

HANDBOOK FOR THE STUDY AND DESCRIPTION OF MICROBIALITES

**Bulletin 147
coming in
2019**



Small columns developing on broader columns overlain by climbing ripples; stromatolite; Meentheena Member; Tumbiana

There has long been a need for a more balanced and consistent approach to how stromatolites and other microbialites are described and recorded in the literature.

GSWA Bulletin 147, due for release in 2019, has consolidated definitions and useful terminology from global literature into a rational and systematic manual to address many of the existing problems that have historically prevented effective comparative studies.

Microbialite

Stromatolite



laminated

Thrombolite



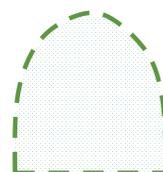
clotted

Dendrolite



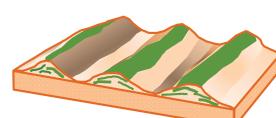
shrubs
Subsets of microbialite

Leiolite



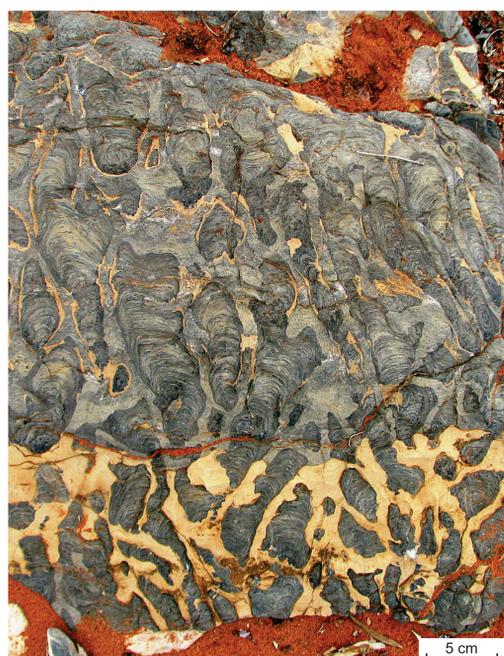
structureless

MISS
(microbially induced
sedimentary structures)



surface feature

This handbook is a practical guide extensively complemented with illustrative examples. It deals with the description of microbialites from the regional and outcrop scale down to the macroscopic and microscopic scale.

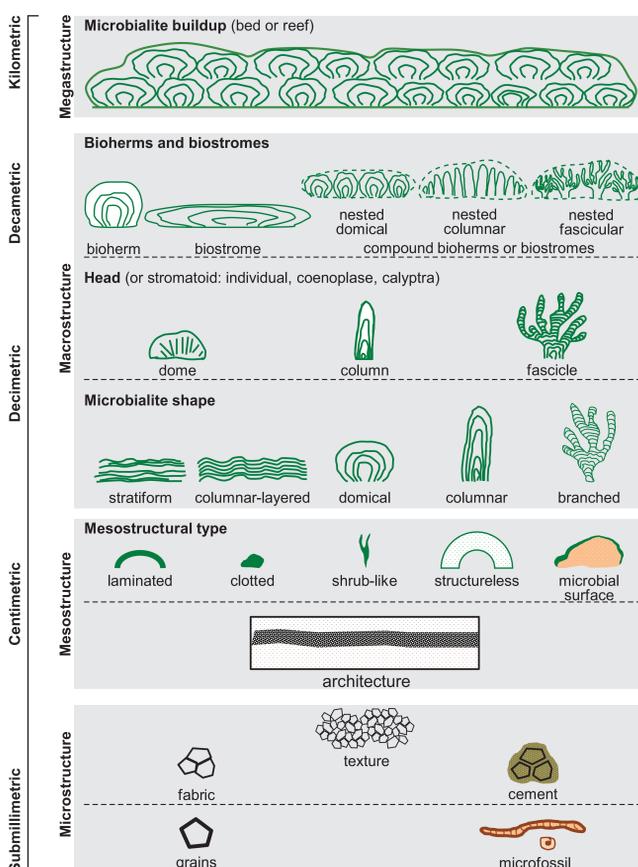


Linella avis; Loves Creek Formation, Bitter Springs Group; Amadeus Basin



Concave conical; Conophyton new Form

Scale Components of microbialite-bearing beds

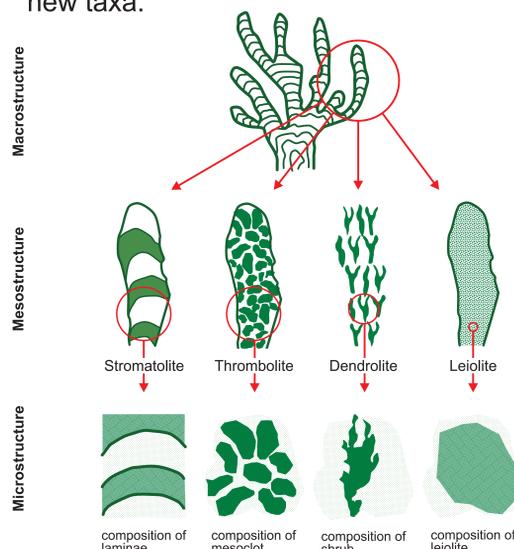


Mega- and macromicrobialites



Subspherical (hemispherical) buildup

The naming of microbialite structures has been contentious. To overcome this problem and assist biostratigraphers, an independent code of nomenclature is proposed that continues to recognise the more than a thousand already named taxa, and allows for the description of new taxa.



Wavy laminae; stromatolite; Woodiana Member, Jeerinah Formation

The main thrust of this handbook is to foster effective communication by presenting what should become internationally acceptable procedures and terminology for the study of microbialites.

ABOUT THE AUTHORS

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Dr Kathleen Grey is a retired State paleontologist. During her career, Kath worked at Geological Survey of Western Australia (GSWA) for 40 years. Her large volume of work on Proterozoic paleontology resulted in the creation of a biostratigraphic framework for countless publications and maps published by the Department.



Professor Stanley Awramik is a researcher in the Department of Earth Science, University of California, Santa Barbara. He has been studying microbialites for over 45 years from both marine and nonmarine environments, and from the early Archean to living examples of the Holocene.



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