

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

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OPINION 420

Addition to the *Official List of Specific Names in Zoology* of the specific names for eleven species of the Class Brachiopoda and for two species of the Class Cephalopoda originally published by Martin (W.) in 1809 in the nomenclatorially invalid work entitled *Petrificata Derbiensia* and now available as from the first subsequent date on which they were severally published in conditions satisfying the requirements of the *Règles*

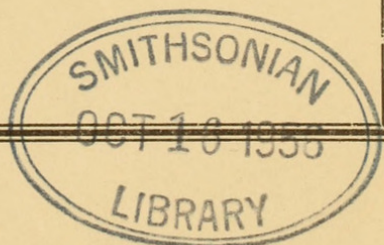
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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

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OPINION 420

ADDITION TO THE "OFFICIAL LIST OF SPECIFIC NAMES IN ZOOLOGY" OF THE SPECIFIC NAMES FOR ELEVEN SPECIES OF THE CLASS BRACHIOPODA AND FOR TWO SPECIES OF THE CLASS CEPHALOPODA ORIGINALLY PUBLISHED BY MARTIN (W.) IN 1809 IN THE NOMENCLATORIALLY INVALID WORK ENTITLED "PETRIFICATA DERBIENSIA" AND NOW AVAILABLE AS FROM THE FIRST SUBSEQUENT DATE ON WHICH THEY WERE SEVERALLY PUBLISHED IN CONDITIONS SATISFYING THE REQUIREMENTS OF THE "REGLES"

RULING :—(1) The under-mentioned specific names for species of the Class Brachiopoda¹ originally published by Martin (W.) in 1809 in the nomenclatorially invalid work entitled *Petrificata Derbiensia* are hereby placed on the *Official List of Specific Names in Zoology* with the Name Numbers severally specified below with priority from the first author by whom subsequent to 1809 they were severally published in conditions satisfying the requirements of the *Règles* :—

- (a) *aculeatus* Sowerby (J.), 1814, as published in the combination *Productus aculeatus*, the species so named to be interpreted by reference to the lectotype selected and figured by Muir-Wood (H.M.) in 1951 (: pl. 3, figs. 3a-d) (Name No. 744);

¹ As has been explained in *Opinion* 419 (footnote 1) Dr. Helen Muir-Wood (the applicant for this portion of the present case) has notified the Office of the International Commission that in her opinion, the term Brachiopoda, should be reserved for use as the name for a Phylum. On this view, the Phylum Brachiopoda consists of two Classes, of which one is the Class Articulata, to which all the species of Brachiopoda discussed in the present *Opinion* should, Dr. Muir-Wood states, be referred.

- (b) *acuminata* Sowerby (J.), 1822, as published in the combination *Terebratula acuminata*, the species so named to be interpreted by reference to the lectotype selected and figured by Muir-Wood (H.M.) in 1951 (pl. 3, figs. 1a-c) (Name No. 745) ;
- (c) *crassus* Fleming, 1828, as published in the combination *Productus crassus*, the species so named to be interpreted by reference to the neotype therefor designated by Muir-Wood (H.M.) in the Appendix to the present *Opinion* (Name No. 746) ;
- (d) *cuspidatus* Sowerby (J.), 1816, as published in the combination *Spirifer cuspidatus*, the species so named to be interpreted by reference to the lectotype selected and figured by Muir-Wood (H.M.) in 1951 (: pl. 4, figs. 1a-d) (Name No. 747) ;
- (e) *giganteus* Sowerby (J.), 1822, as published in the combination *Productus giganteus*, the species so named to be interpreted by reference to Martin's specimen re-figured by Sowerby (1822 : pl. 320) which was selected as the lectotype by Muir-Wood (H.M.) in 1951 (Name No. 748) ;
- (f) *glaber* Sowerby (J.), 1820, as published in the combination *Spirifer glaber*, the species so named to be interpreted by reference to the lectotype selected and figured by Muir-Wood (H.M.) in 1951 (pl. 3, figs. 2a-c) (Name No. 749) ;
- (g) *lineata* Sowerby (J.), 1822, as published in the combination *Terebratula ? lineata*, the species so named to be interpreted by reference to the lectotype selected and figured by Muir-Wood (H.M.) in 1951 (: pl. 5, figs. 4a-c) (Name No. 750);
- (h) *punctatus* Sowerby (J.), 1822, as published in the combination *Productus punctatus*, the species so named to be interpreted by reference to the lectotype selected and figured by Muir-Wood (H.M.) in 1951 (: pl. 4, figs. 2a, b) (Name No. 751) ;

- (i) *sacculus* Sowerby (J. de C.), 1824, as published in the combination *Terebratula sacculus*, the species so named to be interpreted by reference to the lectotype selected and figured by Muir-Wood (H.M.) in 1951 (: pl. 5, figs. 1a-c) (Name No. 752) ;
- (j) *scabriculus* Sowerby (J.), 1814, as published in the combination *Productus scabriculus*, the species so named to be interpreted by reference to the lectotype selected and figured by Muir-Wood (H.M.) in 1951 (: pl. 5, figs. 5a-c) (Name No. 753) ;
- (k) *triangularis* Sowerby (J. de C.), 1827, as published in the combination *Spirifer triangularis*, the species so named to be interpreted by reference to the lectotype selected and figured by Muir-Wood (H.M.) in 1951 (: pl. 5, figs. 3a-d) (Name No. 754) ;

(2) The under-mentioned specific names for species of the Class Cephalopoda originally published by Martin (W.) in 1809 in the nomenclatorially invalid work entitled *Petrificata Derbiensia* are hereby placed on the *Official List of Specific Names in Zoology* with the Name Numbers severally specified below with priority from the first author by whom subsequent to 1809 they were severally published in conditions satisfying the requirements of the *Règles* :—

- (a) *listeri* Sowerby (J.), 1812, as published in the combination *Ammonites listeri*, the species so named to be interpreted by reference to the lectotype selected and figured by Stubblefield (C.J.) in 1951 (: pl. 7, figs. 2a-c) (Name No. 755) ;
- (b) *sphaericus* Sowerby (J.), 1814, as published in the combination *Ammonites sphaericus*, the species so named to be interpreted by reference to Martin's holotype, now preserved in the British Museum (Natural History), figured by Stubblefield (C.J.) in 1951 (: pl. 7, figs. 1a-c) (Name No. 756).

(3) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* with the Name Numbers severally specified below :—

- (a) *Buxtonia* Thomas (I.), 1914 (gender : feminine) (type species, by original designation : *Productus scabriculus* Sowerby (J.), 1814, as defined in (1)(j) above) (Class Brachiopoda) (Name No. 1003) ;
- (b) *Echinoconchus* Weller (S.), 1914 (gender : masculine) (type species, by selection by Chao (1927) : *Productus punctatus* Sowerby (J.), 1822 as defined in (1)(h) above) (Class Brachiopoda) (Name No. 1004) ;
- (c) *Gigantoproductus* Prentice, 1950 (gender : masculine) (type species, under Rule (f) in Article 30 through selection as the type species of *Gigantella* Sarycheva, 1928 (a junior homonym of *Gigantella* Ekman, 1905) by Muir-Wood (1930) : *Productus giganteus* Sowerby (J.), 1822, as defined under (1)(e) above) (Class Brachiopoda) (Name No. 1005) ;
- (d) *Pugnax* Hall & Clarke, 1894 (gender : masculine) (type species, by original designation : *Terebratula acuminata* Sowerby (J.), 1822, as defined in (1)(b) above) (Class Brachiopoda) (Name No. 1006) ;
- (e) *Gastrioceras* Hyatt, 1884 (gender : neuter) (type species, by selection by Foord & Crick (1897) : *Ammonites listeri* Sowerby (J.), 1812, as defined in (2)(a) above) (Class Cephalopoda) (Name No. 1007) ;
- (f) *Goniatites* de Haan, 1825 (gender : masculine) (type species, by selection by Miller (S.A.) (1889) : *Ammonites sphaericus* Sowerby (J.), 1814, as defined in (2)(b) above) (Class Cephalopoda) (Name No. 1008).

(4) It is hereby directed that, when in accordance with (1) and (2) above, the under-mentioned specific names are entered on the *Official List of Specific Names in Zoology*, an endorsement be made that the names in question are the specific names of the type species of the genera severally specified below :—

(a) *acuminata* Sowerby (J.), 1822, as published in the combination *Terebratula acuminata* : specific name of type species of *Pugnax* Hall & Clarke, 1894 ;

(b) *giganteus* Sowerby (J.), 1822, as published in the combination *Productus giganteus* : specific name of type species of *Gigantoproductus* Prentice, 1950 ;

(c) *punctatus* Sowerby (J.), 1822, as published in the combination *Productus punctatus* : specific name of type species of *Echinoconchus* Weller (S.), 1914 ;

(d) *scabriculus* Sowerby (J.), 1814, as published in the combination *Productus scabriculus* : specific name of type species of *Buxtonia* Thomas (I.), 1914 ;

(e) *sphaericus* Sowerby (J.), 1814, as published in the combination *Ammonites sphaericus* : specific name of type species of *Goniatites* de Haan, 1825.

(5) The under-mentioned specific names, each of which is invalid by reason of having been published in a work (Martin's *Petrificata Derbiensia*) which has been rejected for nomenclatorial purposes (by the Ruling given in *Opinion* 231), are hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* with the Name Numbers severally specified below :—

(a) *aculeatus* Martin, 1809, as published in the combination *Conchylolithus Anomites (aculeatus)* (Name No. 317) ;

- (b) *acuminatus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (acuminatus)* (Name No. 318) ;
- (c) *attenuatus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (attenuatus)* (Name No. 319) ;
- (d) *crassus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (crassus)* (Name No. 320) ;
- (e) *cuspidatus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (cuspidatus)* (Name No. 321) ;
- (f) *giganteus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (giganteus)* (Name No. 322) ;
- (g) *glaber* Martin, 1809, as published in the combination *Conchyliolithus Anomites (glaber)* (Name No. 323) ;
- (h) *lineatus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (lineatus)* (Name No. 324) ;
- (i) *listeri* Martin, 1809, as published in the combination *Conchyliolithus Nautilites (listeri)* (Name No. 325) ;
- (j) *punctatus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (punctatus)* (Name No. 326) ;
- (k) *rotundatus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (rotundatus)* (Name No. 327) ;
- (l) *sacculus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (sacculus)* (Name No. 328) ;
- (m) *scabriculus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (scabriculus)* (Name No. 329) ;

- (n) *sphaericus* Martin, 1809, as published in the combination *Conchyliolithus Nautilites (sphaericus)* (Name No. 330) ;
- (o) *triangularis* Martin, 1809, as published in the combination *Conchyliolithus Anomites (triangularis)* (Name No. 331).

(6) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* with the Name No. 332 : *martini* Fleming, 1828, as published in the combination *Spirifer martini* (a junior objective synonym of *lineata* Sowerby (J.), 1822, as published in the combination *Terebratula? lineata*).

(7) The under-mentioned generic name is hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* with the Name No. 446 : *Gigantella* Sarycheva, 1928 (a junior homonym of *Gigantella* Ekman, 1905).

I. THE STATEMENT OF THE CASE

Following the submission to the Commission by Dr. Helen M. Muir-Wood (*British Museum (Natural History), London*) and Dr. C. J. Stubblefield (*Geological Survey and Museum, London*) in 1950 of an application for the use of the Plenary Powers for the purpose of validating certain specific names published in 1809 in the *Petrificata Derbiensia* of William Martin², the same specialists approached the Commission on the question of placing on the *Official List of Specific Names in Zoology* certain names published in the foregoing work as from the first author

²The decision of the Commission on the application here referred to has been embodied in *Opinion 419* (Part 3 of the present volume).

subsequent to 1809 on which they were validly published. This led to the submission to the Commission on 9th May 1951 of the following application :—

**Proposed addition to the “ Official List of Specific Names in Zoology ”
of the trivial names of two species of the Class Cephalopoda and of
twelve species of the Class Brachiopoda hitherto attributed to
Martin, 1809, and matters incidental thereto**

By HELEN M. MUIR-WOOD, D.Sc.

(*Department of Geology, British Museum (Natural History), London*)

and

C. J. STUBBLEFIELD, D.Sc., F.R.S.

(*Geological Survey and Museum, London*)

1. The present application for the addition of fourteen nomenclatorially available trivial names to the *Official List of Specific Names in Zoology* follows upon the decision taken by the International Commission on Zoological Nomenclature that names published in 1809 in William Martin's *Petrificata Derbiensia* are not available in zoological nomenclature (1950, *Bull. zool. Nomencl.* 4 : 450—452) and is submitted in response to the desire expressed by the Thirteenth International Congress of Zoology that, when (as in the case of Martin's *Petrificata*) the International Commission rule that a given work is not available for nomenclatorial purposes (1950, *Bull. zool. Nomencl.* 4 : 310) the Commission should determine the future status of any new names published in such a work.

2. When giving its ruling against the availability of Martin's *Petrificata* for nomenclatorial purposes, the International Commission recognised that there might be cases where the dropping of a trivial name published by Martin in that work would lead to confusion and accordingly placed on record its willingness to give sympathetic consideration to applications which might be submitted for the validation of such names. In response to that invitation we have, in a separate application (Z.N.(S.) 461), asked the Commission to use its Plenary Powers to validate ten of Martin's trivial names (two, being the trivial names of species of the Class Anthozoa, eight, of species of the Class Brachiopoda). The present application is concerned with trivial names which it is important should be preserved for use for the species to which they are currently applied, but for which it is not necessary for this purpose to invoke the use of the Commission's Plenary Powers, since, in each case, the name in question, on the first occasion on which it was used subsequent to Martin (1809),

was used in a manner consistent with that in which it had been employed by Martin. In consequence, the strict application of the *Règles* in these cases will not involve any change in the names used for the species concerned ; it will merely mean that in future these names will be attributed to some author, other than Martin, and will rank for purposes of priority from some date subsequent to 1809. The required stabilisation of these names, as from the authors and as of the dates attributable to them under a strict application of the *Règles* can thus readily be secured by the Commission placing these names on the *Official List of Specific Trivial Names in Zoology*, and this is what is here recommended should now be done.

3. From the point of view of the International Commission, the present application represents no more than a start in the process of determining the manner in which trivial names hitherto attributed to Martin (1809) should in future be used ; the present application is submitted, however, because each of the names with which it is concerned has been the subject of special study in the light of the Commission's decision on the status of names in Martin's *Petrificata*, the names of the two species of the Class Cephalopoda by Stubblefield (1951, *Ann. Mag. nat. Hist.* (12) 4 : 119—124, pl. 7), the names of the twelve species of the Class Brachiopoda by Muir-Wood (1951, *ibid.* (12) 4 : 97—118, pls. 3—6). Full particulars in regard to each of these names are given in the papers referred to above, and, in consequence, it has not been thought necessary in the present application to do more than give those particulars which have an immediate bearing on the application now submitted. Each case is discussed briefly in the following paragraphs.

(1) The trivial name “*sphaericus*” as published by Martin in 1809 in the combination “*Conchyliolithus Nautilites (sphaericus)*”.

4. The trivial name *sphaericus* was published by Martin in 1809 (*Petr. derb.* : sheet sign.D[2], pl. 7, figs. 3—5) in the combination *Conchyliolithus Nautilites (sphaericus)*. This trivial name (in the combination *Ammonites sphaericus*) was next used by Sowerby (J.) in 1814 (*Min. Conch.* 1 : 116, pl. 53, figs. 2 (left & right)), a reference being given to Martin's figures. The species hitherto known as *Goniatites sphaericus* (Martin, 1809) will thus in future be known as *Goniatites sphaericus* (Sowerby (J.), 1814) ; it is proposed, therefore, that the trivial name *sphaericus* Sowerby (J.), 1814, should now be added to the *Official List*. It would be convenient if a reference were there to be made to the fact that this nominal species should be interpreted by reference to the specimen numbered 43871 in the British Museum (Natural History), which is the specimen figured by Sowerby and which Foord & Crick (1897 : 159) and Bisat (1924 : 73) have suggested may well have been Martin's type specimen. This specimen has recently been refigured by Stubblefield (1951 : pl. 7, figs. 1a, 1b, 1c).

5. It must here be noted that the foregoing was one of the two nominal species originally included by de Haan in the genus *Goniatites* de Haan, 1825 (*Specimen phil. inaug. exhib. Mon. Ammonit. Goniatit.* : 159) and was selected as the type species of that genus by Miller (S.A.) in 1889 (*N. Amer. Geol. Pal.* : 438), by whom, however, the species was referred to as *Goniatites sphericus*, its trivial name being misspelt, as shown. It is desirable that the present opportunity should be taken to place the generic name *Goniatites* de Haan, 1825 (with the above species as type species) on the *Official List of Generic Names in Zoology*.

(2) The trivial name “*listeri*” as published by Martin in 1809 in the combination “*Conchyliolithus Nautilites Ammonites (listeri)*”.

6. The trivial name *listeri* was published by Martin in 1809 (*Petr. derb.* : sheet sign.P[4], pl. 35, fig. 3) in the combination *Conchyliolithus Nautilites Ammonites (listeri)*. This trivial name was next used (in the combination *Ammonites listeri* by Sowerby (J.) in 1812 (*Brit. Min.* 5 : 97, pl. 455); the same species was described and more adequately figured, again under the name *Ammonites listeri*, by Sowerby's son (J. de C. Sowerby) in 1825 (*Min. Conch.* 5 : 163, pl. 501, figs. 1, left and right hand). Both the older and the younger Sowerby referred in their descriptions of this species to *C. Naut. Amm. listeri* Martin. The species figured by the two Sowerbys which is that hitherto known as *Gastrioceras listeri* (Martin, 1809), will thus in future be known as *Gastrioceras listeri* (Sowerby, 1812); it is proposed therefore, that the trivial name *listeri* Sowerby (J.), should now be added to the *Official List*. The original specimen figured by Sowerby (J.) in 1812 cannot now be found, but the specimens figured respectively as the right hand and left hand figures 1 on J. de C. Sowerby's pl. 501 are both now in the British Museum (Natural History). Stubblefield has selected (1951 : 123) the specimen numbered 43909*b* (which is the original of J. de C. Sowerby's left hand figure) as the specimen by which this nominal species should be interpreted, and has refigured this specimen (1951 : pl. 7, figs. 2a, 2b, 2c). It is suggested that a reference to this action should be added against the trivial name *listeri* Sowerby (J.), 1812, when that name is placed on the *Official List*.

7. The foregoing nominal species was the first of those cited by Hyatt when in 1884 (*Proc. Boston. Soc. nat. Hist.* 22 : 327) he published the generic name *Gastrioceras*, and was selected as the type species of that genus in 1884 (*Cat. foss. Cephal. Brit. Mus.* 3 : 327) by Foord & Crick, who referred to this species under the name *Goniatites listeri* Phillips, a method of citation which fulfills the requirements of Rule (g) in Article 30, since Phillips (1836, *Ill. Geol. Yorkshire* 2 : 235) expressly cited *Ammonites listeri* Sowerby in the synonymy which he then gave for this species. It is desirable that the present opportunity should be

taken to place the generic name *Gastrioceras* Hyatt, 1884 (with the above species as type species) on the *Official List of Generic Names in Zoology*.

(3) The trivial name "giganteus" as published by Martin in 1809 in the combination "Conchyliolithus Anomites (giganteus)".

8. The trivial name *giganteus* was published by Martin in 1809 (*Petr. derb.* : sheet sign.G[2], pl. 15, fig. 1) in the combination *Conchyliolithus Anomites (giganteus)*, and in 1793 (*Fig. Descr. Petrifactions Derbyshire* : sheet sign.H[1], pl. 15, fig. 1) as *C. Anomia (giganteus)*. The next occasion on which this trivial name was applied to Martin's species was in 1822 (*Min. Conch.* 4 : 19, pl. 320) when it was figured as *Productus giganteus* by Sowerby (J.), to whom Martin had presented his specimen. This specimen is now preserved in the Sowerby collection at the British Museum (Natural History) under the number BB.936. This species which was formerly known as *Gigantella gigantea* (Martin, 1809) and more recently as *Gigantoproductus giganteus* (Martin, 1809) will in future be known as *Gigantoproductus giganteus* (Sowerby (J.), 1822) ; it is now proposed that the trivial name *giganteus* Sowerby (J.), 1822, should be added to the *Official List*.

9. The foregoing species is the type species, by subsequent selection by Muir-Wood (1930, *Ann. Mag. nat. Hist.* (10) 5 : 105, 106) of *Gigantella* Sarycheva, 1928 (*Mem. geol. Sci. Res. Inst. Moscow* 1928 (1) : 13) ; that name is, however, invalid, being a junior homonym of *Gigantella* Ekman, 1905 (*Wiss. Ergeb. schwed. Südp.-Exp.* 5 (No. 4) : 20) and has been replaced by *Gigantoproductus* Prentice, 1950 (*Geol. Mag.* 87(6) : 436). It is proposed that this generic name (with the above species as type species) should now be placed on the *Official List*, the invalid homonym *Gigantella* Sarycheva, 1928, being at the same time placed on the *Official Index*.

(4) The trivial name "crassus" as published by Martin in 1793 in the combination "Conchyliolithus Anomia (crassus)".

10. Martin published the name *Conchyliolithus Anomia (crassus)* in 1793 (*Fig. Descr. Petrifactions Derbyshire* : sheet sign.H[2], pl. 16, figs 2, 3) and 1809 (*Petr. derb.* : sheet sign. G[3], pl. 16, fig. 2) he published a figure of another specimen of the same species under the name *Conchyliolithus Anomites (crassus)*. The next author to refer to Martin's species was Fleming, who in 1828 (*Hist. brit. Anim.* : 379) briefly described it under the name *Productus crassus*. Muir-Wood has recently (1951 : 101, pl. 6, figs. 1a, 1b) selected a specimen from Derbyshire (probably from the Upper Dibunophyllum zone) in the White Watson Collection, now in the British Museum (Natural

History) (specimen number B.40431) as the neotype of this species, as Martin's and Fleming's specimens have not been preserved. This specimen was figured by Muir-Wood (1951 : pl. 6, figs. 1a, 1b). It is proposed that the trivial name *crassus* Fleming, 1828, which now becomes the oldest available trivial name for this species should be placed on the *Official List*.

(5) The trivial name "aculeatus" as published by Martin in 1809 in the combination "Conchyliolithus Anomites (aculeatus)".

11. The trivial name *aculeatus* was published by Martin in 1809 (*Petr. derb.* : sheet sign. R[4], pl. 37, figs. 9, 10) in the combination *Conchyliolithus Anomites (aculeatus)*. This species was next described by Sowerby (J.) in 1814 (*Min. Conch.* 1 : 156, pl. 68, fig. 4) under the name *Productus aculeatus*. Sowerby's specimen is now in the British Museum (Natural History) (specimen No. B.60992); it is virtually certain that this specimen is also the original of Martin's figure. This specimen has recently been selected as the lectotype of this species by Muir-Wood (1951 : 102), by whom it was at the same time refigured (1951 : pl. 3, fig. 3a, b, c). It is proposed that the trivial name *aculeatus* Sowerby (J.), 1814 (as published in the binominal combination *Productus aculeatus*) should now be placed on the *Official List* and that in the entry to be made in that *List* reference should be made to the foregoing lectotype selection.

(6) The trivial name "punctatus" as published by Martin in 1809 in the combination "Conchyliolithus Anomites (punctatus)".

12. The trivial name *punctatus* was published by Martin in 1809 (*Petr. derb.* : sheet sign. R[3], pl. 37, figs. 6—8) in the combination *Conchyliolithus Anomites (punctatus)*. Martin's species was redescribed and figured by Sowerby (J.) in 1822 (*Min. Conch.* 4 : 22, pl. 323) as *Productus punctatus*. This was the first occasion on which, subsequent to Martin 1809, the trivial name *punctatus* was applied to this species and it is accordingly from this usage that this name now takes priority. Four of the specimens figured by Sowerby on his plate 323 are preserved in the Sowerby Collection in the British Museum (Natural History), and of these, the specimen figured by Sowerby as the lower right hand figure (specimen No. B.60966) has been selected by Muir-Wood (1951 : 103) as the lectotype of Sowerby's species and has been refigured (1951 : pl. 4, figs. 2a, b). It is proposed that the trivial name *punctatus* Sowerby (J.), 1822, as published in the combination *Productus punctatus*, should now be placed on the *Official List*, reference being made in the entry in question to the lectotype selection referred to above.

13. The species *Productus punctatus* Sowerby, 1822 (under its earlier, but, as is now known, invalid name *Anomites punctatus* Martin, 1809 (i.e. *Conchyliolithus Anomites punctatus*) was selected as the type species

of *Echinoconchus* Weller (S.), 1914 (*Mon. State geol. Surv. Illinois* 1 : 138) by Chao in 1927 (*Palaeont. sinic.* 5(2) : 63). The name *Echinoconchus* Weller is an available name and is accepted as the oldest such name for the genus in question. It is accordingly proposed that this generic name with the above species as type species should now be placed on the *Official List*.

(7) The trivial name “*scabriculus*” as published by Martin in 1809 in the combination “*Conchylolithus Anomites (scabriculus)*”.

14. The trivial name *scabriculus* was published by Martin in 1809 (*Petr. derb.* sheet sign. R[2], pl. 36, fig. 5) in the combination *Conchylolithus Anomites (scabriculus)*. This species was next described and figured by Sowerby (J.), as *Productus scabriculus*, in 1814 (*Min. Conch.* 1 : 157, pl. 69, fig. 1) and this is the oldest available use of this name subsequent to Martin, 1809. The specimen figured by Sowerby, which is in the Sowerby Collection in the British Museum (Natural History) (specimen No. B.60954) has been selected by Muir-Wood as the lectotype of Sowerby's species and has been refigured (1951 : pl. 5, figs. 5a, b, c). It is proposed that the trivial name *scabriculus* Sowerby (J.), 1814, as published in the combination *Productus scabriculus*, should now be placed on the *Official List*, a note being made in the entry thereon of the lectotype selection referred to above.

15. The above species (under the invalid name given to it by Martin in 1809) is the type species, by original designation, of the genus *Buxtonia* Thomas (I.), 1914 (*Mem. geol. Surv. Unit. Kingd.*, Pal. 1(4) : 259) and, as that name is both an available name and also the oldest such name for the genus in question, it is proposed that it should now be placed on the *Official List* with the foregoing species as type species.

(8) The trivial name “*acuminatus*” as published by Martin in 1809 in the combination “*Conchylolithus Anomites (acuminatus)*”.

16. The trivial name *acuminatus* was published by Martin in 1809 (*Petr. derb.* : sheet sign. O[4], pl. 32, figs. 7, 8 ; pl. 33, figs. 5, 6). Martin's species was next figured and described as *Terebratula acuminata* by Sowerby (J.), in 1822 (*Min. Conch.* 4 : 23, pl. 324, fig. 1 (two upper figures and middle figure)). The specimen figured by Sowerby as the upper figure is missing but that figured as the middle figure is preserved in the Sowerby Collection in the British Museum (Natural History) (specimen No. B.61235) and has been selected (Muir-Wood, 1951 : 105) as the lectotype of Sowerby's species and refigured (1951 : pl. 3, figs. 1a, b, c). Sowerby's usage of the name *acuminatus* for this species is thus that as from which that name now ranks for the purposes of the Law of Priority. It is proposed that the trivial name *acuminata*

Sowerby (J.), 1822, as published in the combination *Terebratula acuminata*, should now be placed on the *Official List* and that in the entry so made reference should be included to the lectotype selection noted above.

17. The above species (under the name *Anomites acuminatus*) is the type species, by original designation, of the genus *Pugnax* Hall & Clarke, 1894 (*Paleont. New York* 8(2) : 202). The name *Pugnax* is an available name and is accepted by specialists as the oldest such name for the genus in question. It is accordingly proposed that this generic name (with *Terebratula acuminata* Sowerby (J.), 1822, as type species) should now be placed on the *Official List*.

(9) The trivial name "lineatus", as published by Martin in 1809 in the combination "Conchylolithus Anomites (lineatus)".

18. The trivial name *lineatus* was published by Martin in 1809 (*Petr. derb.* : sheet sign. Q[4], pl. 36, fig. 3). Martin's species was next described and figured by Sowerby (J.), in 1822 (*Min. Conch.* 4 : 39, pl. 335 (referred to as 334 in text), figs. 1, 2) as *Terebratula ? lineata*. The name *lineata*, as from Sowerby, 1822, is the oldest available name for this species ; the specimen figured by Sowerby as figure 1 on his plate 335 is preserved in the Sowerby Collection in the British Museum (Natural History) (specimen No. B.60997) and has been selected by Muir-Wood (1951 : 106) as the lectotype of this species and has been refigured (1951 : pl. 5, figs. 4a, b. c). It is proposed that the trivial name *lineata* Sowerby (J.), 1822, as published in the combination *Terebratula ? lineata*, should now be placed on the *Official List*, a note being made in that list of the foregoing lectotype selection. It is proposed that at the same time there should be added to the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology* the trivial name *martini* Fleming, 1828 (*Hist. brit. Anim.* : 376), as published in the combination *Spirifer martini*, which is a junior objective synonym of *lineata* Sowerby, 1822, the name *Spirifer martini* Fleming being no more than an unrequired substitute for the earlier name *Terebratula ? lineata* Sowerby (J.).

(10) The trivial name "triangularis" as published by Martin in 1809 in the combination "Conchylolithus Anomites (triangularis)".

19. The trivial name *triangularis* was published by Martin in 1809 (*Petr. derb.* : sheet sign. Q[3], pl. 36, fig. 2) in the combination *Conchylolithus Anomites (triangularis)*. The specimen so named and figured by Sowerby (J. de C.) in 1827 (*Min. Conch.* 6 : 120, pl. 562, fig. 5 (Martin's specimen), fig. 6 (another syntype)) under the name *Spirifer triangularis*. As from Sowerby, 1827, this is an available name and the oldest such name for this species. From the two

specimens figured by Sowerby, both of which are preserved in the Sowerby Collection in the British Museum (Natural History), Muir-Wood (1951 : 106) selected that figured by Sowerby as figure 5 on his plate 562 (specimen No. B. 61049, Martin's specimen) to be the lectotype of Sowerby's species. This specimen has been refigured by Muir-Wood (1951 : pl. 5, figs. 3a-d). It is proposed that the trivial name *triangularis* Sowerby (J. de C), 1827, as published in the combination *Spirifer triangularis*, should be placed on the *Official List*, a note being added to the entry so made drawing attention to the lectotype selection referred to above.

(11) The trivial name "acutus" as published by Martin in 1809 in the combination "Conchyliolithus Anomites (acutus)".

20. The trivial name *acutus* was published by Martin in 1809 (*Petr. derb.* : sheet sign. 2A[1], pl. 49, figs. 15, 16) in the combination *Conchyliolithus Anomites (acutus)*. This species was not dealt with by either of the Sowerbys, the species which J. Sowerby figured and described as *Terebratula acuta* (1816, *Min. Conch.* 2 : pl. 150, figs. 1, 2) being a Lias Rhynchonellid, while that referred to under the same name by J. de C. Sowerby in 1825 (*Min. Conch.* 5 : pl. 502, fig. 4) is an Inferior Oolite Rhynchonellid. The next author to be considered is Fleming, 1828 (*Hist. brit. Anim.* : 375) who applied the name *Spirifer acutus* and gave a reference both to Martin's figures of *acutus* and also to the figures given for quite a different species, *Spirifer minimus* Sowerby (J.), 1821 (*Min. Conch.* 4 : pl. 377, fig. 1). McCoy (1844 : 132) also united these two species, applying to each the name *Spirifer minimus* Sowerby. The first author to have described and figured Martin's *acutus*, without at the same time confusing that species with some other species, was Davidson who in 1863 (*Mon. brit. foss. Brach.* 2(5) : 224, pl. 52, figs. 16, 17) figured and described this species under the name *Spirifera acuta*. Of Davidson's figures, figure 16 was a copy of Martin's. The specimen figured by Davidson as his figures 17, 17a is in the Davidson Collection in the British Museum (Natural History) (specimen No. B.7391) has been selected by Muir-Wood (1951 : 107) as the specimen by which in future this species should be interpreted and has been refigured (1951 : pl. 5, figs. 2a-c). This selection was made on the assumption that Davidson (1863) was the first author, after Martin (1809), by whom the name *acutus* was effectively applied to Martin's species. More recently, the position in relation to this matter of the name *Spirifer acutus* Fleming, 1828, has been considered further. This is clearly an available name, for it is not a homonym of any previously published name and it was certainly published with an indication. At the present time it is, however, indeterminate from the taxonomic point of view, for until a selection has been made under Article 31, it is not possible to determine whether this name, published by Fleming as the name of a composite species, is applicable to Martin's *Conchyliolithus Anomites acutus* (to the figure of which Fleming gave a reference) or

to *Spirifer minimus* Sowerby (J.), 1822 (to which also Fleming gave a reference). In order to clear up this preliminary point Muir-Wood hereby selects, under the procedure prescribed in Article 31 (see 1950, *Bull. zool. Nomencl.* 4 : 74—76), the reference given by Fleming to *Spirifer minimus* Sowerby, 1821, to be the reference by which the hitherto composite species *Spirifer acutus* Fleming, 1828, is in future to be determined. This action makes the nominal species *Spirifer acutus* Fleming, 1828, a junior objective synonym of *Spirifer minimus* Sowerby, 1821 (the two nominal species being based upon the same type specimen). The removal in this way of Fleming's *Spirifer acutus* from consideration as the first name given, after 1809, to Martin's *acutus* makes Davidson's *Spirifera acuta* of 1863 the oldest name for that species, for it is an available name, not being a homonym of *Spirifer acutus* Fleming, since under Article 34, as defined by the Paris Congress (see 1950, *Bull. zool. Nomencl.* 4 : 161—162) the names *Spirifer* and *Spirifera* are not to be regarded as homonyms of one another. Accordingly the trivial name *acuta* Davidson now becomes the oldest available name for Martin's species, and it is proposed therefore that this name should now be placed on the *Official List*. It is further proposed that a reference should be inserted in the entry so to be made, referring to the lectotype selected from the Davidson Collection.

(12) The trivial name "glaber" as published by Martin in 1809 in the combination "Conchyliolithus Anomites (glaber)".

21. The trivial name *glaber* was published by Martin in 1809 (*Petr. derb.* : sheet sign. Z[2], pl. 48, figs. 9, 10) in the combination *Conchyliolithus Anomites (glaber)*. The next author to deal with this species was Sowerby (J.), who in 1820 (*Min. Conch.* 3 : 123, pl. 269 (169 on plate)) described and figured it as *Spirifer glaber*. The upper of the two specimens figured by Sowerby on the foregoing plate, which is in the Sowerby Collection in the British Museum (Natural History) (specimen No. BB.102), has been refigured by Muir-Wood (1951 : pl. 3, figs. 2a-c), by whom it has been selected to be the lectotype of this species. It is proposed that the trivial name *glaber* Sowerby (J.), 1820, as published in the combination *Spirifer glaber*, should now be placed on the *Official List*, a note being at the same time made thereon referring to the above lectotype selection.

22. The species called *Conchyliolithus Anomites (glaber)* by Martin in 1809 (the earliest binominal name for which is, as we have seen, *Spirifer glaber* Sowerby (J.), 1820) is commonly treated as being the type species of the genus *Martinia* McCoy, 1844, but in fact this is not the type species of that genus under the *Règles*. Great confusion would arise if the *Règles* were allowed to operate in the normal way in this case and an application Reference Z.N.(S.) 535 has been made to the International Commission on Zoological Nomenclature to use

its Plenary Powers to give valid force to the position of *Spirifer glaber* Sowerby (J.), as the type species of this genus.

(13) The trivial name “*cuspidatus*” as published by Martin in 1809 in the combination “*Conchyliolithus Anomites (cuspidatus)*”.

23. The trivial name *cuspidatus* was published by Martin in 1809 (*Petr. derb.* : sheet sign. Y[3], pl. 46, figs. 3, 4 ; pl. 47, fig. 5 (all three figures representing the same specimen) in the combination *Conchyliolithus Anomites (cuspidatus)*. Martin's species was next described and figured by Sowerby (J.) in 1816 (*Min. Conch.* 2 : 42, pl. 120, figs. 1—3) in the combination *Spirifer cuspidatus*. Martin's original specimen from Castleton, Derbyshire, is one of the two specimens figured by Sowerby on his plate 120, where it appears as figures 1 and 3. This specimen is in the Sowerby Collection in the British Museum (Natural History) (specimen No. B.61450) ; it has been selected by Muir-Wood (1951 : 112) as the lectotype of *Spirifer cuspidatus* Sowerby (J.), 1816 and has been refigured (1951 : pl. 4, figs. 1a-d). It is proposed that the trivial name *cuspidatus* Sowerby (J.), 1816, as published in the combination *Spirifer cuspidatus*, should now be placed on the *Official List*, a note being made in that list of the foregoing lectotype selection.

(14) The trivial name “*sacculus*” as published by Martin in 1809 in the combination “*Conchyliolithus Anomites (sacculus)*”.

24. The trivial name *sacculus* was published by Martin in 1809 (*Petr. derb.* : sheet sign. Y[3], pl. 46, figs. 1, 2) in the combination *Conchyliolithus Anomites (sacculus)*. Martin's species was next described and figured by Sowerby (J. de C.) in 1824 (*Min. Conch.* 5 : 65, pl. 446, fig. 1 (three top figs.)) in the combination *Terebratula sacculus*. The originals of Sowerby's first and second figures on plate 446 are preserved in the Sowerby Collection in the British Museum (Natural History) and the second of these specimens (i.e. that represented as the top middle figure on Sowerby's plate 446 (specimen No. B.61653) has been selected by Muir-Wood (1951 : 114) as the lectotype of *Terebratula sacculus* Sowerby (J. de C.), 1824, and has been figured (1951 : pl. 5, figs. 1a-c). It is proposed that the trivial name *sacculus* Sowerby (J. de C.), 1824, as published in the combination *Terebratula sacculus*, should now be placed on the *Official List*, a reference being made in the *List* at the same time to the foregoing lectotype selection.

(15) The trivial names used by Martin in 1809 for the two other species of Brachiopoda then named by that author.

25. In addition to the twelve species of Brachiopoda discussed as items (3) to (14) above, Martin in 1809 described two other species,

which he called respectively *Conchylolithus Anomites (rotundatus)* (*Petr. derb.* : sheet sign. Z[3], pl. 48, figs. 11, 12) and *Conchylolithus Anomites (attenuatus)* (*Petr. derb.* : (Addl. Remarks) 14). As regards the first of these species, the position is that Martin's original specimen is lost, that his figure (which appears to represent an immature shell) is not sufficient to permit of the identification of the species figured and that the next occasion on which the trivial name *rotundatus* was used (*Spirifer rotundatus* Sowerby (J. de C.), 1824, *Min. Conch.* 5 : 89, pl. 461, fig. 1 (two views)) it was applied to a species which is certainly not the same as that to which that trivial name had been given by Martin. In view of the doubt as to the identity of Martin's species (Muir-Wood, 1951 : 108), it is not considered desirable to refer the trivial name *rotundatus*, as used by Martin, to any species described by a subsequent author. It is accordingly proposed that in order to dispose of this problem, the trivial name *rotundatus* Martin, 1809, as published in the combination *Conchylolithus Anomites (rotundatus)*, which is an invalid name under the general decision taken by the International Commission on Zoological Nomenclature regarding the status of names in Martin's *Petrificata derbiensia* (see paragraph 1 above), should now be placed on the *Official Index of Rejected and Invalid Names*. The second of the two nominal species referred to above is not figured by Martin and is unidentifiable. It is accordingly proposed that the invalid trivial name *attenuatus* Martin, 1809, as published in the combination *Conchylolithus Anomites (attenuatus)*, should be disposed of by being placed on the *Official Index*.

Recommendations

26. Having now examined the status, under the *Règles*, of the trivial names given by Martin in 1809 to the two species of *Goniatites* and the twelve species of *Brachiopoda* there described and, in most cases, figured, we may summarise as follows the recommendations which we submit to the International Commission on Zoological Nomenclature, namely that it should—

- (1) place the under-mentioned trivial names on the *Official List of Specific Names in Zoology* :—

(A) Class Cephalopoda

- (a) *listeri* Sowerby (J.), 1812, as published in the combination *Ammonites listeri*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 7, figs. 2a-c) by Stubblefield, 1951 ;
- (b) *sphaericus* Sowerby (J.), 1814, as published in the combination *Ammonites sphaericus* (holotype figured, pl. 7, figs. 1a-c) by Stubblefield, 1951 ;

(B) Class Brachiopoda

- (c) *aculeatus* Sowerby (J.), 1814, as published in the combination *Productus aculeatus*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 3, figs. 3a-c) by Muir-Wood, 1951 ;
- (d) *acuminata* Sowerby (J.), 1822, as published in the combination *Terebratula acuminata*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 3, figs. 1a-c) by Muir-Wood, 1951 ;
- (e) *acuta* Davidson, 1863, as published in the combination *Spirifera acuta*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 5, figs. 2a-e) by Muir-Wood ;
- (f) *crassus* Fleming, 1828, as published in the combination *Productus crassus*, the species so named to be interpreted by reference to fig. 2 on Martin's (1809) plate 16, cited by Fleming ;
- (g) *cuspidatus* Sowerby (J.), 1816, as published in the combination *Spirifer cuspidatus*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 4, figs. 1a-d) by Muir Wood, 1951 ;
- (h) *giganteus* Sowerby (J.), 1822, as published in the combination *Productus giganteus*, the species so named to be interpreted by reference to the lectotype selected by Muir-Wood, 1951 ;
- (i) *glaber* Sowerby (J.), 1820, as published in the combination *Spirifer glaber*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 3, figs. 2a-c) by Muir-Wood, 1951 ;
- (j) *lineata* Sowerby (J.), 1822, as published in the combination *Terebratula ? lineata*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 5, figs. 4a-c) by Muir-Wood, 1951 ;
- (k) *punctatus* Sowerby (J.), 1922, as published in the combination *Productus punctatus*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 4, figs. 2a, b) by Muir-Wood, 1951 ;
- (l) *sacculus* Sowerby (J. de C.), 1824, as published in the combination *Terebratula sacculus*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 5, figs. 1a-c) by Muir-Wood, 1951 ;
- (m) *scabriculus* Sowerby (J.), 1814, as published in the combination *Productus scabriculus*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 5, figs. 5a-c) by Muir-Wood, 1951 ;

- (n) *triangularis* Sowerby (J. de C.), 1827, as published in the combination *Spirifer triangularis*, the species so named to be interpreted by reference to the lectotype selected and figured (pl. 5, figs. 3a-d) by Muir-Wood, 1951 ;

(2) place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—

(A) Class Cephalopoda

- (a) *Gastrioceras* Hyatt, 1884 (type species, by selection by Foord & Crick (1897) : *Ammonites listeri* Sowerby (J.), 1812, as defined in (1)(a) above) ;
- (b) *Goniatites* de Haan, 1825 (type species, by selection by Miller (1889) : *Ammonites sphaericus* Sowerby (J.), 1814, as defined in (1)(b) above) ;

(B) Class Brachiopoda

- (c) *Buxtonia* Thomas (I.), 1914 (type species, by original designation : *Productus scabriculus* Sowerby (J.), 1814, as defined in (1)(m) above) ;
- (d) *Echinoconchus* Weller (S.), 1914 (type species, by subsequent selection by Chao (1927) : *Productus punctatus* Sowerby (J.), 1822, as defined in (1)(k) above) ;
- (e) *Gigantoproductus* Prentice, 1950 (nom. nov. pro *Gigantella* Sarycheva, 1928, a junior homonym of *Gigantella* Ekman, 1905) (type species, by subsequent selection by Muir-Wood (1930) : *Productus giganteus* Sowerby (J.), 1822, as defined in (1)(h) above) ;
- (f) *Pugnax* Hall & Clarke, 1894 (type species, by original designation : *Terebratula acuminata* Sowerby (J.), 1822, as defined in (1)(d) above) ;

(3) to place the under-mentioned trivial names on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology* :—

- (a) *aculeatus* Martin, 1809, as published in the combination *Conchylolithus Anomites (aculeatus)* ;
- (b) *acuminatus* Martin, 1809, as published in the combination *Conchylolithus Anomites (acuminatus)* ;
- (c) *acutus* Martin, 1809, as published in the combination *Conchylolithus Anomites (acutus)* ;
- (d) *attenuatus* Martin, 1809, as published in the combination *Conchylolithus Anomites (attenuatus)* ;

- (e) *crassus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (crassus)* ;
 - (f) *cuspidatus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (cuspidatus)* ;
 - (g) *giganteus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (giganteus)* ;
 - (h) *glaber* Martin, 1809, as published in the combination *Conchyliolithus Anomites (glaber)* ;
 - (i) *lineatus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (lineatus)* ;
 - (j) *listeri* Martin, 1809, as published in the combination *Conchyliolithus Nautilites Ammonites (listeri)* ;
 - (k) *martini* Fleming, 1828, as published in the combination *Spirifer martini* ;
 - (l) *punctatus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (punctatus)* ;
 - (m) *rotundatus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (rotundatus)* ;
 - (n) *sacculus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (sacculus)* ;
 - (o) *scabriculus* Martin, 1809, as published in the combination *Conchyliolithus Anomites (scabriculus)* ;
 - (p) *sphaericus* Martin, 1809, as published in the combination *Conchyliolithus Nautilites (sphaericus)* ;
 - (q) *triangularis* Martin, 1809, as published in the combination *Conchyliolithus Anomites (triangularis)* ;
- (4) to place the generic name *Gigantella* Sarycheva, 1928 (a junior homonym of *Gigantella* Ekman, 1905) on the *Official Index of Rejected and Invalid Generic Names in Zoology*.

II. THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : Upon the receipt of the application by Dr. Muir-Wood and Dr. Stubblefield the question of the addition to the *Official List of Specific Names in*

Zoology of certain specific names originally published in 1809 in Martin's *Petrificata Derbiensia* was allotted the Registered Number Z.N.(S.) 534.

3. Publication of the present application : The present application was sent to the printer on 27th May 1951 and was published on 28th September of that year in Part 1 of volume 6 of the *Bulletin of Zoological Nomenclature* (Muir-Wood & Stubblefield, 1951, *Bull. zool. Nomencl.* **6** : 18—30).

4. Comments received : The publication of the present application elicited two comments. Both of these were favourable. No objection was received from any source, save that the first of the specialists to submit a comment raised an objection to the proposal submitted in relation to the third of the Brachiopod names included in Dr. Muir-Wood's list. This was the name *acutus* originally published by Martin in 1809 as *Conchylolithus Anomites (acutus)*. The communications so received are reproduced in the following paragraphs.

5. Support received from Dr. Herta Schmidt (Natur-Museum und Forschungs-Institut Senckenberg, Frankfurt a. M., Germany) : On 1st November 1951 Dr. Herta Schmidt (*Natur-Museum und Forschungs-Institut Senckenberg, Frankfurt a. M.*) submitted a note in which she supported all the recommendations submitted except that in regard to the name *acutus* referred to in paragraph 4 above. As explained in paragraph 9 below, the proposal relating to the foregoing name was later withdrawn from the present proposal for further consideration. Dr. Schmidt's comment was published in full in Part 7 of volume 6 of the *Bulletin of Zoological Nomenclature* (Schmidt (H.), 1952, *Bull. zool. Nomencl.* **6** : 224). The following is the introductory sentence of Dr. Schmidt's communication, in which, subject to the exception noted above, she intimated her support for the recommendations submitted in this case : " Soweit die Vorschläge Brachiopoden [i.e. the Brachiopod names dealt with in the application reproduced in the first paragraph of the present

Opinion] betreffen, stimme ich ihnen zu mit Ausnahme von (B)(e), *Spirifera acuta* Davidson, 1863³, betreffend ”.

6. Support received from the Joint Committee on Zoological Nomenclature for Paleontology in America : On 9th April 1952 there was received in the Office of the Commission a large number of letters commenting on various applications previously published in the *Bulletin of Zoological Nomenclature* from Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America. Included among these was the following letter, dated 18th February 1952, reporting that by a majority of nine votes to one vote the Joint Committee had decided to give its support to the present application :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject, and I wish to inform you that, being polled, they voted : To support the petition (nine) : (1) Katherine V. W. Palmer ; (2) A. Myra Keen ; (3) Siemon W. Muller ; (4) J. Marvin Weller ; (5) J. Winston Sinclair ; (6) Bryan Patterson ; (7) Bobb Schaeffer ; (8) R. C. Moore ; (9) John B. Reeside, Jr. To oppose the petition (one) : Don L. Frizzell.

III. THE DECISION TAKEN BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

7. Issue of Voting Paper V.P.(53)5 : On 2nd January 1953, a Voting Paper (V.P.(53)5) was issued in which the Members of the Commission were invited to vote either for, or against, “the proposal relating to the addition to the *Official List of Specific Trivial Names in Zoology* of certain trivial names originally published by Martin in 1809 and allied matters as

³ The portion of Dr. Schmidt's comment on the case of the name *Spirifera acuta* Davidson, 1863, is not reproduced here, since, as explained above, the case of that name has been withdrawn from the purview of the present case. The comment on the foregoing name furnished by Dr. Schmidt will be reproduced in the *Opinion* later to be rendered by the Commission in regard to that name.

set out in Points (1) to (4) on pages 27 to 30 in volume 6 of the *Bulletin of Zoological Nomenclature* ” [i.e. in the Points numbered as above in paragraph 26 of the application reproduced in the first paragraph of the present *Opinion*].

8. The Prescribed Voting Period for Voting Paper V.P.(53)5 :
As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 2nd April 1953.

9. Withdrawal from the scope of Voting Paper V.P.(53)5 of the proposal there submitted in relation to the specific name “*acutus*” Davidson, 1863, as published in the combination “*Spirifera acuta*” : On 3rd April 1953 Mr. Hemming, as Secretary, placed the following Minute on the Commission's File Z.N.(S.) 534, withdrawing from the scope of Voting Paper V.P.(53)5 the proposal there submitted in relation to the specific name *acuta* Davidson, 1863, as published in the combination *Spirifera acuta* :—

The specific name “*acutus*” as published by Davidson in 1863 in the combination “*Spirifera acuta*” : withdrawal for further consideration of the proposals submitted with Voting Paper V.P.(53)5

MINUTE by FRANCIS HEMMING, C.M.G., C.B.E.,

(Secretary to the International Commission on Zoological Nomenclature)

In a statement dated 1st November 1951 Dr. Herta Schmidt (*Natur-Museum und Forschungs-Institut Senckenberg, Frankfurt a. M.*) communicated to the Office of the Commission a statement in which she objected to the proposal submitted in relation to the specific name *acutus* Davidson, 1863, as published in the combination *Spirifera acuta*. The objection so submitted was based, in part, on an interpretation of Article 19 relating to the emendation of names and the status of certain classes of emendations which will be the subject of consideration at Copenhagen later this year first by the International Commission on Zoological Nomenclature and later by the Fourteenth International Congress of Zoology. In these circumstances, I consider that a decision on the present case should be held over until after the Copenhagen Congress when it will be possible to re-examine the issues involved in the light of the decisions taken by that Congress.

2. For the reasons set forth above I, as Secretary to the International Commission on Zoological Nomenclature, hereby withdraw the proposal regarding the foregoing name from the scope of Voting Paper V.P.(53)5 and direct that the position as regards this name be reviewed⁴ in due course in the light of any decisions regarding the provisions of the *Règles* by the forthcoming Fourteenth International Congress of Zoology which may have a bearing on the issues involved in this case.

10. Particulars of the Voting on Voting Paper V.P.(53)5 : At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(53)5, less the proposal relating to the specific name *acuta* Davidson, 1863, as published in the combination *Spirifera acuta*, removed from the purview of that vote by the Direction given in the Secretary's Minute of 3rd April 1953 reproduced in paragraph 9 of the present *Opinion* was as follows:—

(a) *Affirmative Votes had been given by the following fourteen (14) Commissioners (arranged in the order in which Votes were received) :*

Lemche ; Hering ; Bradley (J.C.) ; Dymond ; Esaki ; Vokes ; Bonnet ; Riley ; do Amaral ; Hankó ; Stoll ; Cabrera ; Hemming ; Boschma ;

(b) *On Leave of Absence, one (1) :*

Mertens ;

(c) *Negative Votes :*

None ;

⁴ The review so prescribed was later carried out on a new File bearing the Number Z.N.(S.) 848. The Secretary's Report on this case was published on 28th February 1955 in Part 4 of volume 11 of the *Bulletin of Zoological Nomenclature* (Hemming, 1955, *Bull. zool. Nomencl.* 11 : 124—131).

(d) *Voting Papers not returned, two (2) :*

Jaczewski ; Pearson.

11. Declaration of Result of Vote on Voting Paper V.P.(53)5 :

On 3rd April 1953, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(53)5, signed a Certificate that the Votes cast were as set out in paragraph 10 above and declaring that the proposal submitted in the foregoing Voting Paper, less the proposal withdrawn therefrom by the Direction issued by the Secretary in a Minute signed earlier on the same day (paragraph 9 above) has been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

12. Supplementary application submitted in 1954 by Dr. Helen Muir-Wood : In April 1954 Dr. Helen Muir-Wood (the original author of the Brachiopod section of the present application) notified the Office of the Commission that, consequent upon the decision of the Fourteenth International Congress of Zoology, Copenhagen, 1953, to insert in the *Règles* provisions recognising neotypes as a category of type specimen, she was of the opinion that in the one species included in her application for which it was not possible to select a lectotype it would be more satisfactory if the Commission were to direct that the species in question should be interpreted by reference to a neotype rather than, as recommended in her original application, by reference to a previously published figure. The nominal species concerned was *Productus crassus* Fleming, 1828. Already in 1953 prior to the meeting of the Copenhagen Congress Dr. Muir-Wood had published a paper in which she had designated an "unofficial" neotype for the above species. In its final form Dr. Muir-Wood's supplementary application was submitted to the Office of the Commission on 20th July 1955. The document so submitted is attached to the present *Opinion* as an Appendix.

13. Submission to the Commission in October 1955 of proposals based upon the supplementary application for the recognition of a neotype for the nominal species "*Productus crassus*" Fleming, 1828, received from Dr. Muir-Wood : On 12th October 1955 Mr. Hemming, as Secretary, submitted to the Commission a paper in which he set forth a proposal designed to give effect to Dr. Muir-Wood's supplementary application. The first two paragraphs of Mr. Hemming's paper contained an historical account of the circumstances which led up to the submission of Dr. Muir-Wood's supplementary application. This is not reproduced here because the circumstances in question have already been described in much greater detail in the earlier portions of the present *Opinion*. The remainder of Mr. Hemming's paper was as follows :—

Proposal supplementary to that approved by the Commission in relation to the name "*Productus crassus*" Fleming, 1828 (Class Brachiopoda) submitted by Dr. Helen Muir-Wood

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

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3. In the case of the nominal species *Productus crassus* Fleming, 1828, with which the present paper is concerned, the proposal originally submitted (*Bull. zool. Nomencl.* 6 : 21, 28 (Point (f))) was that the Commission should give a Ruling that this nominal species should be interpreted by reference to figure 2 on Martin's (1809) plate 16, which was cited by Fleming when dealing with this species. That specimen is not preserved in the British Museum Collection or elsewhere and is therefore not available for designation as a neotype. For the purposes of such a designation some other specimen must therefore be selected. In view of the fact that most of Martin's specimens were originally obtained from the White Watson collection, Dr. Muir-Wood judged that one of the specimens of the above species preserved in that collection in the British Museum (Natural History) would be the most suitable for designation as the neotype of *Productus crassus*. Accordingly, before the Copenhagen (1953) Congress she selected from

that collection a specimen numbered B.40431 and designated it as an "unofficial neotype" (1951, *Ann. Mag. nat. Hist.* (12) 4 : 101, pl. 6, figs. 1a, b). This is the specimen which in the supplementary application now received Dr. Muir-Wood asks that the Commission, when giving its Ruling on her original application, should direct should be the standard for the interpretation of the nominal species *Productus crassus* Fleming, 1828. Dr. Muir-Wood has furnished full particulars of the labels attached to, or otherwise associated with, the foregoing specimen.

4. The proposal by Dr. Muir-Wood that the at present unpromulgated decision taken by the vote on Voting Paper V.P.(53)5, namely that the nominal species *Productus crassus* Fleming, 1828 (Class Brachiopoda) be interpreted by reference to a specified previously-published figure be replaced by a decision that the foregoing nominal species be interpreted by reference to the neotype therefor designated by Dr. Muir-Wood, is hereby submitted to the Commission for consideration.

14. Issue of Voting Paper V.P.(O.M.)(55)34 : On 12th October 1955 a Voting Paper (V.P.(O.M.)(55)34) was issued in which the Members of the Commission were invited to vote either for, or against, "the proposal submitted by Dr. H. M. Muir-Wood set out in paragraph 4 of the paper bearing the number Z.N.(S.) 534 submitted by the Secretary simultaneously with the present Voting Paper [i.e. in paragraph 4 of the paper, an extract from which has been reproduced in paragraph 13 of the present *Opinion*], namely that in place of the at present unpromulgated decision taken by the vote on Voting Paper V.P.(53)5 that the nominal species *Productus crassus* Fleming, 1828 (Class Brachiopoda) be interpreted by reference to a specified previously published figure (a decision taken prior to the incorporation into the *Règles* of provisions recognising neotypes as a category of type specimen) a Ruling be given that the above nominal species be interpreted by reference to the neotype designated therefor by Dr. Muir-Wood as specified in the foregoing paper".

15. The Prescribed Voting Period for Voting Paper V.P.(O.M.)(55)34 : As the foregoing Voting Paper was issued under the One-Month Rule, the Prescribed Voting Period closed on 12th November 1955.

16. Particulars of the Voting on Voting Paper V.P.(O.M.)(55)34 :
At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(O.M.)(55)34 was as follows⁵ :—

(a) *Affirmative Votes had been given by the following twenty-two (22) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Lemche ; Vokes ; Stoll ; Esaki ; Boschma ;
Riley ; Miller ; Bradley (J.C.) ; Prantl ; Mayr ;
Jaczewski ; Tortonese ; do Amaral ; Dymond ;
Hemming ; Bonnet ; Mertens ; Cabrera ; Key ;
Kühnelt ; Hankó ;

(b) *Negative Votes, two (2) :*

Holthuis ; Sylvester-Bradley ;

(c) *On Leave of Absence, one (1) :*

Bodenheimer ;

(d) *Voting Papers not returned :*

None.

⁵ In the period between the taking of the Vote on Voting Paper V.P.(53)5 and of that on Voting Paper V.P.(O.M.)(55)34, Commissioner Joseph Pearson had retired from the Membership of the Commission. In the same period the following nine zoologists have been elected to be Commissioners :—
Mr. P. C. Sylvester-Bradley (*Sheffield University, Sheffield, England*) (12th August 1953)

Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (12th August 1953)

Dr. K. H. L. Key (*Commonwealth Scientific and Industrial Research Organisation, Canberra, A.C.T., Australia*) (15th October 1954)

Dr. Alden H. Miller (*Museum of Vertebrate Zoology, University of California, U.S.A.*) (29th October 1954)

Doc. Dr. Ferdinand Prantl (*Národní Museum v. Praze, Prague, Czechoslovakia*) (30th October 1954)

Professor Dr. Wilhelm Kühnelt (*Zoologisches Institut, Der Universität, Vienna, Austria*) (6th November 1954)

Professor F. S. Bodenheimer (*The Hebrew University, Jerusalem, Israel*) (11th November 1954)

Professor Ernst Mayr (*Museum of Comparative Zoology at Harvard College, Cambridge, Massachusetts, U.S.A.*) (4th December 1954)

Professor Enrico Tortonese (*Museo di Storia Naturale "G. Doria" Genova, Italy*) (16th December 1954)

17. Declaration of Result of Vote on Voting Paper V.P.(O.M). (55)34 : On 14th November 1955, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(O.M.)(55)34, signed a Certificate that the Votes cast were as set out in paragraph 16 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

18. Preparation of the Ruling given in the present " Opinion " : On 5th March 1956 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(53)5, as amended in respect of one item by the Vote taken on Voting Paper V.P.(O.M.)(55)34.

19. Original References : The following are the original references for the names placed on *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

aculeatus, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. R [4], pl. 37, figs. 9, 10

aculeatus, *Productus*, Sowerby (J.), 1814, *Min. Conch.* 1 : 156, pl. 68, fig. 4

acuminatus, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. O [4], pl. 32, figs. 7, 8 ; pl. 33, figs. 5, 6

acuminata, *Terebratula*, Sowerby (J.), 1822, *Min. Conch.* 4 : 23, pl. 324, fig. 1 (two upper figs. and middle fig.)

attenuatus, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : (Addit. Remarks) 14

Buxtonia Thomas (I.), 1914, *Mem. geol. Surv. Unit. Kingd.*, Pal. 1(4) : 259

crassus, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. G [3], pl. 16, fig. 2

crassus, *Productus*, Fleming, 1828, *Hist. brit. Anim.* : 379

- cuspidatus*, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. Y [3], pl. 46, figs. 3, 4 ; pl. 47, fig. 5
- cuspidatus*, *Spirifer*, Sowerby (J.), 1816, *Min. Conch.* 2 : 42, pl. 120, figs. 1—3
- Echinoconchus* Weller (S.), 1914, *Mon. State geol. Surv. Illinois* 1 : 138
- Gastrioceras* Hyatt, 1884, *Proc. Boston Soc. nat. Hist.* 22 : 327
- Gigantella* Sarycheva, 1928, *Mem. geol. Sci. Res. Inst. Moscow* 1928(1) : 13
- giganteus*, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. G [2], pl. 15, fig. 1
- giganteus*, *Productus*, Sowerby (J.), 1822, *Min. Conch.* 4 : 19, pl. 320
- Gigantoproductus* Prentice, 1950, *Geol. Mag.* 87(6) : 436
- glaber*, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. Z [2], pl. 48, figs. 9, 10
- glaber*, *Spirifer*, Sowerby (J.), 1820, *Min. Conch.* 3 : 123, pl. 269 [by mistake as 169 on legend]
- Goniatites* de Haan, 1825, *Specimen phil. inaug. exhib. Mon. Ammonit. Goniatit.* : 159
- lineatus*, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. Q [4], pl. 36, fig. 3
- lineata*, *Terebratula* ?, Sowerby (J.), 1822, *Min. Conch.* 4 : 39, pl. 335 [referred to as pl. 334 in text], figs. 1, 2
- listeri*, *Conchyliolithus Nautilites Ammonites*, Martin, 1809, *Petrif. derb.* : P [4], pl. 35, fig. 3
- listeri*, *Ammonites*, Sowerby (J.), 1812, *Brit. Min.* 5 : 97, pl. 455
- martini*, *Spirifer*, Fleming, 1828, *Hist. brit. Anim.* : 376
- punctatus*, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. R [3], pl. 37, figs. 6—8

punctatus, *Productus*, Sowerby (J.), 1822, *Min. Conch.* 4 : 22, pl. 323

Pugnax Hall & Clarke, 1894, *Palaeont. New York* 8(2) : 202

rotundatus, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. Z [3], pl. 48, figs. 11, 12

sacculus, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign Y [3], pl. 46, figs. 1, 2

sacculus, *Terebratula*, Sowerby (J. de C.), 1824, *Min. Conch.* 5 : 65, pl. 446, fig. 1 (three top figs.)

scabriculus, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. R [2], pl. 36, fig. 5

scabriculus, *Productus*, Sowerby (J.), 1814, *Min. Conch.* 1 : 157, pl. 69, fig. 1

sphaericus, *Conchyliolithus Nautilites*, Martin, 1809, *Petrif. derb.* : sign. D [2], pl. 7, figs. 3—5

sphaericus, *Ammonites*, Sowerby (J.), 1814, *Min. Conch.* 1 : 116, pl. 53, figs. 2 (left & right)

triangularis, *Conchyliolithus Anomites*, Martin, 1809, *Petrif. derb.* : sign. Q [3], pl. 36, fig. 2

triangularis, *Spirifer*, Sowerby (J. de C.), 1827, *Min. Conch.* 6 : 120, pl. 562, figs. 5, 6

20. The following are the references for the selection of type species for the under-mentioned nominal genera specified in the Ruling given in the present *Opinion* :—

For *Echinoconchus* Weller (S.), 1914 : Chao, 1927, *Palaeont. sinic.* 5(2) : 63

For *Gigantella* Sarycheva, 1928 : Muir-Wood, 1930, *Ann. Mag. nat. Hist.* (10) 5 : 105, 106

For *Gastrioceras* Hyatt, 1884 : Foord & Crick, 1884, *Cat. foss. Cephal. Brit. Mus.* 3 : 327

For *Goniatites* de Haan, 1825 : Miller (S.A.), 1889, *N. Amer. Geol. Pal.* : 438

21. Family-Group Name Problems : The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has been ascertained that an addition or additions to the foregoing *Official List* and/or to the corresponding *Official Index of Rejected and Invalid Family-Group Names in Zoology* will need to be made in order to complete the action which under the General Directives given to the International Commission by the International Congress of Zoology, is required to be taken in the present case. This question is now being examined on a separate File to which the Registered Number Z.N.(G.) 128 has been allotted.

22. At the time of the submission of the present application the name applicable to the second portion of a binomen was "trivial name". This was altered to "specific name" by the Fourteenth International Congress of Zoology, Copenhagen, 1953, which at the same time made corresponding changes in the titles of the *Official List* and *Official Index* of names of this category. These changes in terminology have been incorporated in the Ruling given in the present *Opinion*.

23. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

24. The present *Opinion* shall be known as *Opinion* Four Hundred and Twenty (420) of the International Commission on Zoological Nomenclature.

DONE in London, this Fifth day of March, Nineteen Hundred and Fifty-Six.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

APPENDIX

Request for the substitution of a reference to a neotype for a reference to a specified previously published figure as the standard of reference for the interpretation of the nominal species "Productus crassus" Fleming, 1828 (Phylum Brachiopoda, Class Articulata), a species originally named "Conchylolithus Anomites crassus" by Martin (W.) in 1809 in the work entitled "Petrificata Derbiensia" since rejected for nomenclatorial purposes

By HELEN M. MUIR-WOOD, D.Sc.

(*British Museum (Natural History), London*)

The present paper is in the nature of a supplement to the proposal in relation to one of the twelve specific names in the Phylum Brachiopoda (Class Articulata) originally published by Martin (W.) in 1809 in the work entitled *Petrificata Derbiensia* which, in consequence of the rejection of the foregoing work for nomenclatorial purposes by the Commission in its *Opinion* 231, I then asked should be placed on the *Official List of Specific Names in Zoology* as from the first author subsequent to Martin by whom the names in question were validly published. The foregoing application was a joint application with Dr. C. J. Stubblefield (*Geological Survey and Museum, London*) who submitted a corresponding request in respect of the names of two species of the Class Cephalopoda which also had been originally published by Martin in the *Petrificata Derbiensia* (Muir-Wood & Stubblefield, 1951, *Bull. zool. Nomencl.* 6 : 18—30).

(2) In the foregoing application I asked that, when recognising the name *crassus* Fleming, 1828, as published in the combination *Productus crassus*, as the oldest nomenclatorially available name

for the species originally named *Conchyliolithus Anomites crassus* by Martin in 1809, the International Commission should give a Ruling that the species so named be interpreted by reference to figure 2 on plate 16 of Martin's *Petrificata Derbiensia* of 1809. The situation has since undergone a material change as the result of the decision by the Fourteenth International Congress of Zoology, Copenhagen, 1953, to insert in the *Règles* a provision recognising neotypes as a category of type specimen. In the light of the foregoing decision by the Copenhagen Congress I am asking the Commission to substitute neotypes for previously published figures as the standard of reference for certain species of Brachiopoda, the names for which I have asked should be validated under the Plenary Powers as from Martin, 1809. In the present case I am asking for the adoption of a corresponding course in regard to the nominal species cited above.

(3) The specimen figured by Martin as figure 2 on plate 16 of his *Petrificata Derbiensia* of 1809 which in my original application I asked should be taken as the standard of reference for the nominal species *Productus crassus* Fleming, 1828, is no longer extant, and accordingly, although the foregoing figure of Martin's is otherwise satisfactory, it would not form a suitable basis for the designation of a neotype. For this reason in 1951 (*Ann. Mag. nat. Hist.* (12) 4 : 101, 118, pl. 6, figs. 1a-b) I selected as the "unofficial" neotype of Fleming's *Productus crassus* a specimen in the White Watson collection in the British Museum (Natural History) which resembles Martin's figure in proportions and ornament and which was obtained in Derbyshire (probably from the Upper Dibunophyllum zone), whence Martin's figured specimens were mostly obtained. It is this specimen which I now ask the International Commission formally to recognise as the neotype of *Productus crassus* Fleming, 1828.

(4) The original label of the neotype of *Productus crassus* Fleming, 1828, is lost, a small portion only adhering to the back of the specimen. The entry in the register which may have been copied from the original label (or of which the original label itself may have been a copy) reads as follows: "*Productus*, Carboniferous, Derbyshire, White Watson Coll. (W. Martin), purch. A. Bingham 1914". The same register gives for this specimen the number B.40431.

(5) The following is the label accompanying the neotype :—

Gigantoproductus giganteus var. *crassus* (J. Fleming)

Carboniferous Limestone, Derbyshire.

White Watson Coll. B.40431

Figd. Muir-Wood, Ann. Mag. Nat. Hist. (12) 4, no. 38, 1951 : 101,
pl. 6, figs. 1a, b.

Ref. Muir-Wood and Stubblefield, Bull. Zool. Nomencl. 6(1) 1951 : 21

Selected as neotype by H. M. Muir-Wood, 1951.

(6) The following labels are affixed to the neotype :—

(a) an oval yellow number label B.40431 (Official Registration Number) ;

(b) a round green ticket on which is written in Indian ink a capital letter "N" enclosed in a circle, the green ticket denoting that the specimen has been figured and the letter "N" in a circle denoting that the specimen has been selected as the neotype.

(7) For the reasons set forth above, I now ask that in place of the action recommended in paragraph 26(1)(f) in the application which I originally submitted (1951, *Bull. zool. Nomencl.* 6 : 28) the International Commission, when placing on the *Official List of Specific Names in Zoology* the specific name *crassus* Fleming (J.), 1828 (*Hist. brit. Anim.* : 379), as published in the combination *Productus crassus*, should give a Ruling that the species so named is to be interpreted by reference to the neotype therefor specified in paragraph 3 of the present application.



International Commission on Zoological Nomenclature. 1956. "Opinion 420 Addition to the Official List of Specific Names in Zoology of the specific names for Eleven species of the class Brachiopoda and for two species of the class Cephalopoda originally published by Martin (W.) in 1809 in the nomenclatorially invalid work entitled *Petrificata Derbiensia* and now available as from the first Subsequent date on which they were severally published in Conditions Satisfying the Requirements of the Regies." *Opinions and declarations rendered by the International Commission on Zoological Nomenclature* 14, 129–168.

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