海鞘

脊椎动物最近的无脊椎近亲

海鞘成体通常呈囊状，多固着在岩石等基底上生活，外形与鱼类相差很大。然而，大多数海鞘的幼体呈蝌蚪状，能够短暂游泳，并具有脊索、背神经管和肛后尾等脊索动物基本特征。幼体找到适宜基底后附着并发生变态，尾部被吸收，脊索随之消失，最终发育为固着生活的成体。分子系统学研究表明，尾索动物是脊椎动物的现生姐妹群，与脊椎动物的亲缘关系比文昌鱼所属的头索动物更近。

Ascidian

The Closest Living Invertebrate Relatives of Vertebrates

Adult sea squirts are typically sac-like marine animals that live attached to rocks or other substrates. Although their adult form looks very different from that of a fish, most sea squirts have tadpole-like, free-swimming larvae. These larvae possess key chordate features, including a notochord, a dorsal hollow nerve cord and a post-anal tail. After finding a suitable substrate, the larva attaches itself and undergoes metamorphosis. Its tail is resorbed, the notochord disappears, and it develops into a sessile adult. Molecular phylogenetic studies indicate that tunicates are the living sister group of vertebrates. They are therefore more closely related to vertebrates than are lancelets, such as those of the genus Branchiostoma, and provide important evidence for understanding vertebrate origins.