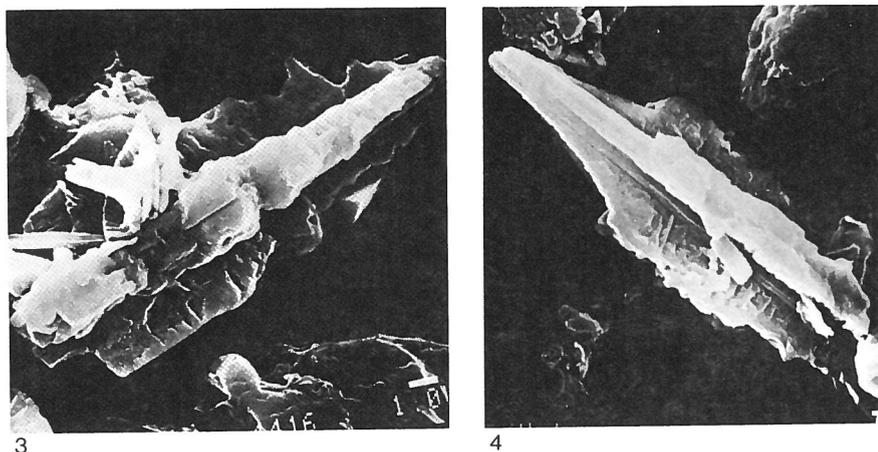


*Lithraphidites*  
*alatus*  
*magnus*

**Lithraphidites alatus magnus** COVINGTON & WISE, 1987



Figs. 3-4 - *Lithraphidites alatus magnus* n. ssp., L. Sample 603B-44-1, 97 cm,  
3) holotype,  $\times 4000$ ; 4) paratype,  $\times 3500$ .

**Description:**

Diagnosis: A subspecies of *Lithraphidites alatus* distinguished by its exceptionally great width and robust size.

Size: Holotype: a minimum of 5.7  $\mu\text{m}$  wide; an estimated 20  $\mu\text{m}$  long.

**Remarks:**

*Lithraphidites alatus magnus* is characteristically found in the black shales, silts, and sandstones of the sand-dominated part of the section in Hole 603B above Core 51. This could indicate that it is a shallow-water form introduced at this site via turbidites.

Differentiation: The holotype is at least 6.75  $\mu\text{m}$  wide as measured on a scanning electron micrograph (Pl. 10, Fig. 3) in which the specimen is foreshortened due to the tilt of the specimen stage. The paratype, represented by another foreshortened image, is at least 5.7  $\mu\text{m}$  wide. The maximum width of the holotype of *L. alatus alatus* is about 5.2  $\mu\text{m}$ , whereas that of the paratype is about 4  $\mu\text{m}$ . A specimen illustrated by Manivit et al. (1977) measures about 4.1  $\mu\text{m}$  in width. The specimens of the new subspecies we observed are in general noticeably larger than the those of *L. alatus alatus* described from the mid-Albian-Cenomanian.

A second difference between the two subspecies seems to be in their shape, although this is more difficult to define because of diagenetic alteration (etching) of most published specimens. *Lithraphidites alatus alatus* has been described as being shaped more or less like an umbrella with the curved portion of the handle removed. The widest point of the nanofossil is at the flared end of the umbrella immediately adjacent to the « handle ». The outline of *L. alatus magnus* appears to be more like a wide bladed dagger, the blade of which maintains a constant width extending some distance from the « handle », perhaps

even widening a bit before tapering toward the point. The holotype of *L. alatus magnus* appears to be widest toward the midpoint rather than at the flared end immediately adjacent to the « handle » (lower left in Pl. 10, Fig. 3).

**Type level:**

DSDP Sample 603B-44-1, 97 cm (Aptian).

Occurrence: Rare to common in the upper Barremian to lowermost Aptian of DSDP Hole 603B. North American Basin.

**Type locality:**

DSDP Sample 603B-44-1, 97 cm.

**Depository:**

Not given.

Holotype: Plate 10, Figure 3.

Paratype: Plate 10, Figure 4.

**Author:**

Covington J.M. & Wise S.W., 1987, p. 631; pl. 10, figs. 3-4.

**Reference:**

Calcareous nannofossil biostratigraphy of a Lower Cretaceous deep-sea fan complex: Deep Sea Drilling Project Leg 93 site 603, lower continental rise off Cape Hatteras. Init. Repts. DSDP, vol. 93, pp. 617-660, 23 pls., 5 text-figs.