

and taxonomically distinct' (para. 6 of the application). This is, in fact, very unlikely. The type genera, *Clavus* Montfort, 1810 and *Drillia* Gray, 1838 (p. 28), of the two nominal subfamilies have type species (*Clavus flammulatus* Montfort, 1810 and *Drillia umbilicata* Gray, 1838 respectively) which are similar and differentiable at the generic level only. Not only are their shells alike but their radular structure is of the same type (the latter is common to all the species in this grouping as now understood). In addition, although there is little available anatomical data, in those cases where it is known there is a very similar poison gland and bulb. Thus, although future research might well demonstrate differences, there is little to suggest the likelihood of there being two significantly different groups, at least at the subfamily level. It may also be noted that in the older literature, such as H. & A. Adams (1853), the taxa concerned were often included in the one genus *Drillia*.

To make the name CLAVUSINAE available would be an artificial solution to the homonymy problem (if in fact there is a problem) and could itself be a cause of instability. I therefore oppose the application.

Additional references

Adams, H. & A. 1853. *The genera of Recent Mollusca*, vol. 1, part 3. Pp. 65–96. Van Voorst, London.

Gray, J.E. 1838. On some new species of quadrupeds and shells. *Annals of Natural History; or, Magazine of Zoology, Botany, and Geology*, 1(1): 27–30.

Comment on the proposed attribution of the specific name of *Ceratites nodosus* to Schlotheim, 1813, and the proposed designation of a lectotype (Cephalopoda, Ammonoidea)

(Case 2732; see BZN 48: 31–35, 246)

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1. Ulrich's proposal (BZN 48: 33, 34) is to attribute the specific name of *Ammonites nodosa* to Schlotheim, 1813, rather than to Bruguière, 1789, and to accept *Ammonites nodosa* Schlotheim, 1813 as the type species of *Ceratites* de Haan, 1825. I consider these proposals to be unnecessary and undesirable, particularly since the original specimen of *Ammonites nodosa* Bruguière has been discovered and proposed as lectotype. I therefore now propose to the Commission that this original specimen be confirmed as the lectotype. In the following paragraphs I spell out in some detail the history of this important case.

2. *Ammonites nodosa* Bruguière, 1789 (p. 43) is based on an illustration (pl. 39, no. 262) in an anonymous work published simultaneously in Paris and The Hague in 1742. The Paris edition is entitled *Traité des Pétrifications* and the Hague edition *Mémoires pour servir à l'Histoire Naturelle des Pétrifications dans les quatre parties du Monde*. Apart from the title pages the books are the same. The author is disguised as 'B***'. These works are attributed to Louis Bourguet (1678–1742). He interpreted the

'pétrifications' as remains of extinct organisms. After revocation of the Edict of Nantes (1685) his interpretations were probably considered heretical and it was evidently for this reason that he chose anonymity. The illustration in these books was redrawn, with acknowledgement of the source, from fig. 25 (p. 159) in Scheuchzer's *Meteorologia et Oryctographia Helvetica* (1718). Scheuchzer's illustration is reproduced by Rieber & Tozer (1986, p. 829). Although these old illustrations are not very good, the drawings and descriptions were nevertheless good enough to characterize an ammonoid species recognizable to Schlotheim (1820, p. 67), Philippi (1901, p. 409), Spath (1934, p. 477) and others mentioned below. *Ammonites nodosa* Bruguière is important because it was designated the type species of *Ceratites* de Haan, 1825 (p. 39) by Smith (1904, p. 382).

3. Until recently the whereabouts, indeed even the continued existence, of Scheuchzer's specimen was unknown. In spite of this, in the principal works that deal with *Ceratites nodosus* (e.g. Philippi, 1901, p. 409; Spath, 1934, p. 476) Scheuchzer's illustration was treated as that of the type specimen. Most later authors (e.g. Penndorf, 1951, p. 13; Wenger, 1957, p. 91), although they do not give the Scheuchzer and other pre-Linnaean references in synonymy, attribute the species to Bruguière without any qualification. Philippi (1901) adopted a style in which the species was listed as '*Ceratites nodosus* (Brug.) Schloth. sp.'. Philippi's nomenclature, which was adopted by Riedel (1916, p. 46) and Schmidt (1928, p. 303), was criticised and rejected by Spath (1934, p. 477). Similarly criticised as being without legal foundation was the unqualified attribution of the species to Schlotheim by Schrammen (1928, p. 41).

4. In 1985 Hans Rieber and I (Rieber & Tozer, 1986) found Scheuchzer's illustrated specimen in the Paläontologisches Museum of the University of Zurich, where it has the registration number PIMUZ L/1651). Also in the Museum collection are the two other specimens described by Scheuchzer (L/1650, L/1652). They do not resemble Scheuchzer's illustration which formed the basis of *Ammonites nodosa* Bruguière, and were illustrated for the first time by Rieber & Tozer (1986, p. 832). They had never been considered in discussions of the definition of *Ammonites nodosa*. Rieber & Tozer (p. 831) proposed L/1651 as lectotype of *Ammonites nodosa*, recognizing that a Commission ruling might be required. It was proposed as a lectotype rather than holotype because of the existence of the two other specimens, even though Bruguière used only the one illustrated specimen. Shortly after publication of this proposal of a lectotype for *Ammonites nodosa* Bruguière, opposition was expressed by Urlichs & Mundlos (1987). They proposed suppression of *Ammonites nodosa* Bruguière and introduced a nominal taxon called '*Ceratites nodosus* (Schlotheim)', which they gave as the type species of *Ceratites* de Haan as having been so designated by Hyatt & Smith (1905, p. 168). As now recognized by Urlichs (BZN 48: 32, para. 7), the first designation was in Smith (1904, p. 382), but in both works the species was attributed to Bruguière and not Schlotheim. Urlichs seeks Commission sanction for these procedures.

5. Schlotheim's role in this question must be considered. He described and illustrated *Ammonites nodosus* (1820, p. 67; 1823, p. 106, pl. 31, figs. 1a, b). This is the only illustration of *Ammonites nodosus* in Schlotheim's work. Philippi (1901, p. 65) regarded Schlotheim's figure as representative of *Ceratites nodosus*. This specimen has now been found in the Museum für Naturkunde, Berlin by Urlichs & Mundlos (1987, p. 22) where it is registered MB: C774. Urlichs & Mundlos do not accept Schlotheim's or Philippi's identifications; instead they name MB: C774 as a representative of *Ceratites* (*Acanthoceratites*) *spinosus spinosus* Philippi. It should be noted that Schlotheim (1820,

p. 67) gives a form of synonymy which refers to the illustrations in Scheuchzer and the works of B***. Although he does not explicitly attribute *Ammonites nodosus* to Bruguière, he clearly considered that he was dealing with Bruguière's species and not a new one.

6. Spath (1934, p. 477) agreed with the Schlotheim and Philippi identification of MB: C774 but, believing that neither Scheuchzer's nor Schlotheim's originals could be traced, decided that 'the specimen figured by Philippi (1901, pl. 46, figs. 1, 1a, b) may be considered to be the neotype'. This may be called Philippi's specimen, which Spath evidently did not attempt to trace. Urlichs & Mundlos have discovered that it was destroyed by fire in Strasbourg; however, a cast is preserved in the Museum für Naturkunde, Berlin (Urlichs & Mundlos, 1987, p. 10). Puzzling and seemingly inconsistent is Urlichs's (BZN 48: 32, para. 6) statement about the Philippi specimen: '... Philippi (1901, p. 413, pl. 46, fig. 1) described and figured as *Ceratites nodosus* a specimen very similar in dimension and sculpture to Schlotheim's figure of *Ammonites nodosus*. This specimen, however, differs from Schlotheim's (1823) *Ceratites nodosus*'. It is stressed that Schlotheim figured only one specimen of *Ammonites nodosus*, which is the specimen identified by Urlichs & Mundlos (1987) as *Ceratites (Acanthoceratites) spinosus spinosus*. Yet in the quoted passage it seems that Schlotheim's figure is accepted as an example of '*Ammonites nodosus*'. The meaning of 'Schlotheim's (1823) *Ceratites nodosus*' is not clear. No explicit reference is given, it seems that there is no figure; also, the genus *Ceratites* had not been proposed in 1823.

7. There are three specimens that bear on the interpretation of *Ammonites nodosa* Bruguière:

1. Scheuchzer's specimen (PIMUZ L/1651), the original for *Ammonites nodosa* Bruguière.
2. Schlotheim's specimen (MB: C774), the original for *Ammonites nodosus* (Schlotheim, 1823, pl. 31, figs. 1a, b).
3. Philippi's specimen (1901, pl. 46, fig. 1), which was destroyed but of which there is a cast in the Museum für Naturkunde, Berlin (Urlichs & Mundlos, 1987, p. 10). This was 'considered to be the neotype' of *Ceratites nodosus* (Bruguière) by Spath (1934, p. 477).

Urlichs & Mundlos (1987, p. 4) dismiss Nos. 1 and 2 as not being representative '*Ceratites (Ceratites) nodosus* (Schlotheim)'. No. 3 they consider representative but unsuitable, having been destroyed. Instead they propose to recognize as lectotype for '*Ammonites nodosus* Schlotheim' a specimen designated MB: C785 in the Museum für Naturkunde. This specimen is said to be from the Schlotheim collection but it was not illustrated by Schlotheim or anybody else and was not explicitly mentioned in the literature prior to its description by Urlichs & Mundlos (1987). The purpose of Urlichs's application is 'to conserve the name of the Triassic ammonite *Ceratites nodosus* (Schlotheim, 1813) in its current usage...'. In this case, 'current usage' can only be defined as usage advocated by Urlichs & Mundlos (1987). Schlotheim, Philippi, Spath and Wenger, over a period of more than a century, regarded ammonites resembling Scheuchzer's illustration as representative of *Ammonites nodosa* Bruguière. Of the three specimens mentioned above, Urlichs & Mundlos (1987, p. 5) consider that only the Philippi specimen conforms to *Ceratites nodosus* in 'current usage'. They identify Scheuchzer's specimen (L/1651) as '*Ceratites (Doloceratites) robustus robustus* Philippi' (Urlichs & Mundlos, 1987, p. 29). The author of *Ceratites robustus* is in fact Riedel (1916,

p. 28) as stated in para. 9 of Urlichs's application. The only specimen of *Ammonites nodosus* illustrated by Schlotheim they identify as *Ceratites (Acanthoceratites) spinosus spinosus* Philippi.

8. The taxonomy adopted by Urlichs & Mundlos (1987) for the ceratitids of the Upper Muschelkalk is different from that of Schlotheim, Philippi, Spath and Wenger. It is much more elaborate, with recognition of genera, subgenera, species and subspecies. Their taxonomy is unarguably subjective but it is this taxonomy that Urlichs regards as 'current usage'. Urlichs's proposals to the Commission are framed to accommodate his own subjective interpretations and are contrary to the Code.

9. I propose that Scheuchzer's specimen (PIMUZ L/1651), the original for *Ammonites nodosa* Bruguière, 1789, be recognized as the lectotype of that taxon in accordance with the Code. The specimen is well preserved and has recently been illustrated (Rieber & Tozer, 1986, p. 829; Urlichs & Mundlos, 1987, p. 29). Spath (1934) proposed a neotype for this taxon, although Urlichs (BZN 48: 33) does not accept his designation as valid. Even so, it is desirable that the Commission should rule on this matter in accordance with Article 75h of the Code (Status of rediscovered name-bearing types). Acceptance of my proposal would make it unnecessary to revise the definition of *Ceratites (Ceratites)*. The definition of *Ceratites* proposed by Urlichs & Mundlos restricts it to conform with the classification they advocate and Urlichs's proposals to the Commission are designed to legalize the taxonomy in Urlichs & Mundlos (1987). These proposals have been made to ensure that the definition of *Ceratites* is changed to what Urlichs wants it to be, as opposed to what it was originally and unambiguously defined to be. Urlichs's proposal cannot be supported and I make a counter proposal.

10. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to suppress the neotype designation made by Spath (1934) of the specimen figured by Philippi (1901, pl. 46, fig. 1) for *Ceratites nodosus* Bruguière, 1789 and any other neotype designation;
- (2) to confirm the lectotype designation by Rieber & Tozer (1986) of specimen PIMUZ L/1651 in the Paläontologisches Museum, University of Zurich, for *Ammonites nodosa* Bruguière, 1789;
- (3) to confirm the type species designation for *Ceratites* de Haan, 1825 by Smith (1904) of *Ammonites nodosa* Bruguière, 1789;
- (4) to place on the Official List of Generic Names in Zoology the name *Ceratites* de Haan, 1825 (gender: masculine), type species by designation by Smith (1904) as confirmed in (3) above *Ammonites nodosus* Bruguière, 1789;
- (5) to place on the Official List of Specific Names in Zoology the name *nodosa* Bruguière, 1789, as published in the binomen *Ammonites nodosa* (specific name of the type species of *Ceratites* de Haan, 1825) and as defined by the lectotype PIMUZ L/1651 designated by Rieber & Tozer (1986).

Additional references

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Comments on the proposed conservation of some generic names first proposed in *Histoire abrégée des insectes qui se trouvent aux environs de Paris* (Geoffroy, 1762)
(Case 2292; see BZN **48**: 107–134; **49**: 71–72)

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Before I became aware of Dr Kerzhner's proposals I had prepared an application for the conservation of *Melolontha* Fabricius, 1775, and I fully support his suggestions on BZN **48**: 121 (para. K.18). As said by Pope (BZN **49**: 71), it is unacceptable to give the authorship 'Müller [or Geoffroy in Müller], 1764' to names such as *Melolontha* regardless of their taxonomic sense.

After Fourcroy (1785) the name *Melolontha* was not used in Geoffroy's sense (i.e. in the CHRYSOMELIDAE) until Crotch (1870) and Des Gozis (1886, p. 33). The latter used *Melolontha* Geoffroy as the valid senior synonym of *Clytra* Laicharting, 1781, and proposed the new generic name *Ludibrius* instead of *Melolontha* Fabricius for the May beetle *Scarabaeus melolontha* Linnaeus, 1758. Only Bedel followed the restoration of *Melolontha* Geoffroy, although in 1911 (p. 379) he abandoned *Ludibrius* for *Hoplosternus*, an unjustified emendation of *Oplosternus*, published by Guérin-Méneville (1838, p. 63) for the scarabaeid *Melolontha (Oplosternus) chinensis*. The generic name *Melolontha* Fabricius, 1775 for the May beetle *M. melolontha* is one of the commonest names in pure and applied entomology; Dalla Torre (1912) gave more than 13 pages of references.

I am well acquainted with Lamellicornia names, and on the grounds of their common usage I support the conservation of *Copris* Geoffroy, 1762 (Kerzhner's para. K.9) and *Platycerus* Geoffroy, 1762 (para. K.23). I also agree with Kerzhner (para. A.4) that Geoffroy in Fourcroy is the correct authorship of the new specific names introduced in Fourcroy's 1785 *Entomologia Parisiensis*, as is pointed out by d'Aguilar & Raimbault (1990).

Considering their usage the necessity to maintain many of Geoffroy's names is apparent. Their conservation with the authorship Geoffroy, 1762 as proposed by Kerzhner is a highly stabilizing act which will avoid any future confusion about many common generic names.

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