TRANSACTIONS
OF THE
ROYAL SOCIETY OF NEW ZEALAND

ZOOLOGY

VOL. 9 NO. 16 11 AUGUST 1967

A Re-examination of the Osteology of *Cheimarrichthys fosteri* Haast 1874

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[*Received by the Editor, 6 February 1967.*]

Abstract

A re-examination of the neurocranium, suborbitals, pectoral girdle and caudal fin of *Cheimarrichthys fosteri* supplies no evidence that it has any but the usual perciform affinities. This interpretation is compared with that of another published account.

INTRODUCTION

INASMUCH as *Cheimarrichthys fosteri* is the sole representative of the distinctive family Cheimarrichthyidae, its osteology and relationships are of more than casual interest. A recent attempt at such a study has been published by Lane (1965), who concluded that the species, although a percoid, is atypical in some respects. He has, for example, attributed to the species the presence of an orbitosphenoid bone, an element not found elsewhere among the percoids.

Through the generosity of Mr Robert M. McDowall, specimens were provided from which two alizarine-stained preparations (34mm and 54mm standard length) and two disarticulated skulls (16mm and 19mm skull length) were prepared. Comparison of these with Lane's account prompt this note.

DISCUSSION

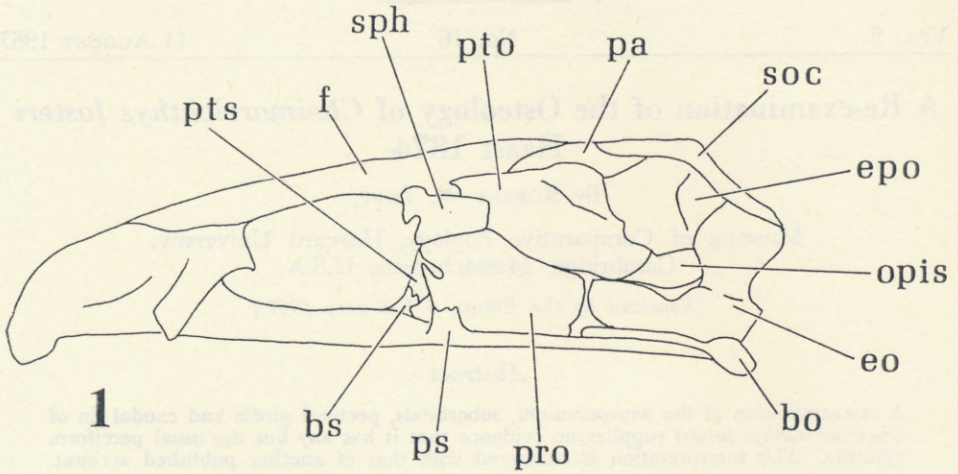
My interpretation of the arrangement of the bones of the postorbital part of the neurocranium is presented in Figures 1 and 2. The primary differences between this pattern and that of Lane follow: First, and most important, my material shows no trace of an orbitosphenoid; the bone so named by Lane is the basisphenoid and pterosphenoid, arranged in the usual percoid way. I find that the position of the frontals and parietals is likewise typical, with no fusion between elements.

My material also indicates that the suborbitals, described by Lane as being cartilaginous and reduced, are distinct and well ossified, as are the remainder of the dermal ossicles associated with the cranial laterosensory system. The bones of the pectoral girdle have, in my specimens, the usual teleostean arrangement.

Published by the Royal Society of New Zealand, c/o Victoria University of Wellington, P.O. Box 196, Wellington.

Finally, the caudal fin is, by Gosline's (1961) definition, deviant from the primitive perciform type in having a single pair of uroneurals and only 13 (occasionally 12) branched fin rays.

A cursory examination of the remainder of the skeleton supplies no evidence that *Cheimarrichthys fosteri* has any but the usual perciform affinities.



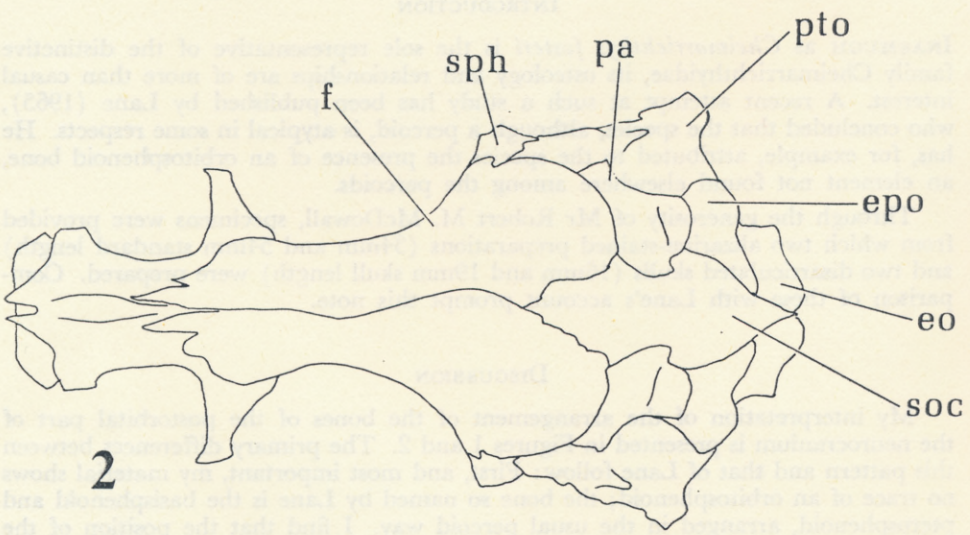


Fig. 1.—Neurocranium, left side. bs, basisphenoid; other abbreviations follow Harrington (1955).

Fig. 2.—Neurocranium, dorsal view.

Acknowledgments

I wish to thank Dr Giles W. Mead for his help in preparing this paper, and Dr John C. Briggs for reviewing it.

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