ganglion in the diagram[1] of the latter would nearly correspond with the nerve-centre in *Cephalodiscus*.

In *Loxosoma* the position of the buds is very different, viz., in the region of the stomach, and there are also often more than two.

Homologies.

Cephalodiscus approaches *Rhabdopleura* very nearly in many structural features, and it is probable, when more complete investigation of both is carried out, these resemblances will be increased rather than diminished.

Thus the *Cœnœcium* in both is largely developed and wholly independent of the polypides, while it is mainly secreted by the buccal shield or disk. The regularly ringed cylindrical cœnœcium of *Rhabdopleura* is, however, very different in form from the irregular, much branched and hispid cœnœcium of *Cephalodiscus*. Moreover, in the latter it is the secretion of the adults, whereas in *Rhabdopleura* much of it would appear to be the product of the younger buds. *Phoronis*, again, secretes its simple gelatinous investment in the sand, or in the form of tubes attached to stones or other foreign bodies, while an Australian species betakes itself to the gelatinous case of *Cerianthus*.[2] There is thus comparatively little method in the formation of its isolated dwelling. *Balanoglossus*, on the other hand, has only a mucous lining to its perforation in the sand, though the secretion of this form is also very abundant. Further, Bateson describes a peculiar odour in the living animals, and the spirit-preparations of *Cephalodiscus* also give evidence of a characteristic odour, though it may differ from that of the former.

The general form of the polypides of *Cephalodiscus* and *Rhabdopleura* diverges very considerably, the former being free, while the latter is fixed by the axial stem. Both, however, are small, while the size attained by *Phoronis* is a distinctive feature, as also is the absence of a pedicle from its cylindrical body.

The *Buccal Shield* is much larger in *Cephalodiscus* than in *Rhabdopleura*, and its secreting powers more active. The buccal shield is absent in *Phoronis* as such, but is represented by the epistome. As will be pointed out by Mr. Harmer, the proboscis of *Balanoglossus* appears to be the homologue of the disk, though only one proboscis-pore is usually present, while two exist in *Cephalodiscus*. Further examination is necessary in regard to these organs in *Rhabdopleura*.

The *Branchial Plumes* have a kind of skeletal system or basement-tissue in both *Cephalodiscus* and *Rhabdopleura*, but they are much fewer in the latter than in the former, which, moreover, has a bulbous and glandular tip to the main axis, thus simulating such organs as the large eye at the tip of the branchiæ of *Branchiomma*. The large

[1] *Quart. Journ. Micr. Sci.*, October 1886, vol. xxvii., pl. xxii. fig. 19.
[2] *Vide* Dr. Haswell, *Proc. Linn. Soc. N. S. W.*, vol. vii. p. 607.