Geol. Mag. **127** (6), *1990, pp. 587–589. Printed in Great Britain*

CORRESPONDENCE AND NOTES

A synonymized nomenclature for calcified sponges

A. Yu. ZHURAVLEV*, F. DEBRENNE† & R. A. WOOD§

*Palaeontological Institute, USSR Academy of Sciences, Profsoyuznaya ul. 123, Moscow B321, U.S.S.R.
†CNRS URA 12, Institut de Paléontologie, 8 Rue de Buffon, Paris 75005, France
§Department of Earth Sciences, University of Cambridge, Downing St., Cambridge CB2 3EQ, U.K.

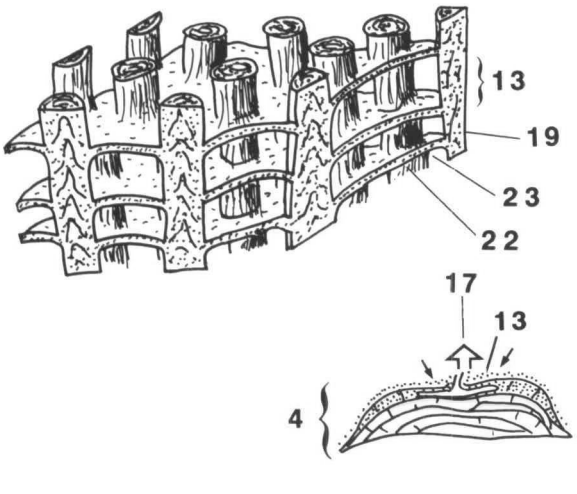
(*Received* 19 March 1990; *accepted* 7 May 1990)

Abstract – A synonymized nomenclature for calcified sponges (archaeocyaths, stromatoporoids, chaetetids, sphinctozoans and pharetronids) is here presented to enable comparison of suggested homologous structures.

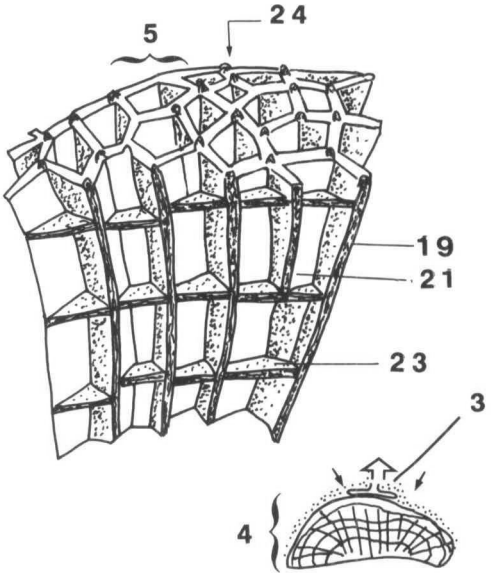
The rediscovery of living calcified sponges has renewed interest in the biology, phylogeny and ecology of related fossils, and many of these forms have been rescued from groups of previously problematic status. If we can prove poriferan affinity for these groups – the archaeocyaths, stromatoporoids, chaetetids and sphinctozoans – then this will have considerable implications for our understanding of the evolution of the Porifera as well as the evolution of fossil communities, especially within reefs. However, these groups have been worked on by specialists in isolation, and complex

Table 1. Homologous structures and supposed synonyms for calcified sponges

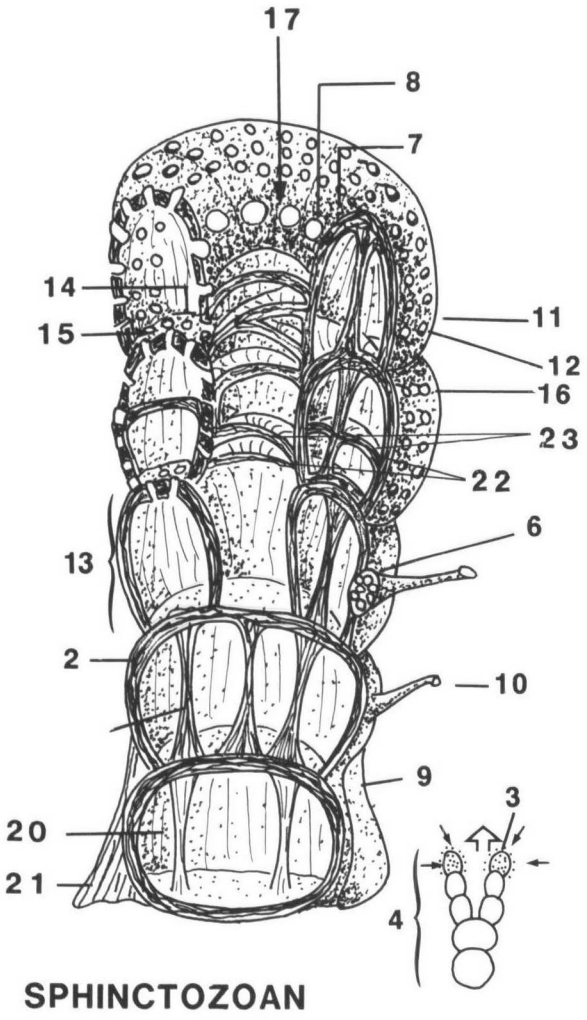
Stromatoporoid and chaetetid (Wood, 1987)	Sphinctozoan (Finks, 1983)	Archaeocyath (Debrenne, Zhuravlev & Rozanov, 1989)
	(1) (ambiostium)	stirrup-pore
	ambisiphonate	[ambisiphonate]
	(2) (aporate)	non-porous
aquiferous unit space	[aquiferous unit space]	[aquiferous unit space]
aquiferous unit	[aquiferous unit]	[aquiferous unit]
aquiferous system	[aquiferous system]	[aquiferous system]
(3) astrorhizae	[astrorhizae]	[astrorhizae]
(3) astrorhizal canal	(endotube)	[astrorhizal canal]
(4) (calcareous) skeleton	(sclerosome)	(cup)
(5) [calicle]		[calicle]
	(cateniform)	thalamid
chimney		[chimney]
	(6) cribribulla	discontinuous microporous sheath
	(7) endowall	tabular inner wall
	(8) endopore	simple inner wall pore
(9) epitheca		(holdfast)
	(10) exaulos	[exaulos]
	(11) exowall	tabular outer wall
	(12) exopore	simple outer wall pore
(13) (interlaminar space)	chamber	intertabulum, chamber
	(14) interwall	(tabula)
(15) (foramina)	interpore	(pore in tabula)
	(16) labripore	[labripore]
?lamina		(dissepiment)
mamelon	[mamelon]	[mamelon]
(17) osculum	(oscule)	(central cavity opening)
(18) pillar	pillar	[pillar]
(19) primary calcareous skeleton	[primary calcareous skeleton]	[primary calcareous skeleton]
	prosiphonate	[prosiphonate]
	(20) (protothalamus)	juvenile cup
	protocysts	
(21) [pseudoseptum]		
	radial trabeculae	?taenia
reticulum		?dictyonal structure
	retrosiphonate	(invaginal inner wall)
(22) secondary calcareous skeleton	(filling tissue)	(secondary thickening, stereoplasm)
(23) (tabula)	vesicle (diaphragm)	(dissepiment)
(24) [tubercule]	(tubercule)	tubercule



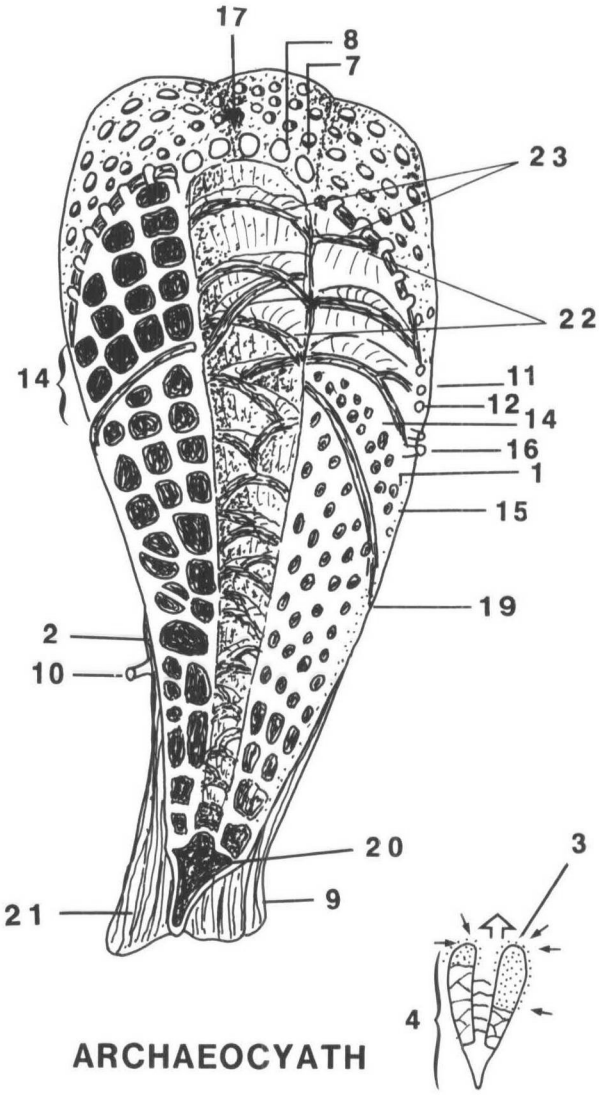
STROMATOPOROID



CHAETETID



SPHINCTOZOAN



ARCHAEOCYATH

Figure 1. Structures of calcified sponges. The numbers refer to terms listed in Table 1.

https://doi.org/10.1017/S0016756800015478 Published online by Cambridge University Press

nomenclatures have developed which have hindered comparison even though we can assume a similar function and homologous development for many structures. Now that living representatives are available for comparative morphology, it has been realised that many of these groups have been separated artificially, which has obscured their true affinities. With the removal of these erroneous taxonomic boundaries, homologous structures are readily comparable and so we here present a table (Table 1) listing homologous structures and supposed synonyms. These synonyms will be useful also for comparison of pharetronids and 'sclerosponges'. In the table, synonyms are given in brackets and preferred terms left open. Additional recommended terms are given in square brackets. Terms used for slightly different elements are without brackets. The numbers refer to the structures illustrated in Figure 1.

References

DEBRENNE, F., ZHURAVLEV, A. YU. & ROZANOV, A. YU. 1989. Pravilnye Archeosiaty [Regular archaeocyaths.] *Trudy Paleontologicheskogo Instituta* **233**, 198 pp. Moscow, Nauka 1989 (in Russian).

FINKS, R. M. 1983. Pharetronida: Inozoa and Sphinctozoa. In *Sponges and Spongiomorphs. Notes for a Short Course* (eds. J. K. Rigby and C. W. Stearn), pp. 59–69. University of Tennessee, Department of Geological Sciences, Studies in Geology 7.

WOOD, R. 1987. Biology and revised systematics of some late Mesozoic stromatoporoids. *Special Papers in Palaeontology* **37**, 1–89.