

is marked by the greater elongation of the posterior extremity of the test, the more vertically truncated anal end, the greater size of the anal system (Pl. XXX.^a fig. 16), the comparatively narrower and stouter lateral ambulacral petals nearly flush with the test (Pl. XXX.^a fig. 15), the very indistinct disconnected peripetalous fasciole, the anterior part of the test sloping towards the ambitus quite gradually, and the regularly elliptical actinal plastron; while in *Brissus unicolor* it is broadest near the subanal fasciole, the size of this fasciole is also comparatively much smaller than in the undoubted *Brissus unicolor*. The depths at which these small specimens were found seems also to indicate either a well-marked variety of *Brissus unicolor* or more probably the young of a hitherto undescribed species of *Brissus*, and it will be very interesting to see what becomes of this rudimentary peripetalous fasciole, or whether this is only an abnormal case of development, as this type of *Brissus* would if adult be closely allied to *Macropneustes* with no peripetalous fasciole, and also to *Micraster* from the slender development of its petaloid system. This species seems to hold to *Brissus* much the same relations which *Nacopatus* holds to *Spatangus* proper.

Dames has figured as *Brissus* (comp. *B. dilatatus*, Des.) a small species, which seems in many respects to be more closely allied to this species than any other of the genus. Dames¹ gives no fascioles, and I am unable from his descriptions in the text or explanations of the plates to determine whether the peripetalous fasciole existed or not in his specimens. The general structure of the petals and of the tuberculation of that species agrees well with ours, but the shape of the actinal plastron is different.

The delicate peripetalous fasciole of a species of *Peripneustes*² which Dames also figures, leads me to think that Dames' *Brissus* may possibly be the young of this genus, and that the species of *Brissus* to which I have called attention is the living representative of this Tertiary *Peripneustes*, which in its turn is certainly most closely allied to the recent *Brissus*.

We have already in *Brissus damesi*, where the petals are nearly flush with the test and scarcely petaloid, a close approximation to such Tertiary forms as *Heterobrissus* of Manzoni and Mazetti, in which the petaloid extremity of the ambulacra near the abactinal pole differs from the rest of the ambulacral zone in having two pairs of pores, much as we find it in the embryonic petals of *Spatangus* and *Brissopsis*, in the younger stages of growth; this seems to be the very type of ambulacra which we find in such genera as *Pygaster* and *Pileus* and in the Galeritidæ, only limited to the abactinal region; the actinal region having already assumed the Spatangoid limitations of the simple pores which extend to their junction with these rudimentary Galeritid petals.

¹ Dames, Palæontograph. xxv., III. F. i. p. 74, pl. xi. fig. 4.

² Dames, *Peripneustes* does not seem to me to belong to *Peripneustes* of Cotteau, which I take to be a true *Meoma*, the species which Cotteau figures (Échinides Tert. de St Barthélemy et Anguilla, 1875) being closely allied to the common West India species, *Meoma ventricosa*.