

Summary of the Symposium
On “Aquaculture and Pathobiology of Crustacean and Other Species”
held in conjunction with the 32nd UJNR Aquaculture Panel Meeting
in Davis and Santa Barbara, California U.S.A.
17-18th and 20th November 2003

The second year of the 6th five-year plan for scientific exchange focused on crustacean disease and pathology. The keynote addresses given the co-chairs included the importance of a more coordinated and more cohesive approach to the management of coastal resources and aquaculture following the five-year plan. Emerging issues such as sustainability, coastal zone management, and impacts on the environment create a more complex challenge for aquaculture research decisions that must be made at the highest levels of government. This type of international exchange can address those issues.

Disease identification and control is essential in aquaculture and is a global management issue. In October 2003 the first case of the carp Herpes virus was detected in Japan. Dr. Sakai explained that this outbreak prevented key members of the Japanese research team from attending the 32nd meeting and personally thanked Professor Hedrick of UC Davis for providing valuable information in dealing with this disease. Since disease outbreaks such as this affect aquaculture globally this symposium was especially important for the exchange of research results.

Dr. Donald Lightner of the University of Arizona opened the symposium with an overview of the impact of four viruses affecting shrimp aquaculture and the resulting changes that have been made globally by shrimp farmers moving from wild captive stock to pathogen free broodstock. Additional presentations discussed disease prevention through disinfection, problems with breeding for disease resistance, establishing industry protocols, keeping published data up-to-date, control of live shipment and using non-compliance penalties to further control the spread of diseases. Following these presentations were questions regarding the changes with virulence of specific diseases over time. This was thought to be an important area for future research. The next section of the symposium addressed issues with mollusk culture. Dr. Seki's paper on abalone seed transplant emphasized the importance of resource enhancements of the algal communities present in the sea bottom ecosystem. Other participants talked about abalone endemic disease control in California, abalone changes in the feeding process and preference with growth, and the discovery of disease susceptibility in blacklip pearl oyster due to environmental changes such as gradual warming of the bay waters. Due to the symposium location in California several research topics of specific interest to the California aquaculture industry were also presented. A final paper on a bitter tasting amino acid in sea urchin ovaries stimulated a discussion on whether the occurrence of the acid was related to the natural progress of oogenesis or an unidentified factor in the natural diet of the sea urchin.

In conclusion, disease continues to be a major negative factor in the successful culture of crustaceans, mollusks and fish. Each year billions of dollars are lost world wide due to a host of diseases and parasites. Continuous exchange of information and technology at the international level must be done because human interactions lead to a broad dispersion of disease vectors around the globe. The UJNR continues to serve as an important contact venue for both Japan and the United States on international disease issues and control. Several of the participants from both countries developed a dialogue on how to work together in the future.