

**Copy of a printed diagram referenced as "Life cycle of acetabularia mediterranea"**

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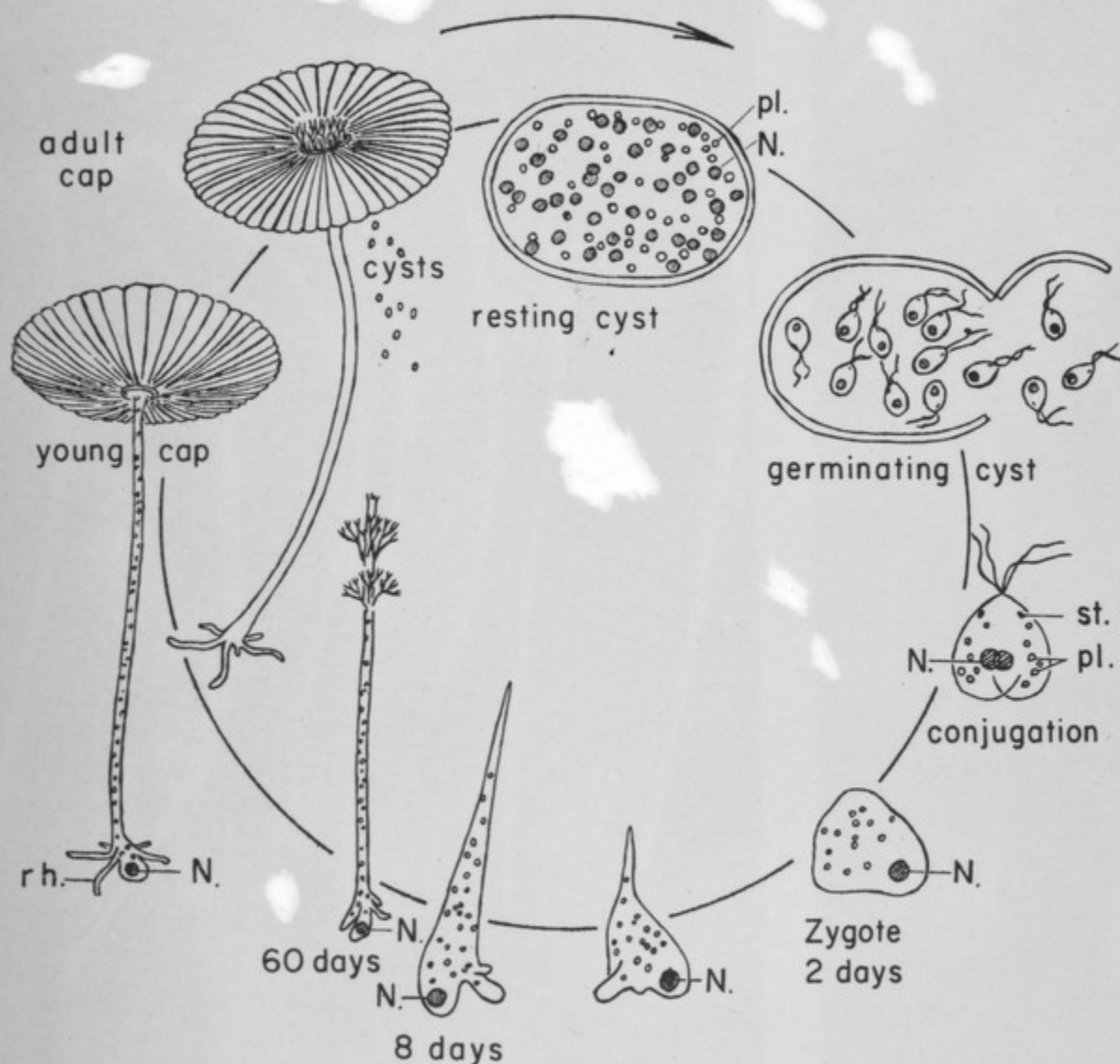
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(Fig. 121). It was concluded by Hämmerling, as early as 1934, that the morphogenetic capacity of an anucleate part is determined by the amount of nucleus-dependent morphogenetic substances stored in it; these substances are distributed along an anterior-posterior concentration gradient.



Life cycle of *Acetabularia mediterranea*.

Further analysis of the problem by Hämmerling (1943, 1946) and his colleagues (Beth, 1943; Maschlanka, 1946) includes very interesting experiments on interspecific grafts. For instance, binucleate grafts containing one *A. mediterranea* (*med*) and one *A. crenulata* (*cren*) nucleus form "intermediate" caps (Fig. 122); trinucleate grafts containing two *cren* and one *med* nucleus give, as would be expected, caps which resemble normal *cren*. If now an anucleate *cren* stalk is grafted