

and had 100 tons of headless frozen shark.

**Russia has formally protested** U.S. legislation establishing a 200-mile fishery zone. In a note to the U.S. Department of State, the Soviets indicated that they view the unilateral action by the United States as a hindrance to the U.N. Law of the Sea Conference.

**Thursdays have been declared "no-meat" days** in the USSR to increase per capita consumption of fish and dairy products. Soviet meat reserves have been low due to a large-scale slaughtering of livestock following last summer's

drought and subsequent feed shortage.

**Russia is producing artificial caviar** which reportedly tastes "just like the real thing." The caviar, made from milk albumin, casein, oils, fish, fats, salt, and water, is produced by a machine with a capacity of 400 pounds a day.

**Britain's Minister of State** at the Foreign Office Roy Hattersley told the European Communities (EC) Council of Ministers on 5 May that any EC common fisheries policy must allow the United Kingdom a fishing zone with limits of up to 50 miles.

#### Publications

## Russian-English Marine Glossary and Electrical Fishing Volumes Published

**The Russian-English Glossary of Fishing and Related Marine Terms** was compiled in 1975 by Menakhme Ben-Yami for Keter Publishing House, Ltd., Jerusalem, Israel. It is arranged alphabetically by Russian terms and contains an English index, a list of Russian abbreviations, several drawings and photographs of fishing gear and other equipment for which no counterparts exist in the West, and an extensive bibliography. The majority of the terms were compiled by Ben-Yami, Chief, Fisheries Technology Unit, Israeli Department of Fisheries, over a period of 14 years. Milton M. Rose, Chief, Language Services Division, and Jerry E. Jurkovich, Gear Research Unit, Northwest Fisheries Center, both of NMFS, NOAA, and T. S. Sealy, Director, MARTRAN, Ltd., United Kingdom, aided in the compilation. The 182-page glossary is available from Halstead Press, John Wiley and Sons, 605 Third Avenue, New York, NY 10016, at \$18.00 per copy.

**Electrical Fishing: Theory and Practice**, by V. Sternin, I. Nikonorov, and Yu. Bumeister, "Pishchevaia promyshlennost" Publishers, Moscow, 1972. This Russian book was recently translated in Israel under the auspices of the U.S.-Israel Binational Science Foundation. The book is made up of two parts. The first part deals with the electric field of currents in electrical fishing. The subject matter includes electrical conductivity of natural waters, electrochemical phenomena on

the surface of electrodes, electrical field of point and line current sources, electrical field of current between electrodes with simple geometric shapes, electrical conductivity between electrodes, and electrotechnical calculations for alternating and pulsating current. The second part deals with biotechnical foundations of electrical fishing. The book is available on loan from F43, Language Services Division, Office of International Fisheries, NMFS, NOAA, Washington, DC 20235.

### Texas A&M Prints Shrimp Thermal Tolerance Study

A study of the thermal tolerance and acclimation rate of postlarval shrimp has been published by Texas A&M University. Entitled "**Thermal Resistance and Acclimation Rate in Young White and Brown Shrimp, *Penaeus setiferous* Linn. and *Penaeus aztecus* Ives,**" it was written by Larry M. Wiesepape of the University's Department of Wildlife and Fisheries Sciences.

Brown shrimp postlarvae, acclimated at 24, 29, and 34°C, were tested for thermal resistance at five lethal temperatures for each acclimation temperature (34-38°C, 35-39°C, and 36-40°C). White shrimp postlarvae acclimated at 29°C and 34°C were tested for thermal resistance at six lethal temperatures for each acclimation temperature (35-40°C and 36-40°C). The temperature which caused 50 percent

mortality at 10,000 minutes was between 35°C and 36°C for postlarvae acclimated at 24°C and between 36°C and 37°C for those acclimated at 29°C and 34°C. Twenty-four-hour LC<sub>50</sub>'s were 36.3°C, 37.5°C, and 38.3°C respectively, and 38.3°C and 38.9°C for white shrimp postlarvae acclimated at 29°C and 34°C respectively. Postlarval brown shrimp were reported more resistant at most lethal temperatures than were 30-mm brown shrimp. Postlarval and 30-mm white shrimp had similar resistance times, which were greater than those of 50-mm white shrimp.

Separate groups of white and brown shrimp postlarvae were acclimated at six temperature and salinity combinations (29°C and 34°C; and 25, 35, and 45 parts per thousand) and were tested for thermal resistance at each of these and two lethal temperatures. Thermal resistance was greatest at a test salinity of 25 parts per thousand. However, acclimation to a higher or lower salinity gave maximum protection against heat death at that salinity and at all salinities closer to 25 parts per thousand.

The 196-page paperbound volume has 69 figures and 10 tables. It is available from the Center for Marine Resources, Texas A&M University, College Station, TX 77843 for \$4.00 each. Orders should include the publication number, TAMU-SG-76-202.

### British Books Describe Small-Scale Fishing Gear, Eel Industry

"**Eel Capture, Culture, Processing, and Marketing**" by David M. Forrest examines virtually all facets of the eel industry, as its title suggests. Interest in eeling and eel farming is growing, says the author, who has worked extensively with eel capture, processing, and marketing in Europe, Japan, Taiwan, and Australia. Eel markets are reportedly worth over \$150 million overall.

Nontechnical, the book provides a general overview of eels, eeling techniques, and eel culture and marketing in Europe, America, New Zealand, and parts of Asia. Most emphasis, though, is on Europe, Taiwan, and Japan where eels are most popular. Five distinct areas of eel operations are

identified: Elvers, fingerling eels, captured wild eels, cultured eels, and fresh and processed eels.

This is a good general guide to the eel industry. Its information is arranged in five sections: Elver capture, holding, and marketing; eel culture; eel capture; eel processing; and eel marketing. For those wanting more technical or in-depth information, numerous references are cited. The text is supplemented with 66 photographs, 24 charts, and 49 tables. Of small (6 x 8½ inches) format, the book has 205 pages. It is published by Fishing News (Books) Ltd., 23 Rosemount Ave., West Byfleet, Surrey, England, and costs £7.25.

Another new book, the "FAO Catalog of Small Scale Fishing Gear," edited by C. Nedelec, has also been published by Fishing News (Books) Ltd. by arrangement with the Food and Agriculture Organization of the United Nations. It is aimed at commercial fishers, fishing gear makers, fishery instructors and extension workers, and the like. Text, in English, French, and Spanish, is at a minimum; most of the book is devoted to drawings of the various types of gear.

Gear construction and operation is emphasized. In its 191 pages the book illustrates a fairly representative selection of gear proven by commercial fishers in many nations. Items shown from the United States include a Buzzards Bay, Mass. lobster pot, a Puget Sound (Wash.) salmon gillnet, and a "surround net" (lampara) used in California to catch live bait. Maximum size of fishing vessels shown is about 15 meters long, with engines of up to 150 horsepower. Other gear described include scoop nets, longlines, trolling gear, handlines, fyke nets, pots, traps, driftnets, liftnets, dredges, trawling gear, seines, etc. The book costs £7.75 and is available from the publisher.

## **Fishery Translations Available on Loan**

The articles and papers listed below have been translated by the Language Services Division of the National Marine Fisheries Service's Office of International Fisheries, unless otherwise noted. Copies of the full translations are available on loan from that office (F43), National Marine Fisheries September 1976

Service, NOAA, Washington, DC 20235.

**Nichiro Joins in Krill Harvesting**, from the 25 May issue of *Suisan Shuho* (No. 771) reports that the Nichiro Gyogyo Company plans to harvest Antarctic krill this fall. In the past they have canned tiny shrimp (*Penacopsis akaebi*) for the market and expect to successfully process krill. The four largest Japanese fishing companies (Taiyo, Nippon Suisan, Nichiro, and Kyokuyo) will all fish for krill this fall.

**Japanese Fishing Industry Use of Fuel Oil**, from *Suisan Shimbun*, No. 3710, 31 March, notes that 11 major Japanese fishing companies used 1,186,000 kiloliters of fuel oil, or 22 percent of the total 5,500,000 kiloliters used in 1975. Small and medium-sized companies and coastal fishers used the remainder, 4,314,000 kiloliters.

Gonadal development, structure, and maturity of female *Loligo pealei* are described in **Questions of Ogenesis of Atlantic Longfin Squid (*Loligo pealei* Les.) of Georges Bank**, by P. N. Burukovskii and A. N. Vovk. The article was translated from the *Archive of Anatomy, Histology, and Embryology* (Vol. 66, No. 5, 1974) by Canada's Multilingual Services Division.

Other NMFS translated articles include: **Japanese Fish Catches Within 200 Miles of Foreign Shores**, from *Suisan Shimbun*, No. 3515, 14 April; **Whaling Season Begins**, from *Suisan Shuho*, No. 711, 25 May; **Good Shrimp Catches at the Amazon River Mouth**, from *Suisan Shuho*, No. 768, 15 April; **Nichiro Forsees a Modest Profit This Year**, from *Suisan Shuho*, 5 March (the company lost almost 20 billion yen in 1974-75); **(Japanese) Fishery Agency Budget**, from *Suisan Shuho*, No. 761, 25 January (the 141,705 billion yen budget represents 6 percent of the total Agriculture and Forestry Ministry budget and a 22 percent increase); **A New Order for the Oceans**, in the 11 March issue of *Asahi Shimbun*, summarizes various Law of the Sea issues.

Other available translations are **Reports on Fur Seal, Sea Lion, and Sea Otter Conservation and Harvesting**, a report on the Conference on the Efficient Organization of Fur Seal Conservation in Moscow, 28-30 January 1975 (Referativnai Informatsiia, Series No. 1, Issue No. 6); **Achievements of the 20th Soviet Antarctic Expedition**,

from *Sovetskaia Latviia*, Vol. 94, No. 10089, 22 April 1976; **USSR-Japan Negotiations Seen as Reflecting the LOS Philosophy**, an editorial from *Asahi Shimbun*, No. 32462, 1 May 1976; **Exports of Fresh Chinese Prawns to Japan**, from *Minato Shimbun*, No. 8648, 22 April 1976; **Krill Meal as Live-stock Feed**, from *Suisan Shuho*, No. 770, 5/15 May 1976; and **Porpoise Population Control**, from *Suisan Keisai Shimbun*, 5 February 1976.

Others are **Importance of Coastal Fishing Grounds**, from *Asahi Shimbun*, 8 March 1976; **Krill: From Research to Harvest**, from *Minato Shimbun*, No. 8579, 30 January 1976; **Status of Fur Seal Stocks** (on the Tyuleniy, Commander, and Kuril Islands) from the USSR Ministry of Fisheries; **Status of the Shrimp Stocks in the Bering Sea**, by V.G. Ivanov in Proceedings of the All-Union Research Institute of Marine Fisheries and Oceanography (VNIRO), Vol. 99, 1974; **Fish Price Stabilization Fund**, from *Suisan Shuho*, No. 762, 5 February 1976 (Japan aims to stabilize fish prices); **A New Japanese Plant for Fish Protein Concentrate (FPC)**, from *Nippon Suisan Shimbun*, 6 February 1976; **Alaska Pollock Wastefully Used**, a series of six articles from *Asahi Shimbun* in early 1976 on Japanese fish eating habits and fish use; and "Fransov," **the First Combined Franco-Soviet Fishing Company**, from *France Peche*, No. 205, November 1975.

Other translations include **Japanese Efforts to Harvest Antarctic Krill**, from *Suisan Shuho*, No. 752, 5 October 1975; **Description of Soviet Fishing Vessels**, a series of 11 short articles from *Sudostroenie*, Vol. 7, July 1975; **Capelin Investigations in the Barents Sea in September-October 1975**, from *Fiskets Gang*, Vol. 62, No. 7, February 1976; **Sardinella Fishing by a Dutch Fleet off Mauritania in 1971 and 1972**, from an article titled "Information on the Fishing Coast of Mauritania" in the *Bulletin of the Fishing Laboratory of Nouadhibou*, No. 2, December 1973, by J. Maigret and J. Brulhet; **Commercial Feasibility Survey of New Fishing Grounds**, from *Minato Shimbun*, No. 8611, 9 March 1976 (a report of a successful year of experimental fishing by Japan's Center for Marine Fisheries Resource Development); and **Thriving Yellowtail Culture**, from *Minato Shimbun*, No. 8610, 7 March 1976.