Proposed validation of the specific names
crenatus BRUGUIÈRE, 1789, and renggeri OPPEL, 1863
(Class Cephalopoda, Order Ammonoidea) from the
Oxfordian Stage of the Upper Jurassic

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Introduction

In a monograph of the Upper Jurassic ammonite genus Glochiceras, B. ZIEGLER (1958:121) drew attention to a complex nomenclatorial situation. ZIEGLER wrote that what is known to modern authors as Creniceras renggeri (OPPEL 1863) should be called, according to the law of priority (International Code of Zoological Nomenclature, Article 23), Creniceras crenatum (BRUGUIÈRE 1791). Consequently, his (ZIEGLER'S) Glochiceras crenatum (OPPEL 1863), according to the Code, should be called Glochiceras dionysii (MOESCH in MAYER 1864). ZIEGLER points out that OPPEL's interpretation of the species crenatum and renggeri is generally accepted by modern authors, and further contends that the names should be validated in OPPEL'S sense for the sake of a stable nomenclature. ZIEGLER (1958: 121) announced that he intended to propose to the International Commission on Zoological Nomenclature to suppress BRUGUIÈRE's authorship of the name crenatum in order to transfer it to OPPEL. Some subsequent authors did not agree with this view of ZIEGLER (see MALINOWSKA 1963: 30, SAPUNOV 1973: 110, or MATYJA 1977: 64). The application to the International Commission on Zoologi-

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cal Nomenclature by B. ZIEGLER was never made (written personal information by B. ZIEGLER). Therefore, R. GYGI made an application of the case to the International Commission on Zoological Nomenclature in July 1978 (see Bull. zool. Nomenclature 35/3: 130, 1979). So far, the Commission took no decision in the case. Nevertheless, a solution of the problem would be equally welcome to taxonomists as to stratigraphers, because both ammonite species *Glochiceras crenatum* and *Creniceras renggeri* have a wide geographical range and consequently they are a valuable means for time correlations in geology.

**Ammonites crenata Bruguière**

Both the generic name *Ammonites* and the specific name *crenata* were introduced by J. G. Bruguière, then official physician, botanist, and naturalist to the king of France. He was entrusted with writing the contribution about worms for the Encyclopédie méthodique, initiated by the leading encyclopedists, Diderot & D’Alembert. Ammonites were classified as worms with a shell at the time. There is some uncertainty about the earliest date of publication of the name *crenata*. In the edition of the Encyclopédie available in the library of the University of Basel, Switzerland, *Ammonites crenata Bruguière* is described as no. 7 on p. 37 of tome 6, vol. 1, of the Encyclopédie, dated at 1789. But D’Orbigny (1847: 521) quotes 1791 as the year of publication. It appears that D’Orbigny had a later printing in hand. No quotation of the species goes back further than 1789, so this may be regarded as the year of original publication of the name *crenata*. D’Orbigny (loc. cit.) emended Bruguière’s wrong spelling *crenata* into *crenatus*.

Bruguière gave a description of his new species without figures. In the list of synonymy he refers to Langius (1708: 92, pl. 23, figs. 1 and 2 under the title *spina dentata*, in the central part of the plate). This detailed specification is necessary, because the numbers 1 and 2 occur three times in pl. 23 under different titles. Thus, the two specimens figured by Langius are the syntypes of *Ammonites crenata Bruguière*. Langius (1708: 92–93) states that both specimens are figured in natural size, that they consist of “marcasite”, and that they were brought to him from Mt. Lägern near Baden, canton Aargau, Switzerland. The ambiguity of Bruguière’s name starts right here: The Mesozoic sequence of Mt. Lägern ranges from Triassic to Upper Jurassic. Ammonites occur throughout the Jurassic part of the sequence, but none of the shape depicted by Langius have been found there in situ as internal molds of iron sulfide. It is very probable that the locality given by Langius is an error (see below). Langius held the office of municipal physician at Luzern, Switzerland, and brought together a large collection of rocks and fossils from Switzerland and part of adjacent countries. It is likely that he had bought much or even most of it, because, when giving the locality of items, he often states “apportata sunt”, which means that they had been brought to him. This could explain an erroneous statement of the place of origin of his *Ammonis cornu spina dentata*. The Langius collection is now in the Natur-Museum at Luzern. The author carefully searched the collection for the originals to Langius’ figures in 1977 with the kind assistance of P. Herger, curator of the museum. The specimens could not be found. According to P. Herger and his predecessor in office, J. Aregger, all what remains of the originally much larger Langius collection is kept in the Natur-Museum at Luzern. This must mean that the types of *Ammonites crenata Bruguière* are lost. They were very probably what modern authors call *Creniceras renggeri* (Oppel 1863), a common species occurring as internal molds of iron sulfide in a clay of early Oxfordian, Mariae Zone (Late Jurassic) age called Renggeri-Ton in northwestern Switzerland (see below). But it can not be ruled out that one or both of Langius’ specimens did not consist of iron sulfide, and that they had indeed been found at Mt. Lägern. *Glochiceras crenatum* (Oppel) sensu Ziegler (1958) is an ammonite species close to *Creniceras renggeri* both morphologically and in its size. The author and his wife have found many calcareous internal