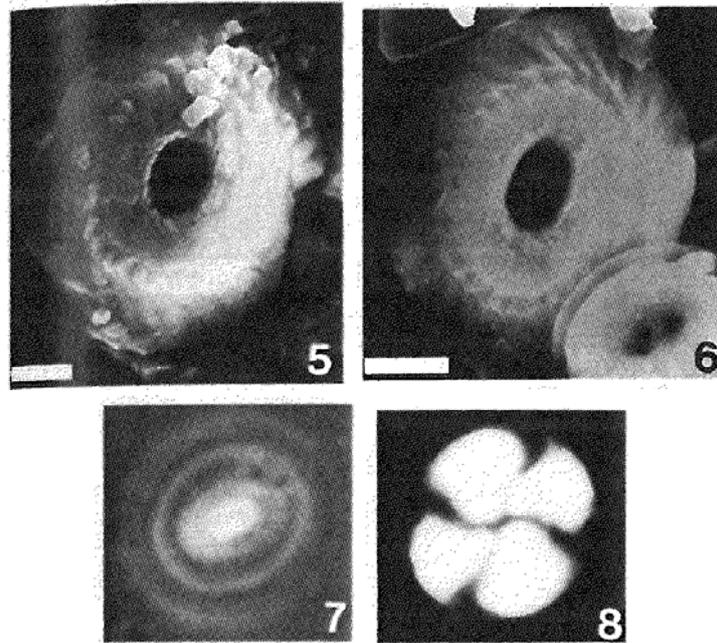


242. *Watznaueria variabilis* Rahman & Roth (1992)



SCALE BARS=2 $\mu$ m

Figs 6.5-6.8

**Diagnosis:** A large subcircular to circular species of *Watznaueria* made of two thick shields with a subcircular to elliptical central opening ranging in size from very small to one fifth the diameter of the coccolith.

**Derivation of name:** From the variability of the size and shape of the central opening.

**Description:** The distal shield is composed of two major cycles of crystals. The outer cycle is wide and consists of 30 to 34 lath shaped crystals imbricated sinistrally (in distal view) showing straight sutures. The inner cycle is relatively narrow and composed of short tabular crystals arranged almost radially along a oval outline. There is a narrow inner cycle of narrow elements oriented subvertically to form a tube like structure connecting the proximal shield. The shape of the central opening varies from subcircular to elliptical. The width of the opening may vary from small (almost nonexistent) to one-fifth of the width of the coccolith. There is no bridge or grill in the central area.

**Remarks:** This species is very distinctive because of its sub circular to circular shape, thick shields and large size. *W. variabilis* is strongly birefringent under crossed nicols. The strong birefringence is not a result of overgrowth, as indicated in the electron microscopic observation.

**Differential diagnosis:** *W. variabilis* differs from *W. manivitae* by the presence of a central opening and a larger area occupied by the inner cycle of the distal shield, from *W. barnesae* by a larger size, thicker and more circular shield, and from *W. fossacincta* and

*W. ovata* by having a larger size and more circular and thicker shield. *Watznaueria deflandrei* (NÖEL) REINHARDT also has a thick shield which is strongly birefringent under crossed nicols. *W. variabilis* can be distinguished from *W. deflandrei* by the large size and the presence of a central opening.

Some specimens of *W. variabilis* resembles the generic characteristics of the genus *Cyclagelosphaera* NÖEL. A wide range of variations continuously from circular to subcircular outline of the rim and the central opening and a large size distinguishes this species from *Cyclagelosphaera margerelii*. *W. variabilis* differs from *Ellipsagelosphaera? tubulatum* GRÜN & ZWEILI by a wider and strongly birefringent rim, a smaller central opening and the larger size.

**Holotype:** 84-39-S24 (Fig. 6.5).

**Paratype:** 84-14-S25 (Fig. 6.6).

**Dimensions:** Holotype is 10.8 µm long and 8.7 µm wide, Length ranges from 7.5 µm to 12 µm and width ranges from 7 to 11 µm.

**Type level:** Upper Oxfordian.

Rahman, A. & Roth, P.H., 1992. New Calcareous Nannofossil Taxa of Jurassic and early Cretaceous age from the Oka River region in Central Russia. *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen*, **184(2)**: 251-277.