

# Resume of Catherine Aley

## *PERSONAL DATA*

Born April 3, 1949 in LaSalle, Illinois. U.S. Citizen. Married, two adult children

## *EDUCATION*

Wichita State University, Wichita, Kansas. B.A. Biology (1972).

Wichita State University, Wichita, Kansas. M.S. Zoology (1979).

## *EMPLOYMENT HISTORY*

**1974 to Present.** Biologist and Owner, Ozark Underground Laboratory, Protem, Missouri. Conducts or directs consulting and contract studies in biology, hydrogeology, cave and karst related issues, and natural resource management of karst regions.

## **SUMMARY OF EXPERIENCE**

Thirty-four years of professional experience in the biology of natural and disturbed areas, pollution control investigations, and land management issues in soluble and fractured rock landscapes. Ms. Aley directs biological aspects of all projects of the Ozark Underground Laboratory. The following projects are representative examples:

1. Hydrologic and biologic studies for land management and spring protection with particular emphasis on soluble rock regions. Numerous studies of this type have been conducted for local, state, and federal agencies in Missouri, Arkansas, Oklahoma, Iowa, Tennessee, Alabama, Kentucky, Wyoming, and Alaska.
2. Ground water tracing and water quality studies in soluble rock landscapes, and delineation of recharge areas for spring systems. Work conducted in Missouri, Arkansas, Oklahoma, Indiana, Illinois, Kentucky, Tennessee, Pennsylvania, Maryland, Arizona, California, Oregon, Wyoming, Alaska, and Alabama.
3. Investigations on the extent and sources of sewage contamination in about 100 springs at Eureka Springs, Arkansas. Work involved the delineation of recharge areas for most of these springs and the identification of sewer line segments which had the greatest leakage problems.
4. Assessment of impacts of proposed highways on springs, caves, and endangered cave-dwelling species in Arkansas, Missouri, and Indiana.
5. Identification and delineation of rare, threatened, and endangered animal species' habitats in caves and ground water systems. Studies in Arkansas, Missouri, Oklahoma, and Alabama.
6. Various microclimate, hydrologic, biologic, interpretive, and management investigations of caves in Missouri, Arkansas, Iowa, Tennessee, Kentucky, New Mexico, Arizona, California, Wyoming, Oregon, Alaska, and Alabama.
7. Mapping and microclimate studies in an endangered species habitat cave subject to flooding from a man-made lake. Assessment of an artificial entrance to be constructed to mitigate problems; Arkansas.
8. Studies on preventing and controlling plant growth in electrically lighted caves. Blanchard Springs Caverns, Arkansas; Carlsbad Caverns, New Mexico; Oregon Caves, Oregon; Mammoth Cave, Kentucky; Kartchner Caverns, Arizona.

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9. Team member for feasibility study for creation of an American Cave and Karst Museum. The museum is now in operation at Horse Cave, Kentucky.
10. Team member of "blue ribbon panel" to assess the significance of cave and karst resources and the impacts of timber harvest and road construction on these resources. Ketchikan Area of the Tongass National Forest, Alaska.
11. Development of a quantitative assessment system for locating and designing septic field systems which will protect ground water supplies in Greene County, Missouri.

### PUBLICATIONS

1. Aley, Thomas and \_\_\_\_\_. 1979. Prevention of adverse impacts on endangered, threatened, and rare animal species in Benton and Washington Counties, Arkansas. Northwest Arkansas Regional Planning Commission, Springdale, 35p.
2. Aley, Thomas and \_\_\_\_\_. 1982. Interpretive training for show cave personnel. *Proc. Fifth National Cave Management Symposium*, pp. 91-92.
3. Aley, Thomas; \_\_\_\_; and Russell Rhodes. 1986. Control of exotic plant growth in Carlsbad Caverns, New Mexico. *Proc. Sixth National Cave Management Symposium*, pp. 159-171.
4. Aley, Thomas and \_\_\_\_\_. 1986. Effects of land management on cave and water resources, Dry Medicine Lodge Creek Basin, Bighorn Mountains, Wyoming. *Proc. Sixth National Cave Management Symposium*, pp. 79-92.
5. Aley, Thomas and \_\_\_\_\_. 1991. Delineation and hazard area mapping of areas contributing water to significant caves. *Proc. Eighth National Cave Management Symposium*, pp. 116-122.
6. Aley, Thomas; \_\_\_\_; William R. Elliott; and Peter W. Huntoon. 1993. Karst and cave resource significance assessment of the Ketchikan Area, Tongass National Forest, Alaska. Report by the Karst Resources Panel to the U.S. Forest Service. 79p. + appendixes.
7. Aley, Thomas; \_\_\_\_; Philip Moss; and Eric Hertzler. 2008. Hydrogeological characteristics of delineated recharge areas for 40 biologically significant cave and spring systems in Missouri, Arkansas, Oklahoma, and Illinois. *Proc. of 2007 National Cave and Karst Management Symposium*, St. Louis. Pp. 154-167.