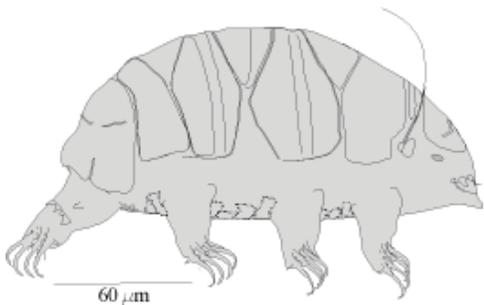


TARDIGRADE INFORMATION

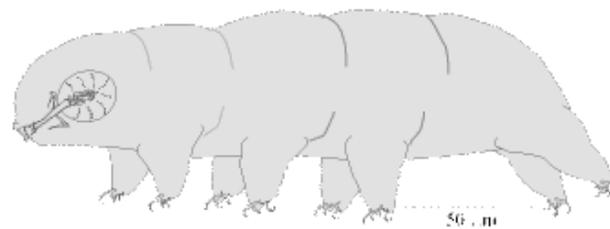
Tardigrades (“water bears”) are members of the phylum Tardigrada. They are microscopic segmented animals with eight legs. These tardigrades were first described by Johann August Ephraim Goeze in 1773 (Kleiner Wasserbär = little water bear). The name Tardigrada means “slow walker” and was given by Lazzaro Spallanzani in 1777. The name water bear comes from the way they walk, similar to a bear’s gait. The largest adults may reach a body length of 1.5 mm, the smallest below 0.1 mm. Freshly hatched juveniles may be smaller than 0.05 mm.

More than 1000 species of tardigrades have been described. Tardigrades occur over the entire world, from the high Himalayas (above 6,000 m) to the deep sea (below 4,000 m) and from the polar regions to the equator. They are polyextremophiles and are able to survive in extreme environments from temperatures of -273°C (close to absolute zero) to temperatures as high as 151°C (303°F). They can survive 1,000 times more radiation than other animals, including humans, a year without water, and even the vacuum of space.

The most common place to find tardigrades are in the sediment between lichen or moss and its substrate (tree, rock, etc.). Tardigrades are most common in moist environments, but can also be found in dry habitats that are periodically wet. The animals must have a film of water around the body in order to be active. Tardigrades are one of the few groups of species that are capable of reversibly suspending their metabolism and going into a state of cryptobiosis in response to drying, freezing, or low oxygen.



Heterotardigrada



Eutardigrada

Water bear, oh water bear,
 On the stones and on the stair,
 I’m sorry I did not see you there.
 Oh water bear, water bear,
 Survival skills are beyond compare
 Our tiny friends are everywhere.
 --Frank Glubbah