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A LIST OF SOME OF THE VERTEBRATES OF  
HARRIS COUNTY, TEXAS

A Thesis  
Presented to  
the Faculty of the Department of Biology  
The University of Houston

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science

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by

F. Morton Daugherty, Jr.

June 1949

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A LIST OF SOME OF THE VERTEBRATES OF  
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(ABSTRACTED)

Lists of the vertebrate animals of Harris County, Texas, exclusive of the fish, birds, and marine mammals have been presented. These lists were compiled from published records, collections, and personal field work. Each species has been recorded systematically and an accession reference given.

The knowledge that it would be highly improbable to make complete lists prompted the use of hypothetical lists. These hypothetical lists are based on ranges, given by authorities, which indicate a close approach to or include Harris County, Texas.

Some animals have been listed as extinct for the Harris County area. These animals have been recorded in old literature, but are not known in the area today.

Harris County, Texas was chosen for this work on the basis of the terrain, locality, and the need for such a work. A general discussion of the terrain, physical dimensions, climate, history, and industries has been included.

ANIMALS LISTED

LISTED CAUDATA

1. Triturus meridionalis (Cope), Texas Newt.
2. Triturus viridescens louisianensis (Wolterstorff), Louisiana Newt.

3. Ambystoma opacum (Gravenhorst), Marbled Salamander.
4. Ambystoma texanum (Matthes), Texas Salamander, Small-mouthed Salamander.
5. Plethodon glutinosus glutinosus (Green), Slimy Salamander.
6. Manculus quadridigitatus paludicolus Kittleman, Dwarf Four-toed Salamander.
7. Siren intermedia nettingi Goin, Texas Dwarf Siren, Mud Eel.

#### HYPOTHETICAL CAUDATA

1. Amphiuma means tridactylum Cuvier, Three-toed Amphiuma.
2. Ambystoma maculatum (Shaw), Spotted Salamander.
3. Ambystoma tigrinum tigrinum (Green), Eastern Tiger Salamander.

#### LISTED SALIENTIA

1. Bufo woodhousii fowleri Bailey and Bailey, Lesser Garden Toad.
2. Bufo valliceps Wiegmann, Mexican Nebulous Toad.
3. Hyla versicolor chrysoscelis (Cope), Common Tree Frog.
4. Hyla crucifer crucifer (Wied), Spring-peeper.
5. Hyla squirella Latreille, Southern Tree Frog.
6. Hyla cinerea cinerea (Schneider), Green Tree Frog.
7. Acris crepitans Baird, Western Cricket Frog.
8. Pseudacris nigrita triseriata (Wied), Three-lined Peeper, Striped Tree Frog.
9. Rana pipiens berlandieri (Baird), Southwestern Leopard Frog.
10. Rana palustris Le Conte, Pickerel Frog.

11. Rana clamitans Latreille, The Green Frog.
12. Rana catesbeiana Shaw, Common Bull Frog.
13. Rana areolata areolata Baird and Girard, Texas Gopher Frog.
14. Microhyla carolinensis (Holbrook), Narrow-mouthed Toad.
15. Microhyla olivacea (Hallowell), Texas Narrow-mouth Toad.

#### HYPOTHETICAL SALIENTIA

1. Scaphiopus holbrookii holbrookii (Harlan), Solitary Spadefoot.
2. Scaphiopus hurterii Strecker, Texas Spadefoot.
3. Hyla femoralis Latreille, Pine Tree Frog.
4. Acris gryllus (Le Conte), Cricket Frog.
5. Pseudacris nigrita clarkii (Baird), Spotted Peeper.
6. Pseudacris ornata (Holbrook), Ornate Peeper.

#### LISTED CROCODYLIA

1. Alligator mississippiensis (Daudin), Alligator.

#### LISTED LACERTILIA

1. Anolis carolinensis Voigt, Green Lizard Chameleon.
2. Sceloporus undulatus hyacinthinus (Green), Northern Fence Lizard.
3. Sceloporus olivaceus Smith, Texas Spiny Lizard.
4. Phrynosoma cornutum (Harlan), Texas Horned Lizard.
5. Ophisaurus ventralis (Linnaeus), Glass Snake.
6. Cnemidophorus sexlineatus (Linnaeus), Six-lined Racerunner.
7. Cnemidophorus gularis gularis Baird and Girard, Eastern Spotted

Spotted Racerunner.

8. Eumeces fasciatus (Linnaeus), Blue-tailed Skink.
9. Eumeces septentrionalis obtusirostris Bocourt, Southern Prairie Skink.
10. Eumeces laticeps (Schneider), Greater Five-lined Skink.
11. Leiolopisma laterale (Say), Ground Lizard.

#### LISTED SERPENTES

1. Farancia abacura reinwardtii (Schlegel), Western Mud Snake, Horn Snake.
2. Diadophis punctatus stictogenys Cope, Mississippi Ring-necked Snake.
3. Heterodon contortrix contortrix (Linnaeus), Common Hog-nosed Snake.
4. Opheodrys aestivus (Linnaeus), Rough Green Snake.
5. Coluber constrictor flaviventris (Say), Blue Racer.
6. Coluber constrictor anthicus (Cope), Spotted Racer.
7. Masticophis flagellum flagellum (Shaw), Eastern Coachwhip.
8. Elaphe laeta laeta (Baird and Girard), Emory's Rat Snake.
9. Elaphe obsoleta lindheimeri (Baird and Girard), Gray Rat Snake.
10. Pituophis sayi sayi (Schlegel), Common Bull Snake.
11. Lampropeltis getulus holbrooki (Stejneger), Speckled King Snake.
12. Lampropeltis triangulum amaura (Cope), Scarlet King Snake.
13. Natrix grahami (Baird and Girard), Graham's Water Snake.
14. Natrix sipedon clarkii (Baird and Girard), Clark's Water Snake.
15. Natrix sipedon confluens (Blanchard), Mississippi River Snake.

16. Natrix erythrogaster transversa (Hallowell), The Yellow-bellied Water Snake.
17. Natrix rhombifera rhombifera (Hallowell), Diamond-backed Water Snake.
18. Natrix cyclopion cyclopion (Dumeril and Bibron), Green Water Snake.
19. Storeria dekayi texana Trapido, Texas Brown Snake, DeKay's Snake.
20. Haldea striatula (Linnaeus), Southern Ground Snake.
21. Thamnophis sirtalis sirtalis (Linnaeus), Common Garter Snake.
22. Thamnophis sauritus proximus (Say), Western Ribbon Snake.
23. Tropidoclonion lineatum (Hallowell), Lined Snake.
24. Micrurus fulvius tenere (Baird and Girard), Texas Coral Snake.
25. Agkistrodon mokeson austrinus Gloyd and Conant, Southern Copperhead, Lowland Copperhead.
26. Agkistrodon piscivorus leucostoma (Troost), Western Cottonmouth.
27. Sistrurus miliarius streckeri Gloyd, Western Ground Rattlesnake, Pigmy Rattlesnake.
28. Crotalus adamanteus Beauvois, Eastern Diamond Rattlesnake.

#### HYPOTHETICAL SERPENTES

1. Leptotyphlops dulcis dulcis (Baird and Girard), Texas Blind Snake.
2. Carphophis amoena vermis (Kenicott), Western Worm Snake.
3. Rhadinaea flavilata (Cope), Yellow-tipped Snake.
4. Coluber constrictor constrictor (Linnaeus), Black Racer.
5. Natrix rigida (Say), Striped Water Snake.
6. Haldea valeriae elegans (Kenicott), Western Ground Snake.

7. Thamnophis marcianus (Baird and Girard), Marcy's Garter Snake.
8. Crotalus atrox (Baird and Girard), Western Diamond Rattlesnake.
9. Crotalus horridus atricaudatus (Latreille), Canebrake Rattlesnake.

#### LISTED TESTUDINATA

1. Kinosternon subrubrum hippocrenis (Gray), Mississippi Mud Turtle,  
Common Mud Turtle.
2. Chelydra serpentina serpentina (Linnaeus), Common Snapper.
3. Macrochelys temminckii (Troost), Alligator Snapper.
4. Terrapene carolina triunguis (Agassiz), Three-toed Box Tortoise.
5. Terrapene ornata (Agassiz), Ornate Box Tortoise.
6. Malaclemys pileata littoralis (W. P. Hay), Texas Diamond-back  
Terrapin, Salt Marsh Turtle.
7. Pseudemys troostii elegans (Wied), Troost's Terrapin.
8. Deiorchelys reticularia (Latreille), Chicken Turtle.
9. Amyda emoryi (Agassiz), Emory's Soft-shelled Turtle.
10. Amyda ferox (Schneider), Southern Soft-shelled Turtle.

#### HYPOTHETICAL TESTUDINATA

1. Sternotherus odoratus (Latreille), Common Musk Turtle.
2. Sternotherus carinatus (Gray), Keeled Musk Turtle.
3. Terrapene carolina major (Agassiz), Gulf Coast Box Turtle.
4. Graptemys pseudogeographica oculifera (Baur), Ocellated Map Turtle.
5. Pseudemys floridana mobilensis (Holbrook), Mobile Turtle.
6. Gopherus polyphemus (Daudin), Gopher Tortoise.

7. Chelonia mydas (Linnaeus), Green Turtle.
8. Caretta caretta (Linnaeus), Atlantic Loggerhead Turtle.
9. Colpochelys kempii (Garman), Kemp's Turtle.

#### LISTED MAMMALIA

1. Didelphis virginiana virginiana Kerr, Virginia Opposum.
2. Dasypus novemcinctus texanus (Bailey), Texas Nine-banded Armadillo.
3. Scalopus aquaticus pulcher Jackson, Arkansas Mole.
4. Myotis lucifugus lucifugus (Le Conte), Little Brown Bat.
5. Pipistrellus subflavus subflavus (F. Cuvier), Pipistrelle.
6. Dasypus floridanus Miller, Florida Yellow Bat.
7. Canis rufus gregoryi (Goldman), Texas Red Wolf.
8. Urocyon cinereoargenteus floridanus Rhoads, Florida Gray Fox.
9. Procyon lotor fuscipes Mearns, Texas Raccoon.
10. Mustela frenata arthuri Hall, Bridled Weasel.
11. Mustela vison mink (Peale and Beauvois), Common Mink.
12. Mephitis mesomelas mesomelas Lichtenstein, Louisiana Striped Skunk.
13. Spilogale indianola Merriam, Gulf Spotted Skunk.
14. Lynx rufus texensis (Allen), Texas Bobcat.
15. Peromyscus leucopus texanus (Woodhouse), Texas White-footed Mouse.
16. Oryzomys palustris texensis Allen, Texas Rice Rat.
17. Neotoma floridana rubida Bangs, Ruddy Wood Rat.
18. Ondatra zibethica rivalicia (Bangs), Louisiana Muskrat.
19. Geomys breviceps brazensis Davis, Brazos Pocket Gopher.
20. Geomys breviceps sagittalis Merriam, White-throated Pocket Gopher.

21. Sciurus carolinensis carolinensis Gmelin, Southern Gray Squirrel.
22. Sciurus niger ludovicianus Curtis, Texas Fox Squirrel.
23. Lepus californicus melanotis (Mearns), Great Plains Jack Rabbit.
24. Sylvilagus floridanus alacer (Bangs), Oklahoma Cottontail.
25. Sylvilagus aquaticus aquaticus (Bachman), Swamp Rabbit.
26. Odocoileus virginianus macilhennyi Miller, White-tailed Deer.

#### HYPOTHETICAL MAMMALIA

1. Cryptotis parva (Say), Little Short-tailed Shrew.
2. Blarina brevicauda brevicauda (Say), Short-tailed Shrew.
3. Eptesicus fuscus fuscus (Beauvois), Big Brown Bat.
4. Lasiurus borealis borealis (Muller), Red Bat.
5. Tadarida mexicana (Saussure), Mexican Free-tailed Bat.
6. Canis niger Bartram, Red Wolf.
7. Vulpes fulva (Demarest), Red Fox.
8. Bassariscus astutus flavus Rhodes, Ring-tailed Cat.
9. Lutra canadensis canadensis (Schreber), River Otter.
10. Conepatus mesoleucus telmalestis Bailey, Swamp Hog-nosed Skunk.
11. Mus musculus musculus Linnaeus, Common Mouse.
12. Rattus norvegicus (Erxleben), Norway Rat.
13. Rattus rattus rattus (Linnaeus), Black Rat.
14. Reithrodontomys humulis humulis (Audubon and Bachman), Eastern Harvest Mouse.
15. Reithrodontomys fulvescens aurantius (Allen), Tawny Harvest Mouse.
16. Peromyscus gossypinus megacephalus Rhoads, Cotton Mouse.

17. Baiomys taylori subater Bailey, Taylor Mouse.
18. Sigmodon hispidus hispidus Say and Ord, Bristle-haired Cotton Rat.
19. Peromathus hispidus hispidus Baird, Hispid Pocket Mouse.
20. Glaucomys volans texensis Howell, Flying Squirrel.
21. Castor canadensis carolinensis Rhoads, Beaver.

#### EXTINCT MAMMALIA

1. Euarctos americanus americanus (Pallas), American Black Bear.
2. Euarctos luteolus (Griffith), Louisiana Black Bear.
3. Felis onca True, Jaguar.
4. Felis pardalis Linnaeus, Ocelot.
5. Felis concolor True, Cougar.

There has been no compilation of this type heretofore. The specimen accession and literature references should be of help to future workers in these groups of animals.

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# TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION . . . . .	1
II. HARRIS COUNTY . . . . .	3
Location and Extent . . . . .	3
History . . . . .	4
Terrain . . . . .	5
Climate . . . . .	6
Industries . . . . .	8
III. ANIMAL LISTS . . . . .	10
Amphibia (Class) . . . . .	10
Caudata (Order) . . . . .	10
Hypothetical Caudata . . . . .	15
Salientia (Order) . . . . .	15
Hypothetical Salientia . . . . .	24
Reptilia (Class) . . . . .	25
Crocodilia (Order) . . . . .	25
Lacertilia (Order) . . . . .	25
Serpentes (Order) . . . . .	31
Hypothetical Serpentes . . . . .	47
Testudinata (Order) . . . . .	47
Hypothetical Testudinata . . . . .	53
Mammalia (Class) . . . . .	53
Marsupialia (Order) . . . . .	53

CHAPTER	PAGE
Edentata (Order) . . . . .	54
Insectivora (Order) . . . . .	55
Chiroptera (Order) . . . . .	55
Carnivora (Order) . . . . .	56
Rodentia (Order) . . . . .	61
Ungulata (Order) . . . . .	69
Hypothetical Mammalia . . . . .	69
Insectivora (Order) . . . . .	69
Carnivora (Order) . . . . .	70
Rodentia (Order) . . . . .	71
Extinct Mammalia . . . . .	72
Carnivora (Order) . . . . .	72
IV. SUMMARY . . . . .	73
LITERATURE CITED . . . . .	75

A LIST OF SOME OF THE VERTEBRATES OF  
HARRIS COUNTY, TEXAS

CHAPTER I

INTRODUCTION

It is the purport of this study to organize the available published materials and collections into comprehensive check lists of Harris County Vertebrata. These lists will be supplemented and confirmed wherever possible by the writer's field studies.

The Harris County area was chosen on the basis of its location, terrain, and faunal types. These factors coupled with a lack of such lists confirm the desirability of such a study. Within the county are the junctions of the eastern timber lands with the salt marshes and coastal prairies. The need for such work is also shown by the gradual encroaching on and obliterating of the natural areas by industry, farming and civilization in general.

The vertebrate animals exclusive of the fish, birds, and marine mammals are listed. The birds have been well organized previously and are too numerous to include herein. The fish and marine mammals are a study in themselves, so are not included.

The plan followed in this work is a listing of each species systematically with an accession reference of at least one preserved specimen. It is not the intent of this study to present complete check lists, but to indicate those known species and those possibly present.

Other animals will be cited as being extinct for the area.

The majority of the published records of the various species are scarce. Many of the references are old, which introduces the complications of synonymy. In general the published keys are too indefinite in distributional data to be valid.

The systematic presentation is based on the classification used by Pratt (1935).

## CHAPTER II

### HARRIS COUNTY

#### Location and Extent

Harris County, the largest county in east Texas, is situated on the southwest Texas coastal prairie. It occupies roughly an area between 95 degrees and 96 degrees west longitude from Greenwich, England, and 29.5 degrees and 30.25 degrees north latitude. The total area is 1,747 square miles (1,118,080 acres), which gradually rises from sea level to 125 feet altitude (Texas Almanac, 1946-47). Harris County is very irregular in contour, measuring approximately forty-five miles from north to south, fifty-five miles from east to west, and sixty-seven miles at its greatest length, southeast to northwest. In the U. S. Biological Survey fourth provisional zone map of North America, Harris County would come within the humid or Austroriparian division of the Lower Austral Region (Merriam, Bailey, Nelson and Preble, 1910). Galveston Bay affords frontage on the southeast. Harris County joins Galveston and Brazoria Counties on the south by a natural boundary, Clear Creek, which empties into Galveston Bay at Seabrook. On the southwest it is bordered by Fort Bend County. Waller County lies on the west and northwest corner. Spring Creek separates Harris County from Montgomery County on the north. On the east, Cedar Bayou forms the county line which divides Harris County from Liberty County to the north and Chambers County to the south fronting on Galveston Bay.

### History

Harris County was one of the original counties created in 1836. In 1837 it was organized and named for John R. Harris, one of the early settlers who had located at the junction of Buffalo Bayou and Bray's Bayou. One of the most important battles of the world was fought at the San Jacinto Battlefield (April 21, 1836) near Houston. This battle was decisive in freeing Texas from Mexico. General Sam Houston's forces defeated the Mexican Army under General Santa Ana. The site of this battle is marked by a monument constructed of native Texas limestone. This monument is over 570 feet tall.

In 1836 the city of Houston was founded on the banks of Buffalo Bayou and named after General Sam Houston, hero of the Battle of San Jacinto. A year later Houston was made the capitol of Texas. At present Houston is Texas' largest city, with a population of 445,000 and 565,000 within the metropolitan area (Texas Almanac, 1946-47). Houston is the county seat of Harris County. It is connected to the Gulf of Mexico by means of a deep water channel formed by dredging Buffalo Bayou, which has been incidental to the rapid growth and development of not only Houston but the balance of Harris County. Houston is the largest port in Texas and prior to World War II was third largest in shipping in the United States. The ideal location of Houston and the land adjoining the ship channel have attracted many industries to Harris County.

### Terrain

The land, level to gently rolling, is predominately coastal prairie, interspersed with cultivated land, coastal marshes, coastal forests, and traversed by many creeks and bayous. The most important stream is the San Jacinto which empties into Galveston Bay.

The prairies are composed largely of andropogon grasses and others, with some grama grasses in the western part. In the years past the prairies were covered with grasses ranging from three to five feet in height, but due to cultivation, grass fires, oil fields, and over-grazing, grasses of such size are not seen today (Smith, 1942). There has been a general change from these tall grasses to carpet grasses such as bermuda, Cynodon dactylon (Linnaeus). In many places the ground is almost bare or has given way to weeds. It is evident that the prairies were gradually being replaced with forests as is shown by the influx of pine seedlings.

Forests cover about one-fifth of Harris County mostly in the north and northeastern sections. There is no virgin timber remaining in the county but replanting and good management have kept the forests on a productive level. The most abundant type is the loblolly pine, Pinus taeda Linnaeus, which is found in association with various species of hardwood such as; water oak, Quercus nigra Linnaeus; willow oak, Q. phellos Linnaeus; sweet gum, Liquidamber styraciflua Linnaeus; hickory, Carya sp.; water elm, Planera aquatica (Walt); red oak, Q. rubra (Linnaeus); magnolia, Magnolia sp. Linnaeus; American elm, Ulmus

americana Linnaeus; sycamore, Platanus occidentalis Linnaeus; cypress, Taxodium distichum (Linnaeus); hackberry, Celtis laevigata and persimmon, Diospyros virginiana Linnaeus (Smith, 1942). In the western portion of the county there are very few pines. The timber which is largely confined to the stream banks are willow oaks, water oaks, and red haws. For the most part the forests have been greatly thinned allowing a spread of vines, shrubs, brush, and other small plants. The growth of this type of cover has aided the propagation of rabbits, red wolves, gray foxes, and quail. On the other hand this thinning has been harmful to such animals as the gray squirrel (Smith, 1942).

Salt marshes comprise only about one per cent of the total area of Harris County and are largely confined to the area adjacent to the mouth of the San Jacinto River. Cord grass, Spartina spartinae (Trin.); cattails, Typha sp. Linnaeus; giant reeds, Arundo donax Linnaeus; common reed, Phragmites communis Trin.; and dropseed grass, Sporobolus virginicus (Linnaeus) (Tharp, 1926), are the characteristic marsh forms.

Approximately one-tenth of Harris County is under cultivation. Most of the farms are located on the coastal prairies and are found in the southwestern and western areas.

### Climate

The climate of Harris County, like most of Texas, can only be described as irregular and unpredictable. All storms typical of the Gulf coast occur here. Tornados come in from the Gulf southwest and the Mississippi water shed. Tropical hurricanes strike the Gulf coast.

Great rainstorms, which are due to Texas' position between the high plateau and mountains on the west and northwest and the warm Gulf waters on the southwest, are almost annual occurrences. The most destructive storm of all recorded time was the "Galveston Hurricane" of September 8 and 9, 1900, in which five thousand to eight thousand lives were lost and \$30,000,000 property damage was estimated. The Harris County area is also affected by the "Texas Northers", which usually come out of the Rocky Mountain and high plains regions (Texas Almanac, 1946-47).

Snowfall here is of negligible importance, with an average annual fall of two-tenths of one inch, which is probably a low for all of Texas (Texas Almanac, 1946-47).

On the basis of a total possible sunshine hours from sunrise to sunset, Harris County has an average annual sunshine of 62 per cent.

Harris County has an average annual rainfall of 44.84 inches, with the heaviest precipitation occurring in May (4.39 inches), July (4.51 inches), and December (4.82 inches). This is based on a period of forty years. The greatest rainfall in a twenty-four hour period was 10.83 inches in Houston, November 1 and 2, 1943 (Texas Almanac, 1946-47).

Texas as a whole has a low average relative humidity which decreases from east to west as does the rainfall. The Houston area is only exceeded by the Brownsville area, which is on the Gulf coast approximately 330 miles southwest of Houston. The average relative humidity of Harris County is eighty-six for 7:00 a.m. and fifty-nine for 12:22 p.m. (Texas Almanac, 1946-47).

There is a mean annual temperature of 69.1 degrees Fahrenheit with a record minimum extreme of five degrees Fahrenheit and a record maximum of 108 degrees Fahrenheit, an average of 54.2 degrees Fahrenheit for January and 83.1 degrees Fahrenheit for July (from a thirty-nine year record). The average killing frost dates are December 8 for the first in the fall and February 10 for the last in the spring. This gives an average growing season for Harris County of 301 days (Texas Almanac, 1946-47).

The average annual wind velocity is 10.6 miles per hour, with very little variation. A maximum of sixty-three miles per hour was recorded March 30, 1926. Newspaper reports exceed this record for Harris County.

### Industries

The major industries are oil refining, chemical production, oil field and refining tool and equipment manufacturing, steel, ship-building, rice milling, cotton compressing, flour milling, cement making, container manufacturing, cottonseed oil processing, bag and bagging, paint manufacturing, clothing, paper pulp, meat packing, baking, furniture, breweries, food processing, numerous wholesale and retail establishments, and others. During World War II Houston and Harris County had many big defense plants which included ship-building, synthetic rubber, and other products essential to the war effort.

There are many educational facilities within Harris County among which are the University of Houston, The Rice Institute, Baylor Medical

College, University of Texas School of Dentistry, and several minor institutions. Houston is the site of the twenty million dollar M. D. Anderson Foundation for the development of the Texas Medical Center. Adjoining the Texas Medical Center is a large Naval Hospital.

Other important towns in Harris County are Goose Creek, Baytown, and Pelly, which are known as the Tri-cities area and have recently been incorporated as one city under the name of Baytown. This is primarily a petroleum center with a wartime outgrowth of the synthetic rubber industry. Towns such as LaPorte, Humble, Seabrook, Tomball, and Webster are of importance from a standpoint of recreation and the lumber industry.

The present trend in Harris County is toward the introduction of new manufacturers. This is instigated by an active Chamber of Commerce and other civic groups.

### CHAPTER III

#### ANIMAL LISTS

#### VERTEBRATA (SUBPHYLUM)

#### AMPHIBIA (CLASS)

#### CAUDATA (ORDER)

#### MUTABILIA (SUBORDER)

#### PLEURODELIDAE (FAMILY)

Triturus meridionalis (Cope), Texas Newt.

The Texas newt is listed by Strecker (1908) as Diemyctylus meridionalis (Cope) and again (1915) as Diemyctylus viridescens meridionalis (Cope). The name used herein and acceptable today is Triturus meridionalis (Cope) (Bishop, 1943).

Strecker (1915) gives the Texas range as the southern and southeastern sections of the state, north into east-central Texas, and to Falls and McLennan counties.

Bishop states the range as central Texas from Houston south to Brownsville; west to San Diego, San Antonio, and Helotes; and north to Waco. His distributional map for this species includes the Harris County area.

Perhaps this animal should be included in a hypothetical list, but there is sufficient cause to place it in the known listing.

Triturus viridescens louisianensis (Wolterstorff), Louisiana Newt.

Two specimens of the Louisiana newt were reported to the writer by W. W. Milstead, University of Houston biology major and herpetologist, March 15, 1947. These newts were taken just east of Willow Creek, where it joins Bray's Bayou.

Bishop (1943) gives the range of the Louisiana newt as southeastern Atlantic and Gulf states from South Carolina to Florida, west to Texas, eastern Oklahoma, and Kansas. In a map showing the distribution of subspecies of Triturus viridescens, Bishop shows the range of T. v. louisianensis (Wolterstorff) covering the Harris County area.

Pratt (1935) ranges the Louisiana newt from the Gulf coast to Tennessee and Kansas.

The writer and party collected twelve Louisiana newts on the Paul Mueschke Estate, one mile east of Westfield, April 20, 1947.

#### AMBYSTOMIDAE (FAMILY)

Ambystoma opacum (Gravenhorst), Marbled Salamander.

Strecker (1915) places the marbled salamander in the northern and eastern sections of the state. He states that they are probably a common species in the bayou country from northeast of Houston to the Louisiana boundary.

Bishop (1943) ranges this salamander from New Hampshire to Florida, west to Louisiana and Texas, Mississippi Basin north to

Arkansas, Missouri, Indiana, Illinois, and Wisconsin. In his range map for Ambystoma opacum, Bishop includes an area cutting across the northeastern part of Harris County. This fact is assumed sufficient reason for placing this salamander herein and not in a hypothetical listing.

Ambystoma texanum (Matthes), Texas Salamander, Small-mouthed Salamander.

Strecker (1915) lists the small-mouthed salamander as Ambystoma microstomum (Cope), but Bishop (1943) gives the name A. texanum (Matthes) to this salamander.

Strecker (1915) states that the small-mouthed salamander is the common salamander of the eastern half of Texas. The Baylor Museum, Waco, Texas, contains specimens from Burnet, Houston, Laguna, Refugio, Victoria, Waco, Bryan, Calvery, and Cleveland.

Pratt (1935) places this salamander in the central states from Ohio to Texas.

Bishop (1943) distributes the small-mouthed salamander from Ohio west to southern Iowa, Kansas, and Nebraska; south to Texas and Louisiana; northward to Tennessee, Kentucky, and western West Virginia. In a distributional map, Bishop shows this salamander in the Harris County area.

Harwood (1931) referred to Ambystoma microstomum as a host for worm parasites in the Houston region.

Milstead collected a specimen of the Texas salamander from the University of Houston reflection pool, February 5, 1948. Two days

later the writer found another specimen in the same pool, which is situated in the center of the campus. This pool measures about 280 feet by 120 feet with a depth of twelve inches.

Plethodon glutinosus glutinosus (Green), Slimy Salamander.

Strecker (1915) gives the Texas range of the slimy salamander as the eastern, central and southeastern parts of the state. He states that he has collected several in McLennan County and two near Cleveland, Liberty County.

Bishop (1943) ranges the slimy salamander from New York south to northern half of Florida; the Gulf states to Texas; northward through eastern Oklahoma, Missouri, southern Illinois to northern Indiana. In his distributional map of this species, Bishop includes the Harris County area.

Pratt (1935) gives a distribution for this salamander which corresponds essentially to that of Bishop.

Even though no Harris County record of this salamander is available, it is included in the major listing on the basis of Bishop's distribution.

Mamulus quadridigitatus paludiculus Mittleman, Dwarf Four-toed Salamander.

There are two specimens of the dwarf four-toed salamander in the University of Houston collection (H-162 and H-163) and two specimens in Milstead's collection (M-199 and M-200). All four of the above

mentioned specimens were collected twelve and one-half miles west of Bammel, in Harris County, by Milstead and R. E. Etheridge, herpetology student, on October 25, 1947.

NEANTES (SUBORDER)

SIRENIDAE (FAMILY)

Siren intermedia nettingi Goin, Texas Dwarf Siren, Mud Eel.

The writer has a specimen (H-35) of mud eel taken in the Houston area November, 1946. During the summer of 1938, sirens were taken by the writer from the San Jacinto River, Bray's Bayou, and a small stream near South Houston.

Strecker (1915) states that mud eels range over the entire eastern half of the state and west beyond the one hundredth meridian.

In his Vertebrate Animals of the United States, Pratt gives the distribution as the south Atlantic and Gulf states, from District of Columbia and central North Carolina to the Rio Grande; and northwards in the valley of the Mississippi to Alton, Illinois, and Lafayette, Indiana.

Bishop (1943) gives the range of this siren as southern Louisiana northward to southern Illinois and Indiana; west and south to Maverick County, Texas; and northern Tamaulipas, Mexico. In his distributional map, all of eastern and southern Texas are included.

Two specimens (H-11 and H-12) were collected in the Houston area,

one by Milstead on November 15, 1946 and the other by the writer on May 7, 1947.

#### HYPOTHETICAL CAUDATA

#### AMPHIUMIDAE (FAMILY)

1. Amphiuma means tridactylum Cuvier, Three-toed Amphiuma.

#### AMBYSTOMIDAE (FAMILY)

2. Ambystoma maculatum (Shaw), Spotted Salamander.
3. Ambystoma tigrinum tigrinum (Green), Eastern Tiger Salamander.

#### SALIENTIA (ORDER)

#### LINGUATA (SUBORDER)

#### BUFOIDAE (FAMILY)

Bufo woodhousii fowleri Bailey and Bailey, Lesser Garden Toad.

There is a specimen of the garden toad in the University of Houston collection (H-62). Roberto Sanchez W., University of Houston biology student, collected this toad during the month of June, 1947, near Spring Creek in Harris County.

Milstead has two Harris County specimens in his collection (M-124 and M-122). One was found June 8, 1947, near Barker Dam, one mile south of Addicks on the Addicks-Howell Road. The other was collected twelve and one-half miles west of Bammel, Harris County, on the Kuykendahl Road.

Bufo valliceps Wiegmann, Mexican Nebulous Toad.

This toad is very common in the Houston area. The lawns of the University of Houston are dotted with them during the warm summer evenings. The writer picked up twelve specimens in about five minutes on the night of October 9, 1946.

During the breeding season in May, 1947, there were hundreds of these frogs along the bar ditches, ponds, and bayous. Roberto Sanchez W. and the writer collected over two hundred of these toads in less than an hour. There are two specimens of valliceps, collected by the writer, in the University of Houston Zoological Collection (H-32 and H-63).

#### HYLIDAE (FAMILY)

Hyla versicolor chrysoscelis (Cope), Common Tree Frog.

The writer examined a specimen of the common tree frog taken by Etheridge and S. G. Litherland, high school herpetology enthusiast. This frog was taken near Bammel, in north-central Harris County, on April 6, 1947.

Milstead collected a specimen (M-29) of the common tree frog from Buffalo Bayou, one mile south of Addicks, Texas, October 27, 1946.

Strecker (1915) states that the common tree frog is found in east-central Texas but at that time he could not outline its Texas range.

Pratt (1935) gives the range of versicolor as North America; west to Minnesota, Kansas, and Texas; northward to southern Canada;

southward into the Gulf states.

Dickerson (1906, 1937) ranges this frog throughout eastern North America west to Kansas, northward into Canada, and southward into Texas.

Wright and Wright (1942) give the range of Hyla versicolor as Maine; southern Canada west to Minnesota; south to the Gulf states (Texas and Arkansas only in part).

Hyla crucifer crucifer (Wied), Spring-peeper.

The spring-peeper was referred to as Hyla pickeringii Cope (Cope, 1889) by Dickerson (1906). However, it had been described by Wied (1838) as Hyla crucifer Wied (Stejneger and Barbour, 1943).

There is apparently no Texas record of this frog in any of the literature. Milstead has a single specimen of the spring-peeper in his collection (M-255). This frog was collected by Etheridge on March 3, 1947, from Hogpen Pond, twelve and one-half miles west of Bammel, Harris County.

Hyla squirella Latreille, Southern Tree Frog.

Strecker (1915) states that he has taken specimens of the southern tree frog from Cleveland, Houston, Victoria, and San Antonio.

Pratt (1935) gives the range of this frog as Virginia to Florida; westward to Texas; and northward to Indiana.

Dickerson (1906, 1937) ranges the southern tree frog in the southern part of North America and extending well up the Mississippi. It is reported from North Carolina, South Carolina, Georgia, Florida,

Louisiana, Mississippi, Texas, and southern Indiana.

Wright and Wright (1942) give the range of the southern tree frog from Virginia to Texas, and north up the Mississippi basin to Indiana.

The writer collected three of these frogs on the University of Houston campus around the reflection pool on May 21, 1947 (H-64, H-65 and H-66).

Milstead has thirteen southern tree frogs in his collection (M-40, M-269 - 280). One frog was collected in his front yard, 2415 Locke Lane, Houston, and the other twelve came from the woods one mile east of Westfield, Texas, January 18, 1948.

Hyla cinerea cinerea (Schneider), Green Tree Frog.

The green tree frog is numerous in the Houston area during the warm months. During the summer evenings dozens of these frogs may be seen on the windows, walls, and steps of the University of Houston. In Reptiles and Amphibians of Texas, Strecker gives their range as eastern and central Texas, south to San Antonio and Refugio. Pratt (1935) merely lists them as common in the Gulf states. Dickerson in her Frog Book (1931) places the green tree frog in "Southern North America" and with reference to Texas in the Austroriparian area.

The writer examined approximately fifty specimens of Hyla c. cinerea during the summer of 1946, all taken on the University of Houston campus. Two preserved specimens from the University of Houston campus (H-36 and H-51) were collected by the writer. One in April, 1947, and

one during the summer of 1941.

Green tree frogs were noticeably less evident during the summer of 1947 than in previous years. The only time these frogs were present in appreciable numbers was during the breeding season from May 21 to May 23. During this time there were hundreds of these frogs around the University of Houston reflection pool but for the balance of the season only an occasional frog was observed. The absence of these frogs in appreciable numbers can in all probability be traced to the amount of rainfall which was only half of that in 1946.

Acris crepitans Baird, Western Cricket Frog.

The writer examined twelve cricket frogs taken by Etheridge and Litherland near Bammel, in north-central Harris County, in April, 1947.

The writer collected six cricket frogs (H-24 - H-29) from Hogpen Pond, north-central Harris County, on April 19, 1947.

Milstead has a specimen (H-41) of this frog taken from Buffalo Bayou, one mile south of Addicks, on December 23, 1946.

Strecker (1915) states that the cricket frog is found all over the state wherever there are lakes, ponds, springs, and streams.

Wright and Wright (1942) gives the range of the western cricket frog as Connecticut, southeast New York, New Jersey, Pennsylvania, Maryland, Delaware, northwest to Canada, west to Utah and New Mexico, and south through Virginia to Georgia and western Texas, from sea level to two thousand feet altitude.

Pseudacris nigrita triseriata (Wied), Three-lined Feeper, Striped Tree Frog.

Harwood (1941) lists the striped tree frog as a host for the trematode, Megalodiscus temperatus, in the Houston region.

Milstead has three specimens of this frog in his collection (M-35, M-326 and M-327). One of these frogs was taken from Hogpen Pond, Harris County, on November 29, 1946. The other two were collected from a marsh just north of Avenue I in East Haven Addition, Houston, Texas, on February 5, 1948.

Pratt (1935) gives the distribution of the striped tree frog as the central states, from the Alleghenies to Arizona and Idaho.

Strecker (1915) states that this frog is found over the greater portion of Texas, particularly in east-central Texas.

Wright and Wright (1942) range the striped tree frog from Oswego, New York, west along the southern shore of Lake Ontario; west to northeastern Arizona, Utah, Nevada, and Idaho; and south to Arkansas and Louisiana.

#### RANIDAE (FAMILY)

Rana pipiens berlandieri (Baird), Southwestern Leopard Frog.

The writer and Milstead collected thirteen southern leopard frogs from a swamp alongside Bray's Bayou, two miles northwest of Bellaire, on March 21, 1947. A single specimen in a small creek west of River Oaks,

Houston, was taken the same night. The number collected in no way indicates the abundance of these frogs. On several occasions four or five frogs would be found in one group and only the largest specimens were taken.

Dickerson (1906, 1937) reports a specimen of R. p. sphenocephala (Cope) from Hitchcock, Texas, which is in Galveston County about fifteen miles south of Harris County. This frog was in all probability R. p. berlandieri. This frog has also been observed in the small drainage ditch on the south of the University of Houston campus.

Rana palustris Le Conte, Pickerel Frog.

The writer examined four pickerel frogs taken by Etheridge and Litherland on April 6, 1947, near Bammel, Harris County, and collected a single specimen (H-20) from the same locality on April 19, 1947.

Pratt (1935) says that the pickerel frog is found in small streams, ponds, and adjacent meadows of North America; from the Atlantic to Wisconsin, Kansas, and Louisiana.

Milstead has two specimens in his collection (M-34 and M-386). One was taken from Hogpen Pond on November 29, 1946; and the other was found on the Stanolind Road, north of Tomball, on February 28, 1948.

Pana clamitans (Latreille), The Green Frog.

Etheridge and Litherland reported to the writer that they collected six green frogs near Bammel on April 6, 1947.

Pratt (1935) gives the range of the green frog as America, from

the Atlantic to the great plains.

Harwood (1931) reports finding Rana clamitans as host to the fluke, Haematoloechus floedae, with Houston as the type locality.

The writer collected a single specimen of the green frog from a small lake in Hogpen Pond, in north-central Harris County, on April 19, 1947.

Milstead collected a green frog in Houston on May 7, 1947 (M-99).

Rana catesbeiana Shaw, Common Bull Frog.

Strecker (1915) in his Reptiles and Amphibians of Texas, ranges the common bull frog from eastern Texas, south to Victoria, and Refugio. Pratt (1935) broadly states the range as America, from the Atlantic to the Rockies.

The writer has seen these frogs along the San Jacinto River, Bray's Bayou in Houston, and in many other places in the county. On October 9, 1946, a specimen was taken from the reflection pool on the University of Houston campus. During the summer of 1946, two others were taken from this man-made pool. On March 21, 1947, the writer and Milstead collected twenty-two of these frogs from a swamp along Bray's Bayou, two miles northwest of Bellaire, Houston. During the summer of 1947, the writer collected thirty-eight adult frogs from the University of Houston campus and the immediate vicinity. Needless to say, these were excellent eating.

Rana areolata areolata Baird and Girard, Texas Gopher Frog.

Harwood (1931) cites this frog as a host for the trematode, Megalodiscus temperatus, at Houston.

There is a specimen of the Texas gopher frog in the University of Houston collection (H-210). This frog was collected February 18, 1948, by Milstead two miles from the Alameda Road on the Alameda-Genoa Road.

Milstead has four Harris County specimens of this frog taken from a marsh north of Avenue I, East Haven Addition, Houston, Texas, on February 5, 1948.

#### MICROHYLIDAE (FAMILY)

Microhyla carolinensis (Holbrook), Narrow-mouthed Toad.

The writer collected a single specimen of narrow-mouthed toad near a small lake in north-central Harris County on April 19, 1947, and another specimen on the Paul Mueschke Estate on April 20, 1947. Nine other specimens were collected on these two trips by two companions.

On May 21, 1947, three narrow-mouthed toads were collected around the reflection pool on the University of Houston campus.

Strecker (1915) gives the Texas range of the narrow-mouthed toad from eastern Texas south to Victoria.

Dickerson (1906, 1937) ranges the narrow-mouthed toad from South Carolina, Georgia, and Florida, westward to western Texas. She states that it has been heard calling from ditches bordering the streets of Houston and San Antonio, Texas.

Microhyla olivacea (Hallowell), Texas Narrow-mouth Toad.

There seems to be considerable confusion concerning the toads of the genus Microhyla. Strecker (1915) refers to this toad as Gastrophryne texensis (Girard); Pratt (1935) calls it Microhyla olivacea (Hallowell); Dickerson (1931) lists it as Engystoma texense (Girard); and Wright (1942) gives the name as G. olivacea (Hallowell).

Strecker gives the range of this toad as east-central, central, and southern Texas. He also states that he has collected specimens at Calvert, Waco, Laguna, Houston, Austin, Texas City, and Refugio. Wright and Wright quote Strecker and accept his authorization of M. olivacea (Hallowell) in the east Texas area.

Milstead has two specimens of the Texas narrow-mouth toad in his collection (M-43 and M-44). These were collected along Buffalo Bayou one mile south of Addicks, Texas, on the Addicks-Howell Road.

#### HYPOTHETICAL SALIENTIA

##### PELOBATIDAE (FAMILY)

1. Scaphiopus holbrookii holbrookii (Harlan), Solitary Spadefoot.
2. Scaphiopus hurterii Strecker, Texan Spadefoot.

##### HYLIDAE (FAMILY)

3. Hyla femoralis Latreille, Pine Tree Frog.
4. Acris gryllus (Le Conte), Cricket Frog.
5. Pseudacris nigrita clarkii (Baird), Spotted Peeper.
6. Pseudacris ornata (Holbrook), Ornate Peeper.

## REPTILIA (CLASS)

## CROCODILIA (ORDER)

## CROCODYLIDAE (FAMILY)

Alligator mississippiensis (Daudin), Alligator.

There is a Harris County specimen of the alligator in the University of Houston collection (H-209). This animal was caught in Green's Bayou, Houston, by B. F. Pyburn, University of Houston student. It was brought in on October 1, 1947, and was kept alive in an aquarium until February 19, 1948.

On May 16, 1947, an alligator, eight and one-half feet long, crawled out of Panther Creek, near Galena Park, in Harris County. This was reported in the Houston Post newspaper on May 17, 1947.

## LACEPTILIA (ORDER)

## IGUANIDAE (FAMILY)

Anolis carolinensis Voigt, Green Lizard Chameleon.

In his Reptiles and Amphibians of Texas, Strecker (1915) places the chameleon from Texarkana in eastern Texas to Brownsville, in the pine woods, and the Gulf coast counties. Pratt (1935) gives the range as the coastal regions of the southern states, from the Neuse River, North Carolina, into Mexico.

In the past twelve years the writer has observed chameleons along

the San Jacinto River, Bray's Bayou, and near South Houston. In October, 1946, a single specimen was taken on the University of Houston campus. March 23, 1947, another chameleon (H-44) was taken on the campus and two others observed. During the fall of 1947, specimens too numerous to list were brought in from the Houston and Harris County area by students. This would indicate a countywide distribution of this species.

Sceloporus undulatus hyacinthinus (Green), Northern Fence Lizard.

Smith (1946), in giving the range of this lizard, says that it is found in the eastern half of Texas and that it reaches the coast only in western Louisiana and eastern Texas.

Milstead has three of these lizards from Harris County in his collection (M-104, M-125, and M-201). One was collected by Milstead and Etheridge on October 25, 1947, twelve and one-half miles west of Bammel, Texas, on the Kuykendahl Road. The second was found by Etheridge in the woods, one mile east of Westfield, May 9, 1947. The third specimen was caught one mile east of Addicks on U. S. Highway 90, on June 9, 1947.

Sceloporus olivaceus Smith, Texas Spiny Lizard.

Smith (1946) states that this lizard ranges from the extreme southern Oklahoma southward through central Texas to southern Tamaulipas, Mexico.

Smith's range falls well away from Harris County. However, in 1947, two specimens were collected in Houston. The circumstances under

which these specimens were caught indicate that this might be a doubtful record for this area. One was found on the second floor of the science building, University of Houston, on May 2, 1947. The writer thinks that this lizard was brought in from another locality by some student and subsequently allowed to escape. This lizard is now in Milstead's collection (M-94). The other specimen, now in a terrarium at the University of Houston, was brought in by H. C. Daniels, student, on October 31, 1947. Here again is reason to doubt a Harris County record for this lizard was found at the York Transport Company, Houston, Texas, in some war surplus materials that had been shipped from San Antonio, Texas.

Phrynosoma cornutum (Harlan), Texas Horned Lizard.

The Texas horned lizard is reported in the Houston area by Harwood (1931) as a host for the tapeworm, Diochetos phrynosomatis.

Other authors (Smith, 1946, and Stejneger and Barbour, 1943) do not show the Texas horned lizard ranging into the Harris County area.

There is a horned lizard in the University of Houston collection (H-159) that was caught in the yard of a student, R. C. Holcome, 2202 Spence, Houston, Texas, on July 4, 1947. Milstead also has a specimen of this lizard in his collection (M-102). It was taken near a small stream on the east side of Barker Dam, one mile south of Addicks, May 14, 1947.

ANGUIDAE (FAMILY)

Ophisaurus ventralis (Linnaeus), Glass Snake.

The glass snake, despite its name, is actually a lizard. Since it is legless, it is very easy to mistake this harmless lizard for a snake. The presence of eyelids, ears, and a scaly belly are the most prominent characteristics which distinguish this lizard from a snake. The name glass snake comes from the brittle quality of its tail. A light blow is sufficient to cause the tail to break into several pieces.

The writer picked up the remains of a glass snake on the University of Houston campus, October 31, 1946. It had just received a terrific beating from a brave student armed with a three foot club.

Strecker (1915) gives the range from the northern boundary of eastern Texas, south to the Rio Grande. Pratt (1935) places this lizard in the southern and central states; northward into Virginia, Indiana and Wisconsin; westward to Nebraska, Texas and Mexico.

At present the University of Houston Zoological Collection has two specimens; one preserved (H-31), collected by the writer near Bammel, Texas, April 21, 1947; and the other living, collected in Houston by an unknown student, October, 1947.

TEIIDAE (FAMILY)

Cnemidophorus sexlineatus (Linnaeus), Six-lined Racerunner.

Smith (1946) gives the range of the six-lined racerunner as Maryland and Rhode Island through Florida; west probably to southeastern Wyoming and extreme southern Texas; and north in the Mississippi-

Missouri Valley to Lake Michigan, western central Wisconsin and south-western Dakota. In a distributional map, Smith shows the range of C. sexlineatus to include Harris County.

Pratt (1935) places the six-lined racerunner from Maryland to Florida; westward to Colorado; up the Mississippi Valley to Lake Michigan and South Dakota.

Strecker (1915) gives the range as east, central, and northern Texas.

Milstead reports collecting one of these lizards in Hermann Park, Houston, during the spring of 1945 (M-3).

Cnemidophorus gularis gularis Baird and Girard, Eastern Spotted Racerunner.

Smith (1946) gives the range of the eastern spotted racerunner as central Oklahoma, south to northern Mexico, east to western Arkansas, and west to eastern New Mexico. Smith's distributional map for this species covers practically all of the state except the extreme eastern, western, and northern (panhandle) areas. This lizard has been included in the major listing on the basis of Smith's map.

#### SCINCIDAE (FAMILY)

Eumeces fasciatus (Linnaeus), Blue-tailed Skink.

Strecker (1915) states that this lizard ranges from eastern Texas, principally in the timber belt, south to Victoria. Pratt (1935)

places the blue-tailed skink from Massachusetts to Florida; westward to Arizona; up the Mississippi Valley to Canada.

These lizards are common in the Houston area. The writer has two preserved specimens (H-16 and H-17) that were taken on the University of Houston campus during the summer of 1939. Another blue-tailed skink (H-41) was collected from the University of Houston campus by the writer during May, 1947.

Eumeces septentrionalis obtusirostris Bocourt, Southern Prairie Skink.

Smith (1946) does not include the Harris County area in his distributional map for this species, but he does give Texas as the type locality.

On March 14, 1948, Jesse Haver, amateur herpetologist of Houston, collected two of these skinks from Fuch's Dairy, one mile west of Cypress Creek, on the Tomball Highway. One of these specimens is in Milstead's collection (H-417) and the other is in Etheridge's collection.

This is a new record for this species and extends the range farther south than is indicated by Smith (1946).

Eumeces laticeps (Schneider), Greater Five-lined Skink.

Smith (1946) gives the range of the greater five-lined skink as central Texas, southwestern Missouri, southern Illinois, central Indiana and Ohio, and extreme southeastern Pennsylvania, south and east to the coasts. In his distributional map, Smith shows this skink covering the Harris County area.

Milstead has a specimen of this skink in his collection (H-66) which was caught by Etheridge in MacGregor Park, Houston, March, 1947.

Leiolopisma laterale (Say), Ground Lizard.

This lizard is listed as L. laterale (Say) by some authors. Pratt (1935) states that L. unicolor (Harlan) is preferable; and gives the distribution as southern New Jersey to Florida, westward to Kansas and Texas. Strecker (1915) places the ground lizard from eastern and central Texas, south almost to the mouth of the Rio Grande.

The writer has a single preserved specimen (H-39) taken on the University of Houston campus in 1939, and has observed others in and around the Houston area during the past twelve years. While on a field trip, March 3, 1947, the writer collected a specimen of the ground lizard on the University of Houston campus. During the spring and early summer these lizards are found in great abundance on the campus. Milstead has seven Harris County specimens in his personal collection.

#### SERPENTES (ORDER)

#### COLUBRIDAE (FAMILY)

Farancia abacura reinwardtii (Schlegel), Western Mud Snake, Horn Snake.

Strecker (1915) intimated that the western mud snake or horn snake probably occurred in all swamp and bayou counties of the eastern and southeastern part of the state. In 1926, Strecker stated that the mud snake is found in the whole of extreme eastern Texas, from the

northern boundary south through the timber and coast counties almost to Corpus Christi. He said it was reported from Houston, Harris County, by J. M. Heiser, Jr.

Harwood (1931) lists the mud snake as the host for the tapeworm, Proteocephalus faranciae, and tells of a specimen he examined from Houston.

Milstead reports this snake from Harris County. This snake was collected from a marsh near Kirby Drive and Bissonet Street, Houston, Texas, August 15, 1946.

Schmidt and Davis (1941) give the range of the western mud snake as extreme western Florida, northward in the lowlands of southern Indiana and southeastern Missouri, and westward along the Gulf coast into eastern Texas.

Diadophis punctatus stictogenys Cope, Mississippi Ring-necked Snake.

The writer has two Harris County records for this snake. One (M-28) was collected by Milstead in a vacant lot at Kirby Drive and Westheimer Road, Houston, Texas, on October 2, 1946. The other, brought in by an unknown student in October, 1947, is in the University of Houston collection (H-158).

Heterodon contortrix contortrix (Linnaeus), Common Hog-nosed Snake.

The writer has a specimen of the hog-nosed snake collected on the Paul Mueschke Estate. Another specimen was collected on this trip by Litherland. In the summer of 1938, the writer found a large specimen in

Herman Park near the Alameda Road bridge crossing Bray's Bayou. In March of 1947, Milstead picked up a dead specimen of hog-nosed snake from a street near River Oaks, in northwest Houston.

There are three specimens in the University of Houston collection (H-55, H-166 and H-167). One of these was collected by the writer in MacGregor Park, Houston, June 12, 1947. The others were brought in by students in October, 1947.

Opheodrys aestivus (Linnaeus), Rough Green Snake.

There are two rough green snakes in the University of Houston collection (H-107 and H-173). One of these was found by Werner Ascoli, student, October 24, 1947, on the University of Houston campus. The other was collected by the writer on the University of Houston campus, June, 1947. These snakes are quite common on the campus.

Milstead has one of these snakes in his collection (H-27). This snake came from a marsh near Kirby Drive and Bissonet Street, Houston, Texas.

Coluber constrictor flaviventris (Say), Blue Racer.

It seems that there has been a great amount of controversy over the separation of the blue racer and the spotted racer, Coluber constrictor anthicus (Cope). Stejneger and Barbour (1943) recognize both; therefore the writer will treat these snakes separately.

There is a specimen of the blue racer in the University of Houston collection (H-168). This specimen was found on the University

of Houston campus by Milstead and Etheridge on October 30, 1947.

Milstead has two of these snakes in his collection (M-18 and M-376). One was collected in his back yard by his mother, and the other was found by Milstead and Etheridge in the vacant lot behind Milstead's home.

Coluber constrictor anthicus (Cope), Spotted Racer.

Jesse Haver gave the writer a large spotted racer that he collected on the Paul Mueschke Estate on April 20, 1947. This snake is now in the University of Houston collection (H-61). Litherland captured another of these spotted racers on the same trip.

Milstead has a specimen of the spotted racer (M-256) from a farm on the Kuykendahl Road, twelve and one-half miles west of Bammel, Harris County.

Masticophis flagellum flagellum (Shaw), Eastern Coachwhip.

The writer has a specimen (H-49) of the eastern coachwhip collected on the Paul Mueschke Estate, April 20, 1947. Milstead collected an eastern coachwhip in the same area on November 1, 1947.

Schmidt and Davis (1941) range the eastern coachwhip from North Carolina to Florida, westward to Texas and central Kansas.

Elaphe laeta laeta (Baird and Girard), Emory's Rat Snake.

The writer found a young specimen of Emory's rat snake on the University of Houston campus, October 18, 1946. Another specimen of

approximately the same size was taken on the campus, October 24, 1946.

Ditmars (1939) gives the range of this snake as Kansas, through Oklahoma and Texas into Mexico.

Elaphe laeta (Baird and Girard) was formerly known as Coluber emoryi (Baird and Girard) and ranges from Missouri and Kansas to Mexico (Pratt, 1935).

Schmidt and Davis (1941) state the range of Emory's rat snake as Missouri and southeastern Nebraska, west to eastern Utah, and south through Texas and New Mexico to central Mexico.

Elaphe obsoleta lindheimeri (Baird and Girard), Gray Rat Snake.

A single specimen was found in the animal house adjacent to the science building on the University of Houston campus, November, 1946. This snake had a large bulge about a third of its length from the head. Two weeks after it was taken the snake regurgitated the remains of a large rat.

During the summer of 1947, the writer collected two large rat snakes from the Houston area. One of these snakes came from the University of Houston campus and the other from MacGregor Park. This last snake was taken in the act of expelling eggs into a hollow tree stump, June 12, 1947.

Two other rat snakes were reported from the University of Houston campus by students, W. Ascoli and J. B. Coroy. These snakes were marked by clipping labials and then released.

Ditmars (1939) gives the distribution of the gray rat snake as

the south Atlantic to the southern Mississippi Valley states, but recorded westward into the prairie country as far as Kansas, and southward to eastern Texas.

Schmidt and Davis (1941) list the range as North Carolina, through the Gulf states.

Pituophis sayi sayi (Schlegel), Common Bull Snake.

Harwood (1931) lists the common bull snake as a host for the nematode, Falicephalus agkistrodontis, in the Houston area.

Schmidt and Davis (1941) range the common bull snake throughout the Great Plains region from northern Mexico and Texas north to Indiana, Wisconsin, and Alberta.

The writer has never found one of these snakes in the Harris County area nor have any been reported by other collectors. This snake will be left in the major listing dependent on the Harwood listing.

Lampropeltis getulus holbrooki (Stejneger), Speckled King Snake.

Pratt (1935) gives the range of the speckled king snake as Louisiana and Texas, northward to Illinois and Wyoming.

Schmidt and Davis (1941) state the distribution of this snake from Illinois to southeastern Wyoming, and south to western Alabama and eastern Texas. They include a map (after Blanchard) showing the distribution of the getulus group. This map includes the Harris County area.

The writer picked up a single specimen of the speckled king snake

on the University of Houston campus, March 23, 1947. This snake was found in a hole alongside a small drainage ditch on the south side of the campus. Litherland and the writer collected two speckled king snakes on the Paul Mueschke Estate on April 20, 1947.

Lampropeltis triangulum amaura (Cope), Scarlet King Snake.

The writer examined a preserved specimen of the scarlet king snake collected by Milstead in Harris County, March 26, 1947. This snake came from the west bank of Willow Creek, east of the Post Oak Road, Houston, Texas.

Natrix grahami (Baird and Girard), Graham's Water Snake.

A specimen of Graham's water snake was examined by the writer on April 1, 1947. This snake was captured in the drainage ditch on the south of the University of Houston campus by Etheridge and Litherland. Milstead also reports Graham's water snake in Harris County (M-2).

Schmidt and Davis (1941) state the range of this snake as Illinois to southern Nebraska, and south to Louisiana and eastern Texas.

Strecker (1915) lists Graham's water snake as Pegina grahami (Baird and Girard) and gives the range as eastern Texas south to San Antonio.

Pratt (1935) ranges the snake from the Great Lakes to Texas.

The writer collected two specimens of Graham's water snake from the University of Houston campus in June, 1947. These snakes are now

in the University of Houston collection (H-13 and H-58).

Natrix sipedon clarkii Baird and Girard, Clark's Water Snake.

Schmidt and Davis (1941) give the range of Clark's water snake as the brackish waters of the Gulf coastal region from northwestern Florida to about Corpus Christi, Texas.

The writer examined a specimen of this snake from Milstead's collection (M-126). It was found on the road southeast of San Jacinto Monument, about one hundred yards northeast of road monument Number 17.

Natrix sipedon confluens (Blanchard), Mississippi River Snake.

Schmidt and Davis (1941) give the range of this snake as eastern Louisiana and east-central Texas.

Milstead has a Harris County specimen (M-11) in his collection. This snake was collected from Hogpen Pond, twelve and one-half miles west of Bammel, Texas.

Natrix erythrogaster transversa (Hallowell), The Yellow-bellied Water Snake.

The writer examined a specimen of the yellow-bellied water snake collected by Etheridge and Litherland. This snake was found in the small drainage ditch on the south of the University of Houston campus, April 2, 1947.

The writer collected three juvenile snakes on the University of Houston campus in June, 1947, and an adult (H-6) in the same place in

May, 1947. Another of the snakes was taken on the campus in June, 1947, by an unknown student.

Milstead has two Harris County specimens (M-8 and M-430) in his collection, both taken in Houston.

Strecker (1915) describes the yellow-bellied water snake as the common water snake of Texas, found in suitable localities throughout the state.

Schmidt and Davis (1941) give the range of the yellow-bellied water snake as western Missouri and eastern Kansas; through western Oklahoma to southeastern New Mexico; east to Fort Worth and Houston, Texas; and south to Mexico.

Natrix rhombifera rhombifera (Hallowell), Diamond-backed Water Snake.

The writer took approximately a dozen diamond-backed water snakes from Bray's Bayou during the summer of 1938. These snakes ranged from three to four feet in length. The writer examined three diamond-backed water snakes on March 21, 1947, while on a field trip with Milstead.

A specimen (H-71) was taken by Milstead in May, 1947, on the University of Houston campus. A large female diamond-back was collected by the writer in June, 1947, on the campus. This snake gave birth to a litter of twenty-nine on September 15, 1947. Both the adult and offspring are in the University of Houston live collection.

Strecker (1915) states that this snake is found over the greater portion of the state.

Ditmars (1939) gives the range of the diamond-backed water

snake from the lower Mississippi Valley states westward to Kansas, Oklahoma, and eastern Texas; and southward into Mexico.

Southern Indiana, southern Illinois and eastern Kansas, south to Alabama through Texas to adjacent Mexico, is the range given by Schmidt and Davis (1941).

Pratt lists the distribution of the species as southern Indiana and Illinois, to Louisiana and Texas.

Natrix cyclopion cyclopion (Dumeril and Bibron), Green Water Snake.

The writer examined and confirmed the identification of a green water snake collected from the San Jacinto Battlefield along Buffalo Bayou, April 21, 1947. This snake is now in the collection of Etheridge of Houston. Milstead also has a green water snake (M-101) taken the same date and place. Both of these snakes were caught by twelve year old Ben Swanson, an ardent collector.

Schmidt and Davis (1941) range the green water snake in the lowlands of the Mississippi Valley from southern Illinois south to Louisiana, east along the Gulf coast to Alabama and possibly west into Texas.

Storeria dekayi texana Trapido, Texas Brown Snake, DeKay's Snake.

A specimen of Texas brown snake was brought to the writer on March 29, 1947. This snake was taken in the University of Houston Trailer Village by one of the maintenance workers.

Strecker (1915) places DeKay's snake in the eastern half of the

state, from the northern boundary, south to the Rio Grande.

Schmidt and Davis (1941) give the range of this snake as southern Maine to Minnesota and Kansas, southward to the Gulf of Mexico except for peninsular Florida.

Pratt (1935) says that this snake is distributed from the eastern and central states westward to Kansas, and southward into Mexico.

Milstead reports three specimens of Texas brown snake from Harris County (M-45, M-46 and M-428).

The writer collected a specimen from the University of Houston campus on July 9, 1947.

Haldea striatula (Linnaeus), Southern Ground Snake.

On March 24, 1947, the writer found a southern ground snake on the University of Houston campus. This snake was under a board beside the drainage ditch on the south side of the campus. Another specimen was found on March 30, 1947, in the grass near the same drainage ditch.

Pratt (1935) lists the southern ground snake as Potamophis striatulus (Linnaeus), whereas, later authorities (Schmidt and Davis, 1941) place it in the genus Haldea (Baird and Girard). Pratt gives the range as the southern and central states; northward into Virginia, east of the mountains, and into Minnesota west of them; and south-westward into Texas.

Schmidt and Davis state the distribution as Virginia to northern Florida, and west to eastern Oklahoma and Texas.

Strecker (1915) places this snake from eastern Texas, west to Cooker, Somervell, and McLennan counties; and south as far as Victoria County.

Thamnophis sirtalis sirtalis (Linnaeus), Common Garter Snake.

Etheridge and Litherland brought a common garter snake to the writer on April 1, 1947. This snake was taken alongside the small drainage ditch on the south of the University of Houston campus.

Strecker (1915) gives the range of the common garter snake as eastern Texas, west to Dallas and Waco, and south in the coast region to Victoria and Matagorda counties.

There are two specimens of the common garter snake in the University of Houston collection. The writer collected one in MacGregor Park, Houston, June, 1947; and the other was found by J. B. Coroy, on the University of Houston campus, September 20, 1947.

Milstead has a specimen collected by Etheridge in March, 1944 (M-120).

Thamnophis sauritus proximus (Say), Western Ribbon Snake.

The writer examined a specimen (H-7) of the western ribbon snake taken by Etheridge and Litherland near Bammel, Harris County, April 6, 1947.

A ribbon snake (H-171) was collected on the University of Houston campus by the writer on July 9, 1947.

Milstead collected a specimen of this snake (M-17) from the San

Jacinto River near Highlands, Texas, May 22, 1946.

Strecker (1915) says that the western ribbon snake is abundant in all Texas, east of the plains and the Pecos River.

Schmidt and Davis (1941) give the range of the western ribbon snake as southern Wisconsin and Minnesota, southward west of the Wabash and Mississippi Rivers to the Gulf of Mexico, and westward into the great plains along water courses.

Tronidoclonion lineatur (Hallowell), Lined Snake.

Strecker (1915) ranges the lined snake from eastern Texas; west to Cooke, Dallas, and McLennan counties; and south to Walker, Harris, and Liberty counties. He states that they are abundant in waste lands and under storerooms and warehouses within the city limits of Dallas, Houston, and Waco.

Schmidt and Davis (1941) give the distribution as the southern half of Illinois, west to southeastern South Dakota, and southward through Kansas to the Gulf of Mexico.

#### ELAPIDAE (FAMILY)

Micrurus fulvius tenere (Baird and Girard), Texas Coral Snake.

Strecker (1915) states that this snake ranges from the northern boundary of eastern Texas, south to the Rio Grande, and west almost to the foot of the plains. Pratt lists the species as ranging from North Carolina to Texas. Ditmars (1939) locates the subspecies Micrurus

fulvius tenere (Baird and Girard) in central and coastal Texas.

The writer has seen several coral snakes in the Houston area in Herman Park and MacGregor Park during the last twelve years. A single specimen was found on the University of Houston campus on May 28, 1946. Others were reported on the campus and near by at this time. Three Texas coral snakes were taken by Etheridge, Litherland, and the writer on the Paul Mueschke Estate, April 20, 1947.

In April, 1947, E. D. Blathewich, University of Houston student, caught two coral snakes (H-4 and H-5) in his back yard, 1747 Pasadena, Forrest Hill, Houston. Another specimen of the coral snake was collected by Vic Helm, photography instructor, on the University of Houston campus, August 8, 1947.

#### CROTALIDAE (FAMILY)

Akistrodon mokeson austrinus Gloyd and Conant, Southern Copperhead, Lowland Copperhead.

In the past the status of the subspecies of copperheads has been highly controversial. Recently (Gloyd and Conant, 1943) the nomenclature of the copperheads was completely reorganized and the copperhead of this region is now known as Akistrodon mokeson austrinus Gloyd and Conant. It was formerly called Akistrodon mokeson mokeson (Gloyd and Conant).

Gloyd and Conant (1943) give the range of the southern copperhead as the lowland areas of the lower Mississippi Valley and the Gulf and Atlantic coastal plains from eastern Texas north to southern Illinois,

and probably southern Maryland.

The writer has recently examined two copperheads which conform to Gloyd and Conant's description of Akistrodon mokeson austrinus. A specimen was brought to the University of Houston, October 21, 1946. This snake came from a pine woods north of Houston. On March 13, 1947, the writer collected a specimen in the pine woods on the south of the University of Houston campus.

Four southern copperheads were collected by Jesse Haver on the Paul Hueschke Estate, April 20, 1947; two of these snakes are now in the University of Houston collection (H-9 and H-59).

Akistrodon piscivorus leucostoma (Troost), Western Cottonmouth.

Etheridge and Litherland reported capturing a specimen of the western cottonmouth from a small lake near Bammel, Harris County, April 5, 1947. The writer collected a single specimen (H-56) of the western cottonmouth from the above mentioned lake, April 19, 1947, and has seen them on numerous occasions in the past ten years along the banks of Bray's Bayou near Herman Park, Houston.

Strecker (1915) states that the cottonmouth is found in eastern and southern Texas.

Pratt (1935) gives the range of the cottonmouth as the Atlantic and Gulf drainage from Virginia to eastern Texas.

Gloyd and Conant (1943) give the range of the western cottonmouth as the valley of the Rio Grande (mouth of Devils River and Eagle Pass) and the Gulf coastal plain of Texas, Louisiana, and Mississippi.

Sistrurus miliaris streckeri Gloyd, Western Ground Rattlesnake, Pigmy Rattlesnake.

The writer and Jesse Haver collected a single specimen (H-38) of the ground rattlesnake on the Paul Mueschke Estate, April 20, 1947.

Another specimen of the pigmy rattlesnake was given to the University of Houston collection (H-207) by B. F. Pyburn, student. It was caught at Green's Bayou, Houston, Texas, December 1, 1947.

Milstead has a specimen (M-5) that he collected on Park Drive, five miles northwest of Houston, April 15, 1945.

Strecker (1915) states that the ground or pigmy rattlesnake is scarce and is found in most of the eastern and east-central counties; in the coast prairie district it is found as far south as Victoria and Matagorda counties.

Schmidt and Davis (1941) range the western ground rattlesnake from the Pearl River Valley of southeastern Louisiana and western Mississippi west through Louisiana and eastern Texas.

Crotalus adamanteus Beauvois, Eastern Diamond Rattlesnake.

The eastern diamond rattlesnake is the largest poisonous snake in North America. This snake can probably be considered as extinct for the Harris County region, for it has not been reported here in many years. Strecker (1915) states that according to J. D. Mitchell the eastern diamond rattlesnake was formerly abundant in Calhoun, Harris, Jackson, Lavaca, Matagorda, and Victoria counties.

Schmidt and Davis (1941) range the eastern diamond rattlesnake from Florida and many adjacent keys, north on the coastal plains to Albemarle Sound in North Carolina, and west to extreme southeastern Louisiana. This present range by Schmidt and Davis would indicate a gradual reduction in distribution from west to east.

#### HYPOTHEICAL SERPENTES

##### LEPTOTYPHLOPIDAE (FAMILY)

1. Lentotyphlops dulcis dulcis Baird and Girard, Texas Blind Snake.

##### COLUBRIDAE (FAMILY)

2. Carphophis amoena vermis (Kenicott), Western Worm Snake.
3. Rhadinaea flavilata (Cope), Yellow-tipped Snake.
4. Coluber constrictor constrictor (Linnaeus), Black Racer.
5. Matrix rigida (Say), Striped Water Snake.
6. Haldea valeriae elegans (Kenicott), Western Ground Snake.
7. Thamnophis marcianus (Baird and Girard), Marcy's Garter Snake.

##### CROTALIDAE (FAMILY)

8. Crotalus atrox (Baird and Girard), Western Diamond Rattlesnake.
9. Crotalus horridus atricaudatus Latreille, Canebrake Rattlesnake.

#### TESTUDINATA (ORDER)

##### KINOSTERNIDAE (FAMILY)

Kinosternon subrubrum hippocrepis (Gray), Mississippi Mud Turtle,  
Common Mud Turtle.

The writer, while on a night field trip, April 11, 1947, collected two specimens of the common mud turtle from the small drainage ditch on the south of the University of Houston campus. A few days before this Etheridge and Litherland collected two adult and two juvenile specimens of this turtle from the same ditch.

Another of these turtles (H-54) was collected by Sanchez from the University of Houston campus on June 17, 1947.

Milstead has a specimen in his collection (M-72) that was taken near the San Jacinto River at Highlands, Texas.

Pratt (1935) gives the distribution of the common mud turtle as the eastern and central states from New York south, exclusive of peninsular Florida; westward to Texas, Missouri, and eastern Illinois.

In giving the range of the Mississippi mud turtle, Pope (1946) states it is the western form of the common mud turtle and is found from the southeastern corner of Missouri, southward through Arkansas and Louisiana, and westward throughout the lowlands of eastern Texas to Austin and Dallas.

#### CHELYDRIDAE (FAMILY)

Chelydra serpentina serpentina (Linnaeus), Common Snapper.

A common snapper was brought to the writer in November, 1946. This turtle was taken from a roadside ditch near the University of

Houston. In 1938, the writer captured a common snapper and it weighed more than thirty pounds.

Pratt (1935) gives this turtle a very extensive range in stating that it is found in North America, east of the Rockies, from Canada to the Gulf.

In listing the reptiles of Texas, Strecker (1915) states:

This large turtle is not uncommon in the lakes and streams of the eastern half of Texas. I have examined specimens from the San Antonio River, Bexar County, and have captured examples from the San Jacinto River.

There are three specimens of this turtle in the University of Houston collection, one preserved (H-108) and two living. These were collected in Houston in June, 1947, by Ben Swanson.

Macrochelys terminckii (Troost), Alligator Snapper.

The alligator snapper is often confused with the common snapper. Strecker (1926) describes a small specimen collected in the San Jacinto River.

The writer has seen these turtles in Bray's Bayou, Harris County, on numerous occasions in his pre-collecting days. One specimen in particular is vividly remembered. This turtle weighed about forty pounds and was caught on pole and line by an old negro fisherman who was certain that the devil himself was on the hook.

Wilstead has the skull of an alligator snapper that he collected in Harris County from Cypress Creek, one mile west of Westfield, August 8, 1946.

## TESTUDINIDAE (FAMILY)

Terrapene carolina triunguis (Agassiz), Three-toed Box Tortoise.

Two specimens of the three-toed box tortoise were taken on the University of Houston campus by the writer on October 21 and 23, 1946. Two living specimens, both from the Houston area, are now in the University of Houston collection. These last two turtles have been found in copula on numerous occasions. The result of this mating is being watched carefully.

This turtle is placed on the Gulf slope, westward into Texas and northward into Missouri (Pope, 1946).

Terrapene ornata (Agassiz), Ornate Box Tortoise.

The writer collected an ornate box tortoise in September, 1946, on the University of Houston campus.

Milstead has a specimen of this tortoise in his collection (M-98). This animal was caught by Etheridge during May, 1947, in Houston.

Pratt (1935) gives the distribution of this turtle as Indiana to the Rocky Mountains, southward to the Gulf of Mexico and Arizona.

Maloclemys pileata littoralis (W. P. Hay), Texas Diamond-back Terrapin, Salt Marsh Turtle.

The writer had the opportunity to examine a diamond-back terrapin which was taken from the bay near Seabrook. This turtle was brought in by Milstead on March 9, 1946, and is now in his collection

(M-48). Milstead obtained this turtle from a fisherman at Seabrook, Harris County, who claimed that they were quite common along Clear Creek and in Galveston Bay.

Pratt (1935) gives the range of this turtle as the Texas coast.

Pseudemys troostii elegans (Wied), Troost's Terrapin.

The writer observed a single juvenile specimen of Troost's terrapin on March 21, 1947. This terrapin was taken by Milstead from a creek near River Oaks, Houston.

On many occasions the writer has seen these turtles along the banks of Bray's Bayou and Buffalo Bayou in Houston.

Pratt (1935) gives the range of this turtle as the Mississippi Valley, northward to Iowa and Ohio, and south to Texas.

Deiorchelys reticularia (Latreille), Chicken Turtle.

A single specimen of the chicken turtle was taken from the reflection pool on the University of Houston campus, November 1, 1946.

Pratt (1935) ranges this turtle on the Atlantic and Gulf coastal plain from central North Carolina, to Texas and Oklahoma, and southward to central Florida.

Harwood (1931) reports the chicken turtle as a host for the nematode, Camallanous trispinosus, from Houston.

Milstead has three chicken turtles in his collection (M-97, M-321 and M-380). One of these turtles was taken on May 3, 1947, from a pond on the Paul Meuschke Estate. Another was collected by John Wottring,

amateur herpetologist, in East Haven Addition, Houston, February 5, 1948. The other was collected by Milstead twelve miles east of the Hegar Road, on the Waller-Tomball Road, February 26, 1948.

#### TRIONYCHIDAE (FAMILY)

Amyda emoryi (Agassiz), Emory's Soft-shelled Turtle.

There is a small specimen of Emory's soft-shelled turtle in the University of Houston collection (H-74). This turtle was collected by the writer from Bray's Bayou, Houston, during the summer of 1940.

Milstead has one of these turtles in his collection (M-131). It was found on the Addicks-Satsuma Road, one mile north of Addicks, Harris County.

Amyda ferox (Schneider), Southern Soft-shelled Turtle.

A southern soft-shelled turtle was taken on the University of Houston campus in November, 1946.

Strecker (1915) said: "Later, I obtained specimens in the Brazos and Bosque Rivers near Waco and in the San Jacinto River in Liberty County."

Pratt (1935) reports the distribution of this turtle as the southern states from South Carolina to Louisiana.

Harwood (1931) gives the southern soft-shelled turtle as host for the nematode, Falcaustra chelydrae, and cites Houston as the type locality.

## HYPOTHETICAL TESTUDINATA

## KINOSTERNIDAE (FAMILY)

1. Sternotherus odoratus (Latreille), Common Musk Turtle.
2. Sternotherus carinatus (Gray), Keeled Musk Turtle.

## TESTUDINIDAE (FAMILY)

3. Terrapene carolina major (Agassiz), Gulf Coast Box Turtle.
4. Graptemys pseudogeographica oculifera (Baur), Ocellated Map Turtle.
5. Pseudemys floridana mobilensis (Holbrook), Mobile Turtle.
6. Gopherus polyphemus (Daudin), Gopher Tortoise.

## CHELONIIDAE (FAMILY)

7. Chelonia mydas (Linnaeus), Green Turtle.
8. Caretta caretta (Linnaeus), Atlantic Loggerhead Turtle.
9. Colpochelys kempii (Garman), Kemp's Turtle.

## MAMMALIA (CLASS)

## MARSUPIALIA (ORDER)

## POLYPODONTIA (SUBORDER)

## DIDELPHIIDAE (FAMILY)

Didelphis virginiana virginiana Kerr, Virginia Opossum.

The Virginia opossum is fairly common in the Houston region.

The writer has taken specimens along Dray's Bayou near Herman Park, in Meadowbrook near South Houston, on the Rice Institute campus, and on the University of Houston campus. Recently (February, 1947) a specimen was reported from Buffalo Bayou near Jefferson Davis Hospital.

Smith (1942) places these animals in the forests and coastal prairies and reported three specimens from his camp near Hockley.

Strecker (1926) gives the range of the Virginia opossum as middle and northern Texas.

Anthony (1928) lists the distribution of the opossum as the Hudson Valley to northern Texas and almost to the Gulf coast, while Pratt (1935) merely says, "Gulf states".

#### EDENTATA (ORDER)

#### DASYPODIDAE (FAMILY)

Dasypus novemcinctus texanus (Bailey), Texas Nine-banded Armadillo.

The writer found a dead nine-banded armadillo on the Kuykendahl Road, two miles northwest of Bammel, April 19, 1947. Hute evidence in the form of mangled rotted tree stumps, on the Paul Hueschke Estate near Westfield, indicated the presence of the nine-banded armadillo.

Jesse Haver collected a young armadillo on the above mentioned estate, July 13, 1947. This specimen is now in the University of Houston collection (H-84).

Two specimens were observed by the writer on the Harris County shore of Clear Lake during the summer of 1947.

The Texas Game, Fish, and Oyster Commission publication on The Principal Game Birds and Mammals of Texas (1942) gives a distributional map for the nine-banded armadillo, which includes all of southern, central, and eastern Texas.

## INSECTIVORA (ORDER)

### TALPIDAE (FAMILY)

Scalopus aquaticus pulcher Jackson, Arkansas Mole.

Pratt (1935) lists the range of the Arkansas mole from central Arkansas to southern Louisiana and eastern Texas.

The writer has a single preserved specimen (H-34) taken in the Houston area in 1939. The exact location and season of collection is not known for this specimen.

A young specimen (H-32) was collected by Mrs. Jesse Haver (Secretary of Houston Herpetology Society) on the Paul Mueschke Estate, April 22, 1947.

## CHIROPTERA (ORDER)

### VESPERTILIONIDAE (FAMILY)

#### VESPERTILIONINAE (SUBFAMILY)

Myotis lucifugus lucifugus (Le Conte), Little Brown Bat.

There is a single specimen of the little brown bat in the

University of Houston collection (H-125). This bat was found in the University of Houston Trailer Village by J. B. Coroy, September 22, 1947.

Anthony (1928) says that the little brown bat is found in the whole of North America north of the southern boundary of the United States, except in the Rocky Mountains and on the Pacific coast of California, Oregon, Washington, British Columbia, and southern Alaska.

Pipistrellus subflavus subflavus (F. Cuvier), Pipistrelle.

In their Mammals of Texas, Taylor and Davis (1947) state that they have examined specimens of this bat from Harris County.

Dasyptherus floridanus Miller, Florida Yellow Bat.

Taylor and Davis (1947) record this species on the basis of a single specimen from Harris County.

#### CARNIVORA (ORDER)

#### CANIDAE (FAMILY)

Canis rufus gregoryi (Goldman), Texas Red Wolf.

Pratt (1935) and Anthony (1928) list the Texas red wolf as Canis rufus (Audubon and Bachman) and Strecker (1926) lists it as Canis lupus var. rufus (Audubon and Bachman). According to W. P. Taylor, Unit Leader, Texas Cooperative Wildlife Research Unit, College Station, Texas, these names are obsolete; and the name Canis rufus gregoryi (Goldman),

as listed by Smith (1942), is correct.

Smith in listing the red wolf states:

During our survey red wolves were still distributed sparingly throughout Harris County, which was surprising considering the united attempts of trappers, hunters, ranchmen, and farmers to eradicate them. From 1934 to 1940, seventy-seven were killed in Harris County by government trappers, according to C. R. Landon, District Agent, Division of Predatory Animal and Rodent Control. Twenty-nine of these were in 1940. Hunters, ranchmen, and farmers have killed a few every year, and it was reported that a few have been run over on the highways. Various sight reports were received. W. B. Schaefer, dairy worker five and one-half miles northeast of Fairbanks, saw two black wolves near White Oak Creek January 6, 1939, and a red wolf January 13. Buck Farmer reported seeing a black wolf near Sheldon in January 1939. J. H. Herring saw a few wolves about three and one-half miles southeast of Westfield during the winter of 1938, and he said a pair raised some pups in that neighborhood during the winter of 1938. Adkins, fence rider on the Paddock ranch, heard wolves howling at night during November 1938, and claimed that he killed a female and eleven pups during the spring of 1938.

J. L. Selensky, a farmer on the Fairbanks-Addicks road, reported that a red wolf killed a heifer and four of his goats in July 1938. Selensky hid near the body of the heifer and when the wolf returned he shot his predator. Another specific case of damage to livestock was reported by Joe Leibham, Route 2, Fairbanks. According to him a wolf killed one of his cows in 1938; he also managed to shoot the wolf. Mr. Clinton reported that wolves killed some calves in the Willow Hole pasture south of Bellaire in 1939.

Urocyon cinereoarctatus floridanus Rhoads, Florida Gray Fox.

Strecker (1926) stated that the Florida gray fox is found in southeastern Texas and probably ranges over most of eastern and north-eastern Texas as well. Frye and Lay (1942) list this fox as being common over most of the state except the northwestern great plains region.

Smith (1942), in a distribution chart, lists specimens from fourteen miles north of Crosby, near Sheldon along San Jacinto River;

three miles east of Cedar Bayou, between Humble and Westfield; Spring Creek north of Waller; five and one-half miles northwest of Spring; four miles north of Huffman; and four and one-half miles northeast of Crosby. According to Smith, the gray fox is increasing in abundance.

#### PROCYONIDAE (FAMILY)

Procyon lotor fuscines Mearns, Texas Raccoon.

The writer has never had the opportunity to take or see one of these animals in Harris County but finds that they are amply recorded.

Smith (1942) states that the Texas raccoon is found throughout the county and that it was reported from all five of his camps. Specimens were reported from the West Ranch (Horsepen Bayou and on open prairie), from Mason's Bay (three and one-half miles from LaForte in a marsh), and from the Telf Davis Estate. Mr. Conner, foreman of the estate, trapped six during the trapping season of 1937 and 1938. The Hager Farm near Hockley had four pet raccoons taken from Spring Creek in June, 1938. The Odus Adkins fence riders treed three with hounds along Cypress Creek on November 10, 1938.

Frye and Lay (1942), in the Texas Game, Fish, and Oyster Commission Bulletin Number 25, reported that the raccoon is abundant over practically the entire state and particularly abundant in the coastal regions and along wooded streams.

Anthony (1928), Pratt (1935), and Strecker (1926) place the Texas raccoon in the southwestern Texas area around Devils River.

## MUSTELIDAE (FAMILY)

## MUSTELINAE (SUBFAMILY)

Mustela frenata arthuri Hall, Bridled Weasel.

The writer has not seen a bridled weasel in Harris County and found it listed only by Smith (1942) under the name of Mustela frenata arthuri Hall.

Anthony (1928) lists the bridled weasel as Mustela frenata frenata (Lichtenstein) while Pratt (1935) does not list the bridled weasel at all. The writer consulted W. P. Taylor concerning Smith's nomenclature and authority. Taylor said that the name Mustela frenata frenata (Lichtenstein) was obsolete and that Smith's listing could be accepted as proper and correct.

Smith locates the bridled weasel on the open prairie in western Harris County. The following catches are listed in his survey: F. C. Miller caught six specimens during the 1937-38 season between Katy and Hockley and four in April, 1938, nine and one-half miles north of Katy; Alfred Hager, Jr. trapped three on the Hager Farm, two and one-half miles north of Katy in the winter of 1937-38; and a negro on the Hager Farm caught three in 1938.

Mustela vison mink (Peale and Beauvois), Common Mink.

The most recent report of the common mink in Harris County was by Smith (1942). In speaking of the abundance of the mink in this region Smith cited an instance, in 1890, when two hundred were trapped on the

open prairie of the southeastern part of the county. Trapping in such great numbers has not been reported in recent years. During Smith's survey a single specimen was taken six miles east of LaPorte. F. C. Miller trapped fifty between Hockley and Katy during the 1935-36 season. The trapper on Paddock Ranch near Cypress took sixty during the 1937-38 season.

Pratt (1935) and Anthony (1928) are both very general in distributing the common mink, listing its Texas range as northeast Texas.

#### MEPHITINAE (SUBFAMILY)

Mephitis mesomelas mesomelas Lichtenstein, Louisiana Striped Skunk.

The writer observed a Louisiana striped skunk along Dray's Bayou, near Herman Park, in the summer of 1938, and another in a pine woods near South Houston in 1941.

Smith (1942) reports two specimens from his survey; one from three miles northeast of Webster, and the other from three miles east of Huffman.

Frye and Lay (1942) give the range of the striped skunk as west from Louisiana along the Texas coast to Matagorda Island.

Strecker (1926) places this animal from eastern Texas, west to Wichita Falls and Matagorda Bay.

Pratt (1935) distributes the Louisiana striped skunk from southern Louisiana to Mississippi; westward to Matagorda Island, Texas; and up the Red River Valley to Wichita Falls. Anthony (1928) cites a

range identical to Pratt's.

Spilogale indianola Merriam, Gulf Spotted Skunk.

Pratt (1935) and Anthony (1928) place the Gulf spotted skunk in the Gulf coast regions of Texas and Louisiana.

Frye and Lay (1942) state that this skunk is common in most of Texas except in the dense southeastern pine woodland and western plains.

Five of these animals were reported during Smith's survey; four from West's ranch and one from the Hager Farm, two and one-half miles north of Hockley (Smith, 1942).

#### FELIDAE (FAMILY)

Lynx rufus texensis (Allen), Texas Bobcat.

Anthony (1928) and Pratt (1935) place the Texas bobcat in southern and eastern Texas. Frye and Lay (1942) say it is found practically all over the state. Strecker (1926) agrees with Frye and Lay as to distribution of this bobcat.

In 1937 and 1938 the following specimens were reported from Harris County; two bobcats two miles northeast of Sheldon (1937); a large male on Lief Davis Estate, four miles northeast of Huffman, August 6, 1938; one sighted five miles east of Cypress (1937-38); and one from an unknown locality (within Harris County) taken by a government trapper (Smith, 1942).

#### RODENTIA (ORDER)

## MURIDAE (FAMILY)

## CRICETINAE (SUBFAMILY)

Peromyscus leucopus texanus (Woodhouse), Texas White-footed Mouse.

Anthony (1928) states that the Texas white-footed mouse is found in southern Texas and that the range extends west to the vicinity of the mouth of the Pecos River, north to about latitude thirty-three degrees, and east to the west side of Galveston Bay.

Seven young specimens of this mouse were found on the University of Houston campus by W. Ascoli, November, 1947.

Cryzomys palustris texensis Allen, Texas Rice Rat.

A single specimen of the Texas rice rat was trapped in the animal house of the University of Houston in December, 1946. The writer has noted several of these rats in the University of Houston Trailer Village.

Anthony (1928) distributes the Texas rice rat from Corpus Christi Bay; north and east along the Gulf coast of Texas and Louisiana; to the delta of the Mississippi; thence north in the Mississippi Valley to southeastern Kansas, probably by way of the Arkansas River Valley through Oklahoma (not yet known in Oklahoma).

Pratt (1935) ranges this rat on the coast of Mississippi, Louisiana, and Texas; Mississippi Valley into Missouri.

In listing the mammals of Texas, Strecker (1926) states the

range of the Texas rice rat as does Anthony.

#### NEOTOMINAE (SUBFAMILY)

Neotoma floridana rubida (Bangs), Ruddy Wood Rat.

A ruddy wood rat was brought to the writer by two students on April 6, 1947. This rat was killed in one of the student houses on the campus. They say that these rats are seen every day. One man tells of awakening to find a rat on his bed.

Anthony (1928) says that this rat is found in the lower Mississippi Valley and Gulf coast, from southwestern Alabama to eastern Texas, and north to eastern Arkansas. He also includes a distributional map, after Goldman, which includes the Harris County area in the range of this species.

Pratt (1935) gives a range for this rat which coincides with the range given by Anthony.

#### MICROTINAE (SUBFAMILY)

Ondatra zibethica rivalicia (Bangs), Louisiana Muskrat.

Smith (1942) reported muskrats from his Number 1 camp near Morgan's Point and LaPorte, Harris County.

#### GEOMIDAE (FAMILY)

Geomys breviceps brazensis Davis, Brazos Pocket Gopher.

There are four species of pocket gophers, Geomys brevicens,

occurring in east Texas. This species has developed a number of varieties each of which occupy an isolated area. Due to the sandy soil type of habitat necessary for the Geomys genus, it is difficult or impossible for the varieties to leave their type habitats (Davis, 1940). Davis reported four specimens of the Brazos pocket gopher from two and one-half miles north of Hockley in Harris County and two specimens from four miles north of Huffman in Harris County. He gives the general distribution of this variety of brevicens as the sandy post oak country of Texas from the Sabine River in Kaufman and Panola counties, south and west to the Colorado River in Colorado and Bastrop counties.

Geomys breviceps sagitallis Merriam, White-throated Pocket Gopher.

The sagitallis variety of Geomys breviceps is apparently limited to a small area of sandy soil in southern Harris County and northern Galveston County (Davis, 1940). Davis records three specimens of sagitallis from three miles northeast of Webster, Harris County, and three specimens from three miles north of LaPorte, Harris County. He gives the type locality for this race as Clear Creek, south end of Harris County, and gives the distribution as along Clear Creek and in the sands along Galveston Bay north of Clear Creek.

Strecker (1926) reports the white-throated pocket gopher from Clear Creek, Galveston Bay, and Galveston County.

Pratt (1935) and Anthony (1926) both give the range of this gopher as the Gulf coast of Texas about Galveston Bay.

## SCIURIDAE (FAMILY)

## SCIURINAE (SUBFAMILY)

Sciurus carolinensis carolinensis Gmelin, Southern Gray Squirrel.

Smith (1942) states that in his survey made in 1938, gray squirrels were uncommon and their distribution was very spotty; colonies occurring along the most heavily wooded streams.

The heaviest concentration of gray squirrels was evidently along Cedar Bayou, six and one-half miles southeast of Crosby, where one hunter killed sixty from December 26 to December 31, the last six days of the 1938 hunting season. At this location there were fifteen gray squirrels to one fox squirrel, which was perhaps the highest ratio in the county. At the West ranch we found that the ratio was about one gray squirrel to five fox squirrels. One specimen (Dept. Cat. number 719, TCMC) was taken on the West ranch.

The type preferred by the gray squirrels seemed to be bottomland hardwoods where trees were growing as close together as nature would permit, and where some, at least, of the trees had attained maturity. In the early days this was the usual condition along the streamways, but today it is rare indeed (Smith, 1942).

Strecker (1926) gives the range of the gray squirrel as eastern Texas and eastern border of east-central Texas.

Pratt (1935) does not mention Texas in the range of this subspecies, but places the southern gray squirrel in the Austral zone; southward to northern Florida; westward into Oklahoma and Nebraska.

Anthony (1928) says the southern gray squirrel is found in the Austral zone, from northern Florida, north about to the lower Hudson Valley; west through the Alleghenies, south of Pennsylvania to Indiana, Missouri, Oklahoma, and the edge of the plains.

The writer observed a single specimen near the University of

Houston, May 28, 1946, and later in the summer observed two more on the campus.

Sciurus niger ludovicianus Curtis, Texas Fox Squirrel.

Smith (1942), in writing about the Texas fox squirrel in Harris County states:

During our survey fox squirrels were present throughout the whole forrested area of Harris County, occurring not only in the forest but along the lightly wooded streams that transected the coastal prairie. They were observed at each of our five summer camps. While their primitive status is not positively known, old-timers reported that this species was formerly much less common than the gray squirrel. The fox squirrel has probably decreased within recent years, but on account of the much greater decrease of the gray squirrel, the former predominates.

Four fox squirrels were collected during our survey. Curtis Conner, schoolboy, reported that he killed thirty-two fox squirrels during the open season in April, May and June, on the Lief Davis estate, four miles northeast of Huffman. A negro near Cypress claimed that he killed sixty-six during the open season in October, November and December, 1938.

On account of most conditions, fox squirrels move about considerably in the forest. A heavy acorn drop in one locality may attract squirrels from other localities where the crop is poor. This accounts for fluctuations in squirrel population. Sometimes they will abandon certain forest areas and become exceedingly common in places where before there were few or none. The largest fox squirrel concentration, one hundred and fifty to two hundred in a twenty acre tract of oak woods, was reported by J. P. Cubstead in November, 1938. Fox squirrels were reported on the open prairie by two observers. In both of these instances the animals were between the forks of a stream, and they were undoubtedly moving from one tract to another.

About nine and one half miles from Houston, on the Buffalo Bayou, at least half of the fox squirrels were black in color. Melanistic squirrels are not uncommon, and perhaps ten per cent of the squirrels in Harris County are of the black color phase.

In the Texas Game, Fish, and Oyster Commission report on the game birds and mammals of Texas the following is reported with reference to

### Harris County:

The movements of fox squirrels are more conspicuous in the timbered section of southeastern Texas in the vicinity of Harris and nearby counties than in other parts of the state. Field investigations have produced ample evidence of these movements: Representative of such data is that of A. H. Bess of Bay City, who saw them moving across prairie land from one woodland site to another. He said that this phenomenon was observed on two occasions, once in 1902 and again in 1922. W. M. Lowry, Genoa, Harris County, said: "About 1936 there was a movement of squirrels because several came in the few trees around the house and several were run over on the highway. They were all fox squirrels".

### LEPORIDAE (FAMILY)

Lepus californicus melanotis (Mearns), Great Plains Jack Rabbit.

Neither Anthony (1928) nor Pratt (1935) list the great plains jack rabbit in the east Texas area. They bring the range into north-central Texas, but no farther south or east.

In his survey, Smith (1942) reported one specimen from a small island in Mason's Bay (about three hundred yards from the mainland), and three from northeast of Webster.

Sylvilagus floridanus alacer (Bangs), Oklahoma Cottontail.

Anthony (1928) states that the Oklahoma cottontail is found on the Gulf coast from Mobile Bay, Alabama, to Matagorda Bay, Texas. Anthony also gives a distributional map, after Nelson, showing a range which includes Harris County, Texas.

Pratt (1935) lists this animal in the southern and Gulf states from Georgia to Oklahoma and westward to central Texas.

Smith (1942) lists cottontails from all of his five camps in Harris County and tells of taking five specimens from six and one-half miles northeast of Crosby.

The writer has seen these rabbits in the South Houston area, on the Rice Institute campus, west of Bellaire, and on the University of Houston campus. A single specimen, which had been run over by an automobile on the University of Houston campus, was examined on March 21, 1947.

Sylvilagus aquaticus aquaticus (Bachman), Swamp Rabbit.

In listing the mammals of Texas, Strecker (1926) referred to the swamp rabbit as Lepus aquaticus (Bachman). At the time of Strecker's paper, there was apparently some confusion as to the proper naming of this rabbit. The genus name Lepus would place it in the jack rabbit group. In more modern nomenclature it is placed with the genus Sylvilagus (cottontails) under the subgenus Tameti, Palustris group (swamp rabbits) (Anthony, 1926). Strecker gave the range of this rabbit as eastern and north-central Texas.

Smith (1942) states that the swamp rabbit is found along the streamways of Harris County. He cited Buffalo Bayou and Alexander's Isle in Mason's Bay as definite localities for this rabbit. Smith recorded two of these rabbits during his survey.

Two specimens of this rabbit were reported from the South Houston region by a qualified observer in 1947.

## UNGULATA (ORDER)

## ARTIODACTYLA (SUBORDER)

## CERVIDAE (FAMILY)

Odocoileus virginianus macilhennyi Miller, White-tailed Deer.

The writer has not seen a live white-tailed deer out of captivity in Harris County, but has seen mute evidence of their existence in the many sets of antlers hanging on the porches of farm houses in the northern portion of the county.

Smith (1942) in reporting the white-tailed deer in Harris County, cites the following observations:

On April 28, 1845, Suthron (1845, p. 97f.) observed large herds of deer at a place not far from Houston. Roemer (1938, p. 61) observed two herds of deer in 1846 near Morgan's Point. S. H. Simmons of Waller reported that in 1885 he saw a herd of six deer on the prairie south of Hockley. Another observer reported seeing a herd of eighteen deer near LaPorte about 1890.

At the time of the present survey (1938) a few, perhaps two hundred, white-tailed deer, believed to represent native stock, remained in the forests in northern and northeastern Harris County.

The Texas Game, Fish, and Oyster Commission's publication (1942) includes a map which shows the range of the white-tailed deer as the northern one-third of Harris County.

## HYPOTHETICAL MAMMALIA

## INSECTIVORA (ORDER)

## SORICIDAE (FAMILY)

1. Cryptotis parva (Say), Little Short-tailed Shrew.
2. Blarina brevicauda brevicauda (Say), Short-tailed Shrew.

#### VESPERTILIONIDAE (FAMILY)

3. Eptesicus fuscus fuscus (Beauvois), Big Brown Bat.
4. Lasiurus borealis borealis (Muller), Red Bat.

#### MYLOSSIDAE (FAMILY)

5. Tadarida mexicana (Cassure), Mexican Free-tailed Bat.

#### CARNIVORA (ORDER)

#### CANIDAE (FAMILY)

6. Canis niger Bartram, Red Wolf.
7. Vulpes fulva (Dumarest), Red Fox.

#### BASSARISCIDAE (FAMILY)

8. Bassariscus astutus flavus Rhoades, Ring-tailed Cat.

#### MUSTELIDAE (FAMILY)

#### MUSTELINAE (SUBFAMILY)

9. Lutra canadensis canadensis (Schreber), River Otter.

#### MEPHITINAE (SUBFAMILY)

10. Conepatus mesoleucus texanensis Bailey, Swamp Hog-nosed Skunk.

## RODENTIA (ORDER)

## MURIDAE (FAMILY)

## MURINAE (SUBFAMILY)

11. Mus musculus musculus Linnaeus, Common Mouse.
12. Rattus norvegicus (Erxleben), Norway Rat.
13. Rattus rattus rattus (Linnaeus), Black Rat.

## CRICETINAE (SUBFAMILY)

14. Reithrodontomys humulis humulis (Audubon and Bachman), Eastern Mouse.
15. Reithrodontomys fulvescens aurantius (Allen), Tawny Harvest Mouse.
16. Peromyscus gossypinus neacephalus Rhoads, Cotton Mouse.
17. Eaiomys taylori subater Bailey, Taylor Mouse.
18. Sigmodon hispidus hispidus Say and Ord, Bristle-haired Cotton Rat.

## HETEROMYIDAE (FAMILY)

19. Perognathus hispidus hispidus Baird, Hispid Pocket Mouse.

## SCIURIDAE (FAMILY)

## PTECOMYINAE (SUBFAMILY)

20. Glaucomys volans texensis Howell, Flying Squirrel.

## CASTORIDAE (FAMILY)

21. Castor canadensis carolinensis Rhoads, Beaver.

EXTINCT MAMMALIA

CARNIVORA (ORDER)

URSIDAE (FAMILY)

1. Euarctos americanus americanus (Pallas), American Black Bear.
2. Euarctos luteolus (Griffith), Louisiana Black Bear.

FELIDAE (FAMILY)

3. Felis onca True, Jaguar.
4. Felis pardalis Linnaeus, Ocelot.
5. Felis concolor True, Cougar.

## CHAPTER IV

### SUMMARY

Lists of the vertebrate animals of Harris County, Texas, exclusive of the fish, birds, and marine mammals have been presented. These lists were compiled from published records, collections, and personal field work. Each species has been recorded systematically and an accession reference given.

The knowledge that it would be highly improbable to make complete lists, prompted the use of hypothetical lists. These hypothetical lists are based on ranges, given by authorities, which indicate a close approach to, or include, Harris County, Texas.

Some animals have been listed as extinct for the Harris County area. These animals have been recorded in old literature but are not known in the area today.

Harris County, Texas, was chosen for this work on the basis of the terrain, locality, and the need for such a work. A general discussion of the terrain, physical dimensions, climate, history, and industries has been included.

Seven known and three hypothetical Caudata have been listed. Fifteen recorded and six hypothetical Salientia have been listed. One Crocodylia has been listed. Eleven known Lacertilia have been listed. Twenty-eight known and nine hypothetical Serpentes have been listed. Ten known and nine hypothetical Testudinata have been listed. The Mammalia have been grouped with twenty-six known, twenty-one

hypothetical, and five extinct species listed.

There has been no compilation of this type heretofore. The specimen accession and literature references should be of help to future workers in these groups of animals.

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