

Euodia (Bailey), Cstr.

Among the *Angulifereæ*, Pritchard¹ enumerates the genera *Euodia*, Bail., and *Hemidiscus*, Wall. The definition of the latter, as given by Wallich,² is as follows:—"Frustule free; valve arcuate, with a marginal nodule; cellulation hexagonal, radiate." Professor H. L. Smith, however, according to Dr van Heurck,³ speaks of *Hemidiscus* as possessing somewhat different characters, namely, "valves celluluses, centre blanc, marge veinée."

The genus *Euodia*, Bail., is defined by Pritchard in these words—"Frustules cellulose or granulate, in lateral view lunate;" while Professor H. L. Smith,⁴ after describing the *Palmeria* of Greville thus—"Valves with indistinct umbilicus, finely punctate with radiating lines, dorsal and ventral margins with minute teeth or spines"—characterises *Euodia* as follows—"All others, dorsal margin without spines, ventral frequently with a small pseudo-nodule."

Thus in the case of *Euodia* Bailey only requires the lunate form and the cellulose structure of the valve as distinguishing features, while Smith demands that the dorsal margin be devoid of spines and the ventral often provided with a pseudo-nodule. In the case of *Hemidiscus*, on the other hand, Wallich regards an arcuate form, a cellular radiating structure, and a marginal nodule as essential; whereas Professor H. L. Smith⁴ insists on "cellular valves, clear centre, and veined margin."

To avoid such confusion, I believe, from the observations which I have been enabled to make, that the two genera, *Hemidiscus* and *Euodia*, should be united into one. This view has also been propounded by Pritchard, who, after defining the *Hemidiscus* of Wallich, adds—"We doubt whether the *Hemidiscus* be distinct from *Euodia*, since the only distinction seems to be the marginal nodule of the former—a character perhaps overlooked by Professor Bailey."

In the marine soundings of the Challenger the lunate forms of *Euodia* and *Hemidiscus* have to be recorded as among the least uncommon forms of Diatoms. They are found of all sizes and in all positions, and they are more or less arcuate in outline, having circular or parabolic curves, the ventral line being almost plain or possessing an inflation in the centre, and being not much less swollen than the dorsal line. I have frequently found specimens with a more or less distinct ventral nodule, but have at the same time observed a few devoid of any such structure. The latter I named *Euodia*, and the former *Hemidiscus*; but on several occasions I had the opportunity of observing some semi-lunate valves in series of two or more frustules, and on examining

¹ Pritchard, *op. cit.*, p. 852.

² On the Siliceous Organisms found in the Digestive Cavities of the Salpæ, and their relation to the Flint Nodules of the Chalk Formation, *Micr. Journ.*, vol. viii. p. 42, 1860.

³ Le Microscope, sa construction, son maniement et son application spéciale à l'anatomie végétale et aux diatomées, par le Dr Henri van Heurck.—Troisième édition, Bruxelles, 1878.

⁴ *The Lens*, vol. i. p. 18, 1872.