

# Lee County Cave Isopod

## *Lirceus usdagalun*

### Description

The Lee County cave isopod is an obligate cave water dwelling organism documented in only four caves in Lee County, Virginia. Three of the caves are connected by groundwater, resulting in a single cave system. The fourth cave is located approximately six miles northeast of that system, but as a result of groundwater pollution the isopod no longer occurs there. This isopod lacks a hard body cover, eyes, and pigmentation and possesses seven pairs of leg-like appendages. Its total length is up to 0.3 inches.

### Life History

This freshwater crustacean is found on the surfaces of small rocks and gravel in cave streams or similar habitat at spring upwellings. This isopod is highly susceptible to water quality and quantity changes. The average number of eggs per female is estimated to be 27.5. Very little is known about the life history of this species.

### Conservation

The Lee County cave isopod was federally listed as an endangered species on December 21, 1992. This species is susceptible to various types of groundwater pollution from surface water passing directly through sinkholes and small openings in the limestone terrain. Sinkholes are natural depressions in the land surface that are formed by the collapse of a cavern roof. Degradation of water quality from surrounding land uses represents a potentially serious threat to the survival of this species. In areas with high densities of caves, the quality

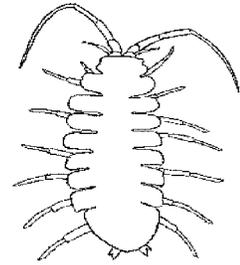
and integrity of the underground environment is completely dependent on the management of the surface environment and the activities that occur there.

### What you can do to help

If you reside on property that borders a stream or other waterway, avoid using chemicals or fertilizers. To help control erosion and reduce runoff, maintain a buffer of natural vegetation along waterbodies and sinkholes. Never place anything into sinkholes. Install fencing to prevent livestock from entering streams, this will reduce siltation and input of waste products. Properly dispose of household wastes, including used motor oil, at recycling facilities and permitted landfills. Have your septic tank inspected regularly by a licensed professional. By following these land use practices, you are not only protecting the habitat of cave creatures but also protecting the quality of your drinking water.

To find out more about the Lee County cave isopod contact:  
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**Virginia Department of Conservation and Recreation**  
Division of Natural Heritage  
217 Governor Street, 3rd Floor  
Richmond, Virginia 23219  
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### References

Reynolds, R. and J.R. Holsinger. 1995. Lee County cave isopod. Page 56 in K. Terwilliger, J.R. Tate, and S.L. Woodward, eds. A guide to endangered and threatened species in Virginia. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

U.S. Fish and Wildlife Service. 1997. Lee County cave isopod (*Lirceus usdagalun*) recovery plan. Hadley, Massachusetts.

**U.S. Fish and Wildlife Service**  
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October 2010

