

SCAR Life Sciences Group (LSG)

U.S. Representatives & Group Scope

Byron Adams, Brigham Young Univ.; **LSG Secretary**

George Watters, NOAA Fisheries

Chuck Amsler, Univ. of Alabama at Birmingham

- **Understanding Antarctic biodiversity and the complexities of the Antarctic environment**
 - predicting the consequences of environmental change on these as well as on organismal adaptation and function
- **Understanding the effects of Antarctica on the health and welfare of scientists and support staff**

Critical Issues Being Discussed

- **Two current SCAR Scientific Research Programs (SRPs) involve life science:**
 - **Ant-ICON** - Integrated Science to Inform Antarctic and Southern Ocean Conservation
 - conservation and management; focus on research to drive and inform international decision-making and policy change
 - **INSTANT** - INStabilities and Thresholds in ANTarctica
 - Antarctica's contribution to sea level, past and future (joint with Physical and Earth Sciences; 'biology' primarily paleoecology)
- **Currently, there is no 'home' in the SCAR SRPs for biologists whose focus is not on conservation or management**

Current Projects/Activities

- **Seven Expert Groups and two Action Groups fall under LSG** (two are joint with other science groups, one with CONMAP)
 - US scientists are involved with all but one, and are in leadership positions in four
- **"Behind the scenes" a lot of activity in the LSG leadership to spin up for the next IPY**
- **The US will host the 14th SCAR Symposium on Antarctic Biology (2027)**
 - Many US scientists will be involved

Future Directions

- **Future SRPs being discussed:**
 - **Climate change** impacts on Antarctic organisms across levels of biological organization
 - Discussed at last (2022; virtual) LSG meeting and there was a lot of interest
 - **'omics** to analyze the biology of evolutionary diversification, functional response, and cold adaptation of Antarctic organisms and ecosystems
 - Inspired by the 2015 NAS/PRB mid-term assessment report
 - **Antarctica International Science & Infrastructure for Synchronous Observation** (Antarctica InSync)
 - Already part of a UN Ocean Decade Network