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Salish Sea bull kelp restoration research: local, regional and international collaborations

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Salish Sea Bull Kelp
Restoration Research: local, regional and international collaborations

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NCES Study area 2011-15
Kelp restoration research

Bull kelp has been in decline in many areas, including central Strait of Georgia.

We are trying to learn:

- What is limiting local wild kelp populations (south Denman Island)? [Monitoring & mapping]
- How best to grow kelp ‘artificially’? [Culture & monitoring kelp performance]
- Can cultivated kelp reproduce and become self-sustaining? (And perhaps recolonize parts of the former habitat?)
Kelp culture grid, Maude Reef
Kelp restoration
Growing kelp

- The seeded spools of string are taken to the planting site and wound onto the culture rope that is to be attached to the grid.
- Then we hope for the best!
- We monitored by SCUBA each 2 months at the grid and at the Denman kelp bed.
Collaboration with Project Watershed and SFU
Population genetics with UW-Milwaukee
What do we know about temperature/time effects?

- Sori production: May to October in “cooler years” (esp. May-June) but none in warmer years.
- Sporophyte upper temperature tolerance: 18°C over 30-35 days
- Spore release: drops off >17°C, but rises if lower temperatures return (Braeden SFU)
- Gametophyte upper temperature tolerance: 23°C for 2 weeks (tom Dieck 1993)
Next steps: sea urchin exclusion experiment
Questions?