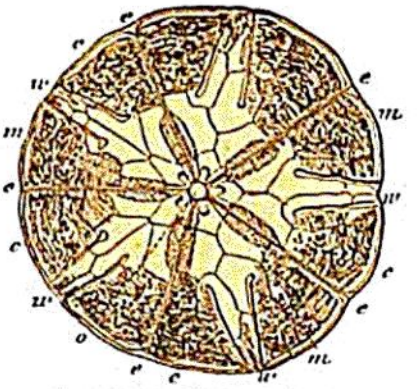
these sexual chymiferous systems, cannot be an objection to considering these systems as interambulacral structures, since we have already seen that in Tiaropsis the eyes are not in the ambulacral rays, but in the interambulacral spaces; and the presence of chymiferous tubes in the interambulacral spaces is no more exceptional in these Medusæ, than in many Echinoderms, among which I have observed and described them in Echinarachnius, more than twelve years ago.[1] An objection to this explanation might perhaps be made on the ground that, in so viewing the Discophoræ, the parts considered as interambulacral are more extensive, more conspicuous, and more characteristic than those regarded as ambulacral. No doubt they are; but this does not alter their homologies, any more than the fact that in Cidaris the ambulacra are also much narrower, and less conspicuous than the interambulacra. Indeed, the relative development of the ambulacral and interambulacral zones varies from one family to the other, in one and the same class, throughout the type of Radiates.

A more direct comparison of Aurelia (*Fig.* 2) and Echinarachnius (*Fig.* 3), or some other member of the family of the Scutellidæ, cannot fail to remove other doubts, respecting the close structural resemblance of the Acalephs and Echinoderms, which may linger in the minds of those who have become accustomed to consider them as belonging to different types. In the first place, the prevailing idea that while Acalephs have a body consisting of a continuous mass of gelatinous substance, in which there are only limited cavities, the Echinoderms have thin, solid walls, surrounding a wide hollow space, in which all the organs of the body are inclosed, is far from accurate. In many of the Scutellidæ, the central cavity of the body is hardly more extensive than that of Aurelia, and certainly not so wide as that of Cyanea; and far from being circumscribed by thin walls, it is surrounded by a spongy mass quite as continuous, and forming as large a proportion of the bulk of the body, as the disk of any Medusa. The difference in the rigidity of that mass cannot be considered as typical, any more than the peculiarity of the skeleton of the Selachians or Myzonts constitutes a typical difference between them and the other Vertebrates. Moreover, among the Echinoderms there are those, such as the Holothurians, the body walls of which are not rigid; and among the Acalephs there is a numerous group, the Tabulata, the largest part of the body of which is as rigid as the hard-shell Echinoderms. All this goes to prove, that among the Radiates, the distinctions adopted upon the ground of the presence or absence of solid parts, are losing their

Fig. 3.



ECHINARACHNIUS PARMA.

o oral aperture. — *r r r* ambulacra. — *r* and *m* ambulacral ramifications. — *w w* interambulacra.

[1] Comptes-Rendus de l'Académie des Sciences for 1847, in a letter to Humboldt, p. 677.