

THE FECUNDITY OF SKIPJACK TUNA (*KATSUWONUS PELAMIS*) FROM THE WESTERN INDIAN OCEAN.

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ABSTRACT

*From 281 females with fork lengths ranging from 43 to 73 cm and ripe ovaries, the batch fecundity of skipjack tuna (*Katsuwonus pelamis*) from the western part of the Indian Ocean has been studied. Gilson's fluid, used as a preservative and dissociative agent for oocytes, has a strong and fast action (5 days) on the shrinkage of these oocytes. Counts made with a Dollfus box on sub-samples of dissociated oocytes show that, within a single sexual maturity period (February), the fecundity of skipjack tuna is the same whatever the geographic area: (Mozambique Channel and South of Seychelles Islands). On the other hand, although sexual activity is noted for skipjack tuna throughout the year, individual fecundity changes with the season within a single area. This individual batch fecundity changes from 80000 eggs for a 44-cm female caught along the northwestern coast of Madagascar to 1.25 million eggs for a large female (75 cm) caught around the Seychelles Islands. The corresponding relative batch fecundity varies from 40 to 130 eggs/g body weight. For this species, 4 successive spawnings per year have been estimated.*

Fonds Documentaire ORSTOM



010013406

Fonds Documentaire ORSTOM
Cote: Bx 13406 Ex: 1

Proceedings of the Sixth Expert Consultation on Indian Ocean Tunas

**Colombo, Sri Lanka
25-29 September 1995**

Distribution:

Participants
Affiliated Parties through IPTP
Liaison officers
FAO Fisheries Department
FAO Regional Fisheries officers
Regional Fisheries Councils and
Commissions
Selector G

Bibliographic entry:

Anganuzzi, A.A., K.A. Stobberup, N.J. Webb (eds.) 1996.
Proceedings of the Expert Consultation
on Indian Ocean Tunas, 6th Session,
Colombo, Sri Lanka,
25-29 September 1995
373 p.

INDO-PACIFIC TUNA DEVELOPMENT AND MANAGEMENT PROGRAMME

INT/94/010 - GCP/RAS/099/JPN

Colombo, 1996

FOREWORD

Since 1985, the Indo-Pacific Tuna Development and Management Programme (IPTP), a UNDP/FAO regional programme, has been convening and sponsoring the Expert Consultations on Indian Ocean Tunas, to provide a forum for the dissemination of research results and the exchange of information on the status of the tuna stocks and tuna fisheries in the Indian Ocean.

The latest meeting, the 6th Expert Consultation on Indian Ocean Tunas, was held in Colombo, Sri Lanka, on 25-29 September, 1995. It was attended by 51 scientists from the national institutions of 20 countries and representatives of two international bodies responsible for tuna management in other oceans, in addition to staff from FAO and IPTP, and 62 national reports and scientific papers were presented, a record for these Consultations. The increasing participation of scientists from nations bordering the Indian Ocean is particularly encouraging, as a measure of the interest that the tuna fisheries are generating in the nations of the region. The collection of working documents presented in this volume is a significant sample of the most recent research on Indian Ocean tunas and the status of the fisheries.

This volume includes the working documents made available to the participants in the Consultation. Frequently, comments made during the discussions that followed each presentation put the results presented in context; these discussions are summarised in the companion volume, *Report of the Sixth Expert Consultation on the Indian Ocean Tunas* (IPTP/95/GEN/23), published earlier this year by IPTP. Since the working documents formed the basis for the discussions and conclusions reached by the Consultation, they are reproduced here in substantially the same form in which they were presented at the meeting, with editorial changes.

The editors would like to acknowledge the support of all the staff of IPTP who participated in the preparation of this volume, and in particular Mrs. M.C.R. Percera-Meherdeen, Mr. S. Amarasekera, Mr. A.C.M. Ifthihar, Mr. M.E. De Costa and Mr. S. Nellanpitiya.

The Editors:

A. A. Anganuzzi,
K. A. Stobberup, and
N. J. Webb.

Colombo, 1996

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