

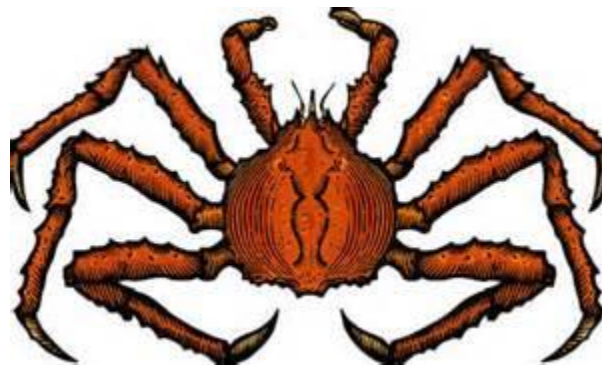
# RKC Mark Recapture Update

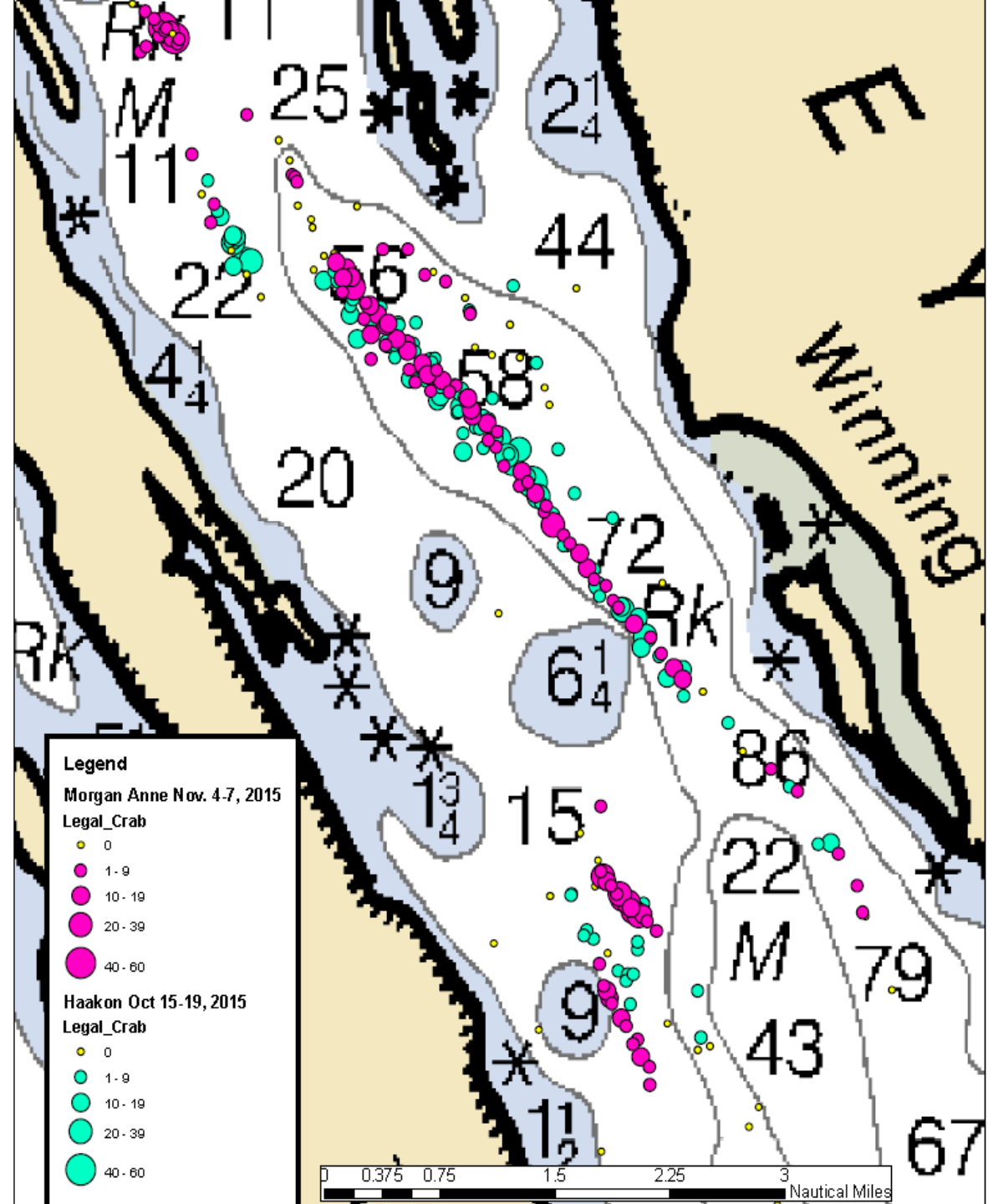
2015: Seymour Canal  
2016 Excursion



# Seymour 2015

- **Mark:** Two boats
  - First trip:** 1008 crab tagged, 177 pots
  - Second Trip:** 1083 crab tagged, 137pots
  - 24 recaptures from first trip
- **Recapture:** Five weeks after mark, 107 pots, 153 crab caught, 6 recaptures.





**Legend**

Morgan Anne Nov. 4-7, 2015

**Legal\_Crab**

- 0
- 1-9
- 10-19
- 20-39
- 40-60

Haakon Oct 15-19, 2015

**Legal\_Crab**

- 0
- 1-9
- 10-19
- 20-39
- 40-60

0 0.375 0.75 1.5 2.25 3 Nautical Miles



# Seymour Issues

- Low recapture numbers ( $n < 10$ ) violate some assumptions of the population estimate
  - Because of this the estimate has low confidence / high variability
  - Crab are not in the same locations as when the mark occurred.
  - Movement of crab out of the sample area would also bias the population estimate.
  - Including the recaptures from the second trip provided a more robust estimate.

# Seymour Results

- **2015 adjustment: 9.14**
- **2011 adjustment: 9.53**
- Old adjustment was done at relatively low legal abundance. New adjustment from a higher abundance, which was the goal of repeating the project.

# Excursion 2016

- **Mark:** One boat 137 pots, 445 crab tagged, 34 recapture during the mark
- **Recapture:** Planned for the second week of December

# Excursion Observations

- Females, Juveniles and legal males spread throughout the bay.
- Crab were actively migrating up the bay.
- Sea lion affecting catch.



# Where we are at now.

<b>From Mark/Recapture study (lb)</b>			
<b>Survey area</b>	<b>CSA</b>	<b>M/R</b>	<b>Adjustment</b>
Lynn Sisters <sup>a</sup>	39,886	62,717	1.57
Pybus Bay <sup>b,d</sup>	80,807	244,139	3.02
	17,635	68,860	3.90
	Weighted avg.		3.18
Gambier Bay <sup>b</sup>	42,104	198,044	4.70
Excursion Inlet <sup>b</sup>	20,066	99,177	4.94
Seymour Canal <sup>c,e</sup>	6,387	60,884	9.53
	29,062	265,549	9.14
	Weighted avg.		9.21
Peril Strait <sup>c</sup>	19,023	28,235	1.48
Port Frederick <sup>c</sup>	12,523	55,657	4.44

Adjustments were calculated using CSA estimates of the year the Mark / Recapture was done: a = 2009, b = 2010, c = 2011, d = 2014 and e = 2015

# Thanks to all the vessels that participated.

- F/V Chikamin
- F/V Morgan Anne
- F/V Angjenl
- F/V Sundance
- F/V Haakon
- F/V Outlook
- F/V Aleutian Dream
- F/V Guardian
- F/V Pillar Bay
- F/V Phoenix



And all their crew!

