



MECOS2

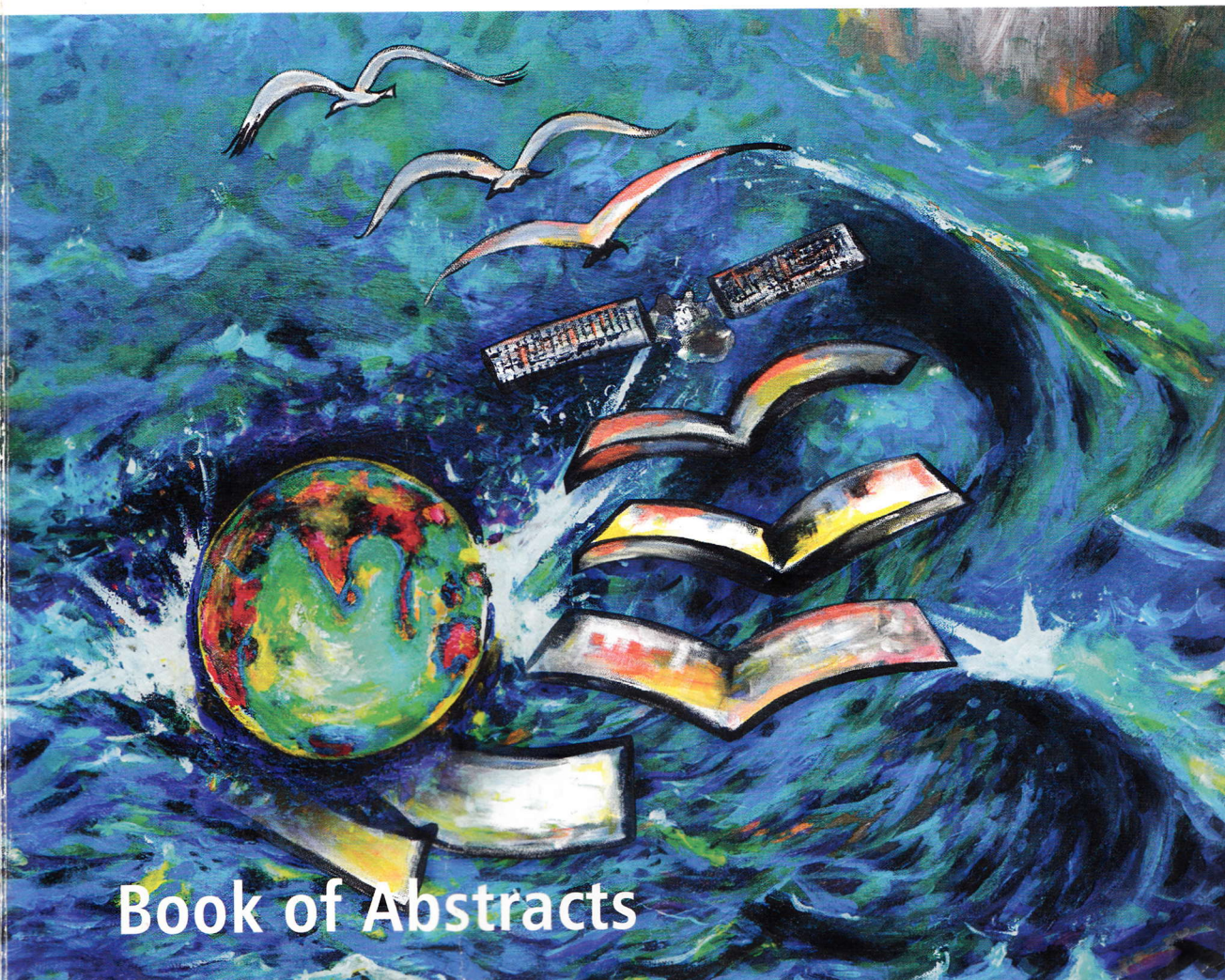
Marine Ecosystems

Challenges & Opportunities

International Symposium | 2-5 December 2014, Kochi, India



MBAI *Marine Biological Association of India*



Book of Abstracts

Reproductive indicators and ovarian development in the squid *Sepioteuthis lessoniana* Lesson, 1830 from Palk Bay, Mandapam, India

Venkatesan, V.* and S. Rajagopal

Central Marine Fisheries Research Institute, Kochi 682 018, Kerala, India

Email: venkatcmfri@yahoo.co.in

Sepioteuthis lessoniana (Lesson, 1830), is one of the most widely distributed loliginid squid of the Indo-West Pacific region. It is a large coastal squid known to occur commonly in coastal environments on sea grass beds, coral reef and sandy bottoms of Palk Bay and Gulf of Mannar region. *S. lessoniana* accounts for around 7 % of cephalopod landings along east coast of India. At Mandapam, *S. lessoniana* contributes 11 % of total cephalopod landings. It is exported to niche markets like Japan, Europe and China. Gonadosomatic index, monthly progression of maturity stages, histological analysis of ovarian development and description of structure of female reproductive system was carried out in *S. lessoniana* collected from the shrimp trawlers operated along Mandapam coastal areas. Based on the monthly progression of maturity stages, larger numbers of mature females were identified in January and February. This result coincided with the gonadosomatic index. The different stages of gametogenic development were examined microscopically. Oocyte growth follows the general pattern observed in other squids. According to the histological analysis, six sub-phases of oocyte development were identified, and these are similar to those described for other species. Different phases of oocyte growth such as oogonia, primary oogonia, secondary oogonia, maturing phases of growth, postovulatory follicles and atresia were detected. During maturation of oocyte, follicle cells transforms from cuboidal to columnar. Oocyte size among types showed significant differences.

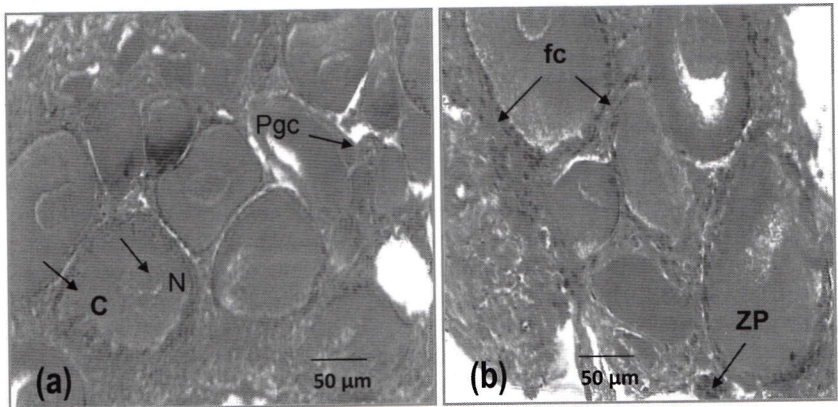


Fig. 1. a. Stage I - Ovary of immature female showing oocytes in early stages of development. Primordial germ cells (oogonia) pgc can also be seen. (b). Oocytes and follicle cell proliferation. Attachment of follicle cells in stage II. Cytoplasm (C), Nucleus (N), Follicle cells (fc), Zone of follicle cell proliferation (ZP).