ELPASO GEOLOGICAL SOCIETY SYMPOSIUM

on the FRANKLIN MOUNTAINS

> Editors David V. LeMone Earl M. P. Lovejoy

QUINN MEMORIAL VOLUME

April 2, 3, 1976

Herpetofauna of the Franklin Mountains, El Paso County, Texas

Richard D. Worthington, Department of Biological Sciences, The University of Texas at El Paso, El Paso, Texas 79968

The Franklin Mountains exhibit two broad habitat types. The steep areas of sedimentary rocks (dominantly limestone) and igneous rocks constituting the main mountain mass comprise the roughlands. Variations in slope, altitude, drainage, and substrate make the roughlands habitat a very complex unit. The rock exposures and thin stony soils have been called by Jaco (1971) the igneous rock land and limestone rock land soil associations. The fauna of this mountain mass has also been described as representing the Upper Sonoran Life Zone (Merriam, 1898; Bailey, 1905, 1913).

The gentle slopes and terraces off the main mountain mass formed of alluvial material constitutes a second habitat type, the piedmont. The piedmont is dissected by numerous arroyos of various sizes. Jaco (1971) has described these soils as being gravelly and shallow over a caliche. The soil types fall into his Del Norte-Canutillo association. The fauna of this habitat falls into that of the Lower Sonoran Life Zone (Merriam, 1898; Bailey, 1905, 1913).

In attempting to list the herpetofauna of the Franklin Mountains, both the roughlands and piedmont habitats are considered. Other broad habitats are found in El Paso County including the Rio Grande flood plain and the Hueco bolson that isolate the Franklin Mountains to the west and the east respectively.

The herpetofauna of El Paso County consists of 63 species. Not all of these species are found associated with the roughlands and piedmont habitats of the Franklin Mountains. Some species (<u>Coleonyx brevis</u>, <u>Sceloporus</u> <u>poinsetti</u>, <u>Thamnophis cyrtopsis</u>, <u>Lampropeltis mexicana</u>, <u>Crotalus scutulatus</u>) are presently known in El Paso County from the Hueco Mountains. Other species (<u>Bufo woodhousei</u>, <u>Rana berlandieri</u>, <u>Rana catesbeiana</u>, <u>Chrysemys picta</u>, <u>Chrysemys scripta</u>, <u>Trionyx spiniferus</u>, <u>Elaphe guttata</u>) appear to be restricted to the Rio Grande flood plain where permanent water, deep alluvial soils, and high humidities are to be found.

The distributions of some species are poorly known. <u>Leptotyphlops</u> <u>dulcis</u> is presently known only from the Rio Grande flood plain. Populations may occur in other habitats within the county. <u>Ambystoma tigrinum</u> has been taken in the northeast part of El Paso, at Ascarate Lake, Horizon City Lake, and at various stock ponds in the Hueco Mountains. All of these localities are associated with permanent or semipermanent bodies of water. The occurrence of populations on the well drained slopes of the piedmont of the Franklin Mountains is doubtful, but adults could wander into such habitats and establish populations in stock tanks should they be created and contain water for long periods of time. The status of populations of <u>Bufo speciosus</u>, <u>Salvadora gra-hamiae</u>, and <u>Lampropeltis getulus</u> in the Franklin Mountains is not known.

A number of species associated with the Rio Grande flood plain and bolson habitats occur at least at ecotone areas with the piedmont of the Franklin Mountains as well as up the arroyos that dissect the piedmont. These include: <u>Bufo debilis, Bufo cognatus, Bufo woodhousei, Terrapene ornata, Crotaphytus</u> <u>wislizeni, Holbrookia maculata, Sceloporus magister, Sceloporus undulatus,</u> <u>Cnemidophorus neomexicanus, Cnemidophorus inornatus, Cnemidophorus tigris,</u> <u>Leptotyphlops dulcis, Heterodon nasicus, Elaphe guttata, Thamnophis marianus,</u> and <u>Crotalus viridis</u>.

The roughlands habitat of the Franklin Mountains contains species not found in the bolson or Rio Grande flood plain habitats. These include: <u>Bufo</u> <u>punctatus</u>, <u>Cnemidophorus</u> <u>uniparens</u>, <u>Urosaurus</u> <u>ornatus</u>, <u>Masticophis</u> <u>taeniatus</u>, <u>Trimorphodon</u> <u>biscutatus</u>, <u>Elaphe</u> <u>subocularis</u>, <u>Crotalus</u> <u>lepidus</u>, and <u>Crotalus</u> <u>molossus</u>.

Much more needs to be known about the distributions of reptiles and amphibians in the El Paso area. It is difficult to generalize about the distribution of species known from but a few localities within the county. Collecting biases of a variety of types do exist. Furthermore, many common species known to occur in most or all of the major habitat types within the county are abundant in rather restricted areas. The generalizations presented in this report are based upon published records and specimens in the Museum of Arid Land Biology. The reader is directed to Brown (1950), Raun and Gehlbach (1973), and Kinniburgh (1973) for additional references and distributional data and to Conant (1973) for subspecific designations, descriptions, and current distribution maps for the species discussed herein.

REFERENCES CITED

Bailey, V., 1905, Biological survey of Texas. North American Fauna 25: 1-222.

Fauna 35: 1-100.

Brown, B.C., 1950, An annotated check list of the reptiles and amphibians of Texas. Baylor Univ. Stud., Waco, Texas, xii-259.

Conant, R., 1975, A field guide to reptiles and amphibians of eastern and central North America. Houghton Mifflin Co., Boston, xviii-429.

Jaco, H.B., 1971, Soil survey of El Paso County, Texas. U.S. Dept. Agr., Washington, D.C., 1-60.

Kinniburgh, R.M., 1972, Distribution and thermal responses of the rattlesnakes (genus <u>Crotalus</u>) in El Paso County, Texas. M.S. Thesis, The Univ. of Texas at El Paso, ix-80. Merriam, C.H., 1898, Life zones and crop zones of the United States: U.S. Dept. Agr., Biol. Survey Bull. 10: 1-79

Raun, G.G., and F.R., Gehlbach, 1972, Amphibians and reptiles in Texas: Bull. Dallas Mus. Nat. Hist. 2: ii-61.

Species 	occur in/on: s. El Paso Co. X
Franklin Mt	Co.
CAUDATA (Salamanders)	x
	x
1. <u>Ambystoma tigrinum</u> ? (tiger salamander)	
ANURA (Frogs and Toads)	
2. <u>Bufo cognatus</u> (Great Plains toad)	Х
3. <u>Bufo</u> debilis (green toad)	х
4. Bufo speciosus ? (Texas toad)	х
5. Bufo woodhousei (southwestern Woodhouse's toad)	x
6. Bufo punctatus X (red-spotted toad)	x
7. <u>Scaphiopus</u> <u>bombifrons</u> X (plains spadefoot toad)	X
8. <u>Scaphiopus</u> couchi (Couch's spadefoot toad)	X
9. <u>Scaphiopus hammondi</u> X (western spadefoot)	X
10. <u>Rana berlandieri</u> (Rio Grande leopard frog)	x ^l
ll. Rana catesbeiana (bullfrog)	x ^l

HERPETOFAUNA OF THE FRANKLIN MOUNTAINS AND VICINITY

њ. т .

1.

С	on	t	d	•

contra.		
CHELONIA (Turtles)		xl
12. Chrysemys picta (painted turtle)		·xl
13. Chrysemys scripta (pond slider)		
14. Kinosternon flavescens (yellow mud turtle)		X
15. <u>Trionyx spiniferus</u> (spiny softshell)		xl
16. <u>Terrapene</u> <u>ornata</u> (western box turtle)	?	Х
SQUAMATA (Lizards and Snakes)		
Lizards:	У.	х
17. <u>Crotaphytus</u> <u>collaris</u> (collared lizard)		x
18. <u>Crotaphytus wislizeni</u> (leopard lizard)		x
19. Holbrookia maculata (lesser earless lizard)		X
20. Holbrookia texana (greater earless lizard)	X	x
21. <u>Sceloporus magister</u> (twin-spotted spiny lizard)	X	
22. <u>Sceloporus poinsetti</u> (crevice spiny lizard)		x ²
	?	Х
23. <u>Sceloporus undulatus</u> (prairie lizard)	Х	х
24. Uta stansburiana (side-blotched lizard)	x	х
25. <u>Urosaurus ornatus</u> (tree lizard)	х	X
26. Phrynosoma cornutum (Texas horned lizard)	Λ	

~

210

contd.

	· · · ·	
27. Phrynosoma modestum (round-tailed horned lizard)	x	x
28. Eumeces obsoletus (Great Plains skink)	x	X
29. <u>Cnemidophorus exsanguis</u> (Chihuahua whiptail)	x	X .
30. Cnemidophorus neomexicanus (New Mexico whiptail)	X	х
31. <u>Cnemidophorus inornatus</u> (seven-striped whiptail)		X
32. <u>Cnemidophorus tesselatus</u> (checkered whiptail)	x	x
33. <u>Cnemidophorus tigris</u> (marbled whiptail)	x	X
34. <u>Cnemidophorus uniparens</u> (desert grassland whiptail)	Х	х
35. <u>Coleonyx brevis</u> (Texas banded gecko)		x ²
Snakes:		
36. Leptotyphlops dulcis (Texas blind snake)	· · · · ·	x
37. Leptotyphlops humilis (western blind snake)	X	х
38. Diadophis punctatus (ringneck snake)	x	X
39. Heterodon nasicus (western hognose snake)		х
40. Masticophis flagellum (coachwhip)	x	x
41. <u>Masticophis taeniatus</u> (striped whipsnake)	x	x
42. <u>Salvadora grahamiae</u> (mountain patch-nosed snake)	?	x

، *م. : € <u>1</u>1

· .

contd.

conta.		
43. <u>Salvadora deserticola</u> (Big Bend patch-nosed snake)	x	X
44. Elaphe guttata (Great Plains rat snake)		xl
45. Elaphe subocularis (Trans-Pecos rat snake)	X	Χ.
46. <u>Arizona elegans</u> (glossy snake)	х	x
47. <u>Pituophis melanoleucus</u> (bullsnake)	X	x
48. Lampropeltis getulus (desert kingsnake)	?	X
49. Lampropeltis mexicana (gray-banded kingsnake)		x ²
50. Rhinocheilus lecontei (long-nosed snake)	X	X
51. Thamnophis cyrtopsis (black-necked garter snake)	.¢	x ²
52. Thamnophis marcianus (checkered garter snake)		х
53. <u>Sonora semiannulata</u> (ground snake)	X	X
54. Gyalopion canum (western hook-nosed snake)	x	X
55. <u>Tantilla atriceps</u> (Mexican black-headed snake)	X	X
56. <u>Tantilla nigriceps</u> (plains black-headed snake)	x	х
57. <u>Trimorphodon biscutatus</u> (Texas lyre snake)	x	X
58. <u>Hypsiglena torquata</u> (night snake)	x	х
59. <u>Crotalus atrox</u> (western diamondback rattlesnake	X 2)	X

211

21	2
----	---

contd.

	ويجربنا بمكاحة متحدي ويقتقون ويتقاول والمتكافر	
60. <u>Crotalus lepidus</u> (rock rattlesnake)	x	Х
61. <u>Crotalus molossus</u> (black-tailed rattlesnake)	х	x
62. <u>Crotalus scutulatus</u> (mojave rattlesnake)		x ² .
63. <u>Crotalus viridis</u> (prairie rattlesnake)		Х

¹Populations occur on the Rio Grande flood plain

²Populations occur in the Hueco Mountains