“Jawless Fishes of the World” – a new book dealing with various aspects of lampreys and hagfishes worldwide

Alexei M. Orlov[1,2]

[1] *Russian Federal Research Institute of Fisheries and Oceanography (VNIRO), 17, V. Krasnoselskaya St., Moscow, 107140, Russia*

[2] *A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences (IEE RAS), 33, Leninsky Prospekt, Moscow, 119071, Russia*

E-mail: orlov@vniro.ru

BACKGROUND

Living jawless fishes are elongate eel-like animals lacking paired fins, represented by hagfishes and lampreys. These animals are the only living representatives of ancient creatures that gave rise to the fish and eventually humans.

Hagfishes are marine animals that are widely distributed in the world’s oceans and are among most abundant demersal fishes in many areas. They represent a very diverse group of fishes whose taxonomy is poorly understood and documented. It is widely believed that hagfishes damage commercial catches of other species. However, some of them have commercial importance in, for example, Japan and Korea. Fisheries for hagfish have developed over the last few decades off both coasts of Canada and the US, as well as off Mexico. Despite wide distribution, high abundance and the importance of these fisheries many issues related to taxonomy, distribution, phylogeny and life cycle of hagfishes are still poorly understood.

Lampreys inhabit freshwater, brackish and marine environments and are represented by over 40 parasitic and non-parasitic species. They are widely distributed and most abundant in the Northern hemisphere but some species occur also in the southern part of the world. These animals have specific life cycle characterized by a long larval stage (ammocete) in freshwater with subsequent radical metamorphosis. Lampreys play significant role in freshwater and marine ecosystems as prey and parasites or predators for variety of aquatic animals. On the one hand, some species are commercially important. On the other, they may damage fish in commercial catches. Despite a long history of research lampreys still remain insufficiently studied.

The main purpose of this book is to provide an overview of the current status of knowledge on the variety of topics related to jawless fishes including their taxonomy, zoogeography, phylogeny, molecular biology, evolution, life history, role in the ecosystem, stock assessment, fisheries and management of hagfishes and lampreys worldwide. Also, the research needs and perspectives for further advancement in this field are identified. This will be the first book dealing exclusively with different aspects of ecology, life history, stock assessment and fisheries of different jawless fish species in various areas of the world.

The book comprises collected papers, the majority of which provide new (unpublished) data. Some of them contain data published previously in the “grey” literature. Until now, data on different aspects of the biology and fisheries of hagfishes and some lampreys are scarce and, if published, are difficult to access.

This book will give readers the opportunity to find a lot of useful information on jawless fishes in a single reference.

CONTRIBUTORS

Name	Affiliation	Country
Noel Alfonso	Canadian Museum of Nature	Canada
Jan Andreska	Charles University in Prague	Czech Republic
Carlos Antunes	University of Aveiro; Aquamuseu do Rio Minho	Portugal
Arturo Angulo	São Paulo State University; Universidad de Costa Rica	Brazil; Costa Rica
Mário Araújo	University of Aveiro; Centre of Marine and Environmental Research	Portugal
Alexei Baitaliuk	Pacific Scientific Research Fisheries Center	Russia
Sandra Barca	Hydrobiology Station “Encoro do Con”	Spain
James Barron	United States Fisheries and Wildlife Service	USA
Terry Beacham	Department of Fisheries and Oceans	Canada
Richard Beamish	Department of Fisheries and Oceans	Canada
Miguel Carneiro	Portuguese Institute for Ocean and Atmosphere	Portugal
Nina Bogutskaya	Naturhistorisches Museum Wien	Austria
Benjamin Clemens	Oregon State University	USA
Fernando Cobo	University of Santiago de compostella; Hydrobiology Station “Encoro do Con”	Spain
Philip Cochran	Saint Mary’s University of Minnesota	USA
Ann Gannam	United States Fisheries and Wildlife Service	USA
Marta Gonçalves	Portuguese Institute for Ocean and Atmosphere	Portugal
Akira Goto	Hokkaido University of Education	Japan
Luis Fernando Del Moral-Flores	Instituto Politécnico Nacional; Universidad Nacional Autónoma de México	Mexico
Margaret Docker	University of Manitoba	Canada
Konstantin Fedorov	St. Petersburg State University	Russia
Aaron Jackson	Confederated Tribes of the Umatilla Indian Reservation	USA
Andrey Ermakov	Penza State University	Russia
Oleg Ermakov	Penza State University	Russia
Lubomir hanel	Charles University in Prague	Czech Republic
Jon Hess	Columbia River Inter-Tribal Fish Commission	USA
Falk Hildebrand	European Molecular Biology Laboratory	Germany
Elizaveta Kirillova	A.N. Severtsov Institute of Ecology and Evolution	Russia
Pavel Kirillov	A.N. Severtsov Institute of Ecology and Evolution	Russia
Alexander Kucheryavyy	St. Petersburg State University; A.N. Severtsov Institute of Ecology and Evolution	Russia
Shigehiro Kuraku	RIKEN Center for Developmental Biology; RIKEN Center for Life Science Technologies	Japan
Yuriy Kuznetsov	St. Petersburg State University	Russia
Ralph Lampman	Yakama Nation	USA
Raúl Lara–Mendoza	Universidad Autónoma de Sinaloa	Mexico
Boris Levin	Institute of Biology of Inland Waters	Russia
Marina Levina	Institute of Biology of Inland Waters	Russia
Rodrigo Lopez	PaisaSIGmo	Spain
John Lyons	Wisconsin Department of Natural Resources	USA
Tereza Manousaki	Institute of Marine Biology	Greece
Rogélia Martins	Portuguese Institute for Ocean and Atmosphere	Portugal
Axel Meyer	University of Konstanz	Germany
Fernando Márquez–Farías	Universidad Autónoma de Sinaloa	mexico
Mary Moser	Confederated Tribes of the Umatilla Indian Reservation; Northwest Fisheries Science Center	USA
Marina Mosyagina	St Petersburg State Academy of Veterinary Medicine	Russia
Joshua Murauskas	Anchor QEA	USA
Alexander Naseka	St. Petersburg State University; Zoological Institute	Russia
Dmitry Nazarov	A.N. Severtsov Institute of Ecology and Evolution	Russia
Miyuki Noro	RIKEN Center for Developmental Biology	Japan
Alexei Orlov	Russian Federal Research Institute of Fisheries and Oceanography; A.N. Severtsov Institute of Ecology and Evolution	Russia
Dmitry Pavlov	A.N. Severtsov Institute of Ecology and Evolution	Russia
Germán Pequeño	Universidad Austral de Chile; Servicio Nacional de Pesca y Acuicultura	Chile
Huan Qiu	Rutgers University	USA
Evlin Ramirez–Felix	Instituto Nacional de Pesca	Mexico
Claude Renaud	Canadian Museum of Nature	Canada
Robert Rose	Yakama Nation	USA
Sylvia Sáez	Universidad Austral de Chile	Chile
Vladimir Sarychev	Natural State Reserve “Galichiya Gora”	Russia
Olga Sarycheva	Natural State Reserve “Galichiya Gora”	Russia
Carl Schreck	Oregon State University	USA
Luke Schultz	Oregon State University	USA
Sergio Silva	University of Santiago de compostella; Hydrobiology Station “Encoro do Con”	Spain
Stacia Sower	University of New Hampshire	USA
Yorgos Stratoudakis	Portuguese Institute for Ocean and Atmosphere	Portugal
Ivan Tsimbalov	A.N. Severtsov Institute of Ecology and Evolution	Russia
Boris Tuniyev	Federal State Institution Sochi National Park	Russia
Sako Tuniyev	Federal State Institution Sochi National Park	Russia
Stan Van de Wetering	Confederated Tribes of Siletz Indians	USA
Joy Wade	Fundy Aqua Services Inc.	Canada
Ruth Withler	Department of Fisheries and Oceans	Canada
Yuji Yamazaki	University of Toyama	Japan
Oscar Zamora–Garcia	Instituto de Ciencias del mar y Limnologia	Mexico
Oleg Zelennikov	St. Petersburg State University	

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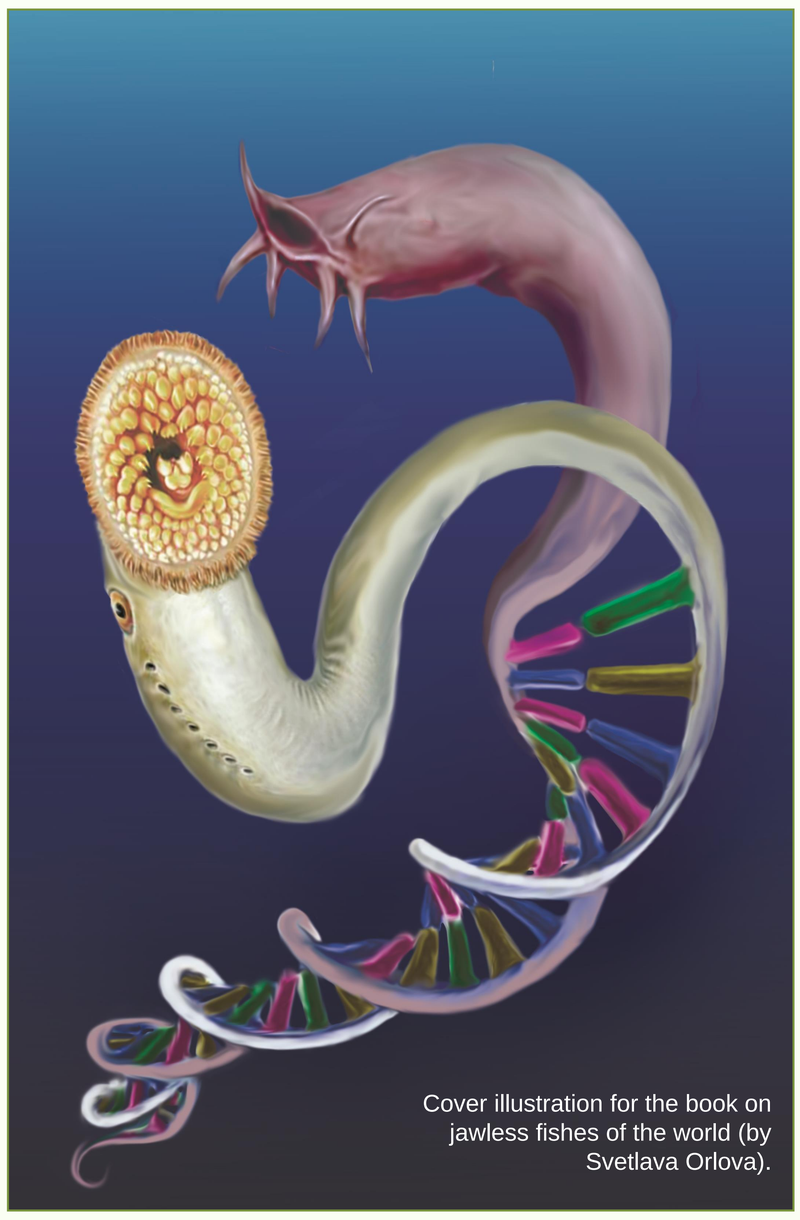

Cover illustration for the book on jawless fishes of the world (by Svetlava Orlova).

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EDITORS

Dr. Alexei Orlov is the principal scientist of the Laboratory of sea fishes of the Russian Far East in the Russian Federal Research Institute of Fisheries and Oceanography (VNIRO), Moscow, Russia. He is also the leading scientist of the Laboratory of lower vertebrates of the A.N. Severtsov Institute of Ecology and Evolution of the Russian Academy of Sciences (IPEE RAS), Moscow, Russia. From 1977-1982, he attended the Faculty of Fisheries, Astrakhan Technical University, specialising in Ichthyology and Pisciculture. After leaving university, he began work as an engineer for the Pacific Department of Fishery Survey and Research Fleet (TURNIF), Vladivostok, Russia, where he remained until beginning his career at VNIRO in 1986 and ultimately receiving a degree of Doctor of Science in 2004. During almost 30 years at VNIRO, he gained a wealth of field experience, most recently in 2004 on Norwegian R/V “G.O. Sars” and 2010 on Russian R/V “Akademik Ioffe”in the Mid-Atlantic ridge area studying deep-water ichthyofauna. On an international scale, he is a member of the BIO (Biological Oceanography) Committee of the North Pacific Marine Science Organisation (PICES), has participated with the ICES working group on the biology and assessment of deep-sea fisheries resources (WGDEEP) and was the participant of the International Scientific Project “Patterns and processes of the ecosystems of the northern Mid-Atlantic (MAR-ECO)”. He has participated in more than 50 International Scientific Conferences, Symposia and Congresses, and is the author of over 650 scientific and popular publications. His scientific interests include distribution, stock assessment, ecology, general biology, zoogeography and taxonomy of bathydemersal and midwater fishes of the North Pacific and North Atlantic Oceans. He is the member of American Fisheries Society, Asian Fisheries Society, Fisheries Society of British Isles, European Society of Ichthyologists, Japanese Ichthyological Society, Moscow Society of Naturalists, Russian Hydrobiological Society and Russian Geographic Society. He serves as an executive editor-in-chief for journals “Vorposy Ikhtiologii” and “Trudy VNIRO”, as associated editor for “Acta Ichthyologica et Piscatoria” and is a member of editorial boards of “Izvestiya TINRO” and “Vestnik AGTU. Fisheries”

Dr. Richard Beamish, C.M., O.B.C, Ph.D., D.Sc., F.R.S.C. is an Emeritus Scientist at the Pacific Biological Station in Nanaimo, B.C. where he served as the Head of the Groundfish Section from 1977-1980 and Director from 1980-1993. He retired in 2011. Dr. Beamish has been honoured with a number of awards including the Order of Canada and the Order of British Columbia. He was made a Fellow of the Royal Society of Canada and became the first foreign scientist to be made an honorary member of the Pacific Research Fisheries Center (TINRO-Center), Vladivostok, Russia. He was a member of the International Panel on Climate Change that received the Nobel Peace Prize in 2007. Recently, he received the first award given by the North Pacific Anadromous Fish Commission for significant contributions in scientific research on Pacific salmon, the Wooster award given by PICES for career achievements in fisheries and ocean science and the outstanding achievement award from the American Institute of Fisheries Research Biologists. In 2008, the Sea Fisheries Institute in Gdynia, Poland presented him with the Demel medal for outstanding scientific research. The Department of Fisheries and Oceans awarded him their Prix D’ Excellence and he received the Queens Golden and Diamond Jubilee medals. He also received an Honorary Doctor of Science degree from Vancouver Island University.

His research interests have included the discovery of acid rain in North America, new methods of ageing fish that included the discovery that many species of fish were much older than previously thought and discovery of a new lamprey species. He has authored or co-authored a number of papers on the effects of climate on fish populations and was one of the first scientists to write about climate regimes and regime shifts. He has published over 350 articles and recently was an editor and contributor to the book “The Sea Among Us - The Amazing Strait of Georgia”. He is an Editor for the “Transactions of the American Fisheries Society” and a member of the editorial board of “Izvestiya TINRO”.

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