

Article XV.—A NEW PYCNODONT FISH, *CÆLODUS SYRIACUS*,
FROM THE CRETACEOUS OF SYRIA.

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A dental plate of a pycnodont fish was recently sent to me for examination by Mr. George Haddad of Rutland, Vt. He collected it while on a visit to Syria, two years ago, at a place about eighteen miles southeast of the city of Beyrout. The specimen is a right splenial in almost perfect preservation. It seems originally to have been embedded in a small limestone concretion, but had weathered out so completely that only a very little of the rock clings to the oral face and around the margins; the underside is entirely free.

The occurrence of the specimen in limestone, taken in conjunction with what we know of the geology of Syria, indicates that it is of *Cretaceous* age. It represents a new species of *Cælodus*, which may be described as follows:

***Cælodus syriacus* n. sp.**

A species known only by a large, right splenial dentition. Teeth of principal series not quite three times as broad as long, their anterior margins straight or only slightly concave. This series separated from inner margin of the element by a space equal to the width of a tooth in the posterior half, but somewhat less than a tooth in the front half of the element. Eight teeth in the principal series; anteriormost about $\frac{2}{3}$ the width of the hindmost. Two outer flanking series, their combined width about $\frac{3}{4}$ that of the principal series. Teeth of inner flanking series transversely elongated, $1\frac{1}{2}$ times as broad as long; those of outer series not elongated, triangular or quadrate in form, with rounded angles. A single, small, nearly circular, unworn tooth inside of the principal series, placed opposite the space between the third and fourth teeth of this series.

Teeth of principal series smooth, or with a scattering of irregular indentations (perhaps

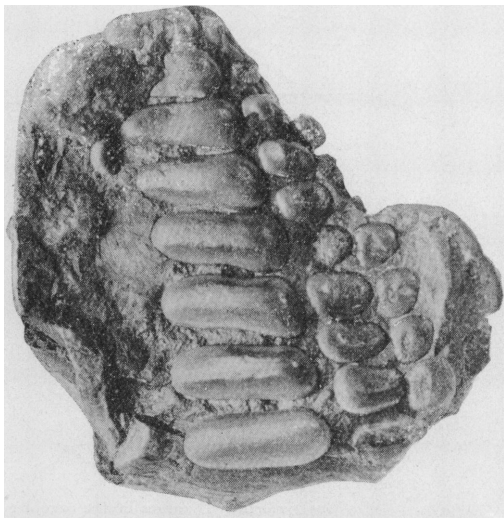


Fig. 1. *Cælodus syriacus*, n. sp. Type. Right splenial dentition, natural size.

due to wear). Teeth in the other rows with a central depression from which crinklins radiate toward the margin; these markings more or less obliterated, or entirely worn away, depending on the amount of use.

Measurements of the Type.

	<i>mm.</i>
Length of principal series, 8 teeth.....	63
Front tooth of principal series.....	12.5 wide by 6 long
Last " " " "	20.5 " " 8.5 "
Next-to-last tooth " "	20 " " 7.5 "
Last preserved tooth of inner flanking series.....	10 " " 7 "
Last preserved tooth of outermost series.....	6.5 " " 7 "
Width of both flanking series (hindmost teeth).....	16.5

No species of *Cœlodus* has heretofore been described from Syria, although the genus was known to occur there since it is stated by Woodward (Catal.

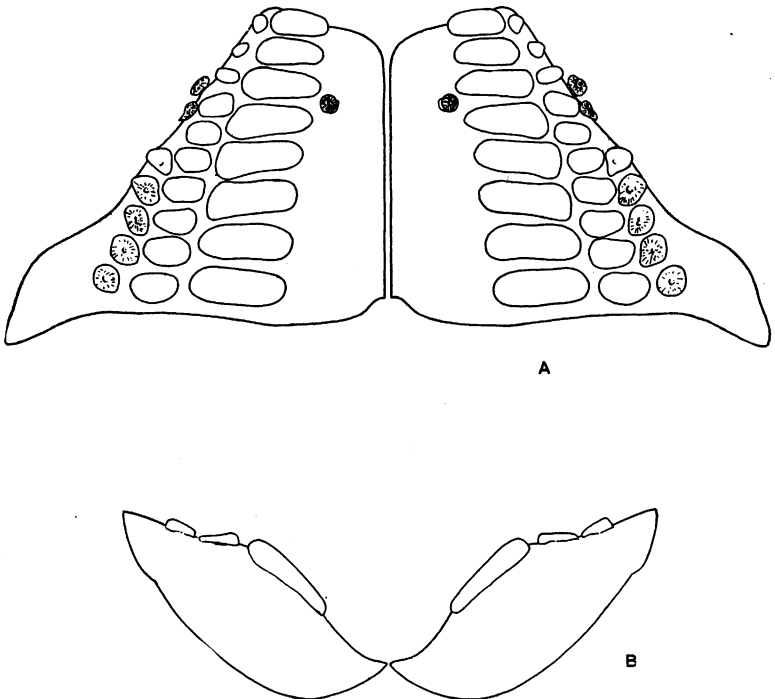


Fig. 2. *Cœlodus syriacus*. Diagram of the complete lower dentition. A, viewed from above. The amount of wear of the teeth corresponds with that exhibited by the type specimen. B, section taken at about two-thirds back from anterior margin, with the splenials apposed approximately as in life. \times about $\frac{1}{2}$.

Fossil Fishes Brit. Museum, Pt. III, 258), that "An undescribed species of *Cælodus* is represented by portions both of the upper and lower dentition from the Cretaceous near Beyrout, now in the Museum of the Syrian Protestant College, Beyrout." It appears probable that this is the same species as is here described.

The genus *Cælodus* ranges from the Upper Jurassic through the Cretaceous and is represented in Europe, Asia and North America. About 30 species are known. The present one differs from all others by the wide separation of the principal series of teeth from the inner margin of the splenial, and by the proportions of width to length of the principal and flanking series.

It is interesting to note that although the species clearly belongs in the genus *Cælodus*, it none the less approaches *Anomæodus* in some features, for instance, in the wide separation of the principal series of teeth from the oral margin of the splenial and in the great transverse elongation of these teeth. Also, one of the anterior teeth in this series is somewhat pointed and directed obliquely forward. All these features go to connect the genus *Cælodus* with *Anomæodus*.

The type and only known specimen is in the possession of Mr. George Haddad of Rutland, Vt., to whom I am greatly indebted for the privilege of studying it. A carefully made cast of it is in the American Museum of Natural History.

