

## Phylum Micrognathozoa

phylum is represented by a single species collected from Greenland in 1994

not formally described until 2000

tiny interstitial animal, found among mosses eating diatoms, bacteria and other algae

appears to prefer cold temperatures

### **Body**

2 part **head**  
with patches of cilia

**thorax**

**abdomen**

### **Movement**

moves using cilia located over the entire body  
cilia are arranged in discreet patches or groupings

### **Digestion**

digestive system consists of a mouth, pharynx, esophagus and gut

cilia on the head create a current that directs food particles toward the mouth

inside the mouth are a complex jaw apparatus

the jaws are made up of up to 15 elements each controlled by separate muscle strands

mouth leads to simple gut then to anus

### **Nervous System**

large cerebral ganglion in head with a pair of ventral nerve cords extending to the tail

the whole body has scattered sensory bristles made of cilia

resembles sensory bristles of gnathostomulida

### **Excretion**

2 pair of protonephridia

### **Reproduction**

only females are known and apparently reproduce by parthenogenesis

recent study indicates that males could be present for short periods

other studies indicate that the animals are protandrous

the young hatch as males then become females as they grow older

females produce 2 kinds of eggs; summer eggs and winter eggs somewhat similar to those of rotifers

### **Evolutionary Relationships**

the complex jaw structure links the **rotifers**, **gnathostomulids** and **micrognathozoa**

the **acanthocephala** are also genetically related to these groups, though because of their specialized life style as parasites their jaws are greatly reduced.