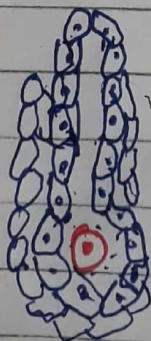


ARCHEGONIATE

Unifying Characters of archegoniate

Cryptogams are divided into two divisions i.e. Thallophyta and Embryophyta based on the structure and nature of the plant body and presence and absence of embryo.

Embryophyta which includes Bryophyta and pteridophyta and gymnosperms are complex in their structure. The unique feature of Archegoniate is that they have multicellular sex organs which are surrounded by sterile jacket layer. The male sex organs are called **antheridia** which are multicellular multicellular and have a sterile jacket. The female sex organs are called **archegonia** and so for this reason the plants are called **archegoniate**.



Archegonium

Archegonium is a multicellular flask shaped structure present in the gametophytes of liverworts, mosses, ferns and gymnosperms. It has a long neck and a swollen venter. A single egg or female gamete is present in the venter. Multicellular jacketed sex organs appeared first in the land plants. These jacket layers protect the enclosed gametes from desiccation since they are exposed to high temperature and sunshine. The archegonite evolved from the alga Ectocarpus by sterilization of the outer layer of cells of multicellular antheridium. It is supposed that the archegonium evolved from such a structure by a more extensive sterilization by which only one gamete remain functional and this was accompanied by the change in the shape of the structure. The given views got support from the occasional occurrence of abnormal sex organs of bryophytes which resemble the transitional stages.