

*Nephrolithus gorkae* ÅBERG, 1966



Pl. I - *Nephrolithus gorkae* n. sp.  
View of convex side.  
Holotype no. Y1.  
Approximately x 13,000.

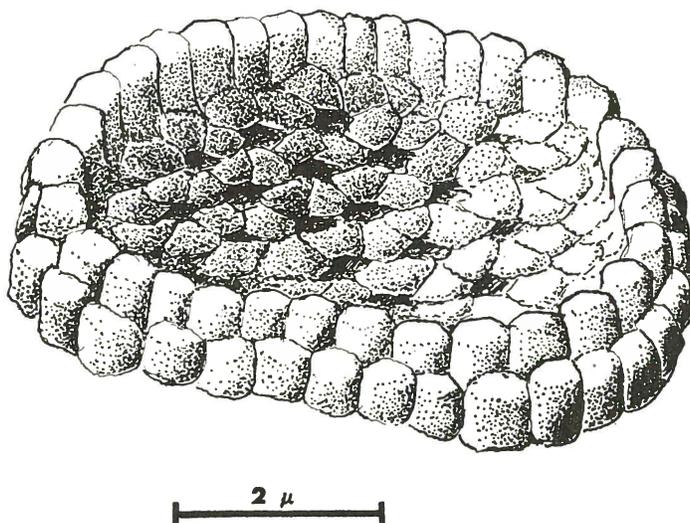


FIG. 1: *Nephrolithus gorkae* n. sp.  
Reconstruction of holotype;  
view of concave side.  
Approximately x 15,500.

**Description:**

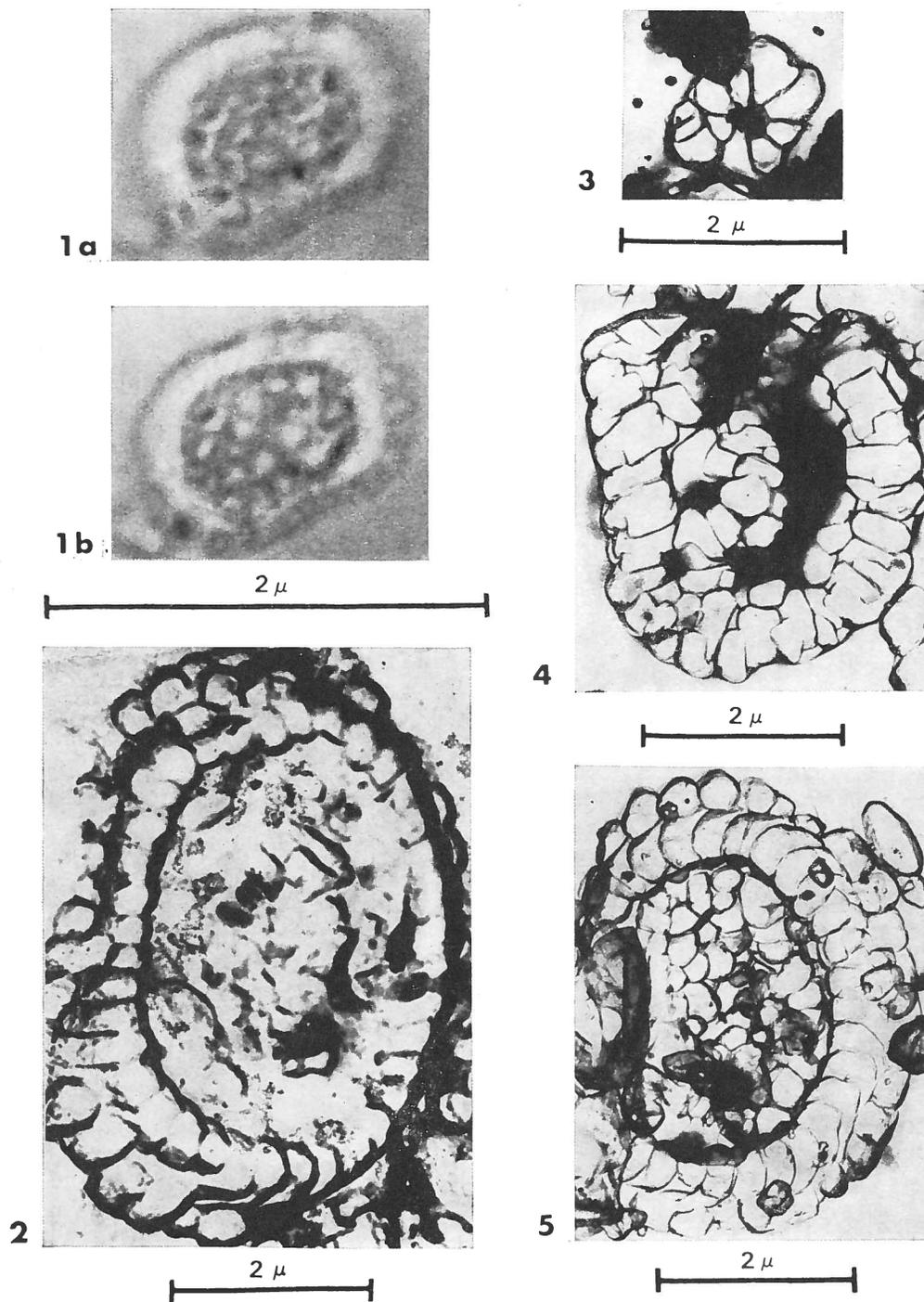
Coccolith generally kidney-shaped. The two rows of rim crystals interlaced in regular alternation. The ring-shaped structures of central area composed of seven to nine imbricately arranged crystals orientated clockwise. Each ring has one or more crystals in common with neighbouring rings.

Size of holotype — Maximum breadth 4.6 microns, minimum breadth 3.3 microns.

**Remarks:**

The crystals of the rim are interlaced in regular alternation so as to give a stable structure. The kidney-like shape seems to result from the bending outwards of the rim crystals of the longer side towards the convex side. In pl. I, five crystals, seen more or less from the side, display this condition. Some specimens do not have the typical kidney-shape, but the shape and general arrangement of the crystals justify their inclusion in *Nephrolithus gorkae* n. sp. Perhaps the typical kidney-shaped coccoliths were placed round some kind of opening in the coccosphere. Such differences in shape of the coccoliths is well known from many modern genera.

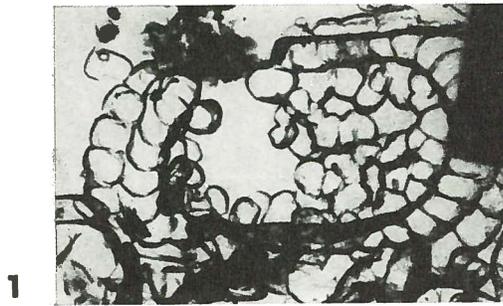
The rings of the central area constitute part of the neighbouring rings, the part in common consisting of one or more crystals. The rings may hold together even if the rim is broken. An example of such a separate ring is shown in pl. II, fig. 3.



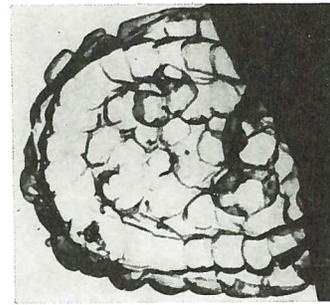
Pl. II - *Nephrolithus gorkae* n. sp.

- FIGS. 1a, 1b — Specimen seen in light microscope. a) High level. b) Low level. Approximately  $\times 6\ 500$  (magnification of photographic negative  $\times 1\ 600$ ).  
 FIG. 2 — View of concave side. Approximately  $\times 14\ 000$ .  
 FIG. 3 — Separate ring. Approximately  $\times 17\ 000$ .  
 FIG. 4 — View of convex side. Approximately  $\times 14\ 000$ .  
 FIG. 5 — View of concave side. Approximately  $\times 14\ 000$ .

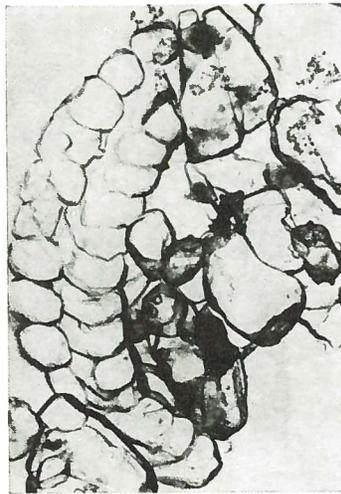
The size range of the coccoliths for greatest breadth is 4.6—7.7 microns and for smallest breadth 2.6—5.1 microns. The measurements were made on micrographs. The separate rings and the individual crystals show remarkably little variation in size.



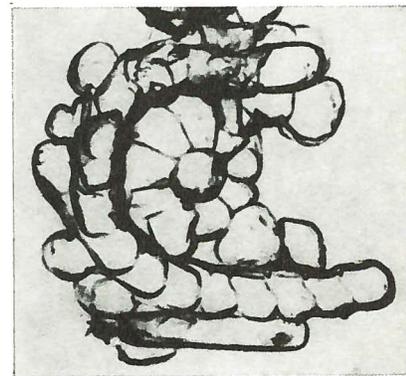
2  $\mu$



2  $\mu$



2  $\mu$



2  $\mu$



2  $\mu$

Pl. III - *Nephrolithus gorkae* n. sp.

- FIG. 1 — View of concave side. Part of central area missing. Approximately  $\times 11\ 000$ .  
 FIG. 2 — Detail of rim. Note interlacing of crystals. Approximately  $\times 14\ 000$ .  
 FIG. 3 — View of convex side. Approximately  $\times 14\ 000$ .  
 FIG. 4 — View of concave side. Approximately  $\times 14\ 000$ .  
 FIG. 5 — Broken specimen showing part of the rim and one ring in central area. Approximately  $\times 14\ 000$ .

**Type level:**

Maestrichtian.

Distribution — Maestrichtian of Södra Sallerup and Limhamn, Scania, Sweden.

**Type locality:**

Södra Sallerup, Scania, Sweden.

**Depository:**

Type collection of Geologiska Institutionen, University of Stockholm. Holotype: Pl. I. Negative no. Y1; paratypes: negatives nos. Y2 - Y18.

**Author:**

Åberg M., 1966, p. 65; pl. 1; pl. 2, figs. 1-5; pl. 3, figs. 1-5; text-fig. 1.

**Reference:**

Electron microscopic studies on *Nephrolithus* (Coccolithophoridae). Stockholm Contr. Geology, vol. 13, pp. 63-67, pls. 1-3, text-fig. 1.