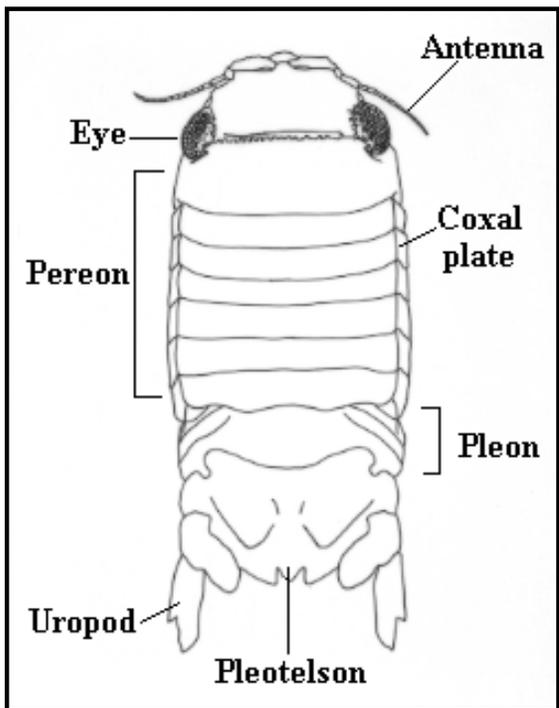


Biology of Isopods



Anatomy

Isopods are said to be flattened but few are. Of all the crustacean groups, isopods are the most diverse in body form. The only sure way to tell an isopod from other similar crustaceans is that they have only one pair of **uropods** and lack strong clawed first thoracic legs. The carapace is lacking which reveals the segmented body composed of a **head**, a **pereon** (thorax) of 7 **somites** (segments) and a **pleon** (abdomen) of 6 somites. The last abdominal segment, to which the uropods are attached, is fused with the **telson** (or tail segment) to form a **pleotelson**. Each of the seven segments of the pereon has a pair of legs, all very similar to each other. Extending out the sides of each segment of the pereon, covering the bases of the legs are the **coxal plates**. The first five pairs of abdominal limbs are flat membranous gills. Isopods have sessile (not stalked) eyes. The figure is of a sphaeromatid isopod. Other families can look very different at first glance even though they possess the same characters. The smallest isopods are microscopic and the largest, from the deep sea, 40 cm long.

Reproduction

During reproduction, the male isopod carries the female for a short period known as pre-copula which lasts until the moult at which copulation occurs. The sperm are transferred from the male to the female genital duct. In most species, the female releases the eggs into a ventral brood chamber where they are incubated until after hatching. Some species incubate their eggs and juveniles in pockets of the body which open from the brood chamber, while others incubate them internally. Unlike crabs and shrimps isopods are not released as free-swimming zoea larva. Instead, when hatched they look very much like adults but have 6 rather than 7 pereonal segments. Some species care for their young after leaving the chamber but most species do not.

Feeding

As a group the isopods demonstrate nearly all of the possible feeding habits used by crustaceans. Some are **scavengers** feeding on dead fish by stripping the carcass of its flesh within hours. Others are permanently **parasitic** on live fish by burrowing into the flesh, attaching to the gills or living inside the mouth. **Burrowers** with strong jaws chew through wood and are able to digest cellulose using the microflora in their

gut. Herbivores graze on seaweed remaining camouflaged to the colour of the algae in which they hide. Some isopods are **predators** capturing their prey with their first legs.

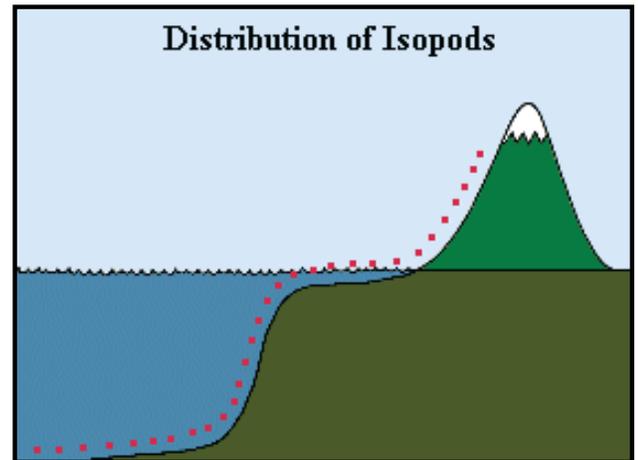
Distribution

The many thousands of species of isopods are classified in about 95 families. Greatest diversity is seen in the deep parts of the ocean basins at 1000-5000 metres depth. Some of the families seen there are not represented in shallower marine environments but many can be seen on the shelf and in the intertidal zone. The most familiar isopods of all are the fully terrestrial slaters and pill bugs occurring in gardens and all other land habitats.

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