

Living things are distinguished from non-living in that they **have biological processes** (*functions such as metabolism, growth, reproduction, etc.*)



The smallest unit of life is called an **organism**.

Examples?

Biodiversity:

the variety and variability of life on Earth.



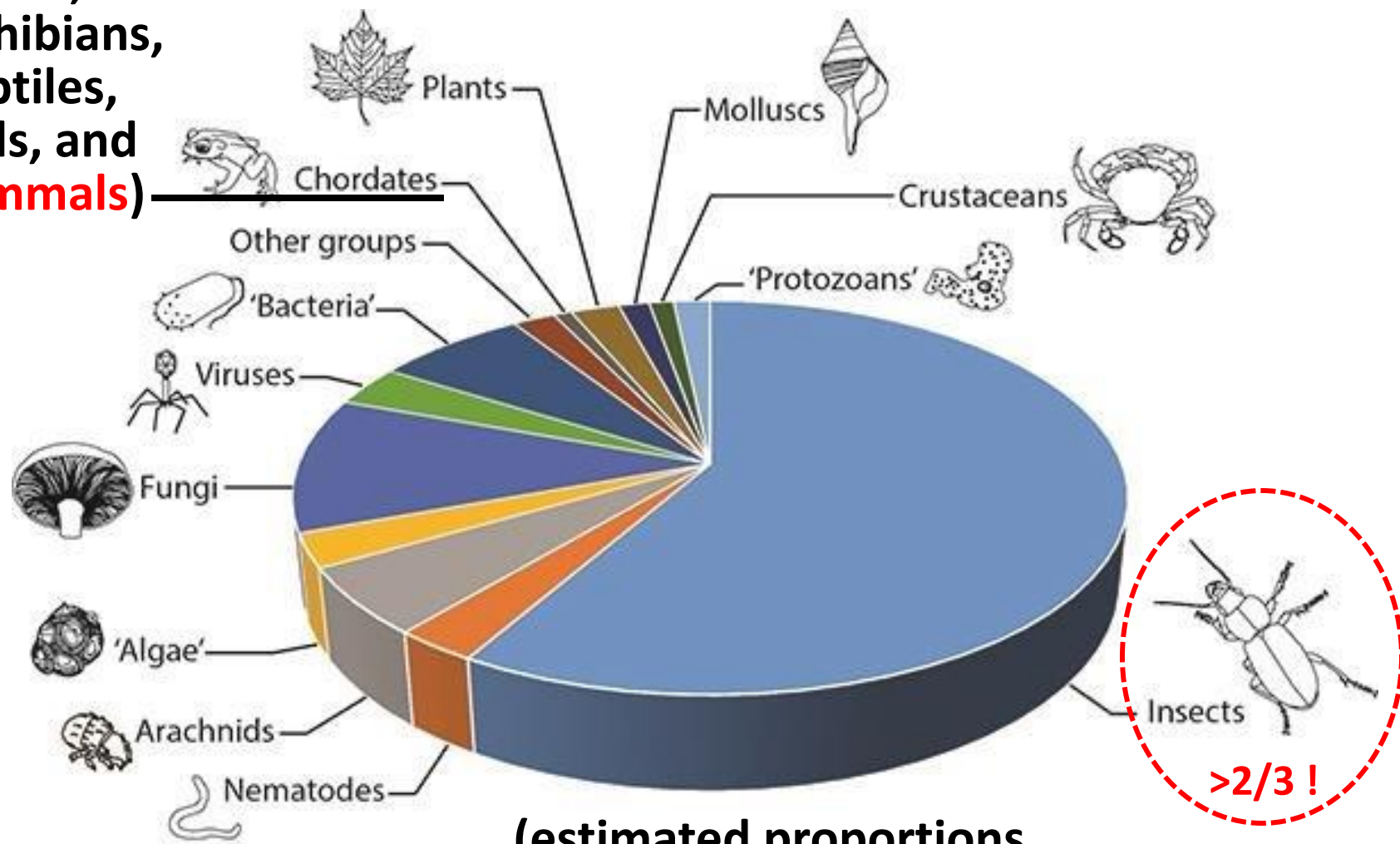
genetic
diversity

species
diversity

ecosystem
diversity

Different groups of organisms on Earth today

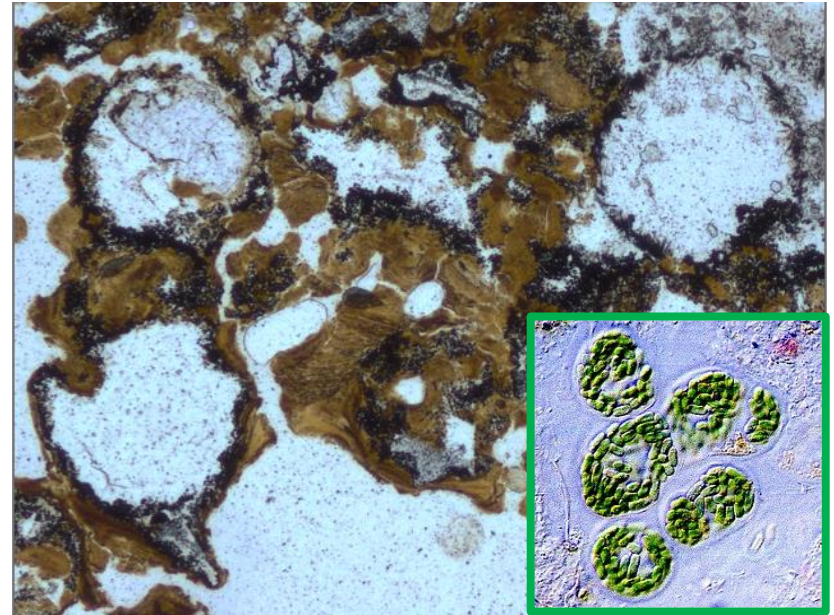
(fish, amphibians, reptiles, birds, and **mammals**)



(estimated proportions, by numbers of species)

Life on Earth

- There is direct evidence of life existing on Earth some 3.5 billion years ago.
- Additional findings suggest life appeared even earlier, about 4.2 billion years ago, just after the formation of the Earth's ocean.
- The mechanism by which life began on Earth is unknown. Modern science is discussing at least **TWO** hypotheses:
 1. A set of hypotheses stating that **life begun in another part of the Universe** and **arrived on Earth by chance** with the crash of a comet or a meteorite.
 2. The most common – **life began here on Earth as the result of a complex sequence of chemical reactions.**



microfossils of microorganisms