Phytoplankton

Corethron spp.

Amphipora spp.
Phytoplankton

- Phytoplankton are microscopic plants that are the major producers of the Antarctic.
- This organism is a food source for zooplankton, such as krill.
- Due to an extremely low Reynold’s number, the phytoplankton move with the currents.
Zooplankton/Krill
Zooplankton/Krill

- Small (1cm to 15cm) shrimp-like creatures.

- Provides food source for most of the other life forms, such as penguins.

- Sometimes found in groups called swarms.

- Due to a low Reynolds number, the krill mostly move with the currents but can also move freely.
Adélie Penguins
Adélie Penguins

- A flightless bird, "wings" adapted to be effective paddles for swimming.
- Have no predators on land.
- Feed on fish and krill.
- Is preyed on by leopard seals and killer whales.
- Six types are found in Antarctica, including the Emperor and Adélie.
Gliders
The Slocum Glider is a uniquely mobile network component capable of moving to specific locations and depths and occupying controlled spatial and temporal grids. Driven in a sawtooth vertical profile by variable buoyancy, the glider moves both horizontally and vertically.

Carrying a wide variety of sensors, they can be programmed to patrol for weeks at a time, surfacing to transmit their data to shore while downloading new instructions.
Tagging
Tagging

- Used to track the movement and foraging patterns of penguins.

- Attached to the back of the penguins using duct tape.

- After 3-5 days the tags are manually removed from the penguins by the scientists.
HF Radar
HF Radar

- Data from the surface of the water is collected using the high frequency (Hf) radar system that measures from (0-1m).

- Oceanographers determine surface currents, wave heights and frequency using this data.