritability of population differences, p. 405–554. *In* C. Gans and D.W. Tinkle (eds.), *Biology of the Reptilia*, Vol. 7, Ecology and Behavior A. Academic Press, New York.
- Fisher, W.K. 1901. Shrike notes. *Condor* 3:47–49.
- Fitch, H.S. 1970. Reproductive cycles in lizards and snakes. *Misc. Publ. Mus. Nat. Hist. Univ. Kansas* (52):1–247.
- . 1978. Sexual size differences in the genus *Sceloporus*. *Univ. Kansas Sci. Bull.* 51:441–461.
- . 1981. Sexual size differences in reptiles. *Misc. Publ. Mus. Nat. Hist. Univ. Kansas* (70):1–63.
- . 1985. Variation in clutch and litter size in New World reptiles. *Misc. Publ. Mus. Nat. Hist. Univ.*

- Kansas (76):1–76.
- Fitzgerald, L.A., C.W. Painter, A. Reuter, and C. Hoover. 2004. Collection, trade, and regulation of reptiles and amphibians of the Chihuahuan Desert region. TRAFFIC North America, World Wildl. Fund, Washington, D.C.
- Flores-Villela, O.A. 1993. Herpetofauna Mexicana: annotated list of the species of amphibians and reptiles of Mexico, recent taxonomic changes, and new species. Carnegie Mus. Nat. Hist. Spec. Publ. (17):iv + 73 p.
- , E. Hernández-García, and A. Nieto-Montes de Oca. 1991. Catalogo de anfibios y reptiles. Serie Catalogos Museo de Zoología “Alfonso L. Herrera,” Facultad de Ciencias, Univ. Nac. Autón. Méx. Catalogo (3):[16] + 223 p.
- , K.M. Kier, M. Benabib, and J.W. Sites, Jr. 2000. Multiple data sets, congruence, and hypothesis testing for the phylogeny of basal groups of the lizard genus *Sceloporus*. Syst. Biol. 49:713–739.
- , F. Mendoza Quijano, and G. Gonzalez Porter (compl.). 1995. Recopilacion de claves para la determinacion de anfibios y reptiles de Mexico. Publ. esp. Mus. Zool. (10):iv + 285 p.
- Fox, H. 1976. The urinogenital system of reptiles, p. 1–157, and Addendum, p. 463–464. In C. Gans and T.S. Parsons (eds.), Biology of the Reptilia, Vol. 6, Morphology E. Academic Press, New York.
- Franke, J. and T.M. Telecky. 2001. Reptiles as pets: an examination of the trade in live reptiles in the United States. Humane Soc. U.S., Washington, DC.
- Gadsden, H., L.E. Estrada-Rodríguez, and S.V. Leyra-Pacheco. 2006. Checklist of amphibians and reptiles of the Comarca Lagunera in Durango-Coahuila, Mexico. Bull. Chicago Herpetol. Soc. 41:2–9.
- , F. de J. Rodríguez-Romero, F.R. Mendez-De la Cruz, and R. Gil-Martínez. 2005. Cielo reproductor de *Sceloporus poinsettii* Baird and Girard 1852 (Squamata: Phrynosomatidae) en el centro del Desierto Chihuahuense, México. Acta Zool. Mex. (n.s.) 21:93–107.
- Gambino, J.J. 1958. *Cyrtosomum readi* n. sp. and *Cyrtosomum heynemani* n. sp. (Oxyuroidea; Atractidae), two new pinworms of iguanids. J. Parasitol. 44:439–445.
- and D. Heyneman. 1960. Specificity and speciation in the genus *Cyrtosomum* (Nematoda: Atractidae). Amer. Midl. Nat. 63:365–382.
- Garrett, J.M. and D.G. Barker. 1987. A Field Guide to Reptiles and Amphibians of Texas. Texas Monthly Field Guide Series. Gulf Publ. Co., Houston, Texas.
- Gehlbach, F.R. 1979. Biomes of the Guadalupe Escarpment: vegetation, lizards, and human impact, p. 427–439. In H.H. Genoways and R.J. Baker (eds.), Biological Investigations in the Guadalupe Mountains National Park, Texas. Natl. Park Serv. Proc. Trans. Ser. (4):xviii + 442 p.
- and J.K. Baker. 1962. Kingsnakes allied with *Lampropeltis mexicana*: taxonomy and natural history. Copeia 1962:291–300.
- Gloyd, H.K. and H.M. Smith. 1942. Amphibians and reptiles from the Carmen Mountains, Coahuila. Bull. Chicago Acad. Sci. 6:231–235.
- Goldberg, S.R. 1975. Reproduction in the Arizona Alligator Lizard, *Gerrhonotus kingi*. Southwest. Nat. 20:412–413.
- , C.R. Bursey, and R. Tawil. 1993. Gastrointestinal helminths of the Crevice Spiny Lizard, *Sceloporus poinsettii* (Phrynosomatidae). J. Helminthol. Soc. Washington 60:263–265.
- , –, and C.T. McAllister. 1995. Gastrointestinal helminths of nine species of *Sceloporus* lizards (Phrynosomatidae) from Texas. J. Helminthol. Soc. Washington 62:188–196.
- Greene, H.W. 1970. Beobachtungen zur fortpflanzung von *Sceloporus poinsettii* (Reptilia, Iguaniidae). Salamandra 6:48–50.
- . 1988. Antipredator mechanisms in reptiles, p. 1–152. In C. Gans and R.B. Huey (eds.), Biology of the Reptilia, Vol. 16, Ecology B, Defense and Life History. Alan R. Liss, Inc. New York.
- Grenot, C.J. 1983. Desierto Chihuahuense, Fauna del Bolson de Mapimi: Ecología y Conservación de los Vertebrados. Depto. Zonas Aridas Univ. Auton. Chapingo City, Mexico.
- , R. Barbault, and M.E. Maury. 1978. Contribution a la connaissance de l’herpetocenose du Bolson de Mapimi. C.R. Soc. Biogéogr. 476:67–84.
- and V. Serrano. 1982. Distribution spatiale et structure des communautés de petits vertébrés du Désert de Chihuahua. C.R. Soc. Biogéogr. 58:159–191.
- Guillette, L.J., Jr. and D.A. Bearce. 1986. The reproductive and fat body cycles of the lizard, *Sceloporus grammicus disparilis*. Trans. Kansas Acad. Sci. 89:31–39.
- and G. Casas-Andreu. 1987. The reproductive biology of the high elevation Mexican lizard *Barisia imbricata*. Herpetologica 43:29–38.
- , R.E. Jones, K.T. Fitzgerald, and H.M. Smith. 1980. Evolution of viviparity in the lizard genus *Sceloporus*. Herpetologica 36:201–215.
- and F.R. Méndez-De la Cruz. 1993. The reproductive cycle of the viviparous Mexican lizard *Sceloporus torquatus*. J. Herpetol. 27:168–174.
- Gundy, G.C. and G.Z. Wurst. 1976. Parietal eye-pineal morphology in lizards and its physiological implications. Anat. Rec. 185:419–432.
- Günther, A.C.L.G. 1890. Biologia Centrali-Americana. Reptilia and Batrachia. R.H. Porter and Dulau and Co., London.
- Guttman, S.I. 1970. Hemoglobin electrophoresis and relationships within the lizard genus *Sceloporus* (Sauria: Iguanidae). Comp. Biochem. Physiol. 34: 563–568.
- Hall, W.P., III. 1973. Comparative population cytogenetics, speciation, and evolution of the iguanid lizard genus *Sceloporus*. Ph.D. Diss., Harvard Univ., Cambridge, Massachusetts.
- Harmon, L.J., J.A. Schulte, II, A. Larson, and J.B. Losos. 2003. Tempo and mode of evolutionary radiation in iguanian lizards. Science 301:961–964.
- Harper, M.E. 1982. Distribution of Chihuahuan Desert

- herpetofauna and its relationship to climate. M.S. Thesis, Univ. Texas El Paso.
- Herrel, A., J.J. Meyers, and B. Vanhooydonck. 2002. Relations between microhabitat use and limb shape in phrynosomatid lizards. *Biol. J. Linn. Soc.* 77:149–163.
- Herrick, C.L., J. Terry, and H.N. Herrick, Jr. 1899. Notes on a collection of lizards from New Mexico. *Bull. Sci. Lab. Denison Univ.* 11:117–148 + pls. XIV–XXIV.
- Hester, T.R. 1992 [1993]. Late paleo-indian occupations at Baker Cave, southwestern Texas. *Bull. Texas Archaeol. Soc.* 53:101–119.
- Hiraldo, F., M. Delibes, J. Bustamante, and R.R. Estrella. 1991. Overlap in the diets of diurnal raptors breeding at the Michilía Biosphere Reserve, Durango, Mexico. *J. Rapt. Res.* 25:25–29.
- Holman, J.A. 1968. A Pleistocene herpetofauna from Kendall County, Texas. *Quart. J. Florida Acad. Sci.* 31:165–172.
- . 1969a. The Pleistocene amphibians and reptiles of Texas. *Publ. Mus. Michigan St. Univ. Biol. Ser.* 4:161–192.
- . 1969b. Herpetofauna of the Pleistocene Slaton Local Fauna of Texas. *Southwest. Nat.* 14:203–212.
- . 1995. Pleistocene Amphibians and Reptiles in North America. *Oxford Monogr. Geol. Geophys.* No. 32. Oxford Univ. Press, Inc., New York.
- Holycross, A.T., C.W. Painter, D.B. Prival, D.E. Swann, M.J. Schroff, T. Edwards, and C.R. Schwalbe. 2002. Diet of *Crotalus lepidus klauberi* (Banded Rock Rattlesnake). *J. Herpetol.* 36:589–597.
- Hunsaker, D., II. 1962. Ethological isolating mechanisms in the *Sceloporus torquatus* group of lizards. *Evolution* 16:62–74.
- and C. Johnson. 1959. Internal pigmentation and ultraviolet transmission of the integument in amphibians and reptiles. *Copeia* 1959:311–315.
- Ibargüengoytía, N.R. and L.M. Casalins. 2007. Reproductive biology of the southernmost gecko *Homonota darwini*: convergent life-history patterns among southern hemisphere reptiles living in harsh environments. *J. Herpetol.* 41:72–80.
- International Commission on Zoological Nomenclature (ICZN). 1999. International Code of Zoological Nomenclature. Fourth Edition. International Trust for Zoological Nomenclature, c/o The Natural History Museum, London.
- Iverson, J.B. 1979. Behavior and ecology of the Rock Iguana *Cyclura carinata*. *Bull. Florida St. Mus. Biol. Ser.* 24:175–358.
- Jack, K.M. 1959. Additional host and locality records for *Geckobiella texana* (Banks), 1904 (Acarina, Pterygosomidae). *Parasitology* 49:462–463.
- Jameson, D.L. and A.G. Flury. 1949. The reptiles and amphibians of the Sierra Vieja Range of southwestern Texas. *Texas J. Sci.* 1:54–79.
- Jes, H. 1887. Lizards in the Terrarium. Barron's Publ., New York.
- Jester, S.L., C.E. Adams, and J.K. Thomas. 1990. Commercial trade in Texas nongame wildlife. *Texas Agr. Exp. Sta. Publ. College Station, Texas.*
- Johnson, R.R., R.L. Glinsky, and S.W. Matteson. 2000. Zone-tailed Hawk (*Buteo albonotatus*). In A. Poole and F. Gill (eds.), *The Birds of North America* (529):1–20. The Birds of North America, Inc., Philadelphia, Pennsylvania.
- Jones, L.L.C. 2005. Herpetology of the American Madrean Archipelago and adjacent valleys, p. 330–332. In Gottfried, G.J., B.S. Gebow, L.G. Eskew, and C.B. Edminster (compl.), *Connecting Mountain Islands and Desert Seas: Biodiversity and management of the Madrean Archipelago II*. USDA, For. Serv., Rocky Mt. Res. Sta., Proc. RMRS-P-36.
- Kimmons, J.E. 1969. The ecology and herptiles of the Rio Hondo and Rio Bonito valleys. M.S. Thesis, Univ. New Mexico, Albuquerque.
- King, W. and T. Krakauer. 1966. The exotic herpetofauna of southeast Florida. *Quart. J. Florida Acad. Sci.* 29:144–154.
- Knowlton, G.F. 1948. Some insect food of *Sceloporus poinsettii* B. and G. *Herpetologica* 4:151–152.
- Köhler, G. and P. Heimes. 2002. Stachelleguane: Lebensweise·Pflege·Zucht. *Herpeton*, Offenbach, Germany.
- Král, B. 1969. A karyotype study of the fringe-toed lizard *Uma inornata* Cope, 1895. *Zool. Listy* 18: 185–194.
- Lang, M. 1989. Phylogenetic and biogeographic patterns of basiliscine iguanians (Reptilia: Squamata: "Iguanidae"). *Bonn. Zool. Monogr.* (28):1–172.
- Larsen, K.L. and W.W. Tanner. 1974. Numeric analysis of the lizard genus *Sceloporus* with special reference to cranial osteology. *Great Basin Nat.* 34: 1–41.
- and –. 1975. Evolution of the sceloporine lizards (Iguanidae). *Great Basin Nat.* 35:1–20.
- Lazcano, D., J.A. Contreras-Lozano, A.J. Contreras-Balderas, G. Castañeda, and C. García-De la Peña. 2006. Natural history notes. *Sceloporus couchi* (Couch's Spiny Lizard). *Sauropagy. Herpetol. Rev.* 37:227.
- , J. Banda, G. Cantañeda, C. García-De la Peña, and C. Solis-Rojas. 2006. Notes on Mexican herpetofauna 6: herpetofauna of the Parque Ecológico Chipinque, Nuevo León, Mexico. *Bull. Chicago Herpetol. Soc.* 41:117–123.
- Lemire, M. 1985. Contribution a l'étude des fosses nasales des sauriens. Anatomie fonctionnelle da la glande "a sels" des lézards déserticoles. *Mem. Mus. Nat. d'Hist. Nat. (n.s.), Ser. A. Zool.* (135):1–119.
- Lemos-Espinal, J.A. 1999. Sierra de Huautla-Cerro Frio, Morelos: Proyecto de Reserva de la Biosfera. *Com. Nac. Conocimiento Uso Biodivers., México, D.F.*
- , D. Chiszar, and H.M. Smith. 2002. The 2001 collection of *Sceloporus* (Reptilia: Sauria) from Chihuahua, Mexico. *Bull. Chicago Herpetol. Soc.* 37: 163–167.
- , –, and –. 2004a. Miscellaneous 2002 lizards from Chihuahua, Mexico. *Bull. Chicago Herpetol. Soc.* 39:1–7.
- , –, –, and G. Woolrich-Piña. 2004b. Selected re-

- cords of 2003 lizards from Chihuahua and Sonora, Mexico. *Bull. Chicago Herpetol. Soc.* 39:164–168.
- and H.M. Smith. 2007a. Anfibios y reptiles del estado de Chihuahua, México/Amphibians and reptiles of the state of Chihuahua, Mexico. Univ. Nac. Autón. Mex., Tlalnepantla y CONABIO, México, D.F.
- and –. 2007b. Anfibios y reptiles del estado de Coahuila, México/Amphibians and reptiles of the state of Coahuila, Mexico. Univ. Nac. Autón. Mex., Tlalnepantla y CONABIO, México D.F.
- , –, R.E. Ballinger, G.R. Smith, and D. Chiszar. 1997. A herpetological collection from northern Chihuahua, Mexico. *Bull. Chicago Herpetol. Soc.* 32:198–201.
- , –, and D. Chiszar. 2000. New distributional and variational data on some species of lizards from Chihuahua, Mexico. *Bull. Chicago Herpetol. Soc.* 35:181–187.
- , –, and –. 2001. Distributional and variational data on some species of turtles and lizards from Chihuahua. *Bull. Chicago Herpetol. Soc.* 36:201–208.
- , –, and –. 2004c. Introduction to the Amphibians and Reptiles of the State of Chihuahua, Mexico. Univ. Nac. Autón. Mex., Tlalnepantla y CONABIO, México D.F.
- Liner, E.A. 1994. Scientific and common names for the amphibians and reptiles of Mexico in English and Spanish. *Nombres científicos y comunes en Inglés y Español de los anfibios y reptiles de México. SSAR Herpetol. Circ.* (23):v + 113 p.
- . 2007. A checklist of the amphibians and reptiles of Mexico. *Occ. Pap. Mus. Nat. Sci. Louisiana St. Univ.* (80):1–60.
- Llewellyn, L.E., P.M. Bell, and E.G. Moczydlowski. 1997. Phylogenetic survey of soluble saxitoxin-binding activity in pursuit of the function and molecular evolution of saxiphilin, a relative of transferrin. *Proc. R. Soc. Lond. B* 264:891–902.
- Logan, L.E. and C.C. Black. 1979. The Quaternary vertebrate fauna of Upper Sloth Cave, Guadalupe Mountains National Park, Texas, p. 141–158. *In* H.H. Genoways and R.J. Baker (eds.), *Biological Investigations in the Guadalupe Mountains National Park, Texas*. Natl. Park Serv. Proc. Trans. Ser. (4):xviii + 442 p.
- Lowe, C.H., Jr. 1955. The eastern limit of the Sonoran Desert in the United States with additions to the known herpetofauna of New Mexico. *Ecology* 36:343–345.
- , J.W. Wright, and C.J. Cole. 1966. Chromosomes and karyotypes of sceloporine iguanid lizards in the North American southwest. *Mamm. Chromosomes Newsl.* (22):201–203.
- MacMahon, J.A. 1985. *Deserts*. The Audubon Society Nature Guides. A.A. Knopf, Inc., New York.
- Marr, J.C. 1944. Notes on amphibians and reptiles from the central United States. *Amer. Midl. Nat.* 32:478–490.
- Martinez-Mendez, N. and F.R. Méndez-De la Cruz. 2007. Molecular phylogeny of the *Sceloporus torquatus* species-group (Squamata: Phrynosomatidae). *Zootaxa* (1609):53–68.
- Martins, E.P. 1993. A comparative study of the evolution of *Sceloporus* push-up displays. *Amer. Nat.* 142:994–1018.
- . 1994. Phylogenetic perspectives on the evolution of lizard territoriality, p. 117–144. *In* L.J. Vitt and E.R. Pianka (eds.), *Lizard Ecology*. Princeton Univ. Press, Princeton, New Jersey.
- Marx, H. 1976. Supplementary catalogue of type specimens of reptiles and amphibians in Field Museum of Natural History. *Fieldiana Zool.* 69:33–94.
- Masters, J.M. 1956. Comparative hematology of some vertebrates of Texas. M.A. Thesis, Sul Ross St. Univ., Alpine, Texas.
- Mauzy, M.E. and R. Barbault. 1981. The spatial organization of the lizard community of the Bolsón de Mapimí (México), p. 79–87. *In* R. Barbault and G. Halffter (eds.), *Ecology of the Chihuahuan Desert*. Inst. Ecol. A.C. Publ. 8, México, D.F.
- McAllister, C.T., S.J. Upton, and S.E. Trauth. 1994. New host and distribution records for coccidia (Apicomplexa: Eimeriidae) from North American lizards. *J. Helminthol. Soc. Wash.* 61:221–224.
- McCranie, J.R. and L.D. Wilson. 1987. The biogeography of the herpetofauna of the pine-oak woodlands of the Sierra Madre Occidental of México. *Contrib. Biol. Geol. Milwaukee Pub. Mus.* (72):1–30.
- and –. 1990. Annotated bibliography to the herpetofauna of the pine-oak woodlands of the Sierra Madre Occidental, Mexico. *Smithson. Herpetol. Info. Serv.* (84):1–16.
- McCrystal, H.K. 1991. The herpetofauna of the Big Bend region. *Sonoran Herpetol.* 4:137–141
- McDiarmid, R.W., J.F. Copp, and D.E. Breedlove. 1976. Notes on the herpetofauna of western Mexico: new records from Sinaloa and the Tres Marias Islands. *Contrib. Sci. Nat. Hist. Mus. Los Angeles Co.* (275):1–17.
- McDowell, S.B. and C.M. Bogert. 1954. The systematic position of *Lanthanotus* and the affinities of the anguimorphans lizards. *Bull. Amer. Mus. Nat. Hist.* (105):1–142.
- Mead, J.I., J. Arroyo-Cabrales, and E. Johnson. 1999. Pleistocene lizards (Reptilia: Squamata) from San Josecito Cave, Nuevo León, México. *Copeia* 1999:163–173.
- Mecham, J.S. 1979. The biogeographical relationships of the amphibians and reptiles of the Guadalupe Mountains, p. 169–180. *In* H.H. Genoways and R.J. Baker (eds.), *Biological Investigations in the Guadalupe Mountains National Park, Texas*. Natl. Park Serv. Proc. Trans. Series (4):xviii + 442 p.
- Méndez-De la Cruz, F.R., G. Casas-Andreu, and M. Villagran-Santa Cruz. 1992. Variación anual en la alimentación y condición física de *Sceloporus mucronatus* (Sauria: Iguanidae) en la Sierra del Ajusco, Distrito Federal, México. *Southwest. Nat.* 37:349–355.
- and Ma. G. Gutiérrez-Mayén. 1991. Variación de la

- robustez física de *Sceloporus torquatus* (Sauria: Iguanidae) y sus implicaciones sobre la temporada de reproducción. *Acta Zool. Mex. (n.s.)* 46:1–12
- , M. Villagrán-Santa Cruz, and R.M. Andrews. 1998. Evolution of viviparity in the lizard genus *Sceloporus*. *Herpetologica* 54:521–532.
- Metzger, K.A. and A. Herrel. 2005. Correlations between lizard cranial shape and diet: a quantitative phylogenetically informed analysis. *Biol. J. Linn. Soc.* 86:433–436.
- Meylan, P.A. 1982. The squamate reptiles of the Inglis IA Fauna (Irvingtonian: Citrus County, Florida). *Bull. Florida St. Mus., Biol. Sci.* 27:1–85.
- Miller, D.J. 1979. A life history study of the Gray-banded Kingsnake, *Lampropeltis mexicana alterna*, in Texas. *Contrib. Chihuahuan Desert Res. Inst.* (87):1–48.
- Milstead, W.W. 1953. Ecological distribution of the lizards of the La Mota Mountain region of Trans-Pecos Texas. *Texas J. Sci.* 5:403–415.
- . 1960. Supplementary notes on the herpetofauna of the Stockton Plateau. *Texas J. Sci.* 12:228–231.
- , J.S. Mecham, and H. McClintock. 1950. The amphibians and reptiles of the Stockton Plateau in northern Terrell County, Texas. *Texas J. Sci.* 2: 543–562.
- Mindell, D.P., J.W. Sites, Jr., and D. Graur. 1989. Speciation evolution: a phylogenetic test with allozymes in *Sceloporus* (Reptilia). *Cladistics* 5: 49–61.
- , –, and –. 1990. Assessing the relationship between speciation and evolutionary change. *Cladistics* 6: 393–398.
- Minton, S.A., Jr. 1959. Observations on amphibians and reptiles of the Big Bend Region of Texas. *Southwest. Nat.* 3:28–54.
- Moll, E.O. 2006. Patronyms of the pioneer west. XIII. *Sceloporus poinsettii* Baird and Girard, 1852–Crevice Lizard. *Sonoran Herpetol.* 19:14–17.
- Moody, S.M. 1983. The rectus abdominis muscle complex of the Lacertilia: terminology, homology, and assumed presence in primitive iguanian lizards, p. 195–212. *In* A.G.J. Rhodin and K. Miyata (eds.), *Advances in Herpetology and Evolutionary Biology. Essays in honor of Ernest E. Williams*. Mus. Comp. Zool., Harvard Univ., Cambridge, Massachusetts.
- Morafka, D.A. 1977a. Is there a Chihuahuan Desert? A quantitative evaluation through a herpetofaunal perspective, p. 437–454. *In* R.H. Wauer and D.H. Riskind (eds.), *Transactions of the Symposium on the Biological Resources of the Chihuahuan Desert Region, United States and Mexico*. U.S. Dept. Interior, Natl. Park Serv., Trans. Proc. Ser. (3):xxii + 658 p.
- . 1977b. A Biogeographical Analysis of the Chihuahuan Desert through its Herpetofauna. *Biogeographica*, Vol. 9. Dr. W. Junk b.v., The Hague.
- Mosauer, W. 1932. The amphibians and reptiles of the Guadalupe Mountains of New Mexico and Texas. *Occ. Pap. Mus. Zool. Univ. Michigan* (246): 1–18.
- Mulaik, D.D. 1946. A comparative study of the urinogenital systems of an oviparous and two ovoviviparous species of the lizard genus *Sceloporus*. *Bull. Univ. Utah* 37:1–24.
- Murphy, R.W. 1999. Evolution of L-lactate dehydrogenase gene expression in non-avian reptiles. *Biochem. Syst. Ecol.* 27:131–146.
- and N.R. Lovejoy. 1998. Punctuated equilibrium or gradualism in the lizard genus *Sceloporus*? lost in plesiomorphs and a forest of trees. *Cladistics* 14: 95–103.
- Murphy, T.J. and A.A. Myers. 1993. A review of *Salmonella* infections in reptiles with particular reference to Gekkonidae. *Amphib.-Rept.* 14:357–371.
- Murray, L.T. 1939. Annotated list of amphibians and reptiles from the Chisos Mountains. *Contrib. Baylor Univ. Mus.* (24):4–16.
- Newlin, M.E. and R.E. Ballinger. 1976. Blood hemoglobin concentration in four species of lizards. *Copeia* 1976:392–394.
- Olson, R.E. 1973. Variation in the Canyon Lizard, *Sceloporus merriami* Stejneger. *Herpetologica* 29:116–127.
- . 1990. *Sceloporus torquatus*: its variation and zoogeography. *Bull. Chicago Herpetol. Soc.* 25:117–127.
- . 1998. *Sceloporus poinsettii*: its taxonomic affinity with *mucronatus*. *Bull. Maryland Herpetol. Soc.* 34:76–82.
- , B. Marx, and R. Rome. 1986. Descriptive dentition morphology of lizards of Middle and North America, I. Scincidae, Teiidae, and Helodermatidae. *Bull. Maryland Herpetol. Soc.* 22:97–124.
- , –, and –. 1987. Descriptive dentition morphology of lizards of Middle and North America II: Iguanidae. *Bull. Maryland Herpetol. Soc.* 23:12–34.
- Ord, T.J. and D.T. Blumstein. 2002. Size constraints and the evolution of display complexity: why do large lizards have simple displays? *Biol. J. Linn. Soc.* 76:145–161.
- , –, and C.S. Evans. 2001. Intrasexual selection predicts the evolution of signal complexity in lizards. *Proc. R. Soc. Lond. B* 268:737–744.
- , –, and –. 2002. Ecology and signal evolution in lizards. *Biol. J. Linn. Soc.* 77:127–148.
- Ortega, A., M.E. Maury, and R. Barbault. 1982. Spatial organization and habitat partitioning in a mountain lizard community of Mexico. *Acta Oecol., Oecol. Gen.* 3:323–330.
- Pennock, L.A. 1969. Minute Y chromosome in the lizard genus *Uta* (Family Iguanidae). *Chromosoma* 24:467–476.
- Pflugmacher, S. 1988. *Sceloporus poinsettii* Baird and Girard 1852–ein lebedgebareuda laguan. *Sauria* 10:7–11.
- Pianka, E.R. 1986. *Ecology and Natural History of Desert Lizards*. Princeton Univ. Press, Princeton, New Jersey.
- Pope, C.H. 1960. *The Reptile World. A Natural History of the Snakes, Lizards, Turtles, and Crocodilians*. Third Printing. A.A. Knopf, Inc., New York.
- Porter, C.A., M. W. Haiduk, and K. de Queiroz. 1994. Evolution and phylogenetic significance of riboso-

- mal gene location in chromosomes of squamate reptiles. *Copeia* 1994:302–313.
- Porter, K.R. 1972. *Herpetology*. W.B. Saunders Co., Philadelphia, Pennsylvania.
- Pough, F.H. 1973. Lizard energetics and diet. *Ecology* 54:837–844.
- . 1979. Summary of oxygen transport characteristics of reptilian blood. *Smithson. Herpetol. Info. Serv.* (45):1–19.
- Poulin, R., D. Mouillot, and M. George-Nascimento. 2003. The relationship between species richness and productivity in metazoan parasite communities. *Oecologia* 137:277–285.
- Powell, B.F., E.W. Albrecht, K. Docherty, and B. Halvorson. 2003. Biological inventory report for the Sonoran Desert Network: 2002. Sonoran Desert Network Inv. Prog., U.S. Geol. Surv., Sonoran Desert Field Sta. School Renew. Nat. Res., Univ. Arizona, Ann. Rep. (2):iv + 53 p.
- , –, W.L. Halvorson, C.A. Schmidt, K. Docherty, and P. Anning. 2006. Vascular plant and vertebrate inventory of Gila Cliff Dwellings National Monument. U.S. Geol. Surv., Southwest Biol. Sci. Center, Sonoran Desert Res. Sta., Univ. Arizona, Open-File Rep. (2005– 1187):xiv + 84 p.
- Powell, R., J.T. Collins, and E.D. Hooper, Jr. 1998. A Key to Amphibians and Reptiles of the Continental United States and Canada. Univ. Press Kansas, Lawrence.
- Presch, W. 1970. Scleral ossicles in the sceloporine lizards, family Iguanidae. *Herpetologica* 26:446–450.
- Prival, D.B., M.J. Goode, D.E. Swann, C.R. Schwalbe, and M.J. Schroff. 2002. Natural history of a northern population of Twin-spotted Rattlesnakes, *Crotalus pricei*. *J. Herpetol.* 36:598–607.
- Punzo, F. 1982. Clutch and egg size in several species of lizards from the desert southwest. *J. Herpetol.* 16:414–417.
- . 2002. Spatial associative learning in the Crevice Spiny Lizard, *Sceloporus poinsettii* (Sauria: Iguanidae). *Texas J. Sci.* 54:45–50.
- Purdue, J.R. and C.C. Carpenter. 1972a. A comparative study of the body movements of displaying males of the lizard genus *Sceloporus* (Iguanidae). *Behaviour* 41:68–81.
- and –. 1972b. A comparative study of the display motion in the iguanid genera *Sceloporus*, *Uta*, and *Urosaurus*. *Herpetologica* 28:137–141.
- Pyburn, W.F. 1955. Species discrimination in two sympatric lizards, *Sceloporus olivaceus* and *S. poinsetti*. *Texas J. Sci.* 7:312–315.
- Ramírez-Bautista, A., O. Ramos-Flores, and J.W. Sites, Jr. 2002. Reproductive cycle of the spiny lizard *Sceloporus jarrovi* (Sauria: Phrynosomatidae) from north-central México. *J. Herpetol.* 36: 225–233.
- Ramsey, L.W. and E.T. Donlon. 1949. The young of the lizard *Sceloporus poinsettii*. *Copeia* 1949:229.
- Raun, G.G. and F.R. Gehlbach. 1972. Amphibians and reptiles in Texas. *Bull. Dallas Mus. Nat. Hist.* (2):ii + 61 p., 71 maps.
- Reeder, T.W. 1995. Phylogenetic relationships among phrynosomatid lizards as inferred from mitochondrial ribosomal DNA sequences: substitutional bias and information content of transitions relative to transversions. *Mol. Phylo. Evol.* 4:203–222.
- and J.J. Wiens. 1996. Evolution of the lizard family Phrynosomatidae as inferred from diverse types of data. *Herpetol. Monogr.* (10):43–84.
- Renous-Lécuru, S. 1973. Morphologie comparée du carpe chez les lepidosauriens actuels (Rhynchocephales, Lacertiliens, Amphisbénien). *Morphol. Jahrb.* 119:727–766.
- Ridenour, K. 2002. Home range of Crevice Spiny Lizards (*Sceloporus poinsettii*) at Mason Mountain Wildlife Management Area. M.S. Thesis, Texas St. Univ., San Marcos.
- Rodgers, K.L. 1976. Herpetofauna of the Beck Ranch local fauna (Upper Pliocene: Blancan) of Texas. *Publ. Mus. Michigan St. Univ. Paleontol. Ser.* 1: 163–200.
- Rodriguez-Romero, F., G.R. Smith, O. Cuellar, and F.R. Méndez-De la Cruz. 2004. Reproductive traits of a high elevation viviparous lizard *Sceloporus bicanthalis* (Lacertilia: Phrynosomatidae) from Mexico. *J. Herpetol.* 38:438–443.
- Ruthven, A.G. 1920. The environmental factors in the distribution of animals. *Geogr. Rev.* 10:241–248.
- Sanderson, J.J. 1990. Estimating rates of speciation and evolution: a bias due to homoplasy. *Cladistics* 6:387–391.
- Scheibe, J.S. 1987. Climate, competition, and the structure of temperate zone lizard communities. *Ecology* 68:1424–1436.
- Schlefsky, C.J. 2003. Abundance and diversity of small mammals and herpetofauna at Elephant Mountain Wildlife Management Area, Brewster County, Texas. M.S. Thesis, Sul Ross St. Univ. Alpine, Texas.
- Schmidt, K.P. 1953. A Check List of North American Amphibians and Reptiles. Sixth Ed. Univ. Chicago Press.
- Schwarzkopf, L. 1992. Annual variation of litter size and offspring size in a viviparous skink. *Herpetologica* 48:390–395.
- Schwenk, K., S.K. Sessions, and D.M. Peccinini Seale. 1982. Karyotypes of the basiliscine lizards *Corytophanes cristatus* and *Corytophanes hernandesii*, with comments on the relationship between chromosomal and morphological evolution in lizards. *Herpetologica* 38:493–501.
- Scudday, J.F. 1973. The vertebrate fauna of Capote Canyon, p. 174–200. *In* Capote Falls: A Natural Area Survey, Part I of IV. Off. Res., Lyndon B. Johnson School Pub. Affairs, Univ. Texas Austin.
- Secoy, D.M. 1971. The myology of *Sceloporus c. clarki* Baird and Girard (Reptilia: Iguanidae). *Brigham Young Univ. Sci. Bull., Biol. Ser.*, 14:1–22.
- Sherrod, S.K. 1978. Diets of North American Falconiformes. *Rapt. Res.* 12:49–121.
- Shine, R. and E.L. Charnov. 1992. Patterns of survival, growth, and maturation in snakes and lizards. *Am. Nat.* 139:1257–1269.
- and L. Schwarzkopf. 1992. The evolution of repro-

- ductive effort in lizards and snakes. *Evolution* 46: 62–75.
- Sites, J.W., Jr., J.W. Archie, C.J. Cole, and O. Flores-Villela. 1992. A review of phylogenetic hypotheses for lizards of the genus *Sceloporus* (Phrynosomatidae): implications for ecological and evolutionary studies. *Bull. Amer. Mus. Nat. Hist.* (213):1–110.
- Slevin, J.R. 1934. A Handlist of Reptiles and Amphibians of the Pacific States. *Spec. Publ. California Acad. Sci.*
- Smith, D.D. and W.W. Milstead. 1971. Stomach analyses of the Crevice Spiny Lizard (*Sceloporus poinsetti*). *Herpetologica* 27:147–149.
- Smith, E.N. 2001. Species boundaries and evolutionary patterns of speciation among the malachite lizards (*formosus* group) of the genus *Sceloporus* (Squamata: Phrynosomatidae). Ph.D. Diss., Univ. Texas at Arlington.
- Smith, H.M. "1936"[1938]. The lizards of the *torquatus* group of the genus *Sceloporus* Wiegmann, 1828. *Univ. Kansas Sci. Bull.* 224:539–693.
- . 1939. The Mexican and Central American lizards of the genus *Sceloporus*. *Zool. Ser. Field Mus. Nat. Hist.* (26):1–397.
- . 1946. *Handbook of Lizards: Lizards of the United States and of Canada.* Comstock Publ. Assoc., Ithaca, New York.
- . 1987. Current nomenclature for the names and material cited in Günther's Reptilia and Batrachia volume of the *Biologia Centrali-Americana*, p. XXIII–LI. *In* A.C.L.G. Günther. 1885–1902. *Biologia Centrali-Americana.* SSAR Facs. Reprints Herpetol., Ithaca, New York.
- and T. Alvarez. 1974. Possible intraspecific sympatry in the lizard species *Sceloporus torquatus*, and its relationship with *S. cyanogenys*. *Trans. Kansas Acad. Sci.* 77:219–224.
- and E.D. Brodie, Jr. 1982. *A Guide to Field Identification. Reptiles of North America.* Golden Press, New York.
- and B.C. Brown. 1941. A new subspecies of *Sceloporus jarrovi* from Mexico. *Zool. Ser. Field Mus. Nat. Hist.* 24:253–257.
- and H.K. Buechner. 1947. The influence of the Balcones Escarpment on the distribution of amphibians and reptiles in Texas. *Bull. Chicago Acad. Sci.* 8(1):1–16.
- and P.S. Chrapliwy. 1958. New and noteworthy Mexican herptiles from the Lidicker collection. *Herpetologica* 13:267–271.
- , D.A. Langebartel, and K.L. Williams. 1964. Herpetological type-specimens in the University of Illinois Museum of Natural History. *Illinois Biol. Monogr.* (32):[6] + 80 p.
- , J.A. Lemos-Espinal, and D. Chiszar. 2005a. 2004 amphibians and lizards from Sonora, Chihuahua and Coahuila. *Bull. Chicago Herpetol. Soc.* 40: 45–51.
- , –, and P. Heimes. 2005b. 2005 amphibians and reptiles from northwestern Mexico. *Bull. Chicago Herpetol. Soc.* 40:206–212.
- , C. McCarthy, and D. Chiszar. 2000. Some enigmatic identifications in Boulenger's 1897 *Sceloporus* monograph. *Bull. Maryland Herpetol. Soc.* 36:124–132.
- and O. Sanders. 1952. Distributional data on Texan amphibians and reptiles. *Texas J. Sci.* 4:204–219.
- and R.B. Smith. 1969. *Early Foundations of Mexican Herpetology. An Annotated and Indexed Bibliography of the Herpetological Publications of Alfredo Dugès, 1826–1910.* Univ. Illinois Press, Urbana.
- and –. 1976. *Synopsis of the Herpetofauna of Mexico. Source Analysis and Index for Mexican Reptiles.* Vol. III. John Johnson, North Bennington, Vermont.
- and –. 1993. *Synopsis of the Herpetofauna of Mexico.* Vol. VII. *Bibliographic Addendum IV and Index, Bibliographic Addenda II–IV.* Univ. Press of Colorado, Niwot.
- and E.H. Taylor. 1950a. An annotated checklist and key to the reptiles of Mexico exclusive of the snakes. *Bull. U.S. Natl. Mus.* (199):v + 253 p.
- and –. 1950b. Type localities of Mexican reptiles and amphibians. *Univ. Kansas Sci. Bull.* 33:313–380.
- Snyder, G.K. and B.A. Sheafor. 1999. Red blood cells: centerpiece in the evolution of the vertebrate circulatory system. *Amer. Zool.* 39:189–198.
- Stamps, J.A. 1983. Sexual selection, sexual dimorphism, and territoriality, p. 169–204. *In* R.B. Huey, E.R. Pianka, and T.W. Schoener (eds.), *Lizard Ecology. Studies of a Model Organism.* Harvard Univ. Press, Cambridge, Massachusetts.
- Stebbins, R.C. 1954. *Amphibians and Reptiles of Western North America.* McGraw-Hill Book Co., Inc., New York.
- . 1966. *A Field Guide to Western Reptiles and Amphibians.* Houghton Mifflin Co., Boston, Massachusetts.
- . 1985. *A Field Guide to Western Reptiles and Amphibians.* Second ed., revised. Houghton Mifflin Co., Boston, Massachusetts.
- . 2003. *A Field Guide to Western Reptiles and Amphibians.* 3rd ed. Houghton Mifflin Co., Boston Massachusetts.
- Stejneger, L. and T. Barbour. 1917. *A Check List of North American Amphibians and Reptiles.* Harvard Univ. Press, Cambridge, Massachusetts.
- and –. 1923. *A Check List of North American Amphibians and Reptiles.* Second Ed. Harvard Univ. Press, Cambridge, Massachusetts.
- and –. 1933. *A Check List of North American Amphibians and Reptiles.* Third Ed. Harvard Univ. Press, Cambridge, Massachusetts.
- and –. 1939. *A Check List of North American Amphibians and Reptiles.* Fourth Ed. Harvard Univ. Press, Cambridge, Massachusetts.
- and –. 1943. *A Check List of North American Amphibians and Reptiles.* Fifth Ed. *Bull. Mus. Comp. Zool.* (93):xix + [1] + 260 p.
- Stinnett, J.K. 1975. The terrestrial vertebrates of the Devil's Sinkhole - Hackberry Creek Area, p. 75–81. *In* Devil's Sinkhole Area -- headwaters of the Nueces River. *A Natural Area Survey, part VIII of VIII. Div. Nat. Res. Environ., Univ. Texas at Austin.*

- [ix] + 117 p.
- Strecker, J.K. 1909. Reptiles and amphibians collected in Brewster County, Texas. *Baylor Univ. Bull.* (12):11–15.
- Sullivan, R.M. 1982. Fossil lizards from Swain Quarry “Fort Union Formation,” middle Paleocene (Torrejonian), Carbon County, Wyoming. *J. Paleontol.* 56:996–1010.
- Szarski, H. 1960. Amphibians and reptiles of North America. *Przeglad. Zool.* 4:170–179.
- Tanner, D.L. 1975. Lizards of the New Mexico Llano Estacado and its adjacent river valleys. *Stud. Nat. Sci. Nat. Sci. Res. Inst. Eastern New Mexico Univ.* 2(2):1–39 + 11 maps.
- Tanner, W.W. 1970. A catalogue of the fish, amphibian, and reptile types in the Brigham Young University Museum of Natural History. *Great Basin Nat.* 30:219–226.
- . 1987. Lizards and turtles of western Chihuahua. *Great Basin Nat.* 47:383–421.
- Taylor, E.H. 1931. The discovery of a lizard *Sceloporus torquatus cyanogenys* Cope in Texas, new to the fauna of the United States. *Proc. Biol. Soc. Washington* 44:129–132.
- Telford, S.R., Jr. 1978. Saurian malaria in Texas. *J. Parasitol.* 64:553–554.
- . 1988. A contribution to the systematics of the reptilian malaria parasites, family Plasmodiidae (Apicomplexa: Haemospororina). *Bull. Florida St. Mus. Biol. Ser.* 34:67–98.
- . 1996. A review of the trypanosomes from lizards of the family Iguanidae (sensu lato), including the descriptions of five new species, and an evaluation of the effect of host difference upon taxonomic characters of saurian trypanosomes. *Syst. Parasitol.* 34:215–237.
- Tennant, A. 1984. *The Snakes of Texas*. Texas Monthly Press, Austin.
- Tenney, S.M. and J.B. Tenney. 1970. Quantitative morphology of cold-blooded lungs: Amphibia and Reptilia. *Resp. Physiol.* 9:197–215.
- Texas Agricultural Experiment Station and Texas Water Resources Institute. 2002. *Ecosystem and Wildlife Implications of Brush: Management Systems Designed to Improve Water Yield*. U.S. Corps Engineers Coop. Agr. (W45XMA10599-597):i + 311 p.
- Thiollay, J.-M. 1981. Ségrégation écologique et pression de prédation de deux buses sympatriques dans un désert Mexicain. *Le Gerfaut* 71:575–610.
- Tinkle, D.W. 1976. Comparative data on the population ecology of the Desert Spiny Lizard, *Sceloporus magister*. *Herpetologica* 32:1–6.
- and J.W. Gibbons. 1977. The distribution and evolution of viviparity in reptiles. *Misc. Publ. Mus. Zool. Univ. Michigan* (154):[4] + 1–56 p.
- Treviño-Saldaña, C.H. 1980. Lista herpetológica anotada del sur de Nuevo León, Méx., p. 298–308. *In Mem. II Congr. Nac. Zool., Vol. 1. Fac. Cienc. Biol., Univ. Auton. Nuevo Leon.*
- . 1988. A new montane lizard (*Sceloporus jarrovi cyaneus*) from Nuevo León, México. *Rev. Biol. Trop.* 36:407–411.
- Turner, F.B. 1977. The dynamics of populations of squamates, crocodylians, and rhynchocephalians, p. 157–264. *In C. Gans and D.W. Tinkle (eds.), Biology of the Reptilia, Vol. 7, Ecology and Behavior* A. Academic Press, New York.
- Van Denburgh, J. 1922. The reptiles of western North America. Vol. I. Lizards. *Occ. Pap. California Acad. Sci.* (10):1–611.
- . 1924. Notes on the herpetology of New Mexico, with a list of species known from that state. *Proc. California Acad. Sci., Ser. 4*, 13:189–230.
- Van Devender, T.R. and C.H. Lowe, Jr. 1977. Amphibians and reptiles of Yepómera, Chihuahua, Mexico. *J. Herpetol.* 11:41–50.
- and R.D. Worthington. 1977. The herpetofauna of Howell’s Ridge Cave and the paleoecology of the northwestern Chihuahuan Desert, p. 85–106. *In R.H. Wauer and D.H. Riskind (eds.), Transactions of the Symposium on the Biological Resources of the Chihuahuan Desert Region, United States and Mexico*. U.S. Dept. Interior, Natl. Park Serv., Trans. Proc. Ser. (3):xxii + 658 p.
- Vermersch, T.G. 1992. *Lizards and Turtles of South-central Texas*. Eakin Press, Austin, Texas.
- Vial, J.L. 1984. Comparative field response to diel and annual thermal regimens among sceloporine lizards, with specific reference to *Sceloporus malachiticus*. *Rev. Biol. Trop.* 32:1–9.
- Vinegar, M.B. 1975. Comparative aggression in *Sceloporus virgatus*, *S. undulatus consobrinus*, and *S. u. tristichus* (Sauria: Iguanidae). *Anim. Behav.* 23:279–286.
- Vleck, D., C.A. Beuchat, and E.J. Braun. 1982. Urinary bladders and osmoregulation in neonatal lizards. *Amer. Zool.* 22:960.
- Warheit, K.I., J.D. Forman, J.B. Losos, and D.B. Miles. 1999. Morphological diversification and adaptive radiation: a comparison of two diverse lizard clades. *Evolution* 53:1226–1234.
- Wauer, R.H. 1971. Ecological distribution of birds of the Chisos Mountains, Texas. *Southwest. Nat.* 16:1–29
- Webb, R.G. 1967. Variation and distribution of the iguanid lizard *Sceloporus bulleri*, and the description of a related new species. *Copeia* 1967:202–213.
- . 1970. Another new night lizard (*Xantusia*) from Durango, Mexico. *Contrib. Sci. Los Angeles Co. Mus. Nat. Hist.* (194):1–10.
- . 1984. Herpetogeography in the Mazatlán-Durango region of the Sierra Madre Occidental, Mexico, p. 217–241. *In R.A. Seigel, L.E. Hunt, J.L. Knight, L. Malaret, and N.L. Zuschlag (eds.), Vertebrate Ecology and Systematics. A Tribute to Henry S. Fitch*. Univ. Kansas Mus. Nat. Hist. Spec. Publ. (10):viii+[i] + 278 p., 1 color frontis.
- . 1988. Type and type locality of *Sceloporus poinsettii* Baird and Girard (Sauria, Iguanidae). *Texas J. Sci.* 40:407–415.
- . 2006. Variation in the Crevice Spiny Lizard, *Sceloporus poinsettii* Baird and Girard. *Bull. Maryland Herpetol. Soc.* 42:65–114.
- and R.H. Baker. 1962. *Terrestrial vertebrates of the*

- Pueblo Nuevo area of southwestern Durango, Mexico. *Amer. Midl. Nat.* 68:325–333.
- , J.A. Lemos-Espinal, and H.M. Smith. 2002. A new subspecies of the lizard *Sceloporus mucronatus* (Sauria, Phrynosomatidae). *Bull. Maryland Herpetol. Soc.* 38:1–14.
- Werning, H. 2002. *Stachelleguane*. Natur und Tier-Verlag GmbH, Münster, Germany.
- Wiens, J.J. 1993. Phylogenetic relationships of phrynosomatid lizards and monophyly of the *Sceloporus* group. *Copeia* 1993:287–299.
- . 1999. Phylogenetic evidence for multiple losses of a sexually selected character in phrynosomatid lizards. *Proc. R. Soc. Lond. B* 266:1529–1535.
- . 2000. Decoupled evolution of display morphology and display behaviour in phrynosomatid lizards. *Biol. J. Linn. Soc.* 70:597–612.
- and T.A. Penkrot. 2002. Delimiting species using DNA and morphological variation and discordant species limits in spiny lizards (*Sceloporus*). *Syst. Biol.* 51:69–91.
- and T.W. Reeder. 1997. Phylogeny of the spiny lizards (*Sceloporus*) based on molecular and morphological evidence. *Herpetol. Monogr.* (11):1–101.
- , –, and A. Nieto-Montes de Oca. 1999. Molecular phylogenetics and evolution of sexual dichromatism among populations of the Yarrow's Spiny Lizard (*Sceloporus jarrovi*). *Evolution* 53:1884–1897.
- Williamson, M.A., P.W. Hyder, and J.S. Applegarth. 1994. *Snakes, Lizards, Turtles, Frogs, Toads and Salamanders of New Mexico*. Sunstone Press, Santa Fe, New Mexico.
- Wilson, L.D. and J.R. McCranie. 1979. Notes on the herpetofauna of two mountain ranges in México (Sierra Fría, Aguascalientes, and Sierra Morones, Zacatecas). *J. Herpetol.* 13:271–278.
- Wozniak, E.J., C. Kanitz, B. Homer, R. Kreisle, S.R. Telford, Jr., and G.L. McLaughlin. 1996a. Demonstration of common and stage-specific anti-*Hepatozoon mocassini* antibodies in experimentally infected unnatural lizard hosts. *Intl. J. Parasitol.* 26:131–133.
- , K.R. Kazacos, S.R. Telford, Jr., and G.L. McLaughlin. 1996b. Characterization of the clinical and anatomical pathological changes associated with *Hepatozoon mocassini* infections in unnatural reptilian hosts. *Intl. J. Parasitol.* 26:141–146.
- , S.R. Telford, Jr., and G.L. McLaughlin. 1996c. Molecular differentiation of two New World saurian *Plasmodium* species in different host species using the polymerase chain reaction. *J. Parasitol.* 82:372–375.
- Wright, A.H. and A.A. Wright. 1957. *Handbook of Snakes of the United States and Canada*. Vol. I. Comstock Publ. Assoc., Cornell Univ. Press, Ithaca, New York.
- Wyles, J.S. and G.C. Gorman. 1978. Close relationships between the lizard genus *Sator* and *Sceloporus utiformis* (Reptilia, Lacertilia, Iguanidae): electrophoretic and immunological evidence. *J. Herpetol.* 12:343–350.
- Yarrow, H.C. "1882"[1883]. Check list of North American Reptilia and Batrachia, with catalogue of specimens in U.S. National Museum. *Bull. U.S. Natl. Mus.* (24):vi + 249 p.
- Yatkola, D.A. 1976. Mid-Miocene lizards from western Nebraska. *Copeia* 1976:645–654.
- Zwart, P., F.G. Poelina, and W.J. Strik. 1970. The distribution of various types of Salmonellae and Arizonas in reptiles. *Zentralb. Bak. Parasitenk. Infek. Hyg.* 213A:201–212.

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