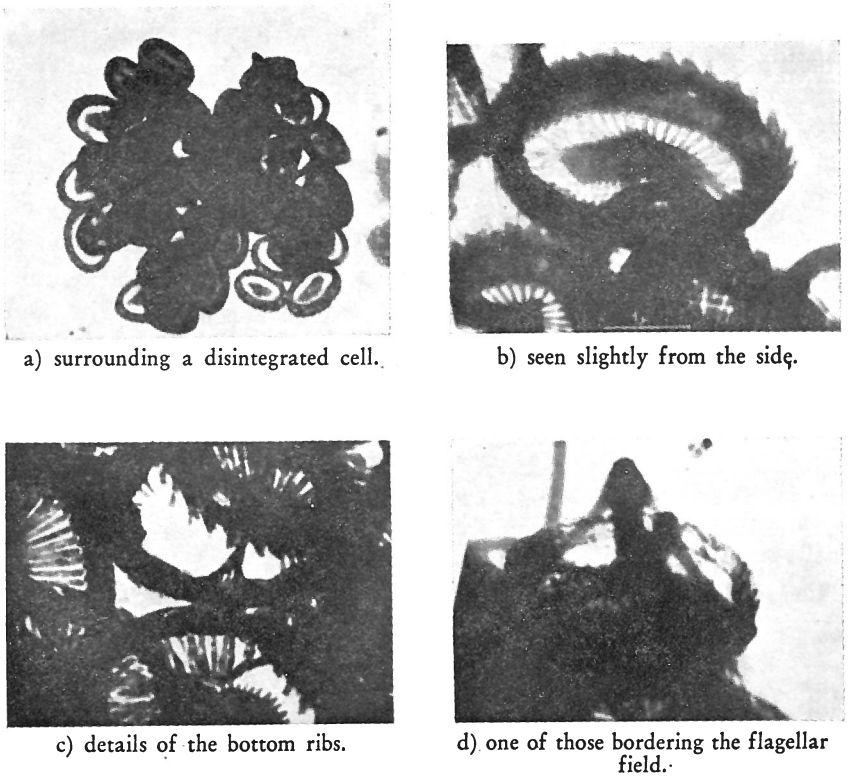
Syracosphaera pulchroides HALLDAL & MARKALI, 1955

1954, *Syracosphaera pulchra* Lohm, pro parte. Halldal and Markali 1954, p. 332, fig. 4. J. Const. int. Explor. Mer, vol. 19, no. 3.



a) surrounding a disintegrated cell.

b) seen slightly from the side.

c) details of the bottom ribs.

d) one of those bordering the flagellar field.

Fig. 4 a-d — *Syracosphaera pulchroides* n. sp.

Description:

Light microscope diagnosis: This species has the same appearance as a small *Syracosphaera pulchra,* being pear-shaped, 16 to 20 μ long, and about 14 μ broad. The blunt spine of the stomatal coccoliths, however, is relatively shorter than those of the stomatal coccoliths in *S. pulchra.*

Electron microscope diagnosis: Following the division used in the description of *Syracosphaera mediterranea* (see aboce), we notice:—(1) The bottom of the ordinary coccoliths has a central solid part bearing a hump in the middle (Figure 4b). The number of ribs going from the central area to the lowest part of the wall varies between 40 and 50. Half way between the central part and the wall each rib is split obliquely (Figure 4c). This may be caused by mechanical stress during drying, but its frequent occurrence indicates that the split represents a true detail in the morphology. Such splits have been observed occasionally in other species which have flat ribs. (2) We have been unable to study the structure of the wall as closely

as in *S. mediterranea,* but some electron micrographs indicate a great degree of conformity in the wall structure of these two types (Figure 4b). In *S. pulchra* we find 30-40 pairs of alternately broad and narrow elements, their numbers being somewhat less than that of the ribs. (3) The lower rim consists of alternately spade-shaped and tapering elements connected with those in the wall, as in *S. mediterranea* (see Figure 4c). (4) Each separate elements of the upper rim in *S. pulchra* is arranged in a similar way to that in the upper rim of *S. mediterranea,* but with one exception; this rim is curled instead of corrugate.

The general arrangement in the structure of *S. pulchra* does not show the same degree of regularity as in *S. mediterranea.* In *S. pulchra* the number of ribs in the bottom is somewhat higher than the number of elements in the upper rim, and the regular correspondence between elements in the bottom and upper rims does not seem to exist.

The coccoliths bordering the flagellar field bear a spine or rod in the middle of their base. These coccoliths are smaller in size and the outline, as seen from above, is more circular (Figure 4d) than the others.

The coccolith size within this species seems to vary from one area to the other. The size of the coccoliths of *Syracosphaera pulchra* observed in our material is somewhat less than mentioned by Kamptner (1941), but agrees with those shown in Schiller's (1930) figures.

Remarks:

In an earlier paper on *Syracosphaera pulchra* (1954) we remarked that the coccolith size of this species seems to vary from one area to the other. Recently we had the opportunity to compare *Syracosphaera pulchra* collected from Weather Ship M with specimens from the Mediterranean and from the Gulf Stream. On the basis of these observations it seems obvious that the smaller forms with coccoliths around 3.5 and 4.5 μ long must be treated as a new species.

Type level:

Recent.

Type locality:

Weather Ship Station M (66° N., 2° E.) in the Norvegian Sea.

Depository:

Institutt for marin biologi, Oslo - Blindern.

Author:

Haldall P. and Markali J., 1955, p. 11, pl. 8, 9.

Reference:

Electron microscope studies on Coccolithophorids from the Norwegian Sea, the Gulf Stream and the Mediterranean. Avh. Norske Vidensk. - Akad. Mat. Nat. Kl. no. 1, pp. 1-30, pls. 1-27.