

An overview of the pachycormiform *Leedsichthys*

Jeff LISTON

Abstract

A historical review of work on the Callovian actinopterygian fish *Leedsichthys* is given, and unresolved issues regarding its type material, taxonomic position and palaeobiology are highlighted. Collections and archival research reveal two previously unrecognised exceptionally complete specimens, which should be critical to the future understanding of this animal.

Introduction

One hundred and fifteen years after some of its bones were first described, the extinct Callovian actinopterygian fish *Leedsichthys* remains extremely poorly understood. Understanding has been hindered by the material collected only being very incomplete (HUDSON & MARTILL 1994), crushed and badly fragmented, and there being no site map record of specimens to indicate the relative dispositions of bones within a site prior to collection. This has led to very few anatomical determinations being made to the bones found, with most of those identifications later retracted.

As essential first steps towards improving understanding of this animal, a comprehensive historical review of all published work on this taxon was undertaken, in conjunction with a survey of all known specimens of *Leedsichthys* held in British collections. The aim of the literature review was to reduce the number of contradictions and inaccuracies persisting in the literature regarding this fish, and the primary purpose of the collection survey was to assess the most complete specimens for future work. In addition, it was hoped that the collection work would identify more limited specimens that represented components not preserved in the more complete individuals, as well as identify and exclude other specimens that might have been passively included within the genus, simply because it seemed to represent “the large fish from the Oxford Clay”, rather than because it contained remains comparable to the type material. This would enable a more refined and rigorous diagnosis of *Leedsichthys* to be produced in the future.

This paper will present a historical review of all published work on the taxon, and present initial results from collections and archival research on historically collected specimens, with the intention of resolving some of the conflicts and inaccuracies in the literature, and to highlight important specimens for future work on this animal.

Historical overview

From 1867 to 1917, gentleman farmer Alfred Nicholson Leeds indulged his passion for collecting vertebrate fossils from the Oxford Clay that cropped out near his home at Eyebury, near Peterborough, in Cambridgeshire (then Northamptonshire), England (LEEDS 1956). His skill as a fossil collector and preparator, his interest in anatomy, and the occasional help of his elder brother Charles in the early years, enabled him to reassemble a large number of these skeletons, mainly of marine reptiles from the Callovian Oxford Clay sea. By September 1885 the British Museum (Natural History) – now The Natural History Museum (London) – had become aware of his collection, and an arrangement was made for it (known afterwards as “the First Collection”) to be purchased in its entirety. Amongst that first collection was a series of bones which Arthur Smith Woodward christened *Leedsichthys problematicus* (WOODWARD 1889b).

The whole contribution can be purchased as PDF file.

Availability

Generally all our publications are available as PDF files; full publications as a general rule after the printed version is out of print. If you have questions concerning particular contributions please contact us by e-mail:

pdf@pfeil-verlag.de.

The PDF files are protected by copyright.

The PDF file may be printed for personal use.

The reproduction and dissemination of the content or part of it is permitted.

It is not allowed to transfer the digital personal certificate or the password to other persons.

Prices

Books: Prices are to be found in the catalog.

Articles in journals and single contributions or chapters in books:

10 EURO basic price per order (including the first 10 pages),
and

0.50 EURO per page, beginning with the 11th page.

Page numbers are found in the contents of the publications.

Orders

Use our order form for PDF files or send your order informal per e-mail (pdf@pfeil-verlag.de). The only accepted payment is by credit card. While using the order form for PDF files, your data will be transmitted by secure link (ssl). You also may send the informations informally by e-mail, fax, phone or mail.

Handling

As soon as possible, depending on our business hours and your order, you will receive your PDF file together with the certificate and password by e-mail.

Larger PDF files can be downloaded from our webpage, if necessary.

Your invoice will be sent out by e-mail after we charged your credit card.

To open the encrypted PDF files you have to install your personal certificate after your first order. All PDF files with the same certificate can be opened from that time on.

Dieser Beitrag kann als PDF-Datei erworben werden.

Verfügbarkeit von PDF-Dateien

Prinzipiell sind von allen unseren Publikationen PDF-Dateien erhältlich. Komplette Publikationen in der Regel erst nachdem die gedruckte Version vergriffen ist. Anfragen bezüglich bestimmter Beiträge richten Sie bitte per E-Mail an pdf@pfeil-verlag.de.

Die PDF-Dateien sind urheberrechtlich geschützt.

Ein Ausdruck der PDF-Dateien ist nur für den persönlichen Gebrauch erlaubt.

Die Vervielfältigung von Ausdrucken, erneutes Digitalisieren sowie die Weitergabe von Texten und Abbildungen sind nicht gestattet.

Das persönliche Zertifikat und das Passwort dürfen nicht an Dritte weitergegeben werden.

Preise

Bücher: Die Preise sind dem Katalog zu entnehmen. Zeitschriftenbeiträge und einzelne Kapitel aus Sammelbänden bzw. Büchern:

10 EURO Grundbetrag pro Bestellung (einschließlich der ersten 10 Seiten),
und

0,50 EURO pro Seite ab der 11. Seite.

Den Umfang der Beiträge entnehmen Sie bitte den Inhaltsverzeichnissen.

Bestellungen

Bestellungen sind mit dem PDF-Bestellformular oder formlos per E-Mail (pdf@pfeil-verlag.de) an uns zu richten. Die Bezahlung ist ausschließlich per Kreditkarte möglich. Bei Verwendung unseres Bestellformulars werden die Kreditkartendaten über eine gesicherte Verbindung (ssl) übermittelt. Sie können die Daten aber auch formlos per E-Mail, Fax, Post oder telefonisch übermitteln.

Abwicklung

So bald wie möglich, aber abhängig von unseren Bürozeiten und der gewünschten Bestellung, schicken wir Ihnen die PDF-Datei(en) zusammen mit Ihrem persönlichen Zertifikat und dem zugehörigem Passwort per E-Mail. Größere Dateien bieten wir Ihnen gegebenenfalls zum Herunterladen an.

Der fällige Betrag wird von Ihrer Kreditkarte abgebucht und Sie erhalten die Rechnung ebenfalls per E-Mail.

Um die verschlüsselten PDF-Dateien öffnen zu können, muss bei der ersten Bestellung das passwortgeschützte persönliches Zertifikat installiert werden, welches anschließend auf dem Rechner verbleibt. Alle mit diesem Zertifikat verschlüsselten Dateien können anschließend auf diesem Rechner geöffnet werden.