

of the hooks. So far as we know certainly, the diancistra do not occur amongst the Desmacidonidæ. Schmidt, however, describes¹ a sponge under the name *Vomerula tibicen*, which is stated by him to contain "Doppelankern" and "Pflugscharspangen;" unfortunately there are no figures, and the entire description is comprised in the following words:—" *Vomerula tibicen*. Neu—Vom Habitus des Desmacidon tunicatum, also incrustirend, mit Oberhaut, welche in $\frac{1}{2}$ bis 1 Cmtr. lange Röhren übergeht. Nach den Kieseltheilen wäre diese Art ein Desmacidon zu nennen, das ausser den charakteristischen Körpern, nämlich den etwas gebogenen Nadeln, den Doppelankern von 0·0257 Mmtr., und den etwa halb so langen Spangen, auch noch die grossen Pflugscharspangen von 0·157 Mmtr. enthält.

"Es ist damit eine abermalige Combination und Uebergangsform verwirklicht. Ob wir es mit einer constanten Form oder mit einer individuellen Abschweifung von *Vomerula* zu *Desmacidon* oder umgekehrt zu thun haben, ist nicht zu entscheiden.—Fundort: Grenada, 170 Faden."

The combination of spicules here indicated would be so unusual were the "Pflugscharspangen" true diancistra, that we cannot help feeling some doubt on this point, and thinking that possibly they may be only large contort sigmata like those of *Esperella simonis*, nobis, and somewhat resembling the true diancistra; or, supposing that they are true diancistra, then perhaps the chelæ occur as foreign bodies, as in the analogous case of *Sceptrella regalis* (*vide supra*). Further information concerning this point is much needed; if diancistra are really present, and also chelæ, then the species in question forms a most important link between the subfamilies Hamacanthinæ and Esperellinæ; it would, of course, be referable to the latter.

The subfamily Hamacanthinæ is divided into two genera, according to whether the megasclera are diactinal (as in *Hamacantha*) or monactinal (as in *Vomerula*).

The Desmacidonidæ, constituting our third family, are characterised by the presence of chelate microsclera. These spicules are, unlike the sigmata, of such very complex and remarkable form that we cannot believe them to have originated polyphyletically, that is, independently in several groups. Hence we are constrained to class together in one family all those species which possess them, and this arrangement will, we hope, be found to be a satisfactory one. It is but a slight, though an important modification of the arrangement followed by previous authors. Thus, the Desmacidonidæ of Vosmaer include, on the one hand, more than our family, in that he admits most of our Heterorrhaphidæ, *i.e.*, species without chelæ, while, on the other hand, they include less, in that he keeps separate the Ectyoninæ, which do possess chelæ. This is an arrangement of which we cannot at all see the justification, more especially with regard to the separation of the "Ectyonidæ," and in the present work we consider the old "Ectyonidæ" as a subfamily of the Desmacidonidæ under the name Ectyoninæ. The presence in the Ectyoninæ of

¹ Spong. Meerb. von Mex. pt. ii. p. 83.