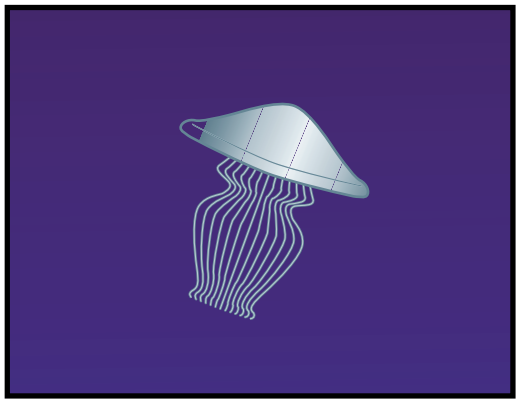
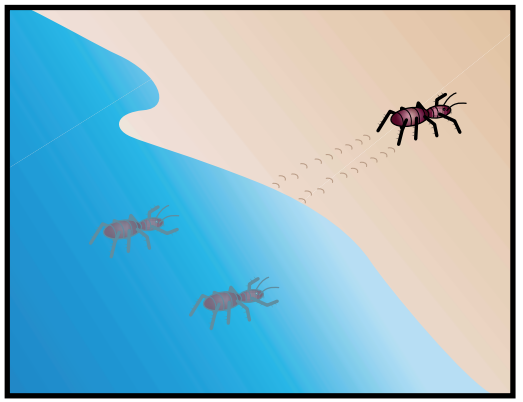
In the Devonian period, some creatures became terrestrial

Evolving multicellular organisms developed an integument that surrounded their cells and retained their own extracellular fluid.



The integument allowed some advanced creatures to leave the sea, carrying their own self-contained extracellular fluid.



Since evolution preserved the cell membrane Na-K ATPase pumps of creatures that ventured onto land, the intracellular low Na^+ ion concentration and high K^+ ion concentration were also preserved, in order to maintain the inward Na^+ gradient and outward K^+ gradient. The Na-K ATPase pumps also helped maintain the intracellular negativity.

Single-celled animals in the sea eventually evolved into multicellular organisms.[51] As these organisms became more complex; some cells specialized.[52] Many multicellular organisms developed an exterior integument that surrounded their cells; now they could produce their own unique (extracellular) fluid that had about the same composition as the surrounding sea.[19] More complex organisms then developed a circulatory system to distribute nutrients and dissolved O_2 and to carry off wastes and dissolved CO_2. Very efficient! Eventually, during the Devonian period (about 400 million years ago), some of the more highly-evolved organisms ventured onto dry land,[62] carrying their self-contained extracellular fluid[60] that approximated the ion composition of the seas from which they emerged. Their cells retained the original cell membrane Na-K ATPase pumps to produce the low intracellular Na^+ ion concentration and high K^+ ion concentration (relative to their extracellular fluid), so the inward Na^+ and outward K^+ transmembrane gradients were maintained, as was the intracellular negativity.