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1992 PROGRESS REPORT ON FISHBASE

by

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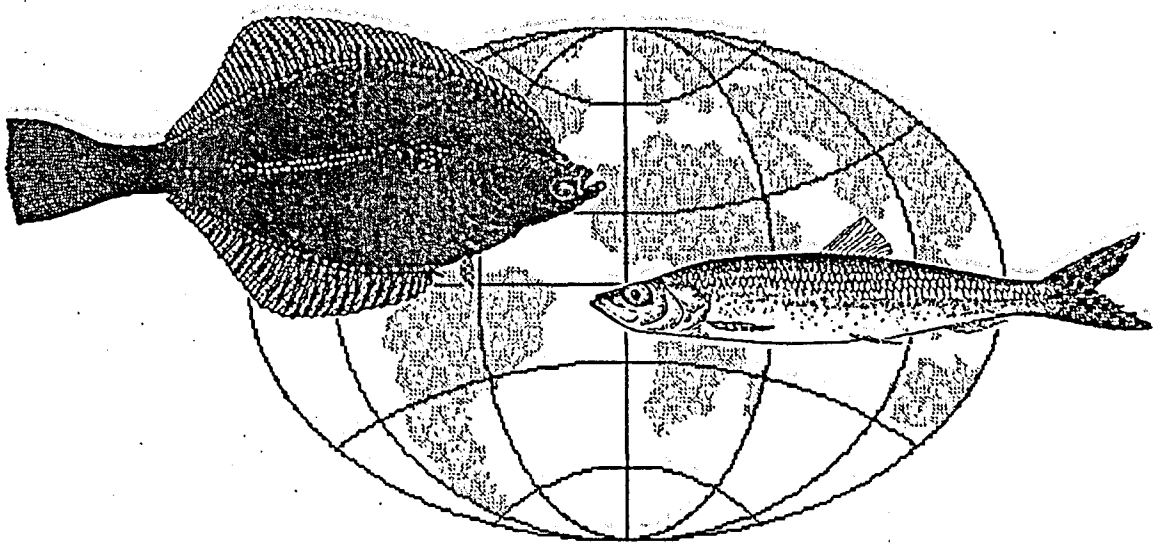

FISHBASE

ABSTRACT

The paper presents the current status of FISHBASE, a global biological database on fish that is developed by the International Center for Living Aquatic Resources Management (ICLARM) in collaboration with the Food and Agriculture Organization of the United Nations (FAO) and with the support of the Commission of the European Communities (CEC). FISHBASE contains now more then 6,000 species, including all fishes of the USA and Canada, all species used for aquaculture, all commercial species of the North Atlantic and the Mediterranean, all species contained in the IUCN Red List, all sharks, and all members of important families such as Scombridae and Clupeidae. For these species FISHBASE contains more than 8,600 synonyms and about 20,000 common names. Data on population dynamics is now available for about 1000 species and genetic information is available for about 300 species. The future development of FISHBASE, its distribution and cooperative arrangements towards its expansion are discussed.

ICLARM Contribution No. 852

Introduction

The International Center for Living Aquatic Resources Management (ICLARM) in collaboration with the Food and Agriculture Organization of the United Nations (FAO) and with the support of the Commission of the European Communities (CEC) is developing a database (named FISHBASE) to summarize global information on finfish (Froese 1990, 1991; Palomares et al. 1991; Pauly and Froese 1991a, 1991b). ICES has set up a Study Group on FISHBASE (Chairman: R. Froese, Germany) to: a) identify data sets from the ICES area that are suitable for inclusion in FISHBASE; and b) input all available information on at least one fish stock from the ICES area into FISHBASE.

Status of FISHBASE

Figure 1 shows the information contained in FISHBASE as of August 1992. FISHBASE incorporates now more than 6000 fishes. While this is only a quarter of the about 24,000 existing species, the 6,000 do include all fishes of the USA and Canada (Robins et al. 1991), all species used for aquaculture (FAO 1991), all commercial species of the North Atlantic and the Mediterranean, all species contained in the IUCN Red List (IUCN 1990), all sharks (Compagno 1984)*, and all members of important families such as Scombridae (Collette and Nauen 1983) and Clupeidae (Whitehead 1985). For these species FISHBASE contains more than 8,600 synonyms and about 20,000 common names. Data on population dynamics is available for about 1000 species and genetic information is available for about 300 species.

The first version of FISHBASE is now being sent out to collaborators and colleagues who volunteer to check its form and content before a publicly available version is produced on CD-ROM, probably by the end of 1993. FISHBASE runs on IBM compatible computers. The diskette version that is sent out now needs at least 40 megabytes on the harddisk.

Data Sets from the ICES Area

Following the terms of reference, several suitable data sets from the ICES area have been identified and are now distributed through FISHBASE.

William N. Eschmeyer from the California Academy of Sciences has recently made available his Catalog of the Genera of Recent Fishes (Eschmeyer 1990) in form of a database (GENERA). This database has been used to verify the taxonomic information in FISHBASE on the generic and higher levels. GENERA is available in FISHBASE.

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*Data for sharks as well as for other families have been obtained from FAO's database SPECIESDAB.

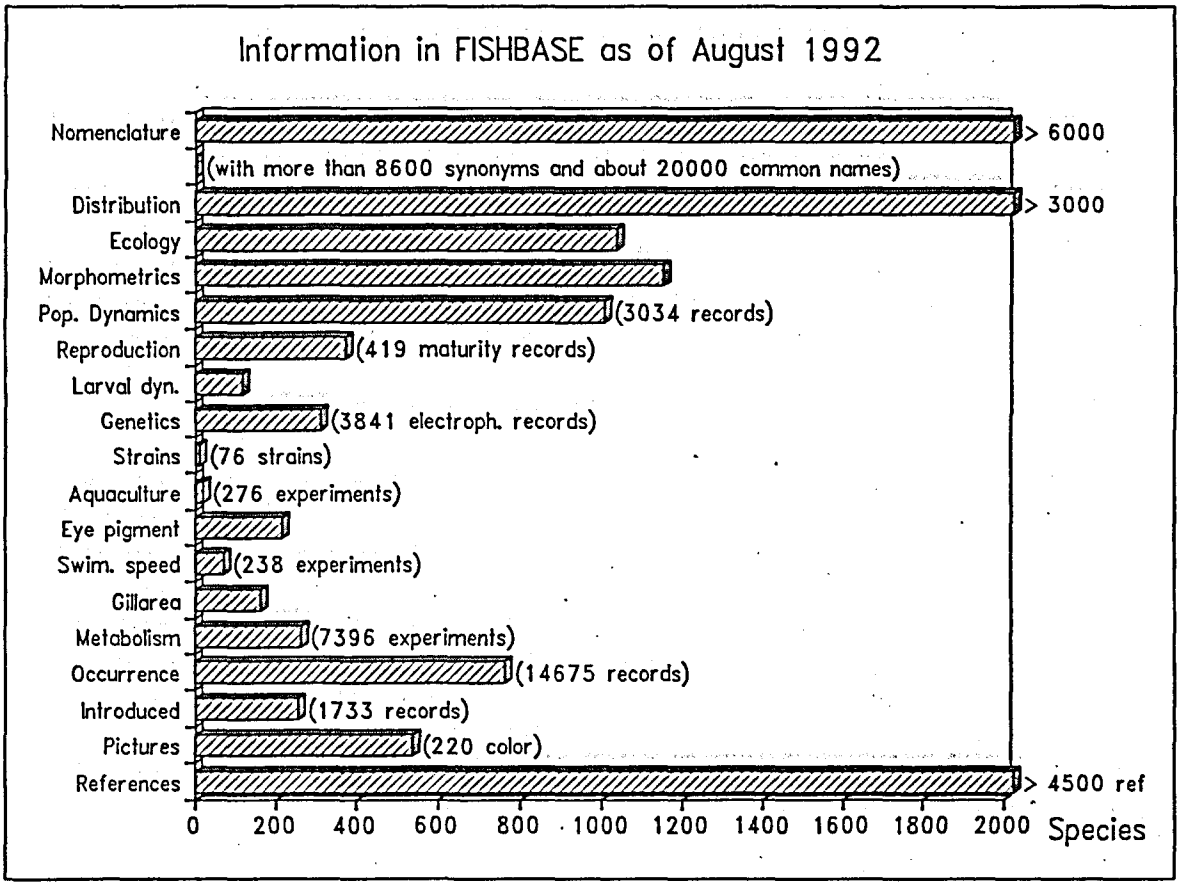

Figure 1. Information incorporated in FISHBASE as of August 1992. Note that the bars refer to the number of species (except for references). Numbers in parentheses indicate the number of records entered. There can be several records for one species.

M.L. Bauchot from the Muséum National d'Histoire Naturelle, Paris has made available his database on relative size (weight) of fish brains (Bauchot and Bauchot 1986), covering nearly 1000 species.

Jean-Claude Hureau from the Muséum National d'Histoire Naturelle, Paris provided more than 7,000 occurrence records for several hundred species from his database GICIM (Hureau 1991). The records have been successfully transferred to FISHBASE. Negotiations are underway to eventually distribute all the more than 70,000 records of GICIM through FISHBASE.

The US Environmental Protection Agency, Athens, Georgia has made available the database OXYREF compiled by R.V. Thurston and P.C. Gehrke (Thurston and Gehrke 1991).

OXYREF contains more than 6800 records on oxygen consumption for about 200 species. OXYREF is now available through FISHBASE.

Edward D. Houde and C.E. Zastrow have made available their database LARVDYN on ecosystem- and taxa-specific dynamic and energetic properties of fish larvae assemblages (Houde and Zastrow 1992). LARVDYN is now distributed through FISHBASE.

Cooperation agreements

ICLARM and FAO have signed recently two Letters of Agreement, beyond that which established their cooperation on the FISHBASE project. In light of the complementary nature of the comparative advantages and mandates of ICLARM and FAO, both organizations agree to cooperate on the development of i) a Strain Registry of fishes used in aquaculture and ii) a database on introductions of fishes, both to be part of FISHBASE.

FAO also intends to use FISHBASE as the backbone of a new information system on the global occurrence of fish diseases.

ICLARM is in the process of signing a Letter of Agreement with the School of Biological Sciences, University College of Swansea, Swansea, UK, which will allow FISHBASE to distribute those 17,000 records of their Protein Diversity Database (Skibinski et al. 1991) that refer to fishes and to cooperate on the further development of that database.

Synopses on ICES stocks

Further to the terms of reference, the author together with Otto Rechlin and Christian Friess from the Institut für Ostseefischerei, Rostock have produced synopses of biological data for the spring spawning herring of the western Baltic and for the flounder of the southwestern Baltic, respectively, using the FISHBASE format. These synopses are now available (Froese and Rechlin 1992; Froese and Friess 1992) and will help the Study Group on FISHBASE formulate a recommendation to the Biological Oceanography Committee on how to proceed with its evaluation of FISHBASE, particularly with regard to its potential use as repository for biological data on ICES' 160 fish stocks.

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