

is a combination that by the accepted laws of nomenclature cannot possibly be disturbed, since the species is the type of the genus so named by Lamarck, and accepted and redefined by O. Schmidt in 1862. A new name should therefore have been found for *Tethya cranium*. Gray, however, unfortunately substituted Nardo's name, *Donatia aurantiaca*, for *Tethya lyncurium*, of which it is a mere synonym, and left *Tethya cranium* to stand. This proceeding has naturally led to some confusion, but the error was not long left uncorrected, O. Schmidt,¹ some three years later, proposing a new genus, *Craniella*, to receive *Tethya cranium*, and leaving *Tethya lyncurium* in enjoyment of its established rights. O. Schmidt, however, included *Craniella* and its near allies, together with less closely connected Sponges, such as *Stelletta*, in his family Ancorinidæ; and we owe to Carter² their separation as a distinct subfamily group. Carter, adopting Gray's nomenclature for *Craniella cranium*, named this group Tethyina, a term which it is impossible to retain. The Challenger material has added two new genera to the group, and it has become important enough to be raised to distinct family rank; indeed, independently of these fresh accessions, its claim to be regarded as a distinct family would naturally be admitted on account of the sharp line of demarcation which exists between it and the other members of Schmidt's Ancorinidæ. Selecting *Tetilla*, the most primitive genus of the family, as the type, I propose for it the name Tetillidæ.

Definition.—The Tetillidæ are Sigmatophora distinguished by characteristic protriænes, which never fail, and by sigmaspires, which not unfrequently are absent.

No other Sponge can well be mistaken for a Tetillid; wide and numerous as are the variations which occur within the limits of the family, the facies remains the same; it is not always easy to say on what particulars a facies depends; in this case I think these will be found first in the form of the protriæne, which is not exactly repeated in any other group of Sponges; next the anisoactinate character of the oxæas may have something to do with it, for though such spicules occur in other Tetractinellids, I do not know of any in which they are present to the same extent; finally the sigmaspires when present are highly characteristic.

The Skeleton.—The different forms of megascleres met with in the family are—

1. A somal oxæa, which varies from 1.27 to 8 mm. in length according to the species; it is usually anisoactinate but sometimes isoactinate, the ecactine being shorter and more bluntly pointed than the esactine.

2. A cortical oxæa, which differs from the somal chiefly in being much smaller and usually isoactinate.

3. Protriænes, which may be isocladosæ, or anisocladosæ in the latter case two; of the cladi are usually of equal size, and smaller than the third. These spicules, as also the oxæas, are frequently trichodal.

¹ O. Schmidt., Spong. Atlant. Gebiet., p. 66, 1870.

² Carter, *Ann. and Mag. Nat. Hist.*, ser. 4, vol. xvi. p. 67, 1875.