

sponges were commonly obtained. We shall, however, return to the question of bathymetrical distribution later on, and refer to it in this place only in explanation of a very striking fact which meets us at the outset.

Comparatively little is as yet known of the geographical distribution of sponges at large, and still less, of course, of the distribution of the Monaxonida.

Vosmaer,<sup>1</sup> it is true, has dealt with the subject in some detail, and constructed tables both of geographical and bathymetrical range, but his results are far from being satisfactory. His list shows that sponges are most abundant in the Mediterranean and Atlantic Oceans, but, as he himself points out, this is only because the Mediterranean and Atlantic have been more or less thoroughly explored—witness Schmidt's works on the Atlantic, Adriatic and Algerian sponges, and Carter's researches on the Atlantic sponges obtained by the "Porcupine,"—while the sponge fauna of other seas and oceans is or has hitherto been almost entirely unknown. Hence it follows that the results of the Challenger Expedition taken alone are likely to give more trustworthy information on this head than those of all previous workers, simply because the observations were extended more impartially over an enormous area.

Vosmaer, then, makes six geographical areas, which, he tells us, are "vollkommen künstlich;" viz., Mediterranean, Atlantic Ocean, Pacific Ocean, Indian Ocean, Arctic Ocean, and Antarctic Ocean. Such an arrangement may be very suitable for general purposes, but is obviously inapplicable to the present case, as will be seen by a glance at the chart which illustrates our remarks on this head. The areas which we distinguish (*vide* Chart) are necessarily made to suit our own requirements. This is unfortunate, as it makes comparison a somewhat more difficult matter, but it cannot be avoided.

One or two peculiarities strike us in examining Vosmaer's table. Leaving out of account the Spongillids, with which we are not concerned in this place, we find here set forth the geographical distribution of 74 genera, or so-called genera, of Monaxonid sponges. Of these, two, viz., *Amphilectus* and *Clathria*, are stated to be cosmopolitan. The first, inasmuch as it is, as is stated<sup>2</sup> by Vosmaer himself, "nur ein vorläufiges Aushilfs-Genus, wo alle diejenigen Desmacidinen untergebracht sind, von welchen keine besondere Merkmale bekannt sind, wodurch sie zu einer anderen Gattung kommen sollten," might naturally be expected to be more or less cosmopolitan, while we are inclined altogether to deny the cosmopolitan character of the second (*Clathria*), at any rate until more evidence is forthcoming. It is not a little surprising to find that, according to Vosmaer, Monaxonid sponges<sup>3</sup> have been hitherto altogether unknown from the Antarctic Ocean, and that only nine genera are recorded from the Indian Ocean. Of course, in the present state of our knowledge, the only definite conclusion to be drawn from this is that

<sup>1</sup> Bronn's *Klass. u. Ordnung. d. Thierrichs*, Porifera, p. 447.

<sup>2</sup> Bronn's *Klass. u. Ordnung. d. Thierreichs*, Porifera, p. 353.

<sup>3</sup> Perhaps we ought to except the genera *Amphilectus* and *Clathria*, though the Antarctic Ocean is about the last place in which we should expect to find the latter.