

Who's Working On Echinoderm Fisheries ?

Sea urchins and sea cucumbers are valued ingredients of Chinese and Japanese cuisine. Echinoderm fisheries are most developed in the southeast, south, and northwest Pacific areas. Major producers of dried sea cucumber or *bêche-de-mer* are the Philippines and Indonesia. Major markets are Hong Kong, China, Japan and Singapore.

For this article, the Aquatic Sciences and Fisheries Abstracts (ASFA) covering the period from 1971 to 1988, the ICLARM library and professional staff collections were used in the literature survey.

Half of the 177 articles found were published in the last decade. The annual average number of publications was less than one before 1970, and 6.4, then 9.3 for the 1970s and 1980s respectively. The earliest article was dated 1893.

Growth over time

The late 1930s saw a small boom in publications. Publications were sporadic until the late 1960s but increased during the 1970s, and peaked in 1979, although more articles were published annually in the 1980s.

Publication types

Seventy per cent of the items were published in journals, 15% as reports by agencies on ongoing projects, and the remainder as books, handbooks/field-guides, newsletters and theses. English was used in 76% of the papers, Japanese in 15%, and eight other languages in the rest.

Areas of research

Seven broad groups could be identified among the publications. These are biology, fisheries, general discussions, fisheries development, processing, resource surveys, and others (culture, marketing, resource management and economics) (Fig. 1). Biology and fisheries dominated early studies. Not until the 1970s did other investigations have substantial volume.

M.J.M. VEGA
Project Information Officer
ICLARM

Asian-, Western-Pacific-, and North-American-based authors produced more than three-fourths of all publications. In North America, more authors worked on sea urchins, while sea cucumber articles dominated the literature elsewhere. The geographical distribution of the articles is presented in Fig. 2.

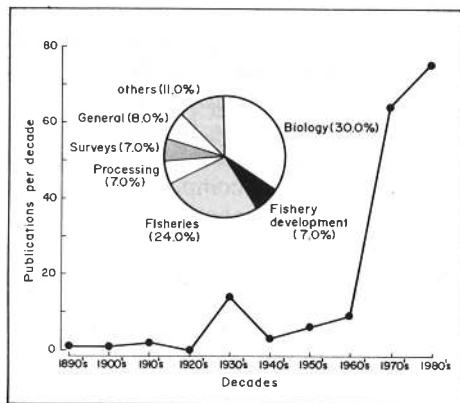


Fig. 1. Growth of echinoderm fisheries literature.

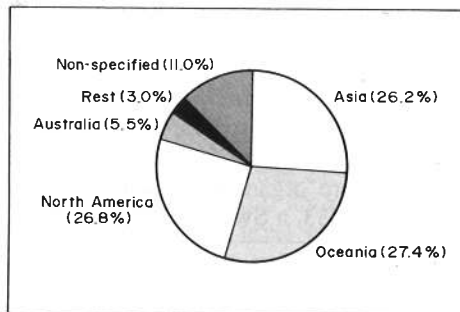


Fig. 2. Geographic distribution of the literature.

history, species utilized, processing countries involved, and export markets of the sea cucumber fisheries, has an extensive bibliography, and a list of importers in Hong Kong and Singapore. An English version, in collaboration with the South Pacific Commission will come out in 1989. Recruitment characteristics of commercially harvested red sea urchin *Stongylocentrotus franciscanus* in southern British Columbia by N.A. Sloan, et al., published in *Fisheries Research* 5(1987):55-96, is one of the recent publications on urchins. A 1988 collaboration of the two authors above is *World fisheries for echinoderms. In Scientific Approach to Management of Shellfish Resources, vol. 2* edited by J.F. Caddy, and published as part of the FAO/Wiley Series on Food and Agriculture, by J. Wiley and Sons, New York, USA.

Here are some institutions involved in sea cucumber fisheries: The South Pacific Commission (S.P.C.) at B.P. D5 Nouméa Cedex, New Caledonia; Office de la Recherche Scientifique et Technique Outre-Mer, Centre de Nouméa, (ORSTOM), B.P. A5, Nouméa, New Caledonia; Laboratoire d'Océanographie Biologique, Université de Bretagne Occidentale, 6, Avenue Le Gorgeu, 29 287 Brest Cedex, France (contact: C. Conand). For urchins, Department of Fisheries and Oceans, Fisheries Branch, Stevenson Point Road, Nanaimo, British Columbia, V9R 5K6, Canada, (contact: R. Harbo, Shellfish Management Biologist); Departamento Biología Ambiental y Población, Pontificia Universidad Católica de Chile, Casilla 114-D, Santiago, Chile (contact: J. Castilla); and the Faculty of Fisheries, Hokkaido University, Nishi 5, Kita 8, Kita-ku, Sapporo 060, Japan (contact: K. Amaoka).

N.A. Sloan may be contacted at 3249 West 49th Ave., Vancouver, B.C., Canada, V6N 3T5.

C. Conand will organize, in collaboration with the S.P.C. a "Bêche-de-mer Newsletter". Contact her for details.

ICLARM can provide more information on echinoderm fisheries. Write to Selective Fisheries Information Service, ICLARM, MC P.O. Box 1501, Makati, Metro Manila, Philippines, for details and costs involved.

Recent papers

Chantal Conand's *Les ressources halieutiques des pays insulaires du Pacifique. Deuxième partie: Les holothuries*. FAO Document Technique sur les Pêches 272.2 (United Nations Food and Agriculture Organization, Via delle Terme di Caracalla 00100, Rome, Italy), published in 1986, presents the