

# WILDLIFE DIVERSITY NOTEBOOK: Madison Cave Isopod

## Scientific Name

*Antrolana lira* (AN-troh-LAHN-ah LYE-rah)

## Status

This species was listed as federally threatened in 1982. At that time it was known only from the Shenandoah Valley of Virginia.

## West Virginia Status

The Madison Cave isopod is known from two sites in Jefferson County. One site is a cave that intersects the groundwater, and the second is a well. This animal probably occurs in pockets of groundwater that extend beyond the sites where it has been observed. All other occurrences are in Virginia.

## Description

The Madison Cave isopod is rather large for an isopod (the common terrestrial “pill bug” or “sow bug” is a good example of the general form of an isopod) reaching a maximum length of 18 mm (0.7 inch). Females are slightly larger than males. Its body is dorsal-ventrally (top to bottom) flattened. It has two pairs of antennae, the first pair is short and the second is long. Like many cave-adapted species, the Madison Cave isopod is blind and unpigmented. It moves by walking or swimming.

## Habitat

The Madison Cave isopod inhabits underground lakes and deep karst aquifers where it lives in the groundwater. It has been observed in a few caves that descend to the groundwater table.

## Threats And Prospects

Contamination of groundwater is the major threat to the Madison Cave isopod. Sources of contaminants include agricultural runoff, poultry farms, and runoff from housing and retail developments.

## Range

This species is restricted to the Shenandoah Valley of Virginia and West Virginia.

## Life History

Little is known about the life history of this species. Biologists suspect that this species is long-lived and has



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a low rate of reproduction.

## Diet

The Madison Cave isopod probably feeds on fine particles of living matter that find their way into the groundwater.

## Additional Comments

This species was discovered in 1958 in Madison Salt-petre Cave in Augusta County, Virginia. The Madison Cave isopod belongs to a group (family Cirrolanidae) that consists largely of marine species. This is the only freshwater species found north of Texas.

## Help

Cavers visiting caves in the Jefferson and Berkeley counties are encouraged to report sightings of “large” (nearly 0.6 inches) white aquatic isopods. Residents of the Shenandoah Valley should work to protect groundwater quality.