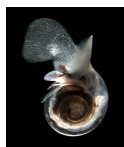
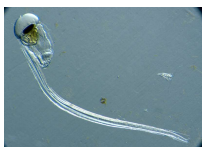


Two decades of observations on mucus-net feeders in the Northern Gulf of Alaska

Emily A. Stidham, Russell R. Hopcroft

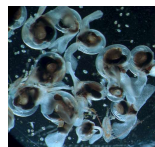
Purpose

- Pelagic tunicates and pelagic snails in the Northern Gulf of Alaska (NGA) are under-appreciated groups of gelatinous zooplankton
- We are creating a twenty-year time series to explore how community composition is influenced by abiotic and biotic factors



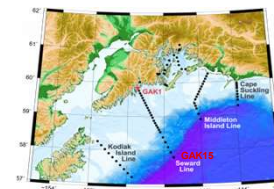
Background Information

- Tunicates (larvaceans, salps, doliolids) and pteropods are efficient grazers that use mucosal nets to feed, often on very small particles
- Mucus-net feeders contribute to the biological pump through their fecal pellets, houses, and shells
- They are important prey for higher trophic levels in NGA including salmon and seabirds

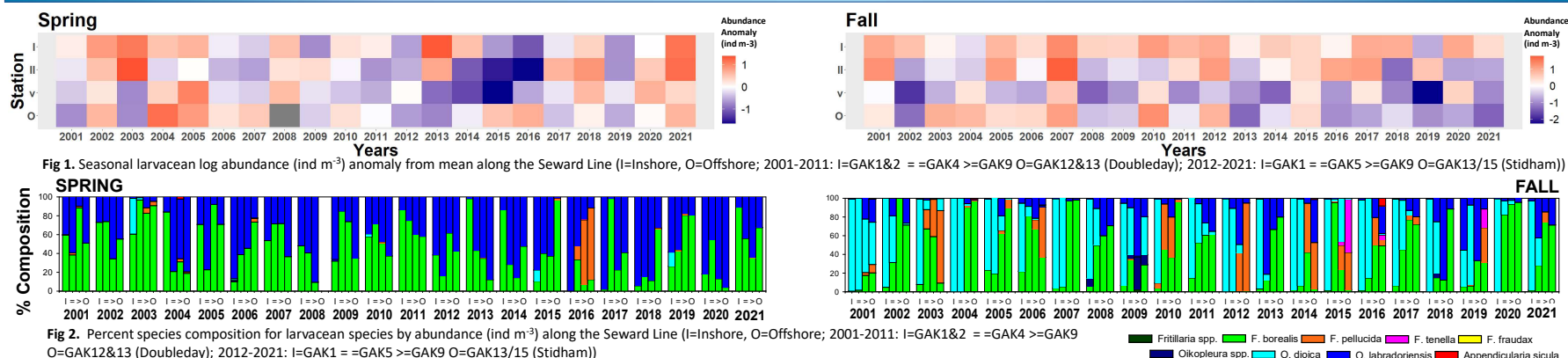


Methods

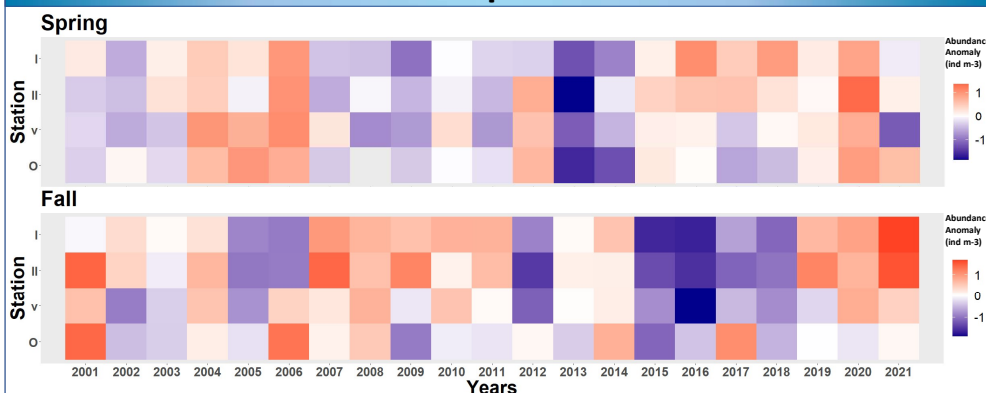
- Samples were collected in the upper 100 m along the Seward line from 2001-2021 using a 53 μ m modified CalVet plankton net
- Organisms were identified to species and sizes measured to estimate biomass



Larvaceans



Pteropods



Discussion & Next Steps

- Larvacean community shifts between season (Fig. 2); response varies between inshore and offshore habitat (Fig 1, 2)
- “Late-season” larvacean species appear earlier in warmer years, like 2019, and are more prominent during warmer years (Fig. 2)
- Pteropod abundance is variable between years (Fig. 3), with stronger contributions in summers
- Size distributions of pteropods suggests high reproduction rates but low local recruitment
- Exotic species typically appear during warmer years (Fig. 2)
- Relationships to abiotic and biotic factors will be explored over a 20-year period once remaining sample analysis is completed

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