*Natrix leberis* Linn. is rare in Turkey Lake, but common in Lake Tippecanoe. Twelve is the highest number of embryos taken from any one specimen.

Embryos taken August 5 contained a considerable amount of yolk; probably enough to nourish the embryo for a month or more.

*Natrix sipedon* Linn. is the most abundant of snakes found in this region, but not the most prolific, *E. sirtalis* standing ahead of it. Thirty-four was the highest number of eggs taken from any one specimen. One snake which was kept in confinement gave birth to fourteen young the third week of September.

Among the bullrushes is a favorite abode for this snake, and also under anything whatever that happens to be lying along the margin of the lake, especially if it happens to be lying partly in the water.

*Sistrurus catinatus* Raf. This snake is very common around Turkey Lake and also around Lake Tippecanoe. Several specimens were secured and others killed. It lives chiefly in the swamps.

A specimen taken August 6 contained five eggs and the embryos were seven inches long.

*Storeria dekayi* Holb. Only one specimen of this was secured. It was taken along a highway running by the side of a swamp.

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## Testudinata. By C. H. Eigenmann.

Turtles are at all times and everywhere abundant. They frequent especially the shallower portions of the lake. Many specimens of all ages were preserved. The number of variations in the shields is large. I present here simply a list with notes on their abundance and breeding habits.

*Chelydra serpentina* Linnæus. This species is abundant in Turkey Lake, and reaches a larger size than any of the others. It is caught for the markets. It is much shyer than the other species of turtles and is not frequently seen. It inhabits the shallower muddy parts of the lake, being abundant in the kettle and about Morrison's Island. No eggs were found.

*Trionyx spiniferus* LeSueur. The soft-shelled turtle is very abundant. It is the second in size and is caught for the markets. Its round eggs are laid in the sand and gravel near the water's edge during June and July. On June 26 one was seen digging a nest in the gravel banks at Syracuse, and on the 27th we obtained eggs from five nests about Ogden Point and other places about the kettle. Other fresh nests were found July 9. The time of hatching was not determined.

Several empty nests were found in July, but some eggs, examined as late as September 1, contained young which would have been ready to hatch about a month later. The number of eggs found in several nests was as follows: 9; 12; 17; 18; 27; 32.

*Aromochelys odorata* Bosc. This species is abundant, but not conspicuous. Individuals were oftenest seen the latter part of June and first part of July while laying their eggs. The eggs are laid in the rotten wood in the tops of stumps standing in the margin of the lake. The turtles were frequently found in the tops of these stumps, and some of their eggs wedged as far into the rotten wood as a finger could bore. Rotten logs removed some distance from the water are also favorable places for egg laying, and in a mucky place of small area at the edge of the lake 362 eggs were taken at one time. The number of eggs laid by one individual varies from 4 to 7, this number being usually in a cluster. At this rate about sixty turtles must have contributed to the nest of 362. While passing along a wheat field some turtles were seen coming from it, and on inspection it was found that they had deposited their eggs in the ground in depressions made by a cow while walking over the ground when it was soft. Still other eggs were found in bundles of rushes drifted together. An interesting change of habit seems to have taken place among these turtles during the last fifty years. Before that time the number of stumps standing in the margin of the lake must have been exceedingly small. The present large number is due to the rising of the lake after the building of the dam and the subsequent cutting down of the trees whose boles had become submerged. The habit of laying eggs in stumps can not be of much more than fifty years' duration.

The time of laying must be scattered over considerable time, for many eggs were found hatched in August, while some obtained about then hatched at various times from September 15 to November 1. These were, however, kept in a box in a room and therefore removed from normal conditions. The age of this, as of all other hard-shelled turtles, can be estimated by the lines of growth on the horny cuticle. The originally exposed part of the plate occupies the mediocephalic corner of the plate and additions occur as smooth strips along the outer and posterior margins. The strips are quite distinct in early years, but become more or less obscure with age.

*Chrysemys marginata* Agassiz. This appears to be the most abundant turtle of the lake. How far its apparent abundance may be due to its habits I am unable to say. It is found floating or quietly paddling along, its head out of the water, but on nearer approach it always turns tail and seeks refuge in the abundant chara fields or in other hiding places. The chara fields are traversed by narrow paths

and tunnels made by this turtle. The eggs are laid later in the summer and farther from the water than those of the other species. Many were leaving the water in late August; the eggs were found but once.

*Malaclemmys geographica* LeSueur. Next to Chrysemys the most abundant of the turtles. It goes by the appropriate name of Housetop.

*Emys blandingii* Holbrook. Found in moderate numbers in the lake and along the banks of Turkey Creek.

*Clemmys guttata* Schneider. But two specimens were seen.

*Cistudo carolina* Linnæus. One specimen of this species was taken. It, however, in no sense forms a part of the fauna of the lake.

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## Water Birds of Turkey Lake. By F. M. Chamberlain.

The following birds were taken between July 1 and September 1, on or near Turkey Lake. Only those of more or less aquatic habits are listed:

1. *Hydrochelidon nigra* L.
2. *Botaurus lentiginosus* Montaga.
3. *Botaurus exilis* Gmelin.
4. *Ardea virescens* L.
5. *Rallus elegans* Audubon.
6. *Rallus virginianus* L.
7. *Gallinula galeata* Lichtenstein.
8. *Fulica americana* Gmelin.
9. *Actitis macularia* L.
10. *Aegilites vocifera* L.
11. *Ceryle alcyon* L.
12. *Agelaius phoeniceus* L.
13. *Clivicola riparia* L.
14. *Cistothorus palustris* Wilson.