

FishBase 2000

Concepts, design and data sources

Edited by

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2000

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Cover: The cover shows the Nile tilapia, *Oreochromis niloticus*, a species used widely in tropical
aquaculture, and the leopard coralgroupier, *Plectropomus leopardus*, a much appreciated marine food fish
of the western Pacific.

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FishBase Registration Form

Attention : ICLARM, FishBase Project
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College, Los Baños
Laguna 4031
Philippines

From : _____

Here is my registration information:

Name : _____

Institution : _____

Address : _____

Fax No. : _____

E-mail : _____

FishBase version : _____

Number of users : _____

Comments : _____

Foreword

The FishBase 2000 release summarises the accumulation and structuring of knowledge on fish biology and ecology over the more than 10 years since its inception.

FishBase 2000 now covers over 25,000 species of fish known to science, has over 70,000 synonyms and 100,000 common names in over 200 languages. The names are the key to accessing knowledge accumulated over time and mobilising scientific and non-scientific knowledge systems. Over 25,000 pictures illustrate these fish and information about them has been extracted from 20,000 references. The classification of higher taxa follows the version of Eschmeyer's *Catalog of Fishes* updated in November 2000.

A number of new features blended into tested 'old' ones lifts the user possibilities to yet another level:

The development of 'Key Facts' by species, first implemented on the web-version to great effect in late 1998, allows rapid estimation of key indicators of relevance for managers and conservationists. Estimates of these life-history indicators with 'best estimates with error margin' can now be produced rapidly on the basis of information already inside FishBase and re-estimated with the user's own data, as required. As an additional complement, an October 2000 update of IUCN's list of threatened fishes is incorporated.

FAO nominal catches from 1950 to 1998 and the further improved presentation and analysis of trophic ecology information open to all interested users the avenue for new types of global trend analysis. The first innovative use of these features was demonstrated by the publication in *Science* of the article on 'Fishing down marine food webs' by Pauly et al. (1998) stimulating much further work into trophic analyses.

As a result, additional capabilities to construct trophic 'Lindeman-pyramids' of ecosystems have been included in the 2000 release. Moreover, all the underlying information on species and their key features is never more than one or two mouse clicks away. By the same token, new support for the parametrisation of ecosystem models has been implemented.

The breadth and depth of information achieved so far, allows asking new questions. This, in turn, allows shaping more analytical routines or other outputs with the potential for making the database more useful to scientific users. The constantly growing emphasis on graphical presentations of data and the relationships between different data sets as well as the derivation of synthetic indicators like the ones mentioned above make it increasingly interesting to a wider audience. It is hoped that the various tools will encourage

local applications of global knowledge through interfacing with national data sets.

Even though some have rich aquatic resources, many African, Caribbean and Pacific (ACP) countries are among the least developed. Hence, the need for the creation of an enabling environment for ACP science and research was recognised during the dialogue on the Fisheries Research Initiative demanded by the ACP-EU Joint Assembly (a parliamentary body composed of ACP representatives and members of the European Parliament). Strengthening partnership with these countries to jointly develop concepts and management support for sustainable benefits from their aquatic resources is a matter of priority. Among resulting projects, one entitled 'Strengthening fisheries and biodiversity management in ACP countries' uses FishBase and its analytical capabilities as its technical backbone.

The project therefore fulfills a specific role in relation to FishBase and biodiversity work under Agenda 21 and an enabling role in relation to the wider objectives of the ACP-EU Fisheries Research Initiative. It does so by strengthening the operational and research capacities in ACP countries, by promoting common information production and management tools in ACP research and training establishments and by holding regional 'for a' in which the objectives of the ACP-EU Initiative will be pursued. This approach is also very much in line with the Decision on a Clearing House Mechanism taken by the Jakarta Conference of the Parties to the Biodiversity Convention (November 1995) ratified by record 157 countries. The best way to achieve this long-term goal is through a broad-based partnership and dialogue. The type of cooperation with greatest potential for lasting and multiplying effects on sustainable development is through investment into human and institutional capital with high knowledge content.

This project started in December 1996 and will last until June 2001. Five regional training nodes respectively in Belize, Kenya, Namibia, New Caledonia and Senegal cater for continued support to colleagues using FishBase and the new sustainability concepts for science and management in their subregions and ensuring improved data coverage and information depth in FishBase.

FishBase 2000 is the last output of this project in the form of the concept book, data and image CD-ROMs. It will be again in English, although French and Portuguese versions of the 1999 book will be available on the CDs. This is largely to ensure that users and collaborators in developing countries with still weak or relatively expensive Internet penetration can have access to what more than 60,000 visitors enjoy every month on the website (see www.fishbase.org).

Having incorporated key features by species, the most essential functions of ecosystem analysis and of mapping resources, FishBase 2000 is expected to remain stable in terms of its principal components for the next years to come. The CD-ROMs are thus

expected to serve for the next years, while waiting for the Internet infrastructure to expand. Work on complementing the content of FishBase will, of course, continue.

The newly created FishBase consortium of museums, fisheries research institutes and international organisations with a fisheries mandate has made an open-ended institutional commitment to further develop and consolidate FishBase and keep it in the public domain. The founding members of this open consortium are: Swedish Museum of Natural History (Stockholm), Royal Museum for Central Africa (Tervuren), Muséum National d'Histoire Naturelle (Paris), Institute of Marine Research (Kiel), Fisheries Centre of the University of British Columbia (Vancouver), FAO (Rome) and ICLARM (Los Baños). The consortium members will thus ensure that the shared knowledge platform for the more than 500 individual and institutional collaborators, many joining as a result of the ACP Project, and for the innumerable users around the world will continue to thrive.

Thanks are more than ever due to the highly committed FishBase Team. Thanks are also due to the rapidly growing number of scientists, photographers, volunteers and institutions who share their knowledge through FishBase with all users and who continue to contribute to the development of the system's content and shape. It is an exciting undertaking in which the FishBase Team, the many collaborators around the globe, the ACP countries and the European Union are jointly investing in order to improve coverage and breadth of utilisation for the benefit of all.

Cornelia E. Nauen and Jacques Prade

**Former and New Chairs, respectively, of the
ACP-EU FishBase Project Steering Committee**