

W2

BIO Workshop Standardizing methods for estimating jellyfish concentration and development of an international monitoring network

Co-Convenors: *Hideki Akiyama (Japan), Richard D. Brodeur (U.S.A.) and Young-Shil Kang (Korea)*

Some jellyfish make massive blooms in the North Pacific coastal and oceanic waters, damaging fisheries and causing large social and economic problems. To date, there have been discussions about bloom mechanisms, distribution, and biological and ecological characteristics of the jellyfish species. However, there are limitations in understanding the dynamics of these massive blooms and providing scientific information to management. One major limitation is standards for sampling and a lack of monitoring. The goals of this workshop are: 1) to understand the problems and develop techniques for estimating concentrations of jellyfishes; 2) to evaluate the status of national/regional monitoring systems for jellyfishes; 3) to emphasize why standard methods and international monitoring are needed; and 4) to develop an implementation plan and schedule for improving abundance and distribution information on jellyfish blooms.

Saturday, October 24 (14:00-18:00)

- 14:00 **Introduction by Convenors**
- 14:05 **Jennifer E. Purcell (Invited)**
Broad-scale research on jellyfish (W2-5604)
- 14:30 **Kazuhiro Sadayasu, Yoshimi Takao and Ryuichi Matsukura**
Echo trace counting method for estimating the giant jellyfish *Nemopilema nomurai* density and distribution using a quantitative echosounder (W2-5877)
- 14:45 **Kyoung-Hoon Lee, Soo-Jeong Jang, Won Duk Yoon, Chang-Doo Park and Seong-Wook Park**
Density estimates of *Nemopilema nomurai* jellyfish in Yellow Sea during 2006-2009 (W2-5874)
- 15:00 **Hideki Ikeda, Hiroko Okawachi, Atsushi Yoshida, Miwa Hayashi and Shin-ichi Uye**
Spatio-temporal distribution of the giant jellyfish *Nemopilema nomurai* in East Asian waters by sighting survey from a ferry (W2-5535)
- 15:15 **Haruto Ishii, Yasuyuki Nogata and Noriaki Endo**
Horizontal and vertical distribution of jellyfish, *Aurelia aurita* medusae, and estimation of its abundance with underwater video system in Tokyo Bay (W2-5711)
- 15:30 **Coffee / tea break**
- 15:50 **Richard D. Brodeur, Cynthia L. Suchman, Elizabeth A. Daly and Lanaya N. Fitzgerald**
Habitat and ecology of large medusa in the northern California Current: An overview of recent studies (W2-5821)
- 16:05 **Naoki Fujii, Shinya Magome, Atsushi Kaneda and Hidetaka Takeoka**
Monitoring method for moon jellyfish abundance in the western Seto Inland Sea, Japan (W2-5849)
- 16:20 **Hao-Hsien Chang, Chang-Yu Lai, and Wen-Tseng Lo**
A study on the ecological significance of the box jellyfish, *Carybdea rastonii* Haacke (Cnidaria: Cubozoa), from the east coast of Taiwan (W2-5868)
- 16:45 **Chang-Hoon Han and Shin-ichi Uye**
Quantification of the abundance and distribution of the common jellyfish *Aurelia aurita* s.l. with a Dual-frequency IDentification SONar (DIDSON) (W2-5680)
- 17:00 **Akira Okuno, Tatsuro Watanabe, Naoto Honda and Katsumi Takayama**
Jellyfish transport simulation taking the diurnal vertical migration into account (W2-5661)
- 17:15 **Discussion, summary, recommendations**
- 18:00 **Workshop ends**

