

## Carbon Source of Acorn Worms

We are looking at using the worms as a modern source of radiocarbon. We have developed a new instrument at WHOI for radiocarbon analysis. It is a gas chromatograph - accelerator mass spectrometry system that permits us to perform rapid compound specific radiocarbon analysis. For our first studies we are selecting simple real world systems to demonstrate its utility.

It is our understanding that there has been a point of contention in the past whether the brominated compounds (HOC) found in acorn worms etc. are exogenous (pollutants) or endogenous. Teuten et al. did a conventional  $^{14}\text{C}$  analysis to show that HOC were in fact endogenous. We are repeating the analysis with *Saccoglossus bromophenolosus* and *kowalevskii* as the two sources. We will analyse synthetic, and therefore radiocarbon free, compounds at the same time. The main brominated compound will be isolated using a basic solvent extraction and workup.