

Nannotax – putting nannofossils on the web

Jeremy R. Young, Paul R. Bown, Jacqueline A Lees *Earth Sciences, University College London, WC1E 6BT, UK* jeremy.young@ucl.ac.uk

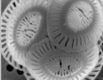
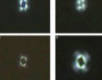
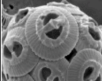
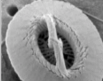
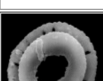
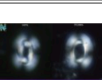
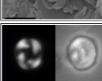
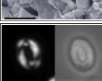
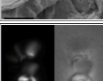
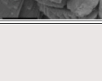
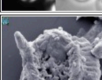
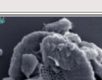


Noelaerhabdaceae

Ancestry: [Coccolithophores](#) -> [Isochrysidales](#) -> [Noelaerhabdaceae](#)

Sister taxa: [Noelaerhabdaceae](#) [Isochrysidaceae](#) [Prinsiceae](#)

Diagnosis: Heterococcoliths with *Reticulofenestra*-type structure, V-units vestigial, R-units forming grill, both shields, and two-layered tube

Daughter taxa (blue => in age window 0-5.3Ma)	Granddaughter taxa
   	<i>Emiliania</i> <i>E. huxleyi</i> <i>E. sp.</i>
   	<i>G. caribbeana</i> <i>G. ericonii</i> <i>G. lumina</i> <i>G. muelleri</i> <i>G. oceanica</i> <i>G. omega</i> <i>G. ornata</i> <i>G. small</i> <i>G. sp. elevated bridge</i> <i>G. sp.</i>
   	<i>Pseudoemiliania</i> <i>P. lacunosa</i> <i>P. ovata</i> <i>P. sp.</i>
   	<i>R. parvula</i> group <i>R. pseudoumbilicus</i> group <i>Reticulofenestra</i> sp. <i>R. floridanus</i> group <i>R. bisecta</i> group <i>R. reticulata</i> group <i>R. umbilicus</i> group
   	<i>Noelaerhabdus</i> <i>N. bozoinoviae</i> <i>N. sp.</i>
   	<i>Pyrocyclius</i> Spurious genus for specimens without shields
   	<i>Bekelithella</i> With ring of short spines extending from inner tube <i>B. eckinata</i> <i>B. sp.</i>

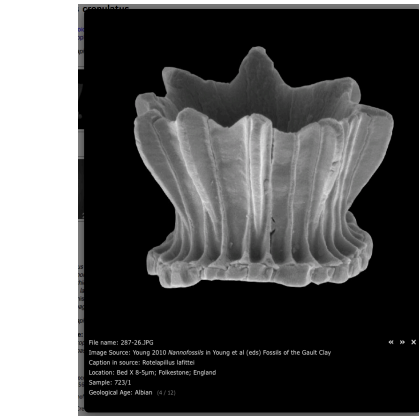
Nomenclature:

Citation: Noelaerhabdaceae Jerkovic, 1970 emend. Young & Bown, 1997

Synonyms: Gephyrocapsaceae Black, 1971

Notes: The phrase "Noelaerhabdacean coccoliths" is ugly and many workers have used alternatives. I recommend using

Reticulofenestra spp. for the group best described as *Reticulofenestra*. Please note that *Reticulofenestra*



Overview

Nannotax (<http://nna.tmsoc.org/Nannotax3>) is a website designed to serve as a comprehensive online guide to nannofossil taxonomy. It is based on an SQL database of taxon descriptions and a collection of authoritatively identified images. It is driven by a server-based php program.

This poster shows some representative screenshots and the notes below outline what the site provides and how it does it.

Image collection and pop-ups

What you see - every species (or sub-species) page has a collection of images of the taxon (>10,000 on the site). These appear as thumbnails which can be enlarged to full size pop-ups with metadata on the source publication of the images, geological age, & geographic location.

How it works - the images are stored in a hierarchical folder collection with one folder per taxon. The php program displays all images in the taxon folder as a gallery of thumbnails. Metadata is stored in the image header. The pop-up display uses a generic php module (MediaboxAdv).

Taxon tables

What you see - all higher taxa (genera and above) have a table listing their daughter taxa with short diagnoses and illustrations of typical specimens, plus a listing of granddaughter taxa. This replaces cryptic taxonomy menus, allows very rapid browsing, and provides graphic keys to every level of the taxonomy. There are ca 600 of these tables on the website. **How it works** - the tables are auto-generated by the php program using the hierarchical folder structure as a model of the taxonomy. Images are taken either randomly from the included taxa or from an icons folder of selected images if this has been created.

Taxon data

What you see - a structured page of data on the taxon, some entries are very short others are extensive. **How it works** - there is an SQL table of data with the taxon name used as a link to the image folders (Linnean taxonomy provides a well-defined namespace). The table can be edited online via an html form or can be saved to excel for bulk editing. The structure is nearly flat, to allow painless data extraction/migration if needed.

Time control

What this does - users can choose any time interval (e.g. Albian, Holocene) to focus on, taxa are then colour coded and sorted according to whether or not they occur in the time interval. **How it works** - the database includes first and last occurrence data (e.g. LAD is in zone NN5) these are dynamically converted to Ma ages via an SQL query to a look-up table as the taxon tables are built up and the program tests if the taxa are inside the time interval of interest.

Commenting

What you see - a comments form is available on every page to allow users to discuss taxa, there is also a separate forum page and a recent comments page. **How it works** - this uses *commentics* a separate php script.

Original descriptions - Farinacci catalog

What you see - users can follow links from most pages to see the type description of the taxon and of any synonyms. They can also separately browse the catalog of type descriptions. **How it works** - the Farinacci catalog of type descriptions (copyright now donated to the INA) has been scanned (ca. 5000 pages) and the images catalogued alphabetically by taxon. The program generates links to these automatically from the names. An updated catalog incorporating recently described species is near completion, by Richard Howe.

Bibliographic data

What you see - a short bibliography of references cited on each page. **How it works** - a large bibliography is maintained using Endnote and exported to an HTML file. Abbreviated citations (e.g. Bown 2005; Noël et al. 2004) are stored in a field on the database and used to select the corresponding references from the HTML file via a grep query. For ambiguous references (e.g. Perch-Nielsen 1985 could refer to different chapters in *Plankton Strat.*) keywords are added to the abbreviated citation.

Zonation charts

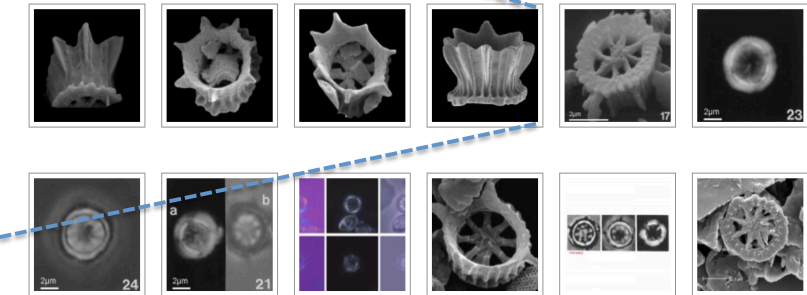


Rotelapillus crenulatus

Ancestry: [Mesozoic](#) -> [Stephanolithales](#) -> [Stephanolithaceae](#) -> [Rotelapillus](#) -> [Rotelapillus crenulatus](#)

Sister taxa: [R. applegatei](#) [R. biarcus](#) [R. crenulatus](#) [R. mskayae](#) [R. munitus](#) [R. pleoseptatus](#) [R. radians](#) [R. sp.](#)

Diagnosis: *Rotelapillus* with central area spanned by eight radial bars.



Nomenclature:

Citation: *Rotelapillus crenulatus* (Stover, 1966) Perch-Nielsen, 1984

Basionym: *Stephanolithon crenulatum* Stover, 1966

Synonyms: *Coccolithon actinodiatum* Gartner, 1968

Notes: *Rotelapillus laffittei* (Noël, 1957) Noël, 1973 has been widely used in the same sense, but is based on type sketches that do not look like the 'crenulatus' species concept. This basic coccolith morphology ranges throughout the Cretaceous with little change.

Farinacci catalog pages: [S. crenulatum](#) + [C. actinodiatum](#) +

Diagnosis: *Rotelapillus* with central area spanned by eight radial bars.

Morphology:

These are small circular coccoliths with high rims and are often seen in side view. Alternate rim elements bear radial ridges, which are clearly visible in the light microscope at high focus, giving a crenulate outline. Central area spanned by 8 radial bars, with weak channelling. Rims form the inner cycle and do not extend high up the wall.

Geological Range:

Last occurrence (top): Late Maastrichtian (66.04Ma). Data source: Burnett 1999

First occurrence (base): Late Tithonian (147.72Ma). Data source: Burnett 1999

References:

- Gartner, S., (1968). Coccoliths and related calcareous nannofossils from Upper Cretaceous deposits of the Tethyan region. *Geological Magazine* 85, 1-56.
- Noël, D., (1973). Nannofossiles calcaires de sédiments jurassiques finement laminés. *Bulletin de la Société de Géologie de France* 244, 1-10.
- Stover, L.E., (1966). Cretaceous coccoliths and associated nannofossils from France and the North Atlantic. *Geological Magazine* 83, 1-10.

Nannotax3 - Mesozoic - Rotelapillus crenulatus by Jeremy R. Young

Taxon Search

Search term: in module

Powered by iNanno, developed by Jeremy R. Young

[Nannotax user? - Go to the Conference, I](#)
[cite this page](#)

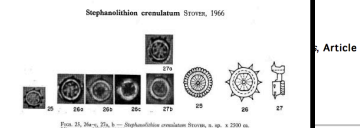
[edit taxon](#)

Comme

A tool used by nannofossil workers across the world

Nannotax was initially funded as part of an EU project (EDIT) for promoting web-taxonomy and subsequently via an NERC knowledge transfer project. We are pleased to report that it has become a prime working tool for industrial and academic nannofossil specialists across the world, and at sea. It also is a useful reference source for non-specialists and anyone seeking to learn or teach nannofossil taxonomy. Content is the responsibility of all three authors, with many thanks to colleagues. Website developed and maintained by J. Young

Staphanolithon crenulatum Stover, 1966



Article

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