

of the branches or trabeculæ. Primary orifice suborbicular or semicircular; border entire. Afterwards the peristome becomes much raised and multiform, usually fissured in the middle or one side in front, the fissure often becoming a suboral pore by the meeting of the upper angles. Very often a small avicularium on one of the angles which is also frequently developed into a labial or preoral rostrum. Usually numerous adventitious avicularia on one or both aspects of the zoarium.

The known recent species of which any intelligible descriptions have been given, so far as I have been able to ascertain, would appear to be twenty-five or thirty, several of which, however, will probably be found to be merely synonymous, for, as Mr. Hincks remarks, "it is essential that the diagnosis should be much fuller and more minute than authors have usually made it, and identification is not always sure." To which it may be added that up to the present time, one most essential point has been overlooked in all descriptions, viz., the character of the chitinous appendages, which in many cases will be found to afford the easiest and most certain means of diagnosis in this difficult and variable genus.¹ In the following account I have endeavoured to some extent to supply this deficiency, but time has not allowed me to do this so fully as I could have wished.

In his notes on the genus *Retepora*,² Mr. Hincks remarks that the notices by the older writers are valueless for purposes of identification, and the same remark applies to many of the descriptions of more modern date.

In the same paper he enumerates as all the recent species described up to that time —

1. *Retepora phænicea*, Busk, = (?) *Retepora indica*, d'Orbigny.
2. „ *monilifera*, Macgillivray.
3. „ *porcellana*, Macgillivray.
4. „ *granulata*, Macgillivray.
5. „ *fissa*, Macgillivray.
6. „ *versipalma*, de Blainville, = (?) a *Hornera*.
7. „ *marsupiata*, Smitt, = *Retepora cellulosa*, var.
8. „ *reticulata*, Pourtales, = (?) *Retepora beaniana*, var.
9. „ *wallichiana*, Busk and Hincks, = *Retepora elongata*, Smitt.
10. „ *edwardsii*, = (?) *Retepora cellulosa*.
11. „ *beaniana*, King.
12. „ *cellulosa*, Auctt.
13. „ *couchii*, Hincks.
14. „ *prætenuis*, Hincks.

¹ Since this was written, Mr. P. H. Macgillivray, in a paper published in the *Proceedings of the Royal Society of Victoria*, August 9, 1883, which has but just come under my notice, has employed this means of diagnosis, and he observes that the chitinous parts are "very characteristic, and in fact it would be possible to identify most of the species by the examination of the opercula alone."

² *Ann. and Mag. Nat. Hist.*, ser. 5, vol. i. p. 354, 1878.