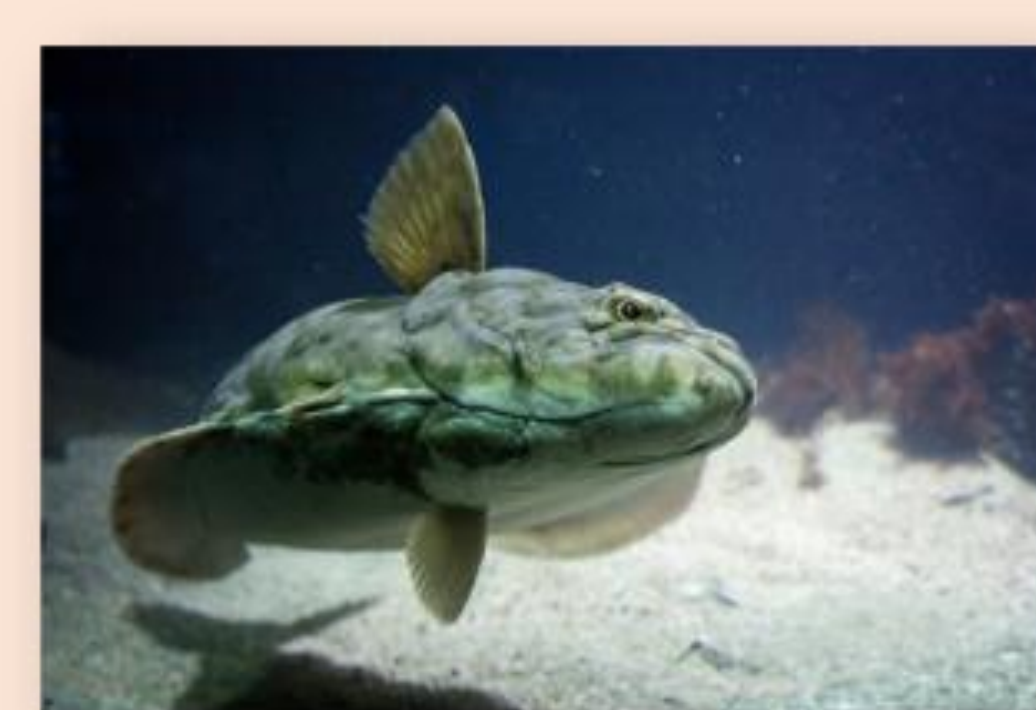




INTERNATIONAL PACIFIC  
HALIBUT COMMISSION



## Biological and Ecosystem Science Program

# Improving maturity schedules: Full characterization of the annual reproductive cycle of the Pacific halibut

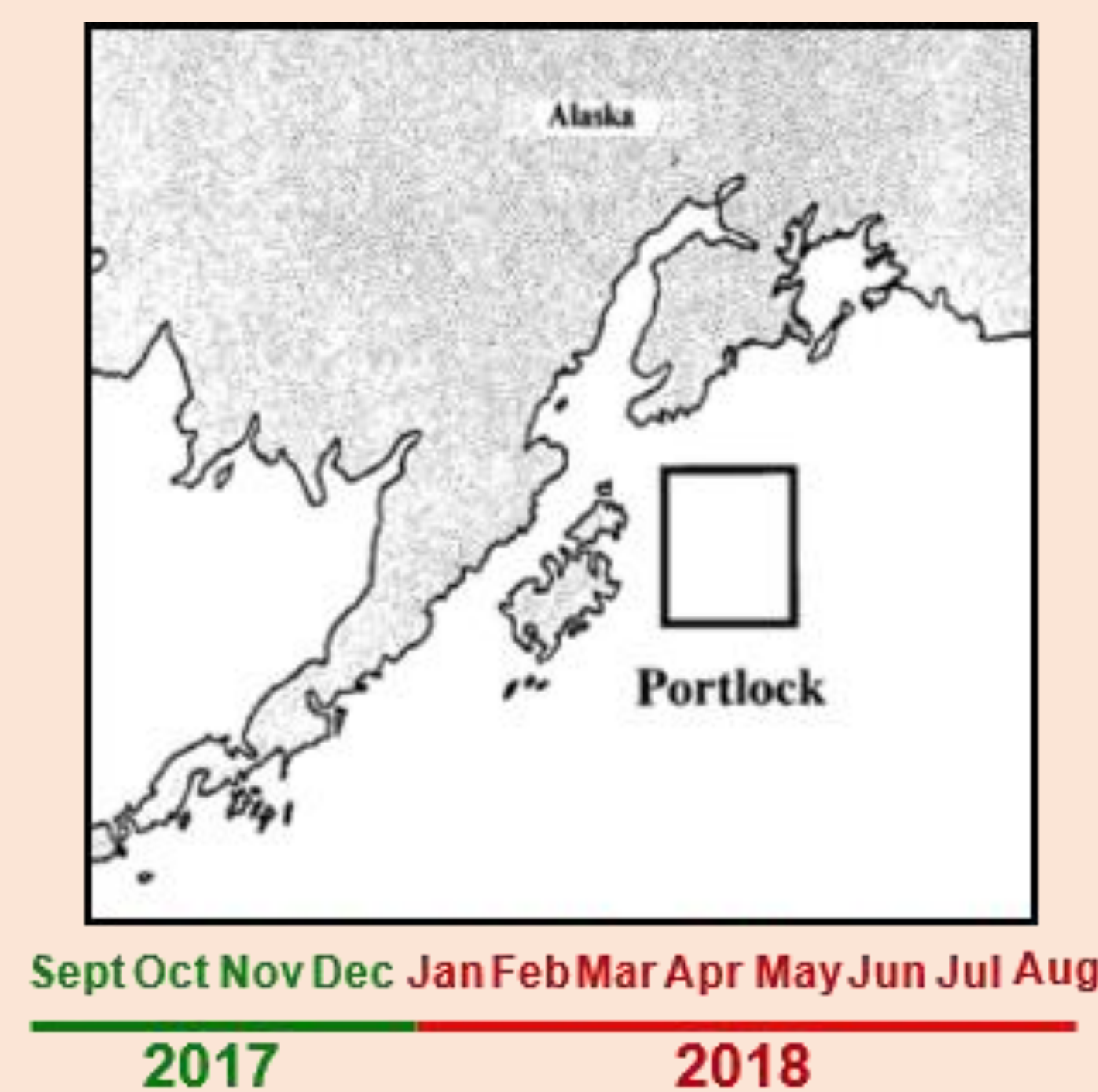


### Objectives:

- Conduct accurate staging of the reproductive status in Pacific halibut
- Update maturity-at-age estimates
- Provide estimates of skipped-spawning
- Conduct a comprehensive reproductive monitoring of the adult population in order to improve estimates of spawning biomass

### Study area: Portlock region (Central Gulf of Alaska)

- Sample number and frequency:**
- 30 females / 30 males (each month)
  - Monthly samplings
  - 1 full year



September 2017: 27 ♀ / 30 ♂	F/V St. Nicholas (Homer)
October 2017: 30 ♀ / 30 ♂	F/V St. Nicholas (Homer)
November 2017: 30 ♀ / 30 ♂	F/V Kema Sue (Kodiak)
December 2017: 30 ♀ / 30 ♂	F/V Kema Sue (Kodiak)
January 2018: 30 ♀ / 30 ♂	F/V Kema Sue (Kodiak)
February 2018: 30 ♀ / 30 ♂	F/V Kema Sue (Kodiak)
March 2018: 30 ♀ / 30 ♂	F/V Kema Sue (Kodiak)
April 2018: 30 ♀ / 30 ♂	F/V Kema Sue (Kodiak)
May 2018: 30 ♀ / 30 ♂	F/V Kema Sue (Kodiak)
June 2018: 30 ♀ / 30 ♂	F/V Predator (Homer)
July 2018: 30 ♀ / 30 ♂	F/V St. Nicholas (Homer)
August 2018: 30 ♀ / 30 ♂	F/V St. Nicholas (Homer)

### Analyses to be performed:

- Histological assessment of gonadal development and maturation
- Sex hormone levels in the blood
- Gene expression (transcriptome) profiling of the reproductive axis
- Gonadosomatic index (GSI) measures throughout the reproductive cycle
- Age, fat content

