Nearshore Fish in the Chukchi Sea, Alaska

Objectives

In nearshore waters of the Chukchi Sea:
- Identify distribution and relative abundance of fish
- Establish baseline for long-term Arctic monitoring
- Collect and archive fish for energetic, genetic, and voucher specimens

Sample design

- August 2007-2009 & 2009
- 6 stations
- 2 bottom trawl tows & 1 seine haul/station

Methods

- Beach seine hauls
- Bottom trawl tows

Environmental conditions

Sea ice break-up
- June 2007: Early
- August 2008: Late
- July 2009: Moderate

Sea surface temperature (SST)
- Mean annual August SST related to ice break-up timing

Dominant fish

- Capelin
- Arctic cod
- Pacific sand lance
- Slender eelblenny
- Sculpin spp.

Catch by gear

- Seine: Capelin 82%, Other spp. 18%
- Trawl: Arctic cod 56%, Other spp. 44%

Annual catch

- Dominant species differed by gear type
- Abundance varied by year and gear type
- Mostly juveniles

Total catch

- 2007 - warm: Capelin 69%
- 2008 - cold: Other spp. 21%
- 2009 - moderate: Arctic cod 10%

Species composition & catch

- Capelin most abundant in warm year (2007) and in September
- Arctic cod most abundant in cold year (2008) and in September

Results

Conclusions

- Capelin and Arctic cod are abundant in nearshore waters of the Chukchi Sea
- Sea ice conditions affect the distribution and abundance of nearshore fish
- Fish abundance and species composition varied monthly and annually

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