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DIVISION OF INDUSTRIAL RESEARCE AND SERVICES

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THESE PUBLICATIONS ARE NOT AVAILABLE FROM THE FISH AND WILDLIFE SERVICE, BUT USUALLY MAY BE OBTAINED FROM THE ORGANIZATIONS ISSUING THEM.

Institut International du Froid, 177 Boulevard Malesherbes, Paris 17<sup>e</sup>, France.

#### SPOT:

A Study of the Biology and Life History of the Spot, LEIOSTOMUS XANTHURUS LACEPEDE, with Special Reference to South Carolina, by C. E. Dawson, Contributions from Bears Bluff Laboratories No. 28, 48 pp., printed. Bears Bluff Laboratories, Wadmalaw Island, S. C., September 1958.

#### TROCHUS:

Selected Annotated Bibliography of Trochus, by
R. Gail and L. Devambez, Technical Paper No.
111, 27 pp., illus., printed, 2/6 stg. (about 35
U. S. cents). South Pacific Commission, G. P.O.
Box 5254, Sydney, Australia. The first part of
this bibliography on trochus shell gives references in alphabetical order of authors' names.
Brief summaries of the publications are also
included. In the second part, the territory or
country where the research has taken place is
used as a subheading, and only the bibliographical
reference is given. A map of the South Pacific
Commission area, showing the natural and artificial distribution of trochus, is appended.

#### TUNA:

"Le Marche du Thon Tropical d'Origine Francaise" (The Market for Tropical Tuna of French Origin), by A. Sahut-Morel, article, La Peche Maritime, vol. 37, no. 965, August 1958, pp. 473-479, illus., printed in French. Editions Maritimes, 190 Boulevard Haussmann, Paris, France.

#### TURKEY:

"Catching Periods of Sarda sarda in Different Seasons and Years" (Torik-Palamut ve Sarda sarda larin Mevsim ve Senelere Bagli Av Peryotlari), by Ilham Artuz, article in 3 parts, Balik ve Balikcilik, Part I - vol. 6, no. 4, April 1958, pp. 1-5; Part II - vol. 6, no. 5, May 1958, pp. 1-6; Part III - vol. 6, no. 6, June 1958, pp. 7-11; printed in Turkish. Et ve Balik Kurumu Umum Mudurlugu, Kat 5, Yene Valde Han Sirkeci, Istanbul, Turkey

"The Girgir-Seines" (Girgir Agi), by Sitki Uner, article, Balik ve Balikcilik, vol. 6, no. 7, July 1958, pp. 22-26, illus., printed in Turkish. Et ve Balik Kurumu Umum Mudurlugu, Kat 5, Yene

Valde Han Sirkeci, Istanbul, Turkey. Describes the Girgir seines used by Turkish fishing boats.

"The Place of Turkish Fisheries in the Mediterranean Countries and in the World" (Memleketimiz Balikciliginin Dunya ve Akdeniz Balikciligindaki Veri), by M. Ilham Artuz, article in 3 parts, Balik ve Balikcilik, Part I - vol. 6, no. 7, July 1958, pp. 18-21; Part II - vol. 6, no. 8, August 1958, pp. 7-11; Part III - vol. 6, no. 9, September 1958, pp. 16-22; printed in Turkish. Et ve Balik Kurumu Umum Mudurlugu, Kat 5, Yene Valde Han Sirkeci, Istanbul, Turkey.

#### UNION OF SOUTH AFRICA:

Department of Nature Conservation, Report No. 14, 1957, 108 pp., illus., printed. Department of Nature Conservation, Provincial Administration of the Cape of Good Hope, Cape Town, Union of South Africa. A complete report on the activities of the Union of South Africa's Department of Nature Conservation. The section on Research and Field Surveys contains, among others, a report on inland fisheries and an article entitled "The Tidal Waters of the Rivers of the Cape Province," by G. F. van Wyk. This article describes a survey which has been undertaken chiefly with the object of providing fair legislation which will not deprive commercial fishermen and anglers of reasonable catches but which will at the same time prevent needless wastage of fish and fish bait. The section covering the Division of Inland Fisheries discusses the work being done at the Jonkershoek Hatchery, Pirie Trout Hatchery, Tsolo Fish Farm, and the stocking of public waters. Also included is a brief report on the Inland Fisheries and Fauna Administration and the figures on the game licenses issued in 1957.

#### VITAMINS:

"Assay of Vitamin A Oils," by E. Brunius, article, Nature, vol. 181, February 8, 1958, pp. 395-396, printed. Macmilland and Company, Ltd., St. Martins Street, London W. C. 2, England.

#### YEARBOOKS AND DIRECTORIES:

Fisheries Yearbook and Directory, 1958, edited by Harry F. Tysser, illus., printed, 20s. (about US\$2.80). British-Continental Trade Press Ltd., London, England.



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