

## BOOK REVIEW

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Review of *Fossile Fische weltweit: Die Welt der prähistorischen Fische und ihr Spiegelbild in der Philatelie (Fossil Fishes Worldwide: The World of Prehistoric Fishes and their Reflection in Philately)* by Drs. Hans Ulrich Ernst and Oliver Hampe.

*Fossil Fishes Worldwide* is the third book written by Dr. Hans Ulrich Ernst on paleontological themes in stamp collecting. Verlag Dr. Friedrich Pfeil published the book in December 2018. It follows the same format as the previous books (*Trilobites Worldwide* and *Nautiloids and Ammonoids Worldwide*), a bilingual, thorough treatment of the subject matter extensively illustrated with photographs of fossils and the stamps that depict the same fossils. Many of the fossils illustrated are archived at the Museum for Naturkunde in Berlin.

Ernst and Hampe begin the text with an introduction to Paleoichthyology, placing fish in the context of vertebrate evolution and describing the basic anatomy, characteristics, and geologic records of the major groups of fish (Agnathans: jawless fish; Placoderms: extinct, armored fish; Chondrichthyes: sharks and their relatives, and the Osteoichthyes: the bony fish).

Through a series of sketches, they label the major anatomical features in each group. The introduction finishes with descriptions of some major European *lagerstätten*—places characterized by exceptional preservation of fossil organisms.

Chapters 2 (Agnathans) and Chapter 3 (Gnathostomes—all of the other groups) provide an overview of the variety of fossil fish that have been illustrated on stamps, starting with the Agnathans and working through the rest of the major groups. These chapters are organized by taxonomy—within each class by the genus (and in some cases particular species).

Each genus follows a standard template: The genus name and basic taxonomy (Class, Order, Family, Genus), followed by a review of the genus's appearance on philatelic materials (stamps, postal cards, souvenir sheets, postmarks, etc.), and an anatomical description of the genus with some inferences on the habitats that the animal lived in. The description is followed by a brief statement of the length of the animal, the geologic age of the genus, and location(s) where fossils of that genus have been found. For each genus, Ernst and Hampe provide labeled photographs of fossils as well as scanned images of stamps and other philatelic materials that exhibit the genus.

Chapter 4 will delight modern ichthyologists and paleoichthyologists as it focuses on the Coelacanth. Coelacanth is a sarcopterygian fish, a subdivision of the osteoichthyan fish with pectoral and pelvic fin structures that are similar to the bones in tetrapods. Coelacanth is related to the lobe-finned fish (Rhipidistia), which are more commonly called lungfish.



Cover photograph courtesy of Verlag Dr. Friedrich Pfeil (<https://pfeil-verlag.de/publikationen/fossile-fische-weltweit/>)



*Mene psarianosi* Symeonidis  
Greece, 12 May 1979  
Sc#1298

Lobe-finned fish are the close cousins of all tetrapods (the four-limbed vertebrates including amphibians, reptiles, birds, and mammals). Coelacanths were long thought to have gone extinct at the end of the Cretaceous until their rediscovery off the eastern coast of South Africa in 1938. Subsequent searching has found living populations in a wide portion of the deeper coastal waters off southeastern Africa (from the Republic of South Africa to Kenya), Madagascar, the Comoros Islands, and even a more recent discovery in Indonesia. Ernst and Hampe provide a detailed summary of their rediscovery as well as discussion of their anatomy, ecology, and reproduction. A variety of philatelic materials have exhibited the modern genus of Coelacanth—*Latimeria* and are reproduced in the book.

Brief Chapters 5, 6, 7, and 8 focus on representations of fossil fish on stamps that cannot be reliably identified to the genus, as they are either in the background and not the central motif of the stamp, or fanciful reconstructions that cannot be easily identified, or are local issues. Note that Ernst and Hampe do illustrate issues from Western Sahara in their collection of fossil fishes on philatelic materials.

Chapter 8 is their footnote that justifies the inclusion of these stamps, as the paleoartist whose reconstructions of these fossil fish did an excellent job and the Western Sahara stamps faithfully recorded the genera names on their issues. The Western Sahara issues also add to the diversity of fossil fish shown on stamps.

Their text ends with references, both paleontological and philatelic. For the collector, the tables after the references provide multiple checklists of paleoichthyological stamp issues, including a table summarizing issues on modern Coelacanths.

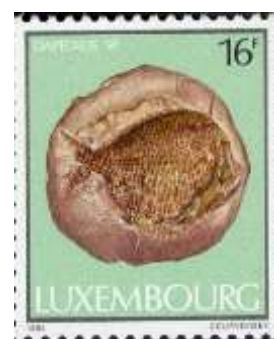
The strengths of the publication are the extensive photographs of both the actual fossils and the various fish shown on stamps (as fossils or as reconstructions of what the fish looked like in life). The photographs of the fossils (and some preserved specimens of closely related modern species) are of good quality and clearly show the size of the individual with handy scale bars. For philatelic materials, Ernst and Hampe show the whole material, and with souvenir sheets, a close-up on the specific stamp or portion of the margin illustrating the genus of interest for that set. Captions include the country of origin, the genus shown, the date of the first issue, and, if part of a larger set of stamps, the position within the sheet or set.

The book is bilingual. It is organized such that the left column of each page is in German and the right column in English. All figure captions are bilingual as well—the upper text in German and the lower in English. In places, the English translation is a bit idiosyncratic, no doubt due to the difficulty of not only translating from German to English, but also attempting to translate from scientific German to scientific English.

*Fossile Fische weltweit* is available at Amazon.com (current list price as of May 2019 was \$50.67 new) as well as through the Publisher's webpage (Verlag Dr. Friedrich Pfeil <https://pfeil-verlag.de/publikationen/fossile-fische-weltweit/>, with a list price of 48 euros). Dr. Ernst's other books are also available at Amazon and through the publisher: Ernst and Rudolf (2002): *Trilobiten weltweit: Die Welt der Dreilapper und ihr Spiegelbild in der Philatelie (Trilobites Worldwide: The World of Trilobites and their Reflection in Philately)*; and Ernst and Klug (2011): *Perlboote und Ammonshörner weltweit (Nautilids and Ammonites Worldwide)* and *Die Welt der Kopffüßer und ihr Spiegelbild in der Philatelie (The World of Cephalopods and their Reflection in Philately)*.



*Asterolepis ornata* Eichwald  
Latvia, 20 February 2015  
Sc#905



*Dapedium* sp.  
Luxembourg, 9 October 1984  
Sc#717



*Chaetodon hoeferi* Gorjanovic-Kramberger  
Yugoslavia, 4 February 1985  
Sc#1724