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ANNOTATED CHECKLIST OF RECENT LAND MAMMALS OF TEXAS

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More than a decade has passed since publication of the most recent state-wide list of mammals in Texas (Davis, 1974, reprinted 1978). All species occurring in the state also were treated in Hall's (1981) *The Mammals of North America*, but formal entries in that two-volume work terminated in 1977 (although a few addenda items at the end of the second volume extend that date by several years). A number of taxonomic changes and extensions of known distribution involving mammalian taxa that occur in Texas have appeared in print since publication of the aforementioned books. Because compilations of the sort presented here facilitate the work of many biologists, especially students, we compiled the present up-dated list. Our aim was to incorporate all appropriate published data through the end of 1987, but a few publications issued early in 1988 also are included and several previously unreported records are listed.

In addition to the works mentioned above, the publications by Schmidly (1977, 1983, 1984) on mammals of the Trans-Pecos region, those occurring in the state to the east of the Balcones Fault Zone, and a synopsis of furbearers in Texas, respectively, were used as points of departure in developing our list, as was the treatment by Dalquest and Horner (1984) of mammals in north-central Texas. Sources of additional information usually are cited in text.

In arranging taxa for presentation, we followed conventional phylogenetic sequence through genera, but species names are

entered alphabetically under each genus. A total of 152 species is included in this checklist; those taxa (13) marked with an asterisk have been introduced from outside North America, and occur in the wild in sufficient numbers to be admitted here. For use of vernacular names, we followed Jones *et al.* (1986). Users will note that more detailed distributional data are provided for some species than for others, a reflection of completeness of the published record. Description of many of the major geographic features mentioned herein and a summary of their ecology can be found in Gould (1975).

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ORDER MARSUPIALIA—Marsupials

Family Didelphidae (opossums)

Didelphis virginiana (Virginia opossum).—Occurs throughout most of Texas except in relatively xeric areas in western part of state (parts of Llano Estacado and most of Trans-Pecos, for example). The subspecies are *D. v. virginiana* Kerr, 1792, in northern and central Texas and *D. v. pigra* Bangs, 1898, in the south and southeast.

ORDER INSECTIVORA—Insectivores

Family Soricidae (shrews)

Blarina carolinensis (southern short-tailed shrew).—Known from eastern one-fourth of state. The subspecies are *B. c. carolinensis* (Bachman, 1837) in the northern part of the range in Texas (south at least to Nacogdoches County) and *B. c. minima* Lowery, 1943, in the south.

Blarina hylophaga (Elliot's short-tailed shrew).—Recorded only from Montague County and from Aransas National Wildlife Refuge, Aransas County. The subspecies are *B. h. hylophaga* Elliot, 1899, and *B. h. plumbea* Davis, 1941, respectively. The systematics of shrews of the genus *Blarina* have not been entirely resolved to date, differences among the three known species

having been based primarily on mensural data and karyology. Pending further study, we follow Jones *et al.* (1984) in referring these apparently isolated populations to *B. hylophaga*.

Cryptotis parva (least shrew).—Occurs in eastern and central parts of state, west in northern Panhandle to New Mexico border (Owen and Hamilton, 1986), and to Val Verde County along Rio Grande. The subspecies are *C. p. parva* (Say, 1823) throughout most of the distribution in Texas and *C. p. berlandieri* (Baird, 1858) on the Rio Grande Plain.

Notiosorex crawfordi (desert shrew).—Recorded from western two-thirds of state, east at least to Archer and Wichita counties in north, and to Gulf Coast southwardly. The subspecies is *N. c. crawfordi* (Coues, 1877).

Family Talpidae (moles)

Scalopus aquaticus (eastern mole).—Presently known from approximately eastern two-thirds of state, west along Canadian River in Panhandle, possibly to New Mexican border, and southwardly to apparently isolated population in Presidio County. Five subspecies currently are thought to occur in Texas (Yates and Schmidly, 1977): *S. a. aereus* (Bangs, 1896) in the extreme east and also the Panhandle region; *S. a. alleni* Baker, 1951, in south-central Texas; *S. a. cryptus* Davis, 1942, in the east-central part of the state; *S. a. inflatus* Jackson, 1914, on the southern part of the Rio Grande Plain; and *S. a. texanus* (J. A. Allen, 1891), an enigmatic race known from Presidio County by a single specimen taken in 1887, and far removed from other known populations except for one individual from the Sierra del Carmens, across the Rio Grande in adjacent Coahuila.

ORDER CHIROPTERA—Bats

Family Mormoopidae (mormoopid bats)

Mormoops megalophylla (ghost-faced bat).—Known from Apache Mountains, Culberson County (Dalquest and Stangl, 1986), and southern Trans-Pecos, southern part of Edwards Plateau, and southern Texas (Cameron and Hidalgo counties); inhabits caves along extreme southern edge of Edwards Plateau in winter and is summer resident of Trans-Pecos. The subspecies is *M. m. megalophylla* (Peters, 1864).

Family Phyllostomidae (leaf-nosed bats)

Leptonycteris nivalis (big long-nosed bat).—Recorded only from Big Bend area in southern Trans-Pecos region (Brewster and Presidio counties); probably resident there only in warm weather. *L. nivalis* (Saussure, 1860) is a monotypic species.

Choeronycteris mexicana (Mexican long-tongued bat).—Known by single record, represented by photographs only, from Santa Ana National Wildlife Refuge, Hidalgo County (LaVal and Shifflett, 1972), and probably representing an accidental northward occurrence. *C. mexicana* Tschudi, 1844, is a monotypic species.

Diphylla ecaudata (Hairy-legged vampire).—Known only by single extralimital record from Val Verde County. *D. ecaudata* Spix, 1823, is a monotypic species.

Family Vespertilionidae (vespertilionid bats)

Myotis austroriparius (southeastern myotis).—Known range includes extreme eastern Texas, from Bowie County southward to Hardin and Liberty counties. The subspecies is *M. a. austroriparius* (Rhoads, 1897).

Myotis californicus (California myotis).—Recorded in Texas only from western and central Trans-Pecos region. The subspecies is *M. c. californicus* (Audubon and Bachman, 1842).

Myotis ciliolabrum (western small-footed myotis).—Saxicolous species known from western one-half of Trans-Pecos Texas and by a single specimen (Hollander and Jones, 1987) from Armstrong County in Panhandle. The subspecies is *M. c. ciliolabrum* (Merriam, 1886)—see van Zyll de Jong (1985).

Myotis lucifugus (little brown myotis).—Recorded from Texas on basis of single specimen from Fort Hancock, Hudspeth County; Schmidly (1977) opined that "it is doubtful that resident populations of this bat occur in the Trans-Pecos." The subspecies is *M. l. occultus* Hollister, 1909.

Myotis septentrionalis (northern myotis).—Previously unreported specimen from Winter Haven, Dimmit County, in the National Museum of Natural History is only known record from state; obtained almost half a century ago, this individual extends known range of northern myotis more than 500 miles southward from southwestern Arkansas and eastern Oklahoma; present status in Texas unknown. *M. septentrionalis* (Trouessart, 1897) is a monotypic species (van Zyll de Jong, 1985).

Myotis thysanodes (fringed myotis).—Reported from much of Trans-Pecos region and from Crosby County at eastern edge of

Llano Estacado (Jones *et al.*, 1987). The subspecies is *M. t. thysanodes* G. S. Miller, 1897.

Myotis velifer (cave myotis).—Occurs over most of western part of state, east at least (north to south) to Dallas, McLennan, Williamson, Travis, Hays, Bexar, La Salle, and Hidalgo (specimens in National Museum of Natural History) counties. The subspecies are *M. v. incautus* (J. A. Allen, 1896) in the south and *M. v. magnamolaris* Choate and Hall, 1967, northwestwardly (see Dalquest and Stangl, 1984).

Myotis volans (long-legged myotis).—Known from central Trans-Pecos Texas and by enigmatic specimen from Knox County, far to the northeast. The subspecies is *M. v. interior* G. S. Miller, 1914.

Myotis yumanensis (Yuma myotis).—Recorded from southern Trans-Pecos region and from just east of Pecos River in Val Verde County (Manning *et al.*, 1987); there is also an unreported specimen in the Texas Natural History Collection from Starr County. The subspecies is *M. y. yumanensis* (H. Allen, 1864).

Lasionycteris noctivagans (silver-haired bat).—State-wide as migrant in spring and autumn; probably resident in some parts of southern Texas (Trans-Pecos, for example—see Schmidly, 1977) in cold months. *L. noctivagans* Le Conte, 1831, is a monotypic species.

Pipistrellus hesperus (western pipistrelle).—Widely distributed in suitable rocky habitats in Trans-Pecos region; also occurs eastward to Knox, Haskell, and Uvalde counties and northward along eastern escarpment of Llano Estacado at least to Randall County. The subspecies is *P. h. maximus* Hatfield, 1936.

Pipistrellus subflavus (eastern pipistrelle).—Known from much of eastern and central Texas, westward to breaks of Llano Estacado and Val Verde County, and south to Padre Island (Zehner, 1985) and Cameron County. The subspecies are *P. s. subflavus* (F. Cuvier, 1832) over much of the range of the species in the state and *P. s. clarus* Baker, 1954, in the extreme southwest.

Eptesicus fuscus (big brown bat).—Widely distributed over most of eastern and western parts of state; curiously, unrecorded from central and southern Texas. The subspecies are *E. f. fuscus* (Palisot de Beauvois, 1796) in the east and *E. f. pallidus* Young, 1908, in the west.

Lasiurus blossevillei (western red bat).—Only recently recognized as distinct from *L. borealis*; known only by one specimen from Sierra Vieja Mountains, Presidio County (Genoways and Baker, 1988). The subspecies is *L. b. teliotis* (H. Allen, 1891).

Lasiurus borealis (eastern red bat).—State-wide in suitable wooded habitats; migratory, but some individuals probably overwinter in Texas. *L. borealis* (Müller, 1776) probably is a monotypic species (Baker *et al.*, 1988).

Lasiurus cinereus (hoary bat).—State-wide as migrant in spring and autumn; additionally, some females may bear and raise young in late spring and summer (see Manning *et al.*, 1987). The subspecies is *L. c. cinereus* (Palisot de Beauvois, 1796).

Lasiurus ega (southern yellow bat).—Known in Texas only from Rio Grande Valley in Cameron County northward along Gulf Coast to Nueces County (Spencer *et al.*, 1988). The subspecies probably is *L. e. panamensis* (Thomas, 1901)—see Baker *et al.* (1988).

Lasiurus intermedius (northern yellow bat).—Occurs only in southeastern part of state. The subspecies are *L. i. intermedius* H. Allen, 1862, from San Patricio County southward and *L. i. floridanus* (G. S. Miller, 1902) from Bexar and Travis counties eastward.

Lasiurus seminolus (Seminole bat).—Known in state only from extreme eastern part, west at least to Burleson County (Lee, 1987). *L. seminolus* (Rhoads, 1895) is a monotypic species.

Nycticeius humeralis (evening bat).—Occupies approximately eastern one-third of state, westward in north to Palo Pinto County, in central Texas to Bandera, Kerr, and San Saba (Wilkins *et al.*, 1979) counties, and southwestward to Kinney and Real counties (Manning *et al.*, 1987). The subspecies is *N. h. humeralis* (Rafinesque, 1818).

Euderma maculatum (spotted bat).—Recorded only from Big Bend National Park, but to be looked for elsewhere in Trans-Pecos region. *E. maculatum* (J. A. Allen, 1891) is a monotypic species.

Plecotus townsendii (Townsend's big-eared bat).—Cavernicolus species known from approximately western one-half of state. The subspecies is *P. t. pallescens* (G. S. Miller, 1897).

Plecotus rafinesquii (Rafinesque's big-eared bat).—Occurs only in extreme eastern Texas, the westernmost record being from Polk County. The subspecies is *P. r. macrotis* Le Conte, 1831.

Antrozous pallidus (pallid bat).—Common resident of western one-half of state. The subspecies recorded from Texas (Martin and Schmidly, 1982) is *A. p. pallidus* (Le Conte, 1856), but *A. p. bunkerii* Hibbard, 1934, occurs in the vicinity of the Red River and in the Panhandle (Manning *et al.*, 1988).

Family Molossidae (free-tailed bats)

Tadarida brasiliensis (Brazilian free-tailed bat).—State-wide in warm months; individuals of western and central populations migrate southward in winter, but populations in extreme eastern Texas are resident year round. The currently recognized subspecies are *T. b. cynocephala* (Le Conte, 1831) in the eastern one-fourth of the state and *T. b. mexicana* (Saussure, 1860) elsewhere. However, the systematics of these two taxa currently are under study and they may, in fact, represent distinct species (but see Schmidly *et al.*, 1977).

Tadarida femorosacca (pocketed free-tailed bat).—Recorded in state only from Big Bend area; to be looked for elsewhere in Trans-Pecos region. *T. femorosacca* (Merriam, 1884) is a monotypic species.

Tadarida macrotis (big free-tailed bat).—Known from western part of state only as seasonal migrant, except for breeding population in Big Bend National Park in warm months; also recorded from San Patricio County. *T. macrotis* (Gray, 1839) is a monotypic species.

Eumops perotis (western mastiff bat).—Known as summer resident from Big Bend area and Val Verde County; winter range unknown. The subspecies is *E. p. californicus* (Merriam, 1890).

ORDER XENARTHRA—Edentates

Family Dasypodidae (armadillos)

Dasypus novemcinctus (nine-banded armadillo).—Occurs throughout much of state; absent only from most of Trans-Pecos and Panhandle. The subspecies is *D. n. mexicanus* Peters, 1864.

ORDER LAGOMORPHA—Lagomorphs

Family Leporidae (hares and rabbits)

Sylvilagus aquaticus (swamp rabbit).—Found in eastern one-third of state, west to Cooke and Travis counties. *S. aquaticus* (Bachman, 1837) evidently is a monotypic species (see Lowery, 1974, and Schmidly, 1983).

Sylvilagus audubonii (desert cottontail).—Occupies upland habitats in western one-half of Texas. The subspecies are *S. a. minor* (Mearns, 1896) in the southern Trans-Pecos, eastward to Val Verde County, *S. a. neomexicanus* Nelson, 1907, in the northern part of the range in the state (south to Reeves and northern Brewster counties), and *S. a. parvulus* (J. A. Allen, 1904)

from Llano County southward in south-central Texas to the Rio Grande.

Sylvilagus floridanus (eastern cottontail).—Occurs in eastern three-fourths of state and parts of Trans-Pecos region. The subspecies are *S. f. alacer* (Bangs, 1896) in eastern Texas, *S. f. chapmani* (J. A. Allen, 1899) in the central and southern parts of the state, *S. f. llanensis* Blair, 1938, on the Llano Estacado, and *S. f. robustus* (Bailey, 1905) from the mountains of the Trans-Pecos. Some authorities (Davis, 1974, for example) have regarded *robustus* as specifically distinct from *floridanus*.

Lepus californicus (black-tailed jackrabbit).—Found throughout Texas except in extreme southeastern part. The subspecies are *L. c. melanotis* Mearns, 1890, in the north, *L. c. merriami* Mearns, 1896, in the south, and *L. c. texianus* Waterhouse, 1848, in the southwest.

ORDER RODENTIA—Rodents

Family Sciuridae (squirrels and allies)

Tamias canipes (gray-footed chipmunk).—Known only from Guadalupe Mountains and Sierra Diablo in Culberson County. The subspecies is *T. c. canipes* (Bailey, 1902). Except for one species, all New World chipmunks were, for many years, assigned to the genus *Eutamias*. Recent investigations have shown that all should be grouped into the single genus *Tamias* (see Jones *et al.*, 1986).

Ammospermophilus interpres (Texas antelope squirrel).—Recorded from western and southern parts of Trans-Pecos region, and eastward at least to Crane and Reagan counties (Hollander *et al.*, 1987b).

Spermophilus mexicanus (Mexican ground squirrel).—Occurs throughout much of southern and western Texas (west to Culberson, Jeff Davis, and Presidio counties in Trans-Pecos), north almost to Red River just east of Panhandle. The subspecies is *S. m. parvidens* Mearns, 1896. This species may hybridize occasionally with *S. tridecemlineatus* at places where their ranges meet or overlap (see Cothran *et al.*, 1977).

Spermophilus spilosoma (spotted ground squirrel).—Known from approximately western one-half of Texas and also southward on Rio Grande Plain. The subspecies are *S. s. annectens* Merriam, 1893, in the southern part of the state, *S. s. canescens* Merriam, 1890, in the western Trans-Pecos, and *S. s. marginatus* Bailey, 1890, in the remainder of the range.

Spermophilus tridecemlineatus (thirteen-lined ground squirrel).—Recorded from northwestern part of state and in corridor in east-central Texas southward to Gulf Coast. The subspecies are *S. t. arenicola* (Howell, 1928) in the Panhandle and adjacent areas to the south and *S. t. texensis* Merriam, 1898, elsewhere within the distribution in the state.

Spermophilus variegatus (rock squirrel).—Known from Trans-Pecos and south-central part of state. The subspecies are *S. v. buckleyi* Slack, 1861, in south-central Texas and *S. v. grammurus* (Say, 1823) to the west.

Cynomys ludovicianus (black-tailed prairie dog).—Occurs or once occurred in western one-half of state north of Rio Grande Plain; easternmost records from Montague County in north and Bexar County in south; now extirpated over parts of former range. The subspecies are *C. l. arizonensis* Mearns, 1890, in the Trans-Pecos and *C. l. ludovicianus* (Ord, 1815) elsewhere.

Sciurus carolinensis (gray squirrel).—Native distribution includes eastern one-third of state, westward at least to Lavaca, Lee, and McLennan counties; introduced in Lubbock and perhaps other counties to west of natural range. The subspecies is *S. c. carolinensis* Gmelin, 1788.

Sciurus niger (fox squirrel).—Occurs in suitable habitats in eastern two-thirds of Texas; introduced at some places outside native range. The subspecies are *S. n. limitis* Baird, 1855, in most of the western part of the range in the state, *S. n. ludovicianus* Custis, 1806, in the east, and *S. n. rufiventer* É. Geoffroy St.-Hilaire, 1803, which occurs in the Canadian River drainage and adjacent areas of northwestern and extreme north-central Texas.

Glaucomys volans (eastern flying squirrel).—Known from wooded areas in eastern one-third of state. The subspecies is *G. v. texensis* Howell, 1915.

Family Geomyidae (pocket gophers)

Thomomys bottae (Botta's pocket gopher).—Recorded from much of Trans-Pecos Texas, eastward across the Edwards Plateau (Hollander *et al.*, 1987b) and immediately adjacent areas at least to Kimble County. Ten subspecies have been recognized in Texas, eight restricted to suitable habitats in the Trans-Pecos region: *T. b. baileyi* Merriam, 1901; *T. b. guadalupensis* Goldman, 1936; *T. b. lachuguilla* Bailey, 1902; *T. b. limpiaie* Blair, 1939; *T. b. pervarius* Goldman, 1938; *T. b. scotophilus* Davis, 1940; *T. b. spatiosus* Goldman, 1938; and *T. b. texensis* Bailey, 1902. Additionally, *T. b. limitaris* Goldman, 1936, occurs in the eastern

Trans-Pecos and eastward across the Pecos River onto the western part of the Edwards Plateau, and *T. b. confinalis* Goldman, 1936, occupies parts of the Edwards Plateau to the east.

Geomys arenarius (desert pocket gopher).—Known only from El Paso County. The subspecies is *G. a. arenarius* Merriam, 1905. In a recent study, Hafner and Geluso (1983) placed the two known subspecies of *G. arenarius* as races of the earlier-named *G. bursarius*. Accordingly, the status of *arenarius*, which is geographically isolated from other populations of *Geomys* in Texas, remains uncertain.

Geomys attwateri (Attwater's pocket gopher).—Recorded from south-central part of eastern Texas, from Milam County southward to Matagorda and San Patricio counties, and southwestward to Atascosa County. *G. attwateri* Merriam, 1895, is a monotypic species.

Geomys breviceps (Baird's pocket gopher).—Occurs in eastern one-fourth of state; reported from Delta County southward at least to Falls County, and hence on southward east of Brazos River to Gulf Coast. The subspecies in Texas is *G. b. sagittalis* Merriam, 1895 (see Honeycutt and Schmidly, 1979, and Schmidly, 1983).

Geomys bursarius (plains pocket gopher).—Reported from northwestern and north-central Texas, south to Crane and Winkler counties in west and to Gillespie County in east, and eastward to Denton, McLennan, and Tarrant counties. Five subspecies currently are thought to occur in the state (Honeycutt and Schmidly, 1979; Hollander *et al.*, 1987a), as follows: *G. b. jugossicularis* Hooper, 1940, in the extreme northwestern part of the Panhandle; *G. b. major* Davis, 1940, over most of the Panhandle and north-central Texas; *G. b. knoxjonesi* Baker and Genoways, 1975, on the southern Llano Estacado and in adjacent areas; *G. b. llanensis* Bailey, 1905, in Gillespie and Llano counties; and *G. b. texensis* Merriam, 1895, which is confined to Mason County.

Geomys personatus (Texas pocket gopher).—Known in southern part of state, frequently in isolated populations, from Val Verde, Kinney, Atascosa, and Karnes counties southward in east to Rio Grande. Seven subspecies presently are recognized (Williams and Genoways, 1981): *G. p. davisii* Williams and Genoways, 1981, in the Rio Grande Valley in western Webb and Zapata counties; *G. p. fallax* Merriam, 1895, from Nueces Bay northward to Karnes County; *G. p. fuscus* Davis, 1940, which is known only from Kinney and Val Verde counties; *G. p.*

maritimus Davis, 1940, in Kleberg and Nueces counties; *G. p. megapotamus* Davis, 1940, from La Salle County southeastward to the south side of Baffin Bay and to the Rio Grande; *G. p. personatus* True, 1889, on Mustang and Padre islands; and *G. p. streckeri* Davis, 1940, which is restricted to Dimmit and eastern Zapata counties.

Cratogeomys castanops (yellow-faced pocket gopher).—Found in western one-third of state, from Panhandle southward to Maverick County; also recorded from Cameron County (Cleveland, 1977). Seven subspecies currently are thought to occur in Texas: *C. c. angusticeps* Nelson and Goldman, 1934, which is found from the lower Pecos Valley eastward; *C. c. clarkii* (Baird, 1855) in the immediate area of the Rio Grande in Big Bend National Park; *C. c. hirtus* Nelson and Goldman, 1934, in the Rio Grande Valley south to El Paso; *C. c. parviceps* (Russell, 1968), which is recorded from Texas only from the Guadalupe Mountains; *C. c. perplanus* Nelson and Goldman, 1934 (*simulans* a synonym—see Dowler and Genoways, 1979), which occupies the Panhandle and the northeastern Trans-Pecos; *C. c. pratensis* (Russell, 1968) in the east-central part of the Trans-Pecos region; and *C. c. torridus* (Russell, 1968), which occurs in parts of the western and southern Trans-Pecos.

Family Heteromyidae (pocket mice and kangaroo rats)

Perognathus flavescens (plains pocket mouse).—Recorded in Texas from El Paso County and from High Plains and adjacent areas in northwestern part of state, south at least to Callahan and Ward counties. The subspecies are *P. f. copei* Rhoads, 1894, in northwestern Texas (see Reed and Choate, 1986) and *P. f. melanotis* Osgood, 1900, in the western Trans-Pecos (see Williams, 1978).

Perognathus flavus (silky pocket mouse).—Found in western two-thirds of state. The subspecies in Texas probably are *P. f. flavus* Baird, 1855, north of the Canadian River in the Panhandle, *P. f. gilvus* Osgood, 1900, in the western part of the range, and *P. f. merriami* J. A. Allen, 1892, in the eastern part. For many years, *P. flavus* and *P. merriami* were regarded as separate species (Wilson, 1973), and the relationships between these taxa still are deserving of serious study.

Chaetodipus hispidus (hispid pocket mouse).—Occurs throughout Texas save for extreme southeastern part. The subspecies are *C. h. paradoxus* (Merriam, 1889) in the western one-third of the state and *C. h. hispidus* (Baird, 1858) in the east.

Chaetodipus intermedius (rock pocket mouse).—Reported only from western part of Trans-Pecos Texas. The subspecies is *C. i. intermedius* (Merriam, 1889).

Chaetodipus nelsoni (Nelson's pocket mouse).—Occurs in southern and central Trans-Pecos region, and just east of Pecos River in Upton and Val Verde counties (Hollander *et al.*, 1987b). The subspecies is *C. n. canescens* (Merriam, 1904).

Chaetopidus penicillatus (desert pocket mouse).—Ranges throughout Trans-Pecos Texas, eastward at least to Val Verde, Ward, and Winkler counties. The subspecies is *C. p. eremicus* (Mearns, 1898).

Dipodomys compactus (Gulf Coast kangaroo rat).—Recorded from eastern two-thirds of South Texas mainland and from Mustang and Padre islands. According to Baumgardner and Schmidly (1981) the two recognized subspecies are *D. c. compactus* True, 1889, on the barrier islands and *D. c. sennetti* (J. A. Allen, 1891) on the mainland.

Dipodomys elator (Texas kangaroo rat).—Occurs in north-central Texas, from Cottle and Motley counties (Jones *et al.*, 1987) in west to Montague County in east. *D. elator* Merriam, 1894, is a monotypic species.

Dipodomys merriami (Merriam's kangaroo rat).—Ranges throughout Trans-Pecos region; known east of Pecos River from Crockett, Gaines, Martin, and Reagan counties. The subspecies is *D. m. ambiguus* Merriam, 1890.

Dipodomys ordii (Ord's kangaroo rat).—Known from western and southern parts of state. The subspecies (Baumgardner and Schmidly, 1981) are *D. o. medius* Setzer, 1949, from the central Llano Estacado southward east of the Pecos River to Crane, Crockett, and Upton counties (Chapman and Spencer, 1987; Hollander *et al.*, 1987b), *D. o. obscurus* (J. A. Allen, 1891) in the western, central, and southern parts of the Rio Grande Plain and in the southern Big Bend area, *D. o. ordii* Woodhouse, 1853, in most of the Trans-Pecos region, and *D. o. richardsoni* (J. A. Allen, 1891) from the Panhandle and adjacent areas southward at least to Floyd County.

Dipodomys spectabilis (banner-tailed kangaroo rat).—Occurs in western and central Trans-Pecos region; reported east of Pecos River from Andrews, Dawson, Ector, Gaines, Martin, Ward, and Winkler counties. The subspecies is *D. s. baileyi* Goldman, 1923.

Liomys irroratus (Mexican spiny pocket mouse).—Known only from extreme southern Texas (Cameron, Hidalgo, and Willacy counties). The subspecies is *L. i. texensis* Merriam, 1902.

Family Castoridae (beavers)

Castor canadensis (beaver).—Found over most of state where suitable aquatic habitat prevails; absent from Llano Estacado and some adjacent areas and from much of Trans-Pecos region. The subspecies are *C. c. mexicanus* Bailey, 1913, along the Rio Grande and its immediate tributaries and *C. c. texensis* Bailey, 1905, to the north.

Family Cricetidae (native mice and rats)

Oryzomys couesi (Coues' rice rat).—Known in state only from Cameron and Hidalgo counties (Benson and Gehlbach, 1979); probably occurs also in immediately adjacent areas. The subspecies is *O. c. aquaticus* J. A. Allen, 1891.

Oryzomys palustris (marsh rice rat).—Distributed in eastern part of Texas, west to Brazos County and hence southward at least to Willacy County. The subspecies is *O. p. texensis* J. A. Allen, 1894.

Reithrodontomys fulvescens (fulvous harvest mouse).—Occurs in eastern and central Texas (west to Armstrong and Childress counties in north) and in parts of Trans-Pecos region. The subspecies are *R. f. aurantius* J. A. Allen, 1895, in the eastern part of the state, *R. f. canus* Benson, 1939, in the eastern and southern Trans-Pecos, *R. f. intermedius* J. A. Allen, 1895, on the Rio Grande Plain and in adjacent areas of southern Texas, and *R. f. laceyi* J. A. Allen, 1896, in the central part of the state.

Reithrodontomys humulis (eastern harvest mouse).—Known from eastern part of state, west to Fort Bend and McLennan counties. The subspecies is *R. h. merriami* J. A. Allen, 1895.

Reithrodontomys megalotis (western harvest mouse).—Occurs in western Texas, from Panhandle southward to Trans-Pecos region. The subspecies are *R. m. aztecus* J. A. Allen, 1893, in the northern part of the range and *R. m. megalotis* (Baird, 1858) to the south.

Reithrodontomys montanus (plains harvest mouse).—Found in western and central parts of state, east and southeast at least to Madison and Bexar counties, respectively. The subspecies are *R. m. griseus* Bailey, 1905, throughout most of the range in Texas and *R. m. montanus* (Baird, 1855) in the Trans-Pecos region.

Peromyscus attwateri (Texas mouse).—Known only from central part of state, south to Crockett, Edwards, and Travis counties. *P. attwateri* (J. A. Allen, 1893) is a monotypic species.

Peromyscus boylii (brush mouse).—Occurs in Texas along escarpment of Llano Estacado and in adjacent parts of Panhandle (north at least to Randall County) and in Trans-Pecos region. The subspecies is *P. b. rowleyi* (J. A. Allen, 1893).

Peromyscus difficilis (rock mouse).—Known only from mountainous parts of western and southern Trans-Pecos Texas. The subspecies are *P. d. nasutus* (J. A. Allen, 1891) from the Guadalupe Mountains in Culberson County and *P. d. penicillatus* Mearns, 1896, from Brewster, El Paso, and Presidio counties.

Peromyscus eremicus (cactus mouse).—Recorded from Trans-Pecos region southeastward along Rio Grande to Webb County. The subspecies is *P. e. eremicus* (Baird, 1858).

Peromyscus gossypinus (cotton mouse).—Found in woodlands in eastern one-fourth of state, west at least (north to south) to Hunt, Kaufman, Freestone, Leon, and Grimes counties. The subspecies is *P. g. megacephalus* (Rhoads, 1894).

Peromyscus leucopus (white-footed mouse).—State-wide in distribution. The subspecies, which are in need of systematic review, are *P. l. leucopus* (Rafinesque, 1818) in the eastern one-third of the state, *P. l. texanus* (Woodhouse, 1853) in central Texas (west to Brewster, Terrell, and Val Verde counties), and *P. l. tornillo* Mearns, 1896, in the Panhandle and much of the Trans-Pecos.

Peromyscus maniculatus (deer mouse).—Known from all but eastern part of state. The subspecies are *P. m. blandus* Osgood, 1904, in the Trans-Pecos and areas immediately to the east, *P. m. luteus* Osgood, 1905, in the Panhandle, south at least to Winkler County, *P. m. ozarkiarum* Black, 1935, which occurs sympatrically with the following race in Cooke, Denton, and Grayson counties, and *P. m. pallescens* J. A. Allen, 1896, in the eastern part of the range in Texas.

Peromyscus pectoralis (white-ankled mouse).—Recorded from most of Trans-Pecos region (west to Culberson and Hudspeth counties) and northeastward through central part of state to Oklahoma (eastern limits of range along Balcones Escarpment from Bexar County northward to McLennan County). The subspecies in Texas is *P. p. laceianus* Bailey, 1906.

Peromyscus truei (piñon mouse).—Recorded in state only from breaks of Llano Estacado and immediately adjacent rough country to east and from Guadalupe Mountains (Cornely *et al.*, 1981). The subspecies are *P. t. comanche* Blair, 1943, and *P. t. truei* (Schufeldt, 1885), respectively.

Ochrotomys nuttalli (golden mouse).—Occurs in woodlands of extreme eastern Texas, west at least to Anderson and Houston counties. The subspecies is *O. n. lisae* Packard, 1969.

Baiomys taylori (northern pygmy mouse).—Distributed over eastern one-half of state, except in extreme northeastern part, west to Collingsworth, Lubbock, and Schleicher counties (see Hollander *et al.*, 1987a, 1987b and included citations); has expanded range northward and westward in past decades. The subspecies are *B. t. taylori* (Thomas, 1897) over most of the range in Texas and *B. t. subater* (Bailey, 1905) in the southeast.

Onychomys arenicola (Mearns' grasshopper mouse).—Ranges throughout all but southeastern part of Trans-Pecos Texas; recorded east of Pecos River from Crockett, Ward, and Winkler counties. The subspecies is *O. a. arenicola* Mearns, 1896. This mouse formerly was regarded as representing the species *O. torridus* (see Hinesley, 1979).

Onychomys leucogaster (northern grasshopper mouse).—Known from western Trans-Pecos region and throughout central Texas south to Gulf Coast and Rio Grande. The subspecies are *O. l. albescens* Merriam, 1904, in El Paso and Hudspeth counties, *O. l. arcticeps* Rhoads, 1898, in the Panhandle and adjacent areas to the east, south to Crockett and Pecos counties, and *O. l. longipes* Merriam, 1899, from Tom Green and Terrell counties southward to the Rio Grande and southeastward to Nueces County.

Sigmodon hispidus (hispid cotton rat).—State-wide in distribution. The subspecies are *S. h. berlandieri* Baird, 1855, which occurs from the Panhandle southward to the Trans-Pecos and the Rio Grande Plain and *S. h. texianus* (Audubon and Bachman, 1853) in the eastern and central parts of the state.

Sigmodon ochrognathus (yellow-nosed cotton rat).—Reported only from higher elevations in southern Trans-Pecos region. *S. ochrognathus* Bailey, 1902, is a monotypic species.

Neotoma albigula (white-throated woodrat).—Found in Panhandle and broken country south of Red River, southeastward to Kerr and Llano counties, thence westward throughout much of southwestern part of state. The subspecies (Rogers and Schmidly, 1981) are *N. a. albigula* Hartley, 1894, which occurs over most of the range in Texas, *N. a. robusta* Blair, 1939, from the mountains of the southern Trans-Pecos, and *N. a. warreni* Merriam, 1908, from north of the Canadian River in the northern Panhandle.

Neotoma floridana (eastern woodrat).—Recorded from eastern part of Texas, south to Victoria County and westward to Edwards

and Kerr counties. The subspecies (Birney, 1973; Schmidly, 1983) are *N. f. attwateri* Mearns, 1897, which occupies the northern and western parts of the range in the state and *N. f. rubida* Bangs, 1898, in the southeast. Additionally, *N. f. illinoensis* Howell, 1910, may be found in extreme northeastern Texas.

Neotoma mexicana (Mexican woodrat).—Known in Texas only from mountainous areas in Brewster, Culberson, Jeff Davis, and Presidio counties of Trans-Pecos region. The subspecies is *N. m. mexicana* Baird, 1855.

Neotoma micropus (southern plains woodrat).—Found in western two-thirds of Texas, eastward to Johnson County in north and Gulf Coast in south. The subspecies are *N. m. canescens* J. A. Allen, 1891, in the western part of the range in the state and *N. m. micropus* Baird, 1855, in the east.

Microtus mexicanus (Mexican vole).—Recorded only from higher elevations in Guadalupe Mountains of Culberson County. The subspecies is *M. m. guadalupensis* Bailey, 1902.

Microtus ochrogaster (prairie vole).—Known from state only by one specimen taken in Hardin County in 1902. According to Schmidly (1983), "this species is probably now extinct in eastern Texas." The subspecies was *M. o. ludovicianus* Bailey, 1900.

Microtus pinetorum (woodland vole).—Found in eastern and central parts of state west to Montague County and south at least to Kerr and Newton counties. The subspecies are *M. p. auricularis* Bailey, 1898, in the southern part of the range in Texas and *M. p. nemoralis* Bailey, 1898, to the north.

Ondatra zibethicus (muskrat).—Occurs only in suitable aquatic habitats in northern, southeastern, and southwestern parts of state. The subspecies are *O. z. cinnamominus* (Hollister, 1910) in the north (Canadian River drainage southeastward to Falls and Trinity counties), *O. z. ripensis* (Bailey, 1902) along the Rio Grande and its immediate tributaries in the Trans-Pecos region, and *O. z. rivalicius* (Bangs, 1895) on the Gulf Coastal Plain as far west as Brazoria County.

*Family Muridae (Old World rats and mice)

****Rattus norvegicus*** (Norway rat).—Widespread in Texas in and near human habitations, but not so common as *R. rattus*.

****Rattus rattus*** (roof rat).—Common in urban environs throughout Texas, and sometimes found in or around human habitations in rural settings.

****Mus musculus*** (house mouse).—State-wide in distribution, usually in close association with humans, but feral populations

also are known. Some authors have argued recently that *Mus domesticus*, rather than *M. musculus*, was the house mouse introduced into North America.

Family Erethizontidae (New World porcupines)

Erethizon dorsatum (porcupine).—Known from western one-half of state, east at least to Wichita and Kerr counties. Intraspecific variation in the porcupine has not been studied in detail. Two subspecies may occur in Texas: *E. d. bruneri* Swenk, 1916, in the northern part of the Panhandle and eastward along the Red River and *E. d. couesi* Mearns, 1897, over the remainder of the range in the state.

*Family Myocastoridae (myocastorids)

**Myocastor coypus* (nutria).—Found in aquatic habitats in eastern two-thirds of state, west at least to Pecos River.

ORDER CARNIVORA—Carnivores

Family Canidae (canids)

**Canis familiaris* (domestic dog).—Feral animals common in eastern Texas (Schmidly, 1983).

Canis latrans (coyote).—Known from variety of habitats throughout state; has moved into parts of eastern Texas since elimination of red wolves from much of that region (Schmidly, 1983). The subspecies are *C. l. latrans* Say, 1823, in the Panhandle, *C. l. texensis* Bailey, 1905, in the western one-half of the state south of the Panhandle, and *C. l. frustror* Woodhouse, 1851, in the eastern one-half of Texas.

Canis lupus (gray wolf).—Once ranged throughout western part of state at least as far east as McLennan County; no resident gray wolves remain in Texas, but individuals occasionally may cross into Trans-Pecos region from Mexico (Schmidly, 1977). The subspecies were *C. l. nubilus* Say, 1823, in the Panhandle and eastward to Montague County, *C. l. monstrabilis* Goldman, 1937, throughout west-central and southern Texas, and *C. l. baileyi* Nelson and Goldman, 1929, in extreme western Texas west of the Big Bend.

Canis rufus (red wolf).—Original range included most of area east of Balcones Fault Zone and west to Wichita County; endangered species that still may exist in Liberty, Chambers, and Jefferson counties (Schmidly, 1983). Subspecies included *C. r. gregoryi* Goldman, 1937, along eastern border of the state and *C.*

r. rufus Audubon and Bachman, 1851, in the remainder of the original range.

Vulpes macrotis (kit fox).—Restricted to Trans-Pecos region and adjacent areas east of Pecos River (to Sterling and Irion counties). The subspecies is *V. m. neomexicana* Merriam, 1902.

Vulpes velox (swift fox).—Known from northern and western parts of state as far south as Andrews and Martin counties, and southeast to Menard County (Hollander *et al.*, 1987b). The subspecies is thought to be *V. v. velox* (Say, 1823), but this fox may be monotypic (Stromberg and Boyce, 1986).

Vulpes vulpes (red fox).—Introduced in eastern and central Texas from elsewhere in North America (Bailey, 1905; Davis, 1974) beginning in about 1891, possibly to replace previously decimated populations; species recorded from late Pleistocene cave deposits (see Dalquest *et al.*, 1969, for example); now ranges across central Texas from eastern part of state to lower Pecos River and probably to New Mexico state line. The subspecies is *V. v. fulva* (Desmarest, 1820).

Urocyon cinereoargenteus (gray fox).—Occurs throughout state except possibly in northeastern part of Panhandle; especially common in eastern Texas. The subspecies are *U. c. floridanus* Rhoads, 1895, east of the Balcones Fault Zone and *U. c. scottii* Mearns, 1891, in the western two-thirds of the state.

Family Ursidae (bears)

Ursus americanus (black bear).—Once ranged across state, except in the southernmost counties; in recent years, sighted only infrequently in extreme western Texas and in wooded regions of the east—probably animals that wandered into state from New Mexico and Louisiana, respectively. The subspecies included *U. a. amblyceps* Baird, 1859, in the Trans-Pecos area and northward along the New Mexican border, *U. a. americanus* Pallas, 1780, in the central part of the state, and *U. a. luteolus* Griffith, 1821, in the east adjacent to Louisiana.

Ursus arctos (grizzly or brown bear).—Known by single specimen obtained in Davis Mountains in 1890; now extirpated in state. The subspecies was *U. a. horribilis* Ord, 1815 (see Hall, 1984).

Family Procyonidae (procyonids)

Bassariscus astutus (ringtail).—Recorded from throughout state except in extreme lower Rio Grande and Coastal plains of

southern Texas; usually associated with rocky and wooded habitats. The subspecies is *B. a. flavus* Rhoads, 1894.

Procyon lotor (raccoon).—Ubiquitous throughout state, especially in mesic areas and near human habitations. The subspecies are *P. l. hirtus* Nelson and Goldman, 1930, in the Panhandle north of the Canadian River, *P. l. mexicanus* Baird, 1858, in the western part of the Trans-Pecos, and *P. l. fuscipes* Mearns, 1914, throughout the remainder of the state.

Nasua nasua (coati).—Limited to southwestern and extreme southern parts of state. The subspecies is *N. n. molaris* Merriam, 1902.

Family Mustelidae (mustelids)

Mustela frenata (long-tailed weasel).—Probably occurs statewide, but scarce in most areas, especially in western and northern Texas. The subspecies include: *M. f. neomexicana* (Barber and Cockerell, 1898) mostly west of the 100th meridian; *M. f. texensis* Hall, 1936, in the central part of the state; *M. f. primulina* Jackson, 1913, in the extreme northeastern part of Texas; *M. f. arthuri* Hall, 1927, east of the Balcones Fault Zone in east-central and southeastern areas; and *M. f. frenata* Lichtenstein, 1831, in the southern part of the state along the Gulf Coast and adjacent to Mexico.

Mustela nigripes (black-footed ferret).—Ranged in northern and western parts of state as far as Cooke County in east and Pecos County in south. *M. nigripes* (Audubon and Bachman, 1851), which is a monotypic species, has been extirpated from Texas and from most other parts of its former geographic range.

Mustela vison (mink).—Known from about eastern one-half of state, westward to northern Panhandle, in habitats near permanent water. The subspecies is *M. v. mink* Peale and Palisot de Beauvois, 1796.

Taxidea taxus (badger).—Found across state except in extreme eastern part; there is some evidence this species is extending its geographic range eastward in connection with changing land-use practices (Schmidly, 1983; 1984). The subspecies is *T. t. berlandieri* Baird, 1858.

Spilogale gracilis (western spotted skunk).—Recorded from southwestern part of state as far north as Howard County (Hollander *et al.*, 1987b) and eastward to Duval County. The subspecies is *S. g. leucoparia* Merriam, 1890.

Spilogale putorius (eastern spotted skunk).—Occurs in Panhandle and north-central Texas, and in eastern part of state east of

Balcones Escarpment. The subspecies is *S. p. interrupta* (Rafinesque, 1820).

Mephitis macroura (hooded skunk).—Known only from Big Bend area and adjacent parts of central Trans-Pecos, northward to Reeves and Ward counties. *M. m. milleri* Mearns, 1897, is the recognized subspecies.

Mephitis mephitis (striped skunk).—Common throughout much of state, although somewhat less numerous in northern part of Trans-Pecos region than elsewhere; especially abundant in agricultural areas and near human habitations. *M. m. varians* Gray, 1837, occurs in the western part of Texas, whereas *M. m. mesomelas* Lichtenstein, 1832, is found east of the 100th meridian.

Conepatus leuconotus (eastern hog-nosed skunk).—Recorded from southern part of state from Aransas, San Patricio, and Webb counties southward. The subspecies is *C. l. texensis* Merriam, 1902.

Conepatus mesoleucus (hog-nosed skunk).—Ranges across southwestern, central, and southern Texas (perhaps nearly extirpated in Big Thicket—Schmidly, 1983), north at least to Collin and Lubbock counties (Manning *et al.*, 1986). The subspecies are *C. m. mearnsi* Merriam, 1902, throughout most of the range in the state, east to Harris County and *C. m. telmalestes* Bailey, 1905, which may be extinct, from the Big Thicket area.

Lutra canadensis (river otter).—Presently known only from about eastern one-fourth of state in major watersheds; probably extirpated from the Panhandle, north-central, and southern Texas (Schmidly, 1984). The subspecies is *L. c. lataxina* F. Cuvier, 1823.

Family Felidae (cats)

**Felis catus* (domestic cat).—Feral animals fairly common in eastern Texas (Schmidly, 1983), and probably in some other areas.

Felis concolor (mountain lion).—Once ranged throughout state; now known certainly, except for occasional occurrences northward, only in desert mountain ranges of Trans-Pecos region, especially in Big Bend National Park, and dense brushlands of Rio Grande Plain. The subspecies is *F. c. stanleyana* Goldman, 1938.

Felis onca (jaguar).—Once ranged northward into central Texas as far as Mills County and along Gulf Coast. The subspecies was *F. o. veraecrucis* Nelson and Goldman, 1933.

Felis pardalis (ocelot).—Recorded from Donley and McLennan counties in north, Brewster County in west, and Jefferson County

in east; probably limited at present to favored habitats in three or four counties of southern Rio Grande Plain (Tewes and Everett, 1986). The subspecies is *F. p. albescens* Pucheran, 1855.

Felis rufus (bobcat).—Occurs in variety of habitats throughout state. According to Schmidly and Read (1986), only one subspecies, *F. r. texensis* (J. A. Allen, 1895), is found in Texas.

Felis wiedii (margay).—Known only from specimen taken in Maverick County in 1850s; probably now extinct in state. The subspecies was *F. w. cooperi* Goldman, 1943.

Felis yagouaroundi (jaguarundi).—Recorded in Texas only from Cameron, Hidalgo, Starr, and Willacy counties; current status unknown, but still may exist in southern three counties of state (Tewes and Everett, 1986). *F. y. cacomitli* Berlandier, 1859, is the recognized subspecies.

ORDER ARTIODACTYLA—Even-toed Ungulates

*Family Suidae (pigs)

****Sus scrofa*** (wild pig).—Sizeable populations of pigs, derived from domestic animals that became feral and from animals introduced for hunting, occur in various places on Rio Grande and Coastal plains and in wooded country of eastern Texas.

Family Tayassuidae (peccaries)

Tayassu tajacu (collared peccary).—Once distributed over much of state; now restricted to southwestern and south-central (Hollander *et al.*, 1987b; M. D. Engstrom, personal communication) Texas and brush country south of San Antonio; an introduced population has survived about 40 years along Red River in Wilbarger County. The subspecies is *T. t. angulatus* (Cope, 1889).

Family Cervidae (cervids)

****Cervus axis*** (axis deer).—Native of India; introduced into Texas in approximately 1932, and now occurs in a number of counties in central and southern parts of state. More than 15,000 individuals are thought to be free-living (Traweek, 1985).

****Cervus dama*** (fallow deer).—Native of western Palaearctic Region, east to Iran and south to North Africa. According to the most recent survey of exotic ungulates (Traweek, 1985), more than 10,000 now occur in Texas, about one-third outside confinement, mostly on the eastern Edwards Plateau and in adjacent areas.

Cervus elaphus (wapiti or elk).—Native to Guadalupe Mountains prior to extirpation by 1900; reintroduced onto Guadalupe in 1928, and viable population still extant there. The subspecies of the native population was *C. e. merriami* Nelson, 1902; the reintroduced animals are *C. e. nelsoni* Bailey, 1935.

**Cervus nippon* (sika deer).—Native of Orient that occurs in Texas primarily in central part of state; about 2500 free-ranging animals of a total of some 5560 individuals (Traweek, 1985).

Odocoileus hemionus (mule deer).—Occurs over most of Trans-Pecos and Panhandle regions of Texas and in some areas immediately east thereof, partly as a result of reintroductions. The subspecies is *O. h. crooki* (Mearns, 1897).

Odocoileus virginianus (white-tailed deer).—Distributed in suitable wooded and brushy habitats throughout state. Originally, the subspecies included *O. v. carminis* (Goldman and Kellogg, 1940) known only from the Big Bend area, *O. v. macroura* (Rafinesque, 1817) in the extreme northeastern corner of the state, *O. v. mcilhennyi* (F. W. Miller, 1928) along the Gulf Coast, and *O. v. texana* (Mearns, 1898) throughout the central part of Texas. Native animals of the subspecies *O. v. mcilhennyi* and *O. v. macroura* were eliminated in eastern Texas; the area was restocked with individuals of *O. v. texana* (see Schmidly, 1983). Hybridization between white-tailed and mule deer has been reported from the eastern Trans-Pecos (Carr *et al.*, 1986), and probably occurs also in adjacent areas of Texas.

Family Antilocapridae (pronghorn)

Antilocapra americana (pronghorn).—Formerly known in western two-thirds of Texas as far east as McLennan and Robertson counties; currently found only in scattered herds in north-central and western parts of state, especially in Trans-Pecos region and western part of Edwards Plateau. The subspecies are *A. a. americana* (Ord, 1815) in the Panhandle and *A. a. mexicana* Merriam, 1901, in western and central Texas, although reintroductions, beginning in the late 1930s, to augment a declining population may have altered this situation.

Family Bovidae (bovids)

**Boselaphus tragocamelus* (nilgai).—Native of India and Pakistan; more than 15,000 now free-living in south-central and southern parts of state (Traweek, 1985).

Bison bison (bison).—Before extirpation, ranged throughout state except in dense woods of Big Thicket area; now present in

Texas only in private herds on some ranches. The subspecies is *B. b. bison* (Linnaeus, 1758).

Ovis canadensis (mountain sheep).—Extirpated from desert mountain ranges in Trans-Pecos Texas; reintroduced, however, into this area where there now is an extant population. The native subspecies was *O. c. mexicana* Merriam, 1901, but some introductions of other subspecies have been made.

**Ammotragus lervia* (Barbary sheep).—Native of North Africa; first introduced into Panhandle of Texas in 1957. Herds now exist on caprock along much of eastern edge of Llano Estacado, in rough country of Trans-Pecos, and on parts of Edwards Plateau. The total population in the wild exceeds 5000 (Traweek, 1985).

**Antelope cervicapra* (blackbuck).—Native to India and Pakistan; approximately 20,000 individuals now occur in Texas, but relatively few occur outside controlled areas.

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