

REPTILES AND AMPHIBIANS OF THE KANSAS ECOLOGICAL RESERVES

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Forty species of amphibians and reptiles have been found on the Kansas Ecological Reserves (KER), and others are to be expected as some of these areas have not been thoroughly sampled. The Fitch Natural History Reservation (FNHR) has been sampled the most thoroughly, with thousands of records based upon almost continuous live trapping over a 43-year period. Sampling of the Rockefeller Experimental Tract was begun in 1957 and has been carried on sporadically. On the Nelson Environmental Study Area (NESA) sampling has been mainly in the southeastern part (the Kansas Biotic Succession Facility) where artificial shelters have been used since 1986. However, the forested portions of NESA have been sampled only casually, and the same applies to the Robinson Tract, and the KER tracts in Baldwin Woods (Breidenthal Biological Reserve, Rice Woodland and the Roy and Eleanor Wall Woods).

Approximately 70 percent of the 56 species in the local herpetofauna have been recorded on the Tri-County area of KER (Fitch Natural History Reservation, Nelson Environmental Study Area, and Rockefeller Experimental Tract). Missing are 8 fluviatile species: *Necturus maculosus*, *Graptemys pseudogeographica*, *Trachemys scripta*, *Trachemys floridana*, *Apalone mutica*, *Apalone spinifera*, *Nerodia erythrogaster*, *Nerodia rhombifera*; also 7 floodplain or wetland species: *Ambystoma texanum*, *Rana areolata*, *Bufo cognatus*, *Thamnophis proximus*, *Thamnophis radix*, *Regina grahami*, *Sistrurus catenatus*; 3 forest species: *Eumeces anthracinus*, *Opheodrys aestivus*, *Storeria occipitomaculata*; and one arenicolous species, *Heterodon platirhinos*.

Most records have been gathered from the FNHR, but with the successional habitat changes from field, pasture, and prairie to brush and woodland, the following species have been eliminated from the Reservation: *Gastrophryne olivacea*, *Terrapene ornata*, *Crotaphytus collaris*, *Eumeces obsoletus*, *Eumeces septentrionalis*, *Cnemidophorus sexlineatus*, *Pituophis catenifer*, *Tantilla gracilis*, and *Crotalus horridus*. All these species except *Crotaphytus collaris*, *Cnemidophorus sexlineatus*, *Eumeces septentrionalis* (and possibly *Tantilla gracilis*) are still present on NESA. Six of the species in our lists (*Ambystoma tigrinum*, *Scaphiopus bombifrons*, *Chrysemys picta*, *Terrapene carolina*, *Elaphe guttata* and *Lampropeltis getula*) are thought to have reached the Tri-County area of KER as occasional dispersers from more favorable habitats, or to have been brought and released by people, but without establishing permanent populations. No species has gained in numbers as a result of the successional changes on FNHR, but the following have been drastically reduced: *Ophisaurus attenuatus*, *Eumeces fasciatus*, *Carphophis amoenus*, *Coluber constrictor*, and *Diadophis punctatus*.

Of the 40 species occurring on KER, 7 (*Bufo woodhousii*, *Rana catesbeiana*, *Chrysemys picta*, *Coluber constrictor*, *Diadophis punctatus*, *Lampropeltis getula*, *Thamnophis sirtalis*) are transcontinental in distribution; 9 (*Scaphiopus bombifrons*, *Rana blairi*, *Gastrophryne olivacea*, *Terrapene ornata*, *Crotaphytus collaris*, *Eumeces obsoletus*, *E. septentrionalis*, *Tantilla gracilis*, and *Tropidoclonion lineatum*) are characteristic of the Great Plains; 1 (*Pituophis catenifer*) is mainly western, and the remaining 23 species (57%) are most characteristic of the Eastern Deciduous Forest Biome. Of the 23, 12 (*Hyla chrysoscelis*, *Bufo americanus*, *Terrapene carolina*, *Eumeces anthracinus*, *E. fasciatus*, *Scincella lateralis*, *Carphophis amoenus*, *Elaphe obsoleta*, *Storeria occipitomaculata*, *Virginia valeriae*, *Agkistrodon contortrix* and *Crotalus horridus*) have overall ranges corresponding well with the Forest Biome; 8 others (*Ambystoma tigrinum*, *Acris crepitans*, *Pseudacris triseriata*, *Ophisaurus attenuatus*, *Cnemidophorus sexlineatus*, *Elaphe guttata*, *Lampropeltis calligaster*,

- and *Nerodia sipedon*) have ranges extending west far into the Great Plains grasslands, while 3 (*Chelydra serpentina*, *Lampropeltis triangulum*, and *Storeria dekayi*) range southward into the tropics.

In the accompanying lists, species are presented in phylogenetic sequence by family and scientific and common (species or subspecies) names follow Conant and Collins (1991). Generalized habitat preferences for each species has been recorded as follows: A=aquatic tendencies, B=barren soil, sand or rock, C=cultivated land, F=forest, P=prairie or pasture, and E=edge or forest-grassland contact. A generalized key to abundance and occurrence is given with the following codes: a=abundant, m=moderately abundant, r=rare, s=single record of occurrence, and i=introduced species with no extant population.

Literature Cited

Conant, R. and J. T. Collins. 1991. Reptiles and amphibians eastern and central North America. Peterson Field Guides. Houghton Mifflin Company, Boston. xviii + 450 pp.

AMPHIBIANS OF THE KANSAS ECOLOGICAL RESERVES

| Family/Species | Common Name | Habitat | Abundance |
|------------------------------|-------------------------------|---------|-----------|
| Ambystomatidae | | | |
| <i>Ambystoma tigrinum</i> | Eastern Tiger Salamander | C | r |
| Pelobatidae | | | |
| <i>Scaphiopus bombifrons</i> | Plains Spadefoot | C | r |
| Bufo | | | |
| <i>Bufo americanus</i> | Eastern American Toad | F | m |
| <i>Bufo woodhousii</i> | Woodhouse's Toad | P | m |
| Hylidae | | | |
| <i>Acris crepitans</i> | Blanchard's Cricket Frog | A | a |
| <i>Hyla chrysoscelis</i> | Cope's Gray Treefrog | F | m |
| <i>Pseudacris triseriata</i> | Western Chorus Frog | C | a |
| Ranidae | | | |
| <i>Rana blairi</i> | Plains Leopard Frog | A | m |
| <i>Rana catesbeiana</i> | Bullfrog | A | a |
| Microhylidae | | | |
| <i>Gastrophryne olivacea</i> | Great Plains Narrowmouth Toad | F | m |

REPTILES OF THE KANSAS ECOLOGICAL RESERVES

| Family/Species | Common Name | Habitat | Abundance |
|---|------------------------------|---------|-----------|
| Chelydridae | | | |
| <i>Chelydra serpentina</i> | Snapping Turtle | A | m |
| Emydidae | | | |
| <i>Chrysemys picta</i> | Midland Painted Turtle | A | s |
| <i>Terrapene carolina</i> | Three-toed Box Turtle | F | s |
| <i>Terrapene ornata</i> | Ornate Box Turtle | P | r |
| Crotaphytidae | | | |
| <i>Crotaphytus collaris</i> | Eastern Collared Lizard | B | i |
| Teiidae | | | |
| <i>Cnemidophorus sexlineatus</i> | Six-lined Racerunner | B | r |
| Scincidae | | | |
| <i>Eumeces anthracinus</i> ¹ | Northern Coal Skink | F | m |
| <i>Eumeces fasciatus</i> | Five-lined Skink | F | m |
| <i>Eumeces obsoletus</i> | Great Plains Skink | P | m |
| <i>Eumeces septentrionalis</i> | Northern Prairie Skink | P | r |
| <i>Scincella lateralis</i> | Ground Skink | E | r |
| Anguidae | | | |
| <i>Ophisaurus attenuatus</i> | Western Slender Glass Lizard | P | m |
| Colubridae | | | |
| <i>Carphophis amoenus</i> | Western Worm Snake | F | r |
| <i>Coluber constrictor</i> | Eastern Yellowbelly Racer | P | a |
| <i>Diadophis punctatus</i> | Prairie Ringneck Snake | E | a |
| <i>Elaphe guttata</i> | Great Plains Rat Snake | P | r |
| <i>Elaphe obsoleta</i> | Black Rat Snake | F | m |
| <i>Lampropeltis calligaster</i> | Prairie Kingsnake | P | m |
| <i>Lampropeltis getula</i> | Speckled Kingsnake | E | r |
| <i>Lampropeltis triangulum</i> | Red Milk Snake | E | r |
| <i>Nerodia sipedon</i> | Northern Water Snake | A | m |
| <i>Pituophis catenifer</i> | Bullsnake | P | r |
| <i>Storeria dekayi</i> | Texas Brown Snake | E | m |
| <i>Storeria occipitomaculata</i> ¹ | Northern Redbelly Snake | F | r |
| <i>Tantilla gracilis</i> ² | Flathead Snake | B | r |
| <i>Thamnophis sirtalis</i> | Red-sided Garter Snake | A | m |
| <i>Tropidoclonion lineatum</i> ³ | Lined Snake | P | r |
| <i>Virginia valeriae</i> | Western Earth Snake | F | r |
| Viperidae | | | |
| <i>Agkistrodon contortrix</i> | Osage Copperhead | E | m |
| <i>Crotalus horridus</i> | Timber Rattlesnake | E | r |

¹Baldwin Woods only; ²no recent records; ³NESA only.