These are all old genera with the exception of *Chorizocormus*, which is formed for the reception of a new species collected by the Challenger Expedition at Kerguelen Island. It is allied to *Synstyela*, but differs from that genus in having the colony broken up into a number of distinct pieces united by stolons, in place of forming a continuous incrusting layer.

The Challenger Polystyelidæ represent three out of the six genera in the above table, viz., *Goodsiria*, Cunningham, *Synstyela*, Giard, and *Chorizocormus*, Herdman. There are five species, four of which are new to science, in the collection.

Goodsiria, Cunningham.

Goodsiria, Cunningham, Trans. Linn. Soc. Lond., vol. xxvii. p. 465, 1871.

Colony massive, sessile or pedunculated, not incrusted with sand.

Ascidiozooids large and ovate in shape, completely imbedded in the common test; not divided into thorax and abdomen. Apertures four-lobed, both on the anterior end.

Test solid, cartilaginous, not sandy. Matrix delicately fibrillated. Vessels present.

Branchial Sac well developed; folds present, rudimentary, or absent; internal longitudinal bars always present.

Dorsal Lamina in the form of a plain membrane.

Alimentary Canal not prolonged behind the branchial sac. Stomach folded longitudinally.

Reproductive Organs in the form of polycarps.

This genus was founded by R. O. Cunningham in 1871 for a large species, *Goodsiria coccinea*, which was obtained in the Strait of Magellan and at the Falkland Islands during the cruise of the "Nassau" between 1866 and 1869. Cunningham's description[1] refers only to the external characters, so I have supplemented it by the necessary details of the internal structure.

The colonies of this genus form large masses which may be disc-shaped, pyriform, or elongated. They are sometimes sessile (*Goodsiria coccinea*), and in other cases shortly pedunculated (*Goodsiria placenta*), while in one of the specimens of *Goodsiria pedunculata* a very long peduncle is present. The area of attachment is always small.

Cunningham has figured the short-bodied ovate or flask-shaped Ascidiozooids with the alimentary viscera placed alongside the branchial sac, a character which distinguishes this genus from *Thylacium*, Carus. The Ascidiozooids are completely imbedded in the test, which forms a thick solid mass. Bladder cells are never present in the test, and the usual test cells are small and inconspicuous. The vessels branch and terminate in dilated bulbs.

[1] *Trans. Linn. Soc. Lond.*, vol. xxvii. p. 465.