

53. *Triceratium spinosum* Bailey (Pl. 3, fig. 51).

Bailey 1844, 46, 39.

A.S.A. 1886, 87, 2-5.

*Biddulphia spinosum* Boyer 1901, 703; 1927, 127.

Cell with girdle zone wider than valves, the latter domed, with digitate processes; in valve view triangular or quadrangular, with straight or slightly concave sides; surface reticulate; several spines occur near margin. Diameter, 85 $\mu$ .

DISTRIBUTION. Indonesian waters.

## Genus HEMIAULUS Ehr. 1844

54. *Hemiaulus polycistinorum* Ehr. (Pl. 5, fig. 6).

Ehrenberg 1854, 36.

A.S.A. 143, 23-29.

Boyer 1927, 142.

Valves lanceolate, concave with a narrow, longitudinal keel on surface, horns long, slightly sigmoid, with stout spines; surface coarsely reticulate, meshes prominent on the horns; chloroplasts 2. Length of valve 100 $\mu$ . Boyer doubted whether this was an extant species; the presence of chloroplasts proves this

DISTRIBUTION. In plankton sample off Flores.

## Family CHAETOCERACEAE

## Genus CHAETOCEROS Ehr. 1844

55. *Chaetoceros dadayi* Pavillard (Pl. 5, fig. 7)

Pavillard 1913, 131, 2b.

Cupp 1943, 109, 64.

Cells usually in short chains; apertures small or absent; setae arising from valve corners, rudimentary on one side, on the other side one seta directed posteriorly, the other anteriorly, setae hirsute; chromatophores numerous, extending into setae. Diameter, 10 $\mu$ .

DISTRIBUTION. Frequent but never abundant in Indonesian waters and the Arafura Sea.

56. *Chaetoceros seriacanthum* Gran (Pl. 5, fig. 8).

Gran 1897, 21, 3, 39-41.

Gran and Angst 1931, 478, 62.

Cells in straight chains, not touching at corners; apertures elliptical to rectangular; setae thin, issuing just inside slightly rounded corners, directed posteriorly; notch between valves and girdle; terminal setae diverging. Diameter, 25 $\mu$ .

DISTRIBUTION. North-east Indian Ocean.

57. *Chaetoceros* sp. (Pl. 5, fig. 9).

Cells in short chains, cylindrical, with domed valves, slightly rostrate, connected by a central spine; setae arising within valve corners, then turning abruptly parallel to chain axis. Diameter, 20 $\mu$ .

DISTRIBUTION. Off Onslow, W.A., in phytoplankton.

58. *Chaetoceros* sp. (Pl. 5, fig. 10).

Cells in chains attached by most of valve surface; apertures very reduced; setae fine, very short, emerging from rounded corners of valve; chromatophores numerous, plate-like: somewhat resembles *Ch. armatum* West but has not the fatty integument or the branched setae and the chains do not taper. Diameter, 40 $\mu$ .

DISTRIBUTION. Indonesian waters.

59. *Chaetoceros tetrastichon* Cleve (Pl. 5, fig. 11).

Cleve 1897, 22, 1, 7.

Cupp 1943, 108, 63.

Cells in short chains; chains straight; valve surface flat, apertures almost absent, terminal valve domed; setae arising from valve margins at right angles to chain axis then