



**Mass Spectrometry
Discussion
Group of Pittsburgh**



and the
Spectroscopy Society of Pittsburgh

Jointly with



Present:

A Mini-Symposium on

" Conservation Status of Aquatic BioDiversity and the Role Mass Spectrometry in Pollutant Analysis."

Wednesday Evening February 23, 2000

Program:

- 6:00 **Registration / Social.**
- 6:25 **Mr. Ken Rosnack**, *Introductions*, Chairman SSP-MSDG.
- 6:30 **Mr. Charles W. Bier**, *The Impacts of Water Pollution on Aquatic Biological Resources in Western Pennsylvania*, Western Pennsylvania Conservancy Director, Natural Heritage Program.
- 7:30 **Dinner**
- 8:30 **Dr. Paul D. Jones**, *The Use of Mass Spectrometry in the Ultra-trace Analysis of Organic Contaminants*, Michigan State University – National Food Safety and Toxicology Center.

**University Club
123 University Place, Oakland (412-621-1890)**

COST: \$10 (Students \$5)

RSVP by Friday Feb 18, 2000 to Ken Rosnack, 412-262-5458 or email: Rosnackkj@aol.com
Parking for cash: **University Club** or at **Soldiers and Sailors Garage.**

The Impacts of Water Pollution on Aquatic Biological Resources in Western Pennsylvania

Mr. Charles W. Bier

Western Pennsylvania Conservancy Director, Natural Heritage Program

Pittsburgh PA

The science staff at the WPC includes conservation biologists who have been involved in the collection of information describing our natural heritage of biological resources. This information is then used to guide conservation initiatives. WPC has identified crucial conservation project areas, such as French Creek, Siding Hill Creek and the Clarion River, to protect resources that are under decline in the region. Aquatic habitats have been identified nationally as some of the most degraded, and the associated aquatic life is in the highest degree of peril for all wildlife. Water pollution is one of the factors responsible for the decline in quality of aquatic environments and the decimation of aquatic life. This evening symposium will begin with a presentation by Charles Bier, WPC's Director, Natural Heritage Program. He will provide a detailed overview of aquatic habitats and the status of wildlife harbored in streams and lakes. WPC is excited about this opportunity to interface with scientists on this important issue, and to extend an invitation to join us for presentations, dinner and discussion.

The Use of Mass Spectrometry in the Ultra-trace Analysis of Organic Contaminants

Dr. Paul D. Jones

Michigan State University - National Food Safety and Toxicology Center

East Lansing, MI

The environment has become contaminated with various organic chemical contaminants as a result of human activity. Some of these chemicals are toxic to humans and wildlife at extremely small concentrations. The most widely analyzed of these chemicals are the dioxins and polychlorinated biphenyls. While concentrations of these chemicals in the environment are small (concentrations in the 10^{-12} to 10^{-15} range) they may be present, in some circumstances, at concentrations that would be expected to cause adverse effects. It is only through the use of high resolution mass spectrometry that environmental concentrations of these chemicals can be measured. This talk will discuss the concentrations of these chemicals in the environment and the reasons that high resolution mass spectrometry is required for this analysis. Results of studies in the Great Lakes and on marine mammals from around the world will be used to illustrate the complexity of ultra-trace organic chemical analysis.

