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Phosphorescent Animal Forms of Arkansas

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ABSTRACT

Two phosphorescent animal forms, *Euryurus* sp. and *Centruroides vittatus*, were collected with a black light in an attempt to collect phosphorescent spiders. Both the millipede and the scorpion were easily observed by the bright phosphorescent yellow color which glowed in the presence of the black light.

Throughout the ages man has been fascinated with phosphorescent and bioluminescent forms, but presently there are no records of research concerning phosphorescent forms in Arkansas. In an attempt to determine whether some spiders are phosphorescent this writer discovered two relatives of spiders which were highly phosphorescent. No phosphorescent spiders have been collected by this writer at the present time but it is believed that such forms exist and continuing efforts are being made to find these individuals. Indebtedness is expressed to Henderson State College for providing financial aid for this and other research projects on the arachnids which are presently being investigated.

A common safari light which had the original fluorescent tube replaced with a black light tube was used at night over various areas of the state. When the light was held about two feet from the ground, trees, and other similar objects; phosphorescent forms, when present, were immediately recognized. Of all black lights tried, this appeared to be the most inexpensive, convenient, and dependable for field work.

Millipedes of the genus *Euryurus* were collected over wide areas of Arkansas. Identification to species is pending. These specimens appear bright yellow under the

black light and can be found in large numbers during the late summer and early autumn. The body is broad and flat with 17 segments. Dorsal plates are without transverse furrows and the basal segments of the legs are without spines. The anal segment is blunt or rounded with the posterior edges of segments and lateral plates orange. There is also a black line present on the mid-dorsal surface. Members of *Euryurus* were most often collected from the grasses where decaying leaves had aggregated; however in some instances they appeared to be migrating in numbers from one area to another. They are apparently very active at night.

The striped scorpion, *Centruroides vittatus* was also collected in large numbers over the state but the greatest numbers were found in the more western countries of Arkansas. The bright yellow color with the dark stripe is quite easily observed when a black light is shined on specimens. Most of the scorpions were collected around sandy areas under rocks, bark, and other similar habitats.

This paper is a record of preliminary research of phosphorescent forms in Arkansas. The study is being continued and this report is by no means intended as a definitive work.