ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Invertebrate Abstract **Element Code:** ILARAD4010
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Albiorix anophthalmus*
COMMON NAME: A Cave Obligate Pseudoscorpion
SYNONYMS:
FAMILY: Ideoroncidae

AUTHOR, PLACE OF PUBLICATION: Muchmore and Papa, Southwestern Naturalist Vol. 44, No. 2, Pp: 138-147. 1999.

TYPE LOCALITY:

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: In North America, there are 18 known families, roughly 100 identified genera, and about 350 described species of pseudoscorpions. It is estimated that there are 500 undescribed species of pseudoscorpions in North America, and probably 75% of the genera need revision. (Read *in* http://www.sff.net/people/windrummer/ReadWebSite/psdoscrp.html). According to the Bohart Museum at UC Davis, There are about 200 species of pseudoscorpions in North America (*In* http://bohart.ucdavis.edu/bohart.asp?s=kidscorner&f=arachnid). Worldwide, there are about 2000 described species of pseudoscorpions.

DESCRIPTION: A small arachnid with a scorpion-like appearance. They bear relatively large chelae on the pedipalps, but they do not have a telson or stinger. Pseudoscorpion pedipalps are smaller, pincher-like appendages, and are similar to those of scorpions except that usually each has a poison gland located in one or both "fingers" of the hand. The abdomen of the pseudoscorpions is oval and has a wide junction with the rectangular carapace. The chelicerae, or grasping pincers, are small and are equipped with structures for cleaning the mouthparts. The third pair of walking legs has excretory glands near the coxae, or base segment. On various parts of the body are numerous trichobothria, or sensory hairs, which can sense small air currents. Pseudoscorpions respiration occurs through two pairs of spiracles, or openings to the outside, leading to a tracheal system. The species *A. anophthalmus* is 3 mm long and is venomous. Adults develop a gray swath across the upper abdomen, which appears more striking in males. The rest of the body varies from light brown to tan. As well as being the largest *Albiorix* species known, it is also the only known eyeless species.

AIDS TO IDENTIFICATION: As well as being the largest *Albiorix* species known, it is also the only known eyeless species. Pseudoscorpions as a whole are seldom more than 5 mm in length, and have zero, two or four eyes.

ILLUSTRATIONS: Color photo (Gruss *in* http://mitchtobin.com/Archive/Focus%20on%20three%20species.htm)

TOTAL RANGE: Arizona

RANGE WITHIN ARIZONA: Pima County, Arizona.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Many pseudoscorpions have poison glands in their pedipalps, which are used to subdue insect prey and small invertebrates. They also have silk glands, but unlike spiders, which have them at the tip of the abdomen, the duct openings are located on the jaws or chelicerae. They use this silk to spin cocoons, in which they over winter and molt. They can maneuver with great ease, moving forward, backward, and sideways. Pseudoscorpions sometimes cling to and are carried around by large insects. All species typically have highly localized distributions, low dispersal and cannot survive outside the cave. Pseudoscorpions do not fluoresce under ultraviolet light. They move slowly, holding their pedipalps in front of them.

REPRODUCTION: In general male pseudoscorpions deposit a spermatophore on the substrate, and the female is attracted to it by scent, or in some advanced species, the male who aids her in the uptake actively maneuvers the female to the spermatophore. After insemination, the female builds a silk lined nest. After the 2-50 eggs are laid, they remain in a sac that is attached to the underside of the female's body. They feed on a milk like liquid from the female's ovaries. Development takes place within the sac. The young undergo one molt before hatching and one during hatching before emerging from the sac. They molt twice more before becoming adults, usually a year later, and individuals may live 2-3 years.

FOOD HABITS: The species of pseudoscorpion is involved in an elaborate food chain. It feeds on macroscopic invertebrates, which feed on the mold that grows on cricket guano.

HABITAT: Found in the interior of the cave, within a zone of complete darkness, and where the temperature and humidity remain constant. It can be found under small pieces of broken limestone rock scattered throughout the interior of the cave.

ELEVATION:

PLANT COMMUNITY:

POPULATION TRENDS:

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: None

MANAGEMENT FACTORS: Protection of the cave from human disturbance may prevent impacts to this species.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: Surveys of caves to determine range and population status of this species is necessary, as well as life history studies.

LAND MANAGEMENT/OWNERSHIP:

SOURCES OF FURTHER INFORMATION

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ADDITIONAL INFORMATION:

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