

FISHERIES

DIGESTIVE PHYSIOLOGY

Dr. Meera Singh



Fisheries

Digestive Physiology

Dr. Meera Singh



RANDOM PUBLICATIONS LLP
NEW DELHI (INDIA)

Fisheries: Digestive Physiology

edited by Dr. Meera Singh

This edition published by Random Publications,
Gali Murari Lal, Ansari Road Daryaganj,
New Delhi-110002 (India)

ISBN 978-93-90780-56-3

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Published in 2022 in India by

RANDOM PUBLICATIONS LLP

4376-A/4B, Gali Murari Lal, Ansari Road
New Delhi-110002

Phone : +9111-43580356, 011-23289044, 011-43142548

e-mail: sales@randompublications.com,
info@randompublications.com, randomexports@gmail.com

Type Setting by : Friends Media, Delhi-110089
Digitally Printed at: Replika Press Pvt. Ltd.

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FISHERIES DIGESTIVE PHYSIOLOGY

The digestive system, in a functional sense, starts at the mouth, with the teeth used to capture prey or collect plant foods. Mouth shape and tooth structure vary greatly in fishes, depending on the kind of food normally eaten. Most fishes are predacious, feeding on small invertebrates or other fishes and have simple conical teeth on the jaws, on at least some of the bones of the roof of the mouth, and on special gill arch structures just in front of the esophagus. The latter are throat teeth. Most predacious fishes swallow their prey whole, and the teeth are used for grasping and holding prey, for orienting prey to be swallowed (head first) and for working the prey toward the esophagus. There are a variety of tooth types in fishes. Good knowledge of the complexity of feeding behaviour and of the factors that modulate food detection, acquisition and processing is essential if we are to improve feeding protocols with live prey and to improve the design of microdiets to replace these. Successful food consumption depends, on the one hand, on a series of anatomical characteristics and physiological functions that should be ready to work at the appropriate time, and on the other, on the availability of appropriate food items. Given that the main activities of fish larvae are to eat and avoid being eaten, the differentiation of sensory organs, mouth and digestive elements and the capacity for locomotion is of primary importance. This book provides basic information on the feeding habits and behavior, and physiology of fishes and crustaceans. The mechanisms that control the movement and digestion of food, methods of assessing digestibility of feed, factors affecting digestion and absorption of food nutrients, and feeding processes in fish.

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About the Author



Dr. Meera Singh is working as an Associate Professor in the department of zoology of D. S. (P.G.) College, Aligarh, which is affiliated to Dr. B. R. Ambedkar University, Agra. She is a well known researcher in fisheries and environmental sciences. She has obtained her Ph.D from Dr. B. R. Ambedkar University, Agra and M.Phil from reputed School of Life Sciences, Department of Zoology, Khandari Campus, Agra.



RANDOM PUBLICATIONS LLP

PUBLISHERS • DISTRIBUTORS

4376-A/4B, Gali Murari Lal, Ansari Road, Daryaganj
New Delhi-110002, Ph: +91-11-43142548/43580356/23289044
Email: randomexports@gmail.com,
sales@randompublications.com,
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ISBN 978-93-90780-56-3



Size: Royal
Pgs.: 300 (Appx.)