

Temporal and Spatial Variability in fish communities of the Chukchi Sea, 2004-2012 Preliminary Conclusions

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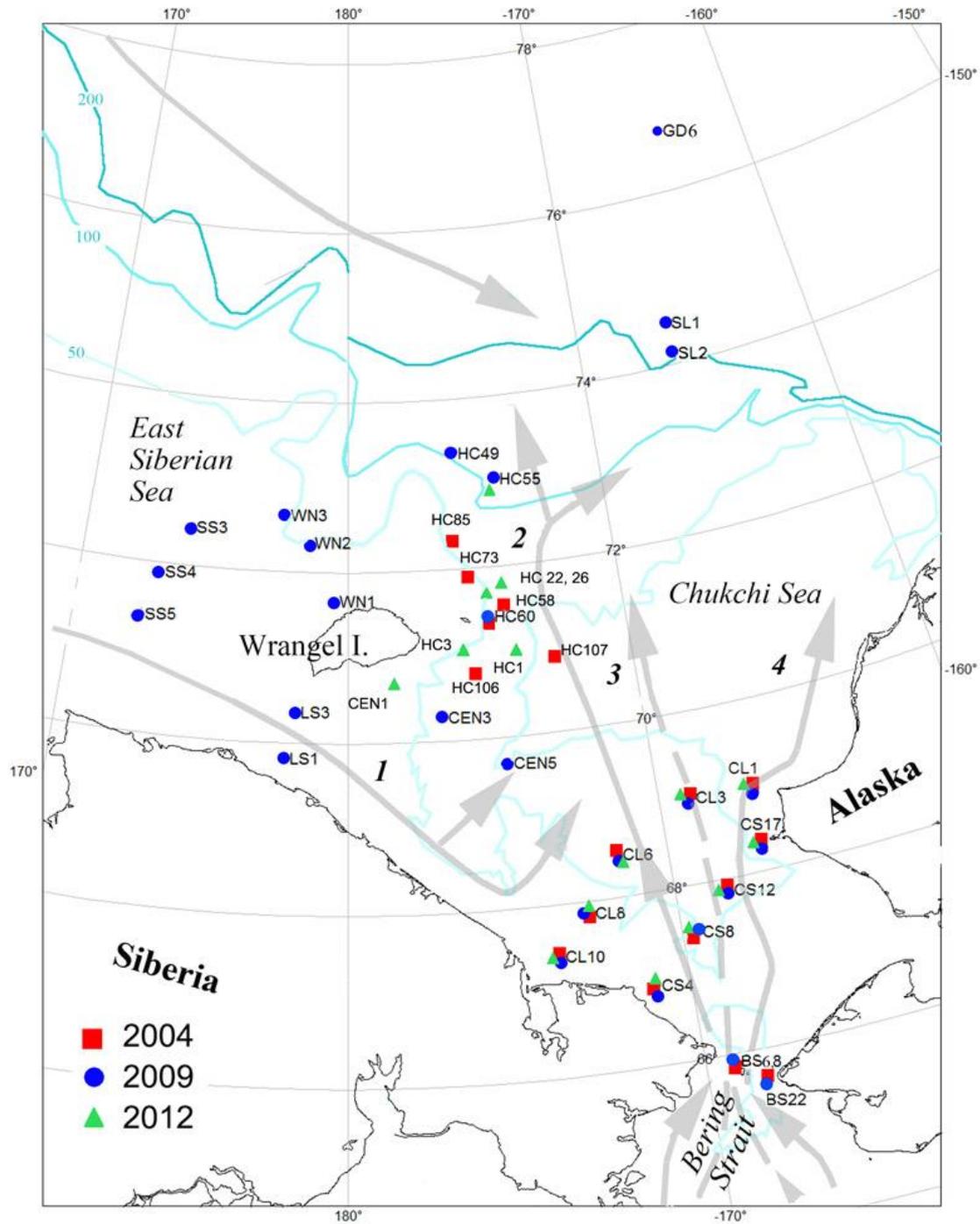
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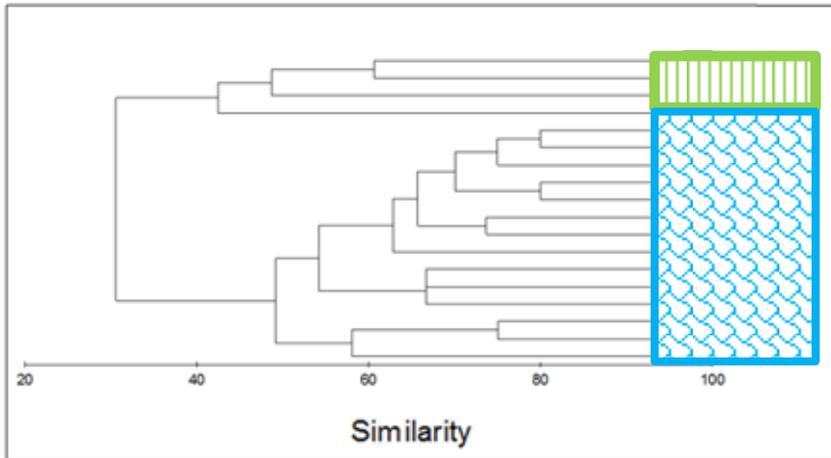
Honolulu, HI

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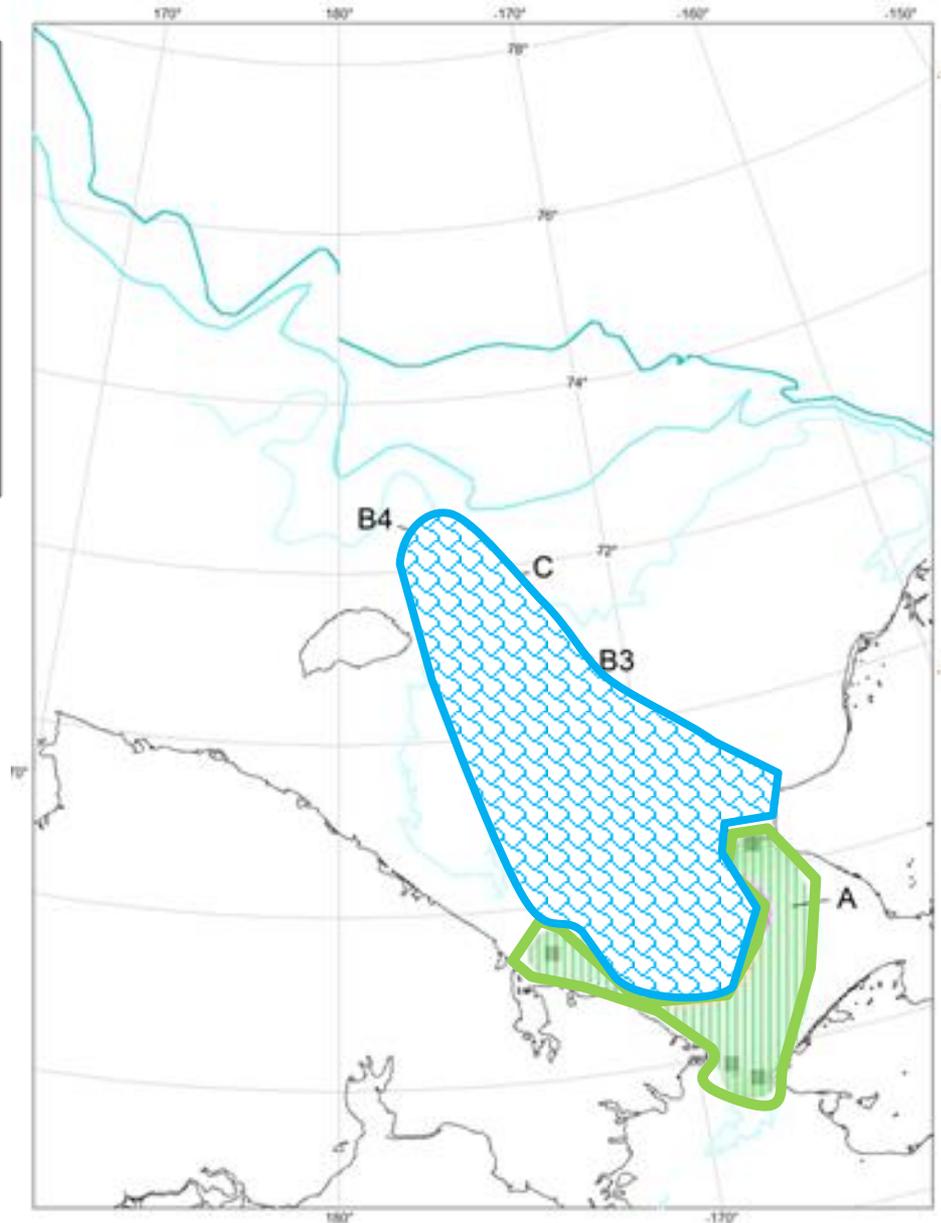
Summary for cruises: 2004, 2009, 2013

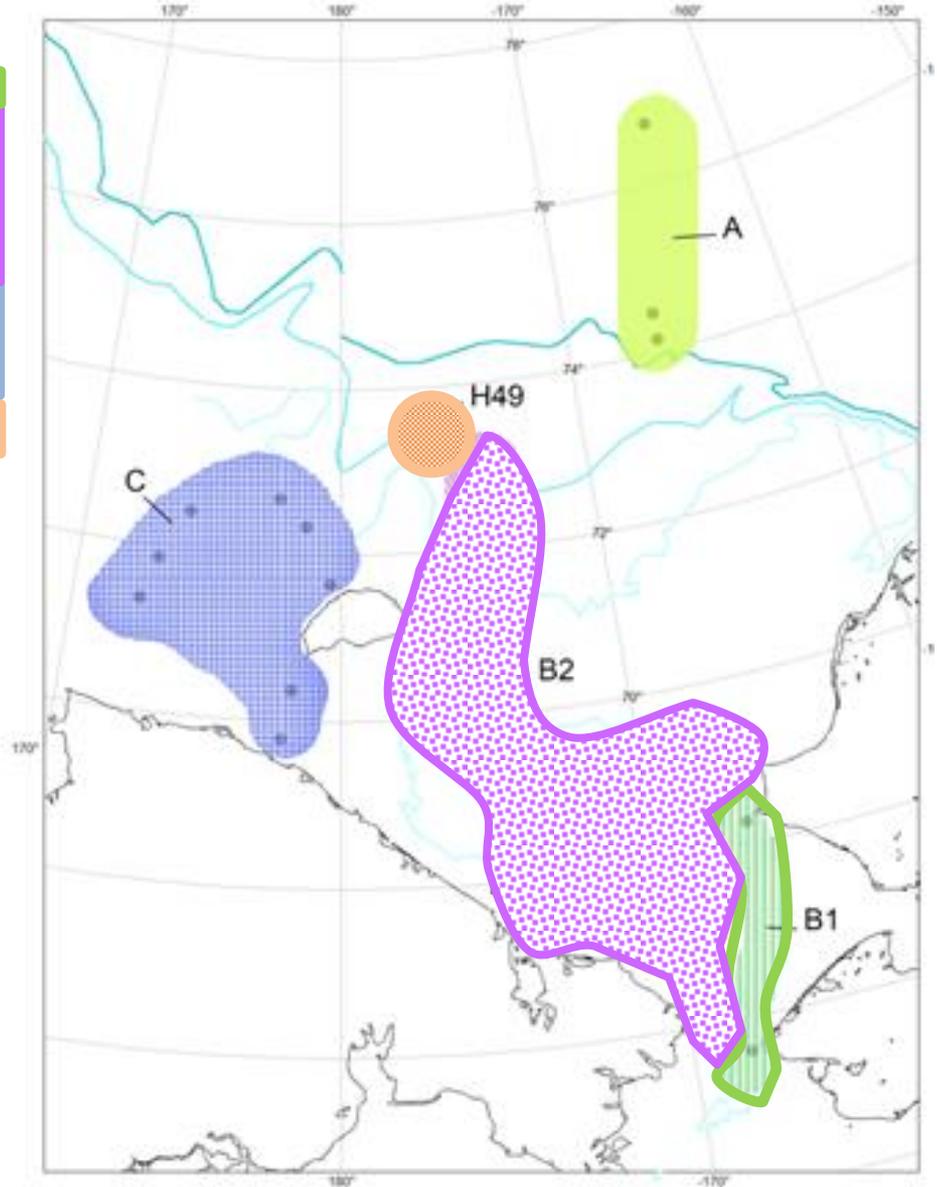
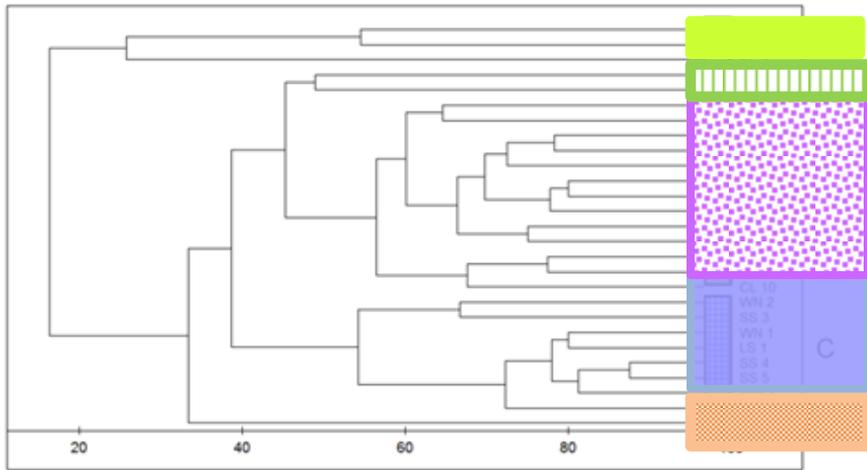
- ~33,000 fishes collected
- 54 species
- Five species commonly and abundantly found in all three cruises 2004-2012
- Abundance of dominant species was highly variable





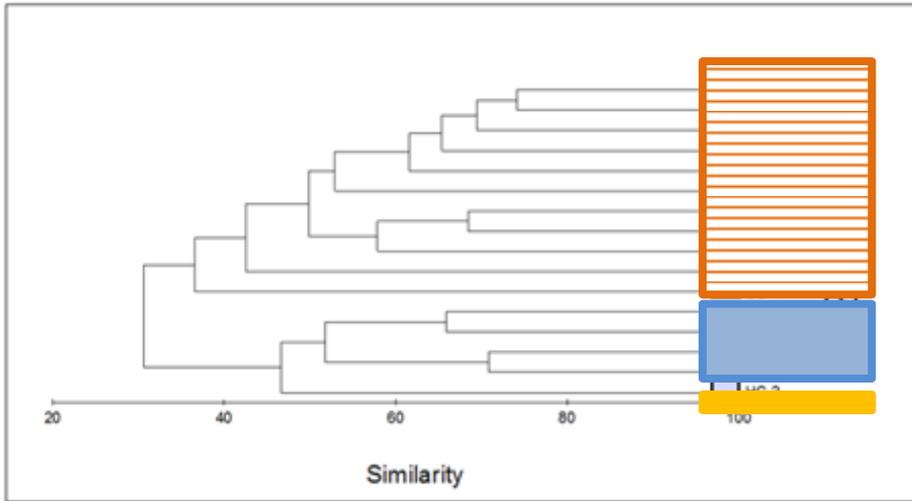
2004
 these two groups are significantly different at $p < 0.01$. No significant differences at $p < 0.001$.





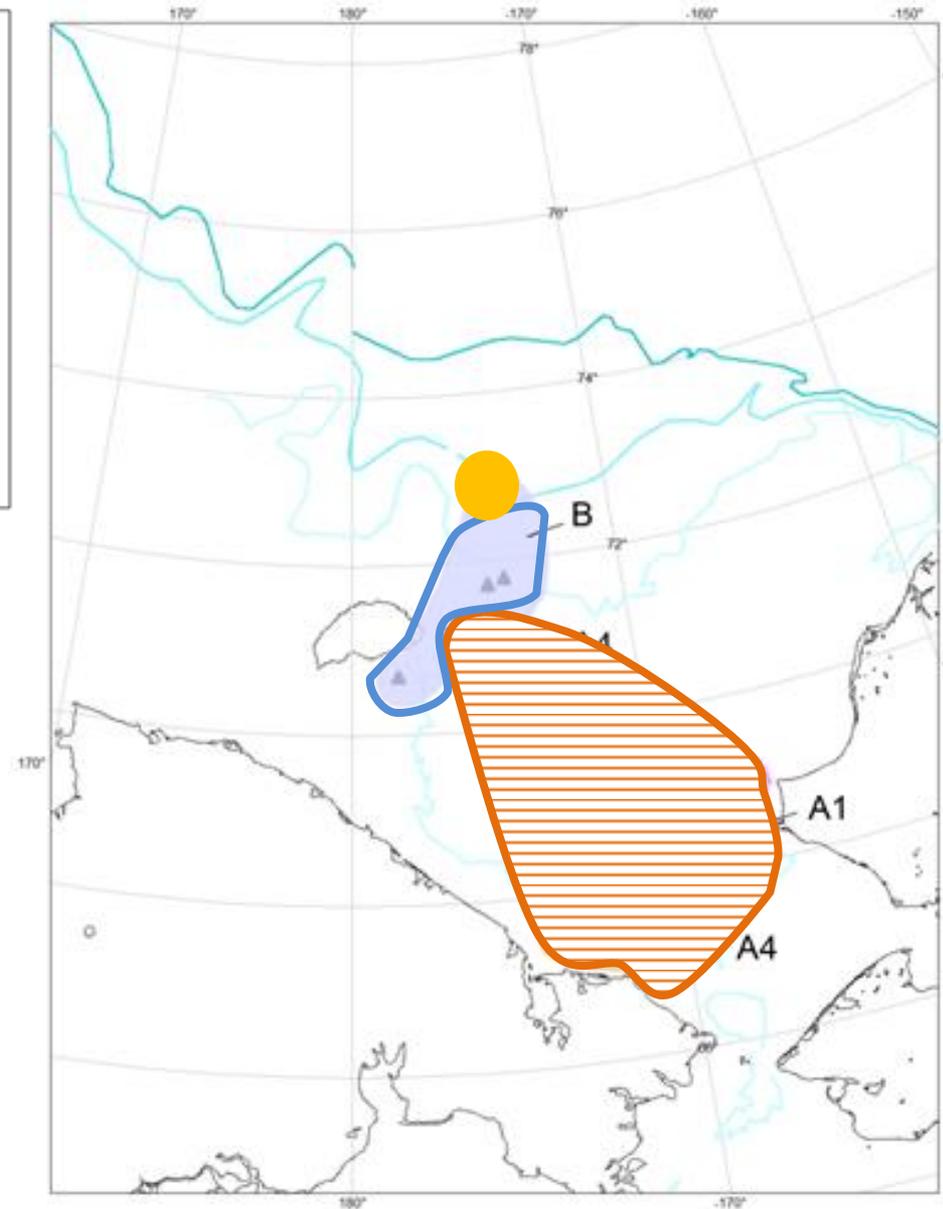
2009
 these five groups are significantly different at $p < 0.01$. No significant differences at $p < 0.001$.

2012



2012

these three groups are significantly different at $p < 0.01$. No significant differences at $p < 0.001$.



Features distinguishing communities

- number of species
- fish abundance and comparative proportions
- amount of 'Pacific fishes'
- proportion of high-arctic fishes
- typical and subdominant species

Spatial variability

- Fish distribution had similar patterns in all three surveys
- Community rich in 'Pacific fishes' alongcoast in eastern Chukchi Sea (Alaska Coastal Water)
- Fish community rich in abundance in southwestern Chukchi (frontal zone)
- Community of *Hippoglossoides* present offshore of Cape Lisburne and to northwest (Bering Sea Water)

Temporal variability

- Number of species at the same station in the three surveys differed 1.1 to 4.3 times
- Number of fish caught at the same station in three surveys differed in 1.5 to 56 times
- No dramatic changes in fish content in 2004-2012
- Number of warm-water 'Pacific fishes' in the Chukchi Sea not increased

