

A PRELIMINARY CATALOGUE OF KANSAS REPTILES AND  
BATRACHIANS.

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The object of this catalogue is to give a condensed view of the present state of our knowledge concerning the herpetological fauna of Kansas. As this object would not otherwise be fully accomplished, I incorporate in the list of reptiles and batrachians already observed in the State, the names of such others as cannot reasonably be doubted to occur there; and append to this a supplementary list, comprising the names of species whose future identification in Kansas there is more or less reason to anticipate, giving with each name the principal evidence upon which it is included.

Among those who have kindly assisted me in the preparation of this catalogue, I am most indebted to Prof. E. A. Popenoe, of the Kansas State Agricultural College, whose warm and constant interest in my work has been shown in a most practical manner by the sending of many notes and specimens. Acknowledgements are also due to Prof. F. H. Snow, of the Kansas State University, for the use of undetermined material in the museum of that institution, and for several interesting notes; to Prof. E. D. Cope, for the determination of difficult species and for other favors; through Prof. S. F. Baird, to Mr. S. C. Brown, of the Smithsonian Institution, for a list of the Kansas reptiles and batrachians in the National Museum; to J. S. Nolan, of the Philadelphia Academy of Natural Science, for similar list, drawn up from the collection of said Academy; through Mr. J. A. Allen, to Mr. S. Garman, of the Cambridge Museum of Comparative Zoology, for a similar list of specimens under his charge, as well as for other favors; to Prof. William Wheeler, of Ottawa, for notes on the tortoises, etc., of the Osage river at that point; to Mr. Harvey Worrall, of Topeka, for the names of specimens in the collection at the State House; and to Col. N. S. Goss, of Neosho Falls.

Of the published writings which I have found useful in the study of Kansas herpetology, the most important are, Cope's "Check-list of North American Batrachia and Reptilia," (the classification and nomenclature in which are followed in the present paper;) Dr. Hallowell's writings in Proc. Phila. Acad. Nat. Sci., 1856, pp. 238 and 309; Miss A. E. Mozley's "List of Kansas Snakes in the Museum of the Kansas State University," (Transac. Kan. Acad. Sci., VI;) Agassiz's "Contributions to the Natural History of the United States," I; and Jordan's "Manual of the Vertebrates."

## TESTUDINATA.

## EMYDIDÆ.

*Cistudo ornata* Agass.: Western Box-tortoise. Appears to be rather

common at Manhattan, and westward throughout the State. Its eastern limit has not been definitely ascertained. I have observed *Cistudo* common at Topeka, but whether of the *ornata* or *clausa* type, I am unable to state. A young specimen of *ornata*, taken at Manhattan, by Prof. Popenoe, shows a slight approach to *clausa*, in having a partially developed keel.

*Cistudo clausa* Gm. Box-tortoise. Prof. Wheeler writes me that he has observed this species at Ottawa. This is doubtless nearly the western limit of its distribution.

*Cistudo clausa* Gm. var. *triunguis* Ag.: Three-toed Box-tortoise. A single specimen, observed by Prof. Popenoe, at Manhattan. Osage river (Agassiz).

*Chrysemys oregonensis* Harl.: Golden Tortoise. The range of this species is given by authors as extending over nearly the entire region west of the Mississippi and east of the Pacific slopes.

*Chrysemys picta* Herm.: Painted Tortoise. An Eastern species, but doubtless ascending the Missouri and its tributaries well into the State. Under the name of *C. Bellii*, Agassiz has recorded its abundance in western Missouri. Prof. Popenoe writes me that he has observed in the Kansas river a tortoise which he believes to be of this species, but not having obtained a specimen, is not quite sure.

*Malacoclemmys pseudogeographicus* Holb.: Le Sueur's Map-tortoise. Five specimens of this tortoise, included in Dr. Hammond's Kansas and Nebraska collection (Hallowell) were probably taken at or near Fort Riley, as were most of the specimens in this collection. Osage river (Agassiz).

*Malacoclemmys geographicus* Le Sueur: Map-tortoise. Prof. Wheeler, writing from Ottawa, states that he has observed the *geographicus* at that locality. I believe this observation somewhat extends its known westward range.

*Pseudemys elegans* Wied.: Elegant Terrapin. Osage river, and from the upper Missouri to Texas (Agassiz). Illinois to the Rocky Mountains (Jordan).

#### CINOSTERNIDÆ.

*Armoehelys carinatus* Gray: Southern Musk-tortoise. Under the name of *Ozotheca tristycha*, Agassiz gives this species as common in the Osage river.

#### CHELYDRIDÆ.

*Chelydra serpentina* Linn.: Snapping-tortoise. Reported from Ottawa by Prof. Wheeler, and from Lawrence from Prof. Snow. Ranges over the entire region east of the Sierra Nevada and south of British America to Ecuador. (Cope).

#### TRIONYCHIDÆ.

*Aspidonectes spinifer* Le Sueur: Soft-shelled Tortoise. Prof. Popenoe writes me that he has taken three specimens of this tortoise at the mouth of the Blue river. Prof. Wheeler also reports it from Ottawa, and Prof. Snow from Lawrence. Authors mention it as common in most of the tributaries of the Missouri.

*Amyda mutica* Le Sueur: Leathery Tortoise. This species is not uncommon in the vicinity of Manhattan, where Prof. Popenoe has observed it in the Blue and Kansas rivers.

#### LACERTILIA.

##### IGUANIDÆ.

*Phrynosoma douglassii* Bell: Horned Lizard. Three specimens taken at Fort Riley, by Dr. Hammond (Hallowell). Prof. Snow informs me that he has taken *douglassii* in Douglas county, and knows of its having been taken in Doniphan county. Specimens from Kansas are in the National Museum (Brown), and in the collection of the Philadelphia Academy (Nolan).

*Phrynosoma cornutum* Harl.: Texan Horned Lizard. This appears to be, generally, the commoner *Phrynosoma* of Kansas. It occurs at least as far east as Ottawa, where it has been taken by Prof. Wheeler. Four specimens sent from Manhattan, by Prof. Popenoe, vary considerably in color, and have the inferior surface of the body marked with sparse black spots, but offer no marked peculiarities. The ovaries of one of these specimens contained seventeen eggs, averaging fifty-five hundredths of an inch in length by thirty-five in diameter.

*Sceloporus consobrinus* B. & G. A Sonoran and Central species, ranging to the north, south and west of Kansas, and doubtless over the western part of the state. Sand-hills, valleys of the Platte (Hayden). Canadian fork (Baird).

*Sceloporus undulatus* Harl.: Tree Lizard. I have seen a single specimen of this lizard, taken in Rooks county, or vicinity, by Prof. Popenoe. Ft. Riley (Brown).

*Crotaphytus collaris* Say: Black-shouldered Lizard. Occurs throughout the State. Prof. Popenoe writes: "Rather frequent about Manhattan. Inhabits stone-quarries and rocky hills. Very agile and somewhat difficult to capture. Fights when taken."

*Holbrooki maculata* Gir.: Cactus Lizard. Neosho river (Brown, Goss) and westward. Prof. Popenoe, who has observed the species in middle and western Kansas, writes that it is found on dry, hot, sandy or stony plains and hillisdes, dodging about clumps of grass or cactus, when pursued, and keeping on the side opposite its pursuer, but never assuming the defensive when caught. He further states that it varies considerably in shade.

##### ANGUIDÆ.

*Opheosaurus ventralis* Daud.: "Grass Snake." Well known in many parts of Kansas as the "joint snake." As it is rarely seen except when turned up by the plow, it is nowhere regarded as abundant. Prof. Popenoe writes that he has observed it several times at Topeka, and Prof. Wheeler sends a similar note for Ottawa; Prof. Snow reports it as not uncommon at Lawrence; it is represented in the collection of the Philadelphia Academy, from Republican fork; and I have observed a single specimen in Crawford county. It occurs westward to Bridger's Pass (Hallowell).

## TEIDÆ.

*Cnemidophorus sexlineatus* Linn.: Six-lined Swift. A southern species, extending northward to the Platte (Hayden). One specimen was taken by Dr. Hammond, at Ft. Riley (Hallowell), and seven others, collected by him in "Kansas and Nebraska" (Hallowell), were probably taken near the same point. A specimen taken in or near Rooks county, by Prof. Popenoe, differs somewhat from eastern specimens in having the anterior portions of the body suffused with a blue-green shade, deepest on the sides of the head, and passing insensibly into olive-gray posteriorly. Dr. Coues considers this lizard the most agile of all its tribe, and states that it is emphatically a ground lizard—not a tree or rock species.

## SCINCIDÆ.

*Eumeces fasciatus* Linn.: Blue-tailed Skink. Prof. Popenoe, who has observed this species in Shawnee county, writes that it is common in the woods along Indian creek, preferring damp, shady localities. Taken at Fort Riley by Dr. Hammond (Nolan), and at Lawrence by Prof. Snow.

*Eumeces Guttulatus* Hallow.: Black Skink. I have received one specimen of this handsome little lizard from Manhattan, through Prof. Popenoe. It is also represented from Kansas in the collection of the Philadelphia Academy (Nolan), and is doubtfully recorded from the upper Arkansas by Baird.

*Eumeces obsoletus* B. & G. Specimens from Douglas county, where the species seems to be common, exhibit marked variations in color and in the arrangement of the anterior cephalic plates. (See Bulletin 20, U. S. Nat. Mus., p. 39).

*Eumeces septentrionalis* Bd.: Northern Skink. A single specimen from Neosho Falls is in the National Museum (Brown).

*Oligosoma laterale* Say.: Ground Lizard. Prof. Popenoe writes that it is not rare at Topeka, occurring with *E. fasciatus*. A specimen from that locality, for which I am indebted to him, has the scales in twenty-eight rows. There is a specimen from Fort Scott in the National Museum (Brown).

## OPHIDIA.

## COLUBRIDÆ.

*Heterodon simus* Linn., var. *nasicus* B. & G. Fort Riley (Brown), Ft. Hays (Garman), Wallace county (Mozley). A specimen collected by Prof. Popenoe in Phillips county, is in the State House collection. Snakes of this genus are popularly known in Kansas under the name of "blow snakes."

*Heterodon simus* Linn. Wallace county (Mozley), Ft. Riley (Nolan).

*Heterodon platyrhinus* Latr., var. *atmodes* B. & G. Douglas county (Mozley).

*Heterodon platyrhinus* Latr.: Hog-nose. Three specimens in National Museum from Ft. Riley (Brown), Douglas county (Mozley). A specimen taken by Prof. Popenoe in Rooks county, is in the collection at the State House.

*Tropidonotus rhombifer* Hallow.: Holbrook's Water Snake. Douglas county (Snow).

*Tripodonotus sipedon* Linn., var. *erythogaster* Shaw: Copper-belly. Kansas (Cope).

*Tripodonotus sipedon* Linn.: Water Snake. Douglas county (Mozley), Ft. Riley (Brown). Fifty miles northwest of Ft. Riley (Nolan). The collection at the State House includes a specimen from Saline county.

*Tripodonotus grahamii* B. & G.: Graham's Snake. Taken in Douglas county (Snow).

*Tropidoclonium lineatum* Hallow. This species, first described by Hallowell in 1856, was based on specimen taken in Kansas by Dr. Hammond. Two specimens, taken in Douglas county, are in the museum of the State University (Snow); and another, from Neosho Falls, is in the National Museum (Brown).

*Storeria dekayi* Holbr.: De Kay's Brown Snake. Taken in Douglas county (Snow). One specimen in the National Museum, from Kansas (Brown).

*Storeria occipitomaculata* Stover: Spot-necked Snake. Taken in Douglas county (Snow). Taken in Kansas by Dr. Hammond (Nolan).

*Eutænia sirtalis* Linn., var. *parietalis* Say: Parietal Garter Snake. Taken at Manhattan and at Topeka by Prof. Popenoe. Ft. Riley (Nolan). Douglas county (Snow, Mozley). Prof. Popenoe mentions this as one of the commoner species in his experience, and writes that it takes to the water as readily as *tropidonotus*.

*Eutænia sirtalis* Linn., var. *ordinoides* B. & G. Taken in Kansas by Dr. Hammond (Nolan).

*Eutænia sirtalis* Linn., var. *ordinata* Linn.: Grass Snake. Taken in Kansas by Dr. Hammond (Nolan).

*Eutænia sirtalis* Linn.: Common Garter Snake. One specimen in National Museum from Ft. Riley, and one from Neosho Falls (Brown). Douglas county (Mozley). Prof. Popenoe notes this species as about equally abundant with var. *parietalis*.

*Eutænia sirtalis* Linn., var. *dorsalis* B. & G.: Douglas county (Mozley).

*Eutænia vagrans* B. & G.: Wandering Garter Snake. Ft. Riley (Nolan). In Cambridge Museum of Comparative Zoölogy, from Kansas (Garman).

*Eutænia marci* B. & G.: Marcy's Garter Snake. Ft. Hays (Garman). Douglas county (Mozley).

*Eutænia radix* B. & G., var. *haydeni* Kenn.: Hayden's Garter Snake, Wallace county (Snow). Manhattan? (Popenoe).

*Eutænia radix* Say: Say's Garter Snake. On the authority of Prof. Popenoe, I give this species as common. Specimens are recorded from eastern, middle, and western Kansas.

*Eutænia fairieyi* B. & G.: Fairie's Ribbon Snake. One specimen in National Museum, from Neosho Falls (Brown):

*Eutænia saurita* Linn.: Ribbon Snake. Douglas county (Mozley).

*Bascanium constrictor* Linn.: Black Snake. Common in Crawford county, and not rare in Shawnee. Ft. Riley (Hallowell).

*Bascanium constrictor* Linn., var. *flaviventre* B. & G.: Blue Racer. Common in Crawford and Shawnee counties. A specimen in the State

House collection, from Clay Center. Prof. Popenoe writes that, next to the *Oph. doliatus triangulus*, this is the most abundant species.

*Pituophis sayi* Schleg.: Say's Bull Snake. Ft. Riley (Garman). Douglas county (Mozley). In the State House collection, from Rooks county. Prof. Wheeler, writing from Ottawa, informs me that he has a specimen of this bull snake eight feet in length, and that it occurs there considerably larger.

*Pituophis sayi* Schleg., var. *mexicanus* Dum. & Bibr.: Mexican Bull Snake. One specimen in the National Museum, from Ft. Riley (Brown).

*Coluber obsoletus* Say: Pilot Snake. Ft. Riley (Brown). Douglas county (Mozley, Snow). Ottawa—growing to a length of ninety inches (Wheeler).

*Coluber obsoletus* Say., var. *confinis* B. & G.: Douglas county (Snow). Ft. Riley (Hallowell).

*Coluber vulpinus* B. & G.: Fox Snake. Kansas (Cope).

*Coluber emoryi* B. & G.: Emory's Racer. Ft. Riley (Brown). A Manhattan specimen, loaned me by Prof. Popenoe, has the dorsal scales in twenty-seven rows, and the labials mostly dark-edged, the seventh largest, both above and below. A dark spot enters the orbit on the fourth labial, and extends backward to the sixth. The abdominal blotches show a considerable degree of regularity, being arranged in four rows, one of gray blotches on each side, usually occupying the extremities of alternate scutellæ, and just within each of these another of considerably darker blotches. The inner and outer of these rows, on either side, are strictly complementary, not a single blotch of either lying on the same scutella with one of the row adjacent. On the tail, the blotches of the two outer rows are gradually lost, while those of the two inner approximate, till, on the posterior half, they occupy adjacent scutellæ, and form two nearly continuous black bands.

*Cyclophus vernalis* DeKay.: Northern Green Snake. An eastern and northern species, occurring westward to Colorado (Coues and Yarrow). Ft. Riley (Nolan). "Neosho." (Brown).

*Diadophis punctatus* Linn.: Ring-necked Snake. Douglas county (Mozley).

*Diadophis punctatus* Linn., var. *amabilis* B. & G.: Central and Eastern regions as far as Ohio (Cope).

*Diadophis punctatus* Linn., var. *docilis* B. & G.: Two specimens of *punctatus* received from Prof. Popenoe, and collected by him at Topeka, represent this sub-species, but with the dorsal scales in seventeen rows.

*Diadophis arnyi* Kenn. One specimen in the National Museum, from "Hyette, Kan." (Brown).

*Ophibolus calligaster* Say: Kennicott's Chain Snake. Ft. Riley (Hallowell). Douglas county (Mozley). Neosho Falls (Brown).

*Ophibolus getulus* Linn., var. *sayi* Holb.: King Snake. Douglas county (Mozley). Shawnee Mission and Ft. Riley (Brown). A Topeka specimen in the State House collection.

*Ophibolus doliatus* Linn., var. *triangulus* Boie.: Milk Snake. Prof. Popenoe writes me that this is the most abundant serpent in the state, and very variable.

*Ophibolus doliatus* Linn.: Corn Snake. Three Douglas county specimens in the museum of the Kansas State University (Snow). Topeka and

Manhattan (Popenoe). The National Museum and Philadelphia Academy both have specimens from Kansas.

*Ophibolus doliatus* Linn., var. *annulatus* Kenn. Kansas (Cope).

*Ophibolus doliatus* Linn., var. *gentilis*, B. & G. Wallace county (Mozley). A specimen labeled "Ophibolus Gentilis???" taken by Prof. Popenoe, at Topeka, is in the State House collection.

*Ophibolus doliatus* Linn., var. *coccineus* Schleg. Kansas (Cope).

*Tantilla nigriceps* Kenn. A single specimen in National Museum, from Ft. Riley (Brown).

*Carphophiops vermis* Kenn.: Worm Snake. Ft. Scott (Brown). Douglas county (Mozley).

#### CROTALIDÆ.

*Ancistrodon contortrix* Linn.: Copperhead. Prof. Popenoe writes from Manhattan that the copperhead is neither rare or common at that point. A small specimen which he sends is rather darker than is the rule with eastern specimens. Douglas county (Mozley).

*Caudisona tergermina* Say: Massasauga. Douglas county (Mozley). Near Ft. Riley (Nolan).

*Caudisona Edwardsii* B. & G. Topeka, one specimen (Popenoe).

*Crotalus confluentus* Say: Missouri Rattlesnake. Two Rooks county specimens are in the collection at the State House. Ft. Hays (Garman). Osborne City (Mozley). Ft. Riley (Nolan). Wallace county (Snow).

*Crotalus horridus* Linn.: Banded Rattlesnake. Douglas county (Snow). One specimen in National Museum (Brown).

#### ANURA.

#### RANIDÆ.

*Rana catesbiana* Shaw: Bull Frog. Prof. Popenoe writes: "Topeka and Manhattan; rather common; inhabits only deeper streams."

*Rana halecina* Kalm.: Leopard Frog. Of this species Prof. Popenoe writes again: "Abundant found on margins of all water."

#### HYLIDÆ.

*Hyla versicolor* LeConte: Northern Tree Frog. In Cambridge Museum of Comparative Zoölogy, from Kansas (Garman).

*Chorophilus triseriatus* Wied.: Striped Bush Frog. One of the most abundant batrachians of Kansas. Prof. Popenoe writes: "I have never captured them on trees, but frequently in roadside puddles." Mr. Garman tells me that they often crawl upon bushes two or three feet above the water. They vary greatly both in color and in pattern of their markings. The ovaries of a specimen sent me by Prof. Popenoe contained about four hundred and twenty eggs, and the stomach was distended with a large grub, the head, thorax, and elytra of a species of *Aphodius*, a small spider and a quantity of apparently silicious matter.

*Acris gryllus* Le Conte., var. *crepitaus* Bd.: Cricket Frog. One hundred and fifty miles west of Ft. Riley (Brown). Ft. Riley (Nolan).

## ENGYSTOMIDÆ.

*Engystoma carolinense* Holb. Kansas (Hallow).

## BUFONIDÆ.

*Bufo lentiginosus* Shaw., var. *fowlerii* Putman: Fowler's Toad. Manhattan and E. (Popenoe).

*Bufo lentiginosus* Shaw., var. *americanus* Le Conte: Common Toad. Common at Manhattan and westward (Popenoe). Should be found also eastward.

*Bufo lentiginosus* Shaw., var. *cognatus* Say. Two Kansas specimens, one of them from Ft. Riley, are in the National Museum (Brown). A third is in the collection of the Boston Natural History Society (Henshaw).

*Bufo lentiginosus* Shaw., var. *frontosus* Cope. Kansas (Brown).

## URODELA.

## PLETHODONTIDÆ.

*Spelerpes ruber* Daud.: Salamander. Maine to Nebraska and southward (Jordan).

## AMBLYSTOMIDÆ.

*Amblystoma microstomum* Cope: Small-mouthed Salamander. Kansas (Jordan).

*Amblystoma mavortium* Bd.: Prairie Salamander. Ft. Riley (Cope). Douglas county (Snow).

*Amblystoma tigrinum* Green.: Tiger Salamander. Two specimens, received from Manhattan, through Prof. Popenoe, have very short tails—nearly an inch shorter than from snout to behind anus; but as the specimens are small, this shortness may be due to their age. The larger specimen, 5.85 in. in length, has the tail .95 in. shorter than head and body; the smaller, 4.35 in. in length, has it shorter by very nearly the same. The stomach of the larger of these specimens contained two medium-sized grass-hoppers, nearly intact.

*Amblystoma punctatum* Linn.: Violet Salamander. United States east of the Rocky Mountains (Jordan).

## SUPPLEMENTARY LIST.

(Comprising species now known only as extralimital, but more or less likely to be found in Kansas.)

*Pseudemys troostii* Holbr.: Yellow-bellied Terrapin. Osage river, Missouri (Agass).

*Pseudemys concinna* Le Conte: Florida Terrapin. Southwestern Missouri (Agass).

*Cinosternum pennsylvanicum* Bose.: Mud Tortoise. Austroriparian and eastern region (Cope).

*Aromochelys odoratus* Latr.: Musk Tortoise. "Have seen specimens from western Missouri." (Agass.).

*Maucrochelys lacertina* Schweig.: Mississippi Snapper. Florida to Texas, and to Missouri in Mississippi (Cope).

*Prynosoma modestum* Gir. Albuquerque, N. M., and near Canadian river (Baird).

*Eumeces epipleurotus* Cope. Ft. Kearney, Neb., and northern boundary of Texas (Cope).

*Eumeces leptogammus* Bd. Sand-hills, valley of the Platte (Hayden). Central region (Cope).

*Eumeces multivirgatus* Hallow. Sand-hills, valley of the Platte (Hayden). Central region (Cope).

*Eumeces inornatus* Bd. Sand-hills, valley of the Platte (Hayden).

*Tropidonotus sipedon* Linn., var. *woodhousei* B. & G. Texas to Missouri (Cope).

*Eutania sirtalis* Linn., var. *pickeringii* B. & G. Pacific region, Minnesota, Texas (Cope).

*Cyclophis ætīvus* Linn.: Southern Green Snake. New Mexico, Texas and western Missouri (Coues & Yarrow). Ft. Smith, Ark., (Baird).

*Ophibolus multistratus* Kenn. Nebraska (Cope).

*Carphophiops amœnus* Say.: Ground Snake, western Missouri (Cooper).

*Caudisona miliaria* Linn.: Ft. Smith, Ark., (Bd).

*Crotalus adamanteus* Beauv., var. *atrox* B. & G. Indian Territory and Texas (Cope).

*Rana clamatans* Merrem.: Green Frog. Ft. Scott, Ark., (Baird).

*Spea bombifrons* Cope: Central regions (Cope).

*Amblytoma obscurem* Baird. Iowa (Cope).

*Amblystoma opacum* Graveuk.: Banded Salamander. An eastern species, westward to Wisconsin and Texas (Cope).

*Menopoma allegheniense* Harl.: Hellbender. All tributaries of the Mississippi (Cope).

*Necturus lateralis* Say.: Mud Puppy. Eastern region except New England and eastern Middle States (Cope). Ft. Smith, Ark., (Baird).

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#### BOTANICAL ADDENDA FOR 1879 AND 1880.

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Reported by J. H. Carruth.

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In my report for 1876 are a few errors which I wish to correct:  
*Buchnera elongata* is not a distinct species, but a synonym of *B. Americana*.

*Physalis viscosa* is perennial; and *P. pubescens*, annual.

*Betula lenta* should be *B. nigra* Ait. Red birch.