spicules of the mesoderm. At short intervals the tubes are united by calcified transverse lamellæ formed from the stolons in which the polyps originate. The anterior portion of the polyps is retractile.

Tubipora, Linné, Syst. Nat. ed. 10, t. i. p. 789; Lamarck, Hist. Nat. Anim. sans Vert., t. ii. p. 207, and ed. 2, p. 324; Lamouroux, Expos. meth. des Polyp, p. 66; Blainville, Manual d'Actinologie, p. 500; Ehrenberg, Corall. des rothen Meeres, p. 55; Perc. Wright, Ann. and Mag. Nat. Hist., 1869, ser. 3, pp. 377–383; G. v. Koch, Anatomie d. Orgelkoralle, Jena, 1874; Klunzinger, Korall. des rothen Meeres, 1877, pt. i. p. 46; Sidney F. Hickson, Quart. Journ. Micr. Sci., 1883, xcii. pp. 516–528.

Family IV. XENIIDÆ.

Xenidæ, Verrill, Proc. Essex Inst., vol. iv. No. 5, 1865, p. 148.
Xeniadæ, Gray (*pars*), Ann. and Mag. Nat. Hist., 1859, ser. 3, vol. iv. p 443.

The colony consists of masses of long cylindrical polyps, which bear terminal crowns of non-retractile tentacles. The polyps are in their lower portion united by cœnenchyma in which are the ramifications of the canalicular system uniting the individual polyps. This cœnenchyma sometimes forms a branching axis, from the upper surface of which the free portions of the polyps project. The spicules are feebly calcareous disks.

Xenia, Savigny, Lamarck, Hist. Nat. Anim. sans Vert., t. ii. p. 409, 1816, ed. 2, p. 625; Lamouroux, Expos. method. d. polyp, p. 69; Klunzinger, Korall. des rothen Meeres, pt. i. 1877, p. 39.

Heteroxenia, Kölliker, Festschr. d. 25 Jahrg. phys.-med. Ges. Würzburg, 1875, p. 12.
Cornularia (*pars*), Quoy and Gaimard, Voy. Astrolabe, t. iv. p. 265, Zooph., pl. 22, fig. 1.
Cespitularia. Valenciennes, in Paris Museum.

Xenia seems closely allied to *Anthelia*, exhibiting in the prolongation of the polyp-tubes, and in the marked development of the cœnenchyma an advance in the colonial system. Heteromorphic forms were first observed by Kölliker in a new species, for which he instituted the genus *Heteroxenia*.

Klunzinger finds bud-like polyps in *Xenia umbellata* and *Xenia fuscescens*, Ehrbg.; in the former species, where they appear sparingly or are wanting, he leaves it an open question whether they are zooids or buds; in the last species he inclines to the opinion that they are zooids which do not develop beyond the bud-like stage. In a paper by W. Haacke (Zur Physiologie der Anthozoen, *Zool. Gart.* xxvii.), the author maintains, on the strength of his observation of the living animals, that the supposed zooids are buds which develop later into polyps. These observations, which appear to us trustworthy,