

# Division of Environmental Biology (DEB)

**Supports fundamental research on  
species, populations, communities,  
and ecosystems**

## **Core Programs:**

- **Systematic Biology & Biodiversity Inventories**
- **Population and Evolutionary Processes**
- **Ecological Biology**
- **Ecosystem Science**





# Systematic Biology & Biodiversity Inventories

- **Assembling the Tree of Life Project (AToL)**
  - To construct a phylogeny for all 1.7 million named species of organisms on earth
- **Biodiversity Surveys and Inventories**
  - Expeditionary work to discover, describe, and document plant animal and microbial diversity
- **Partnerships for Enhancing Expertise in Taxonomy (PEET)**
- **Planetary Biodiversity Inventories (PBI)**
- **Systematic Biology**





# Population and Evolutionary Processes

**Focuses on population properties that lead to variation within & among populations.**

- **Empirical and theoretical studies of microevolution**
- **Organismal adaptation**
- **Geographical differentiation**
- **Natural hybridization & speciation**
- **Macroevolutionary patterns of trait evolution**
- **Areas: Population Dynamics, Evolutionary Ecology, Evolutionary Genetics, Molecular Population Biology**





# Ecological Biology

**Supports studies of community ecology & population interactions at diverse spatial & temporal scales, including:**

- **Food-web structure**
- **Landscape patterns and processes**
- **Mechanisms of coexistence & community structure**
- **Co-evolution**
- **Community ecology**
- **Causal mechanisms, patterns and ecological processes that apply to a wide range of habitats & taxa**





# Ecosystem Science

**Supports investigations of whole-system ecological processes & temporal (including paleo) scales:**

- **Biogeochemistry, nutrient cycling, energy flow**
- **Decomposition of organic matter**
- **Primary productivity, element budgets**
- **Radiatively active gas flux**
- **Relationships between diversity, ecosystem function, ecosystem services, landscape dynamics**
- **Long-Term Ecological Research (LTER)**

