

# Invasive European Green Crab A Threat to Alaska's Fisheries

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What is something you love in coastal Alaska?



# European green crab invasion of NE Pacific

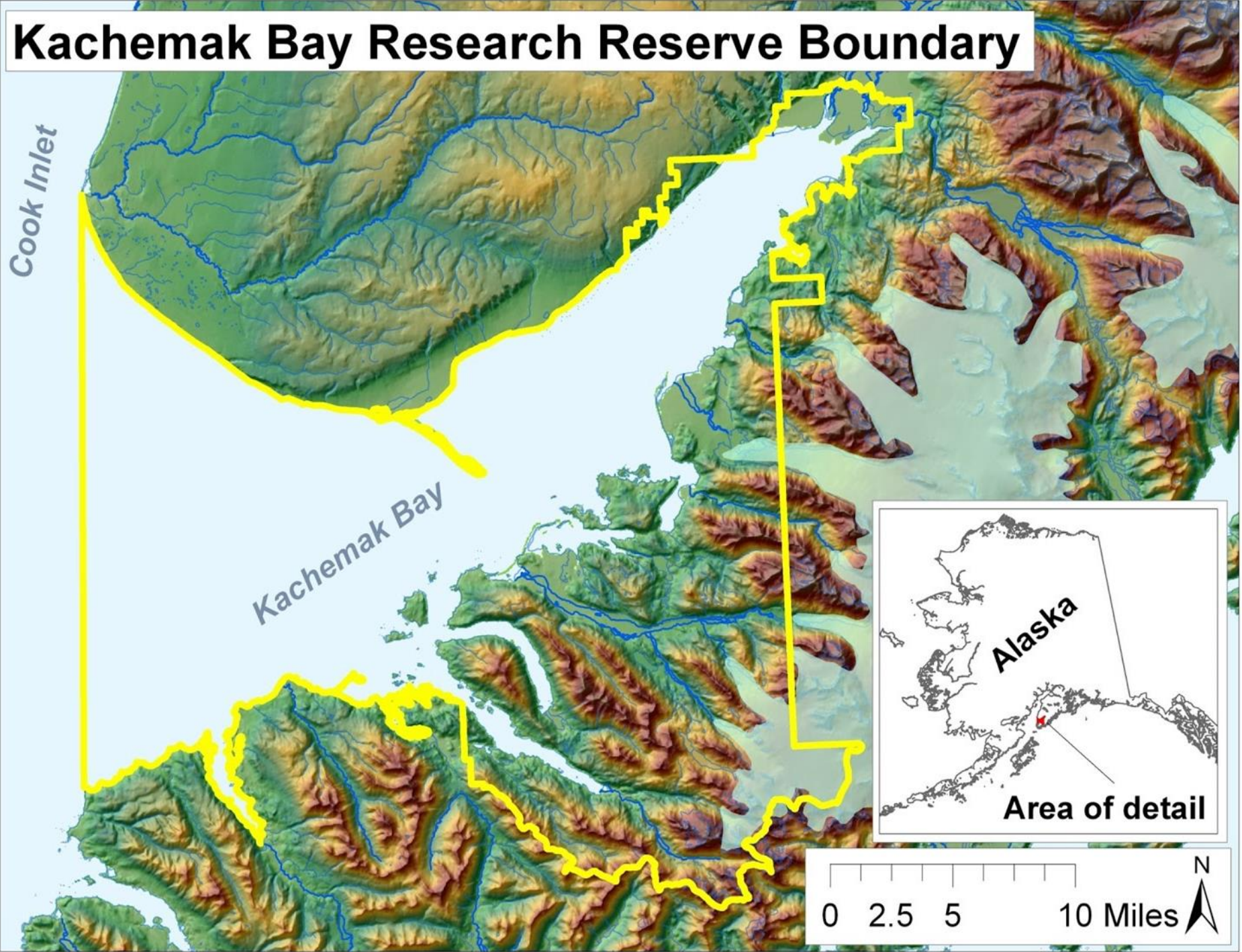
- **San Francisco 1989**
- **Oregon 1995/1996**
- **Washington 1998**
- **Salish Sea 1999**
- **British Columbia 1999**
- **British Columbia Mainland Coast 2011**
- **Southern Haida Gwaii Island, BC 2020**
- **Annette Island, Alaska 2022**



- **European green crab biology and impacts**
- **Responding Together**











# **INVASIVE EUROPEAN GREEN CRAB**



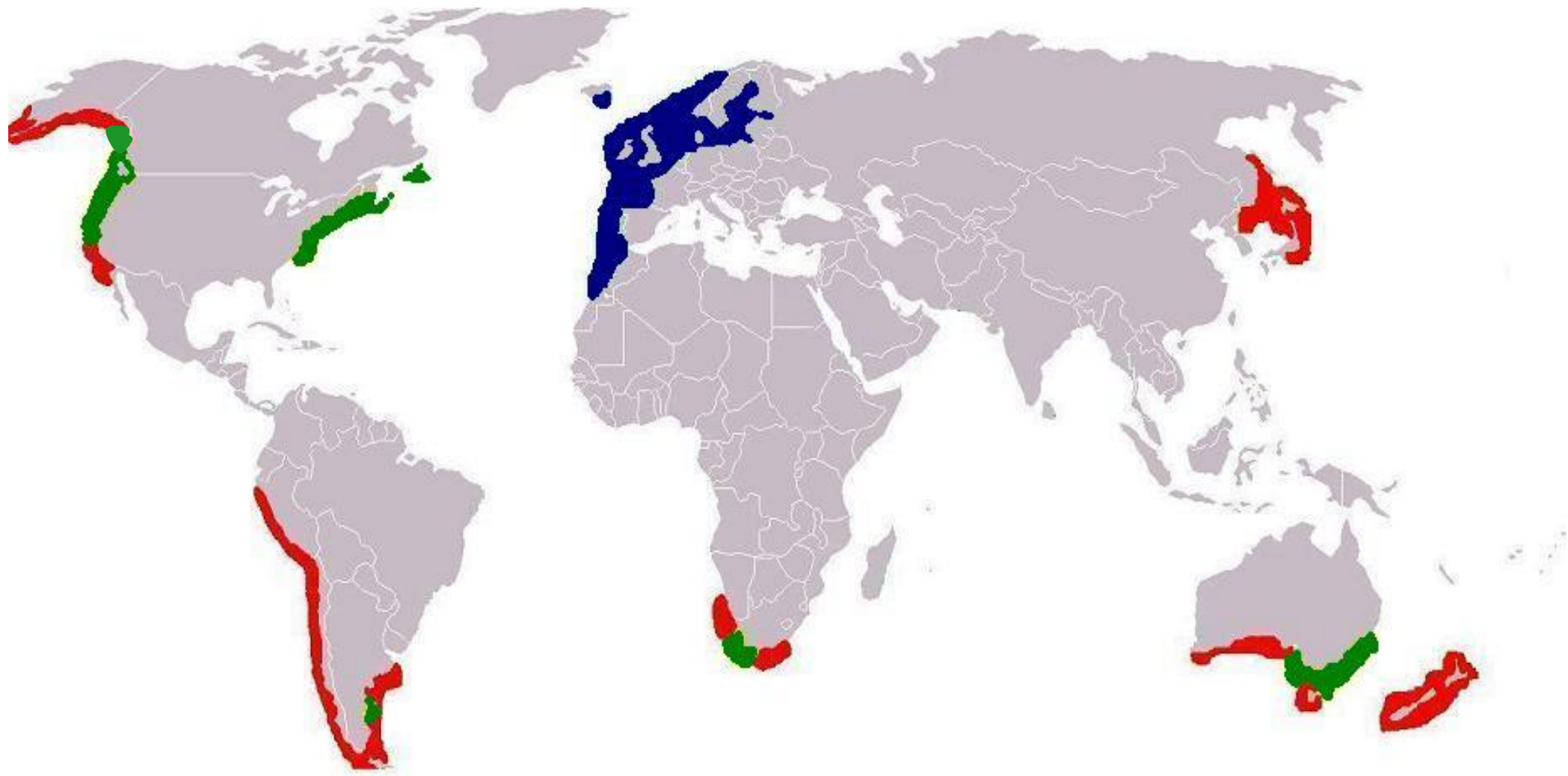


Photos: Stephens et al. 2014









Native Range



Invasive Range



Potential Threat



# Threat # 1





# Threat # 2





## Habitat

Intertidal to maximum known depth of 55 m.

Dominate in saltmarsh, eelgrass beds, protected bays.



Photo by Nick Hawkins/Minden Pictures



An established invasive green crab population can exclude mussels and have a similar negative impact on other bivalves and mollusks.





Threat # 3







Image by Shane Gross



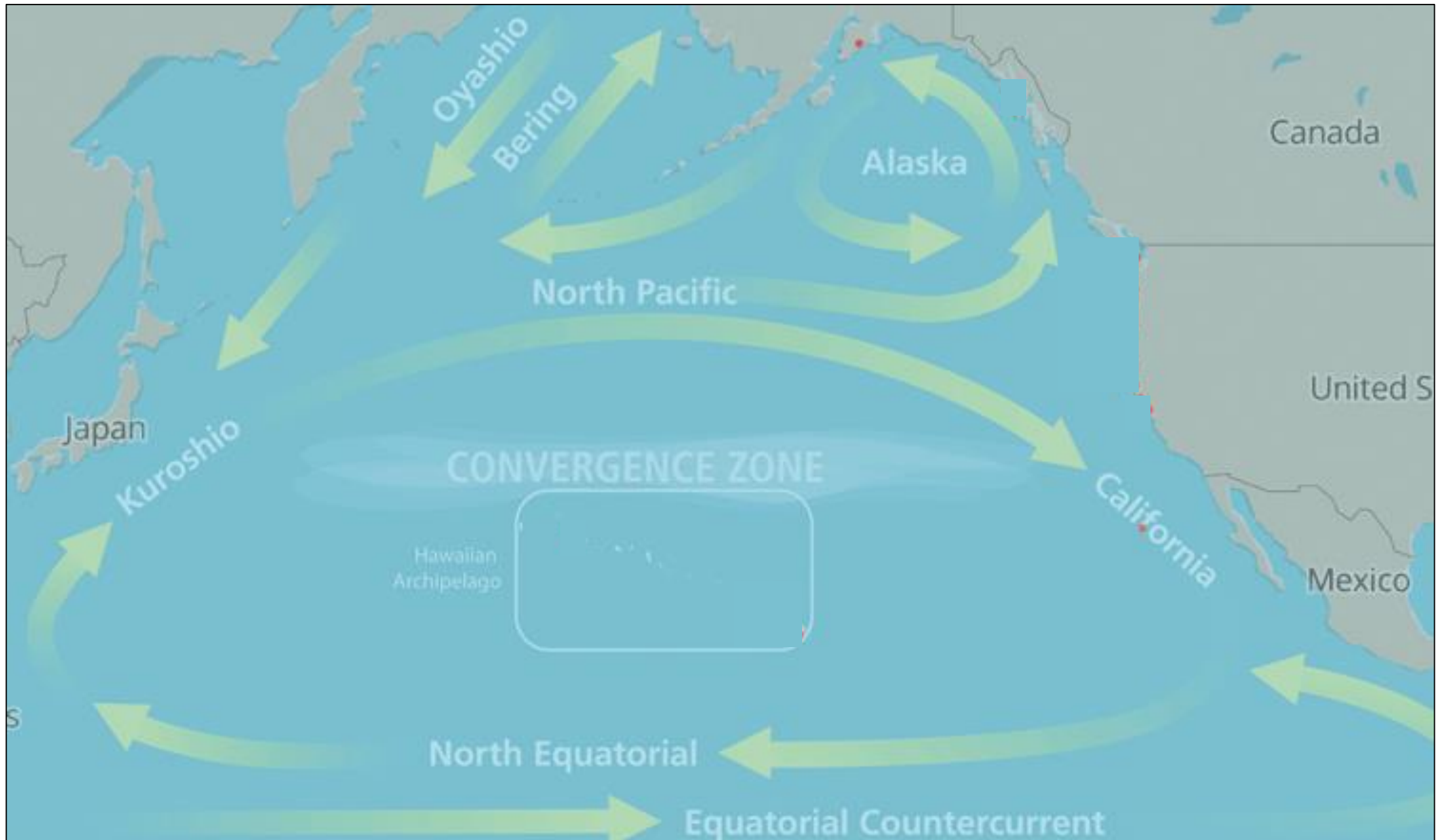
# Threat # 4







Crab Larvae  
aka Zoea



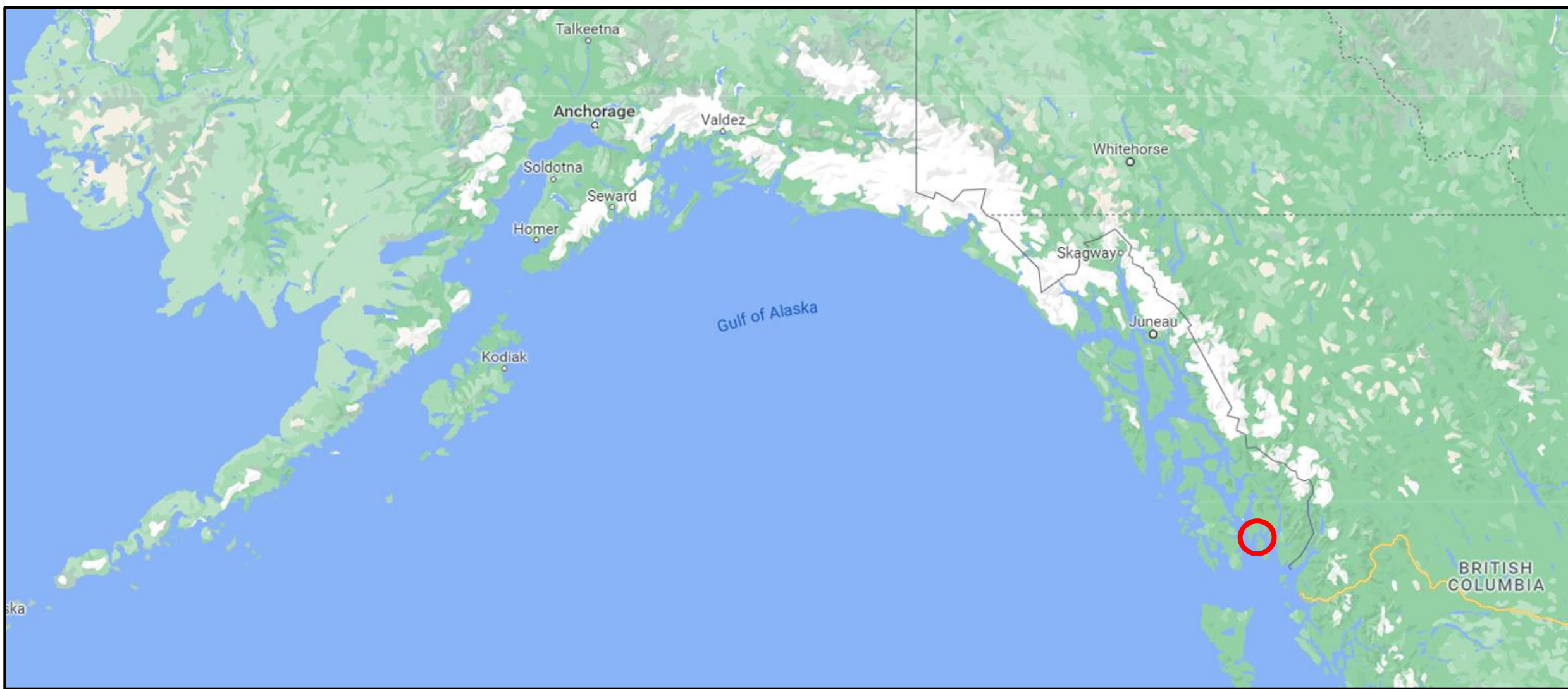
<https://www.geographyrealm.com/debris-2011-japanese-tsunami-carried-almost-300-species-marine-across-pacific-ocean/>



# Invasive green crab status in Alaska







**First detection in Alaska was July 2022, on Annette Island by Metlakatla Indian Community early detection program.**



Since July 2022

- >700 live invasive green crabs caught
- Varying sizes found
- ADF&G surveyed in nearby suitable habitat, no additional detections.



Photo courtesy of Linda Shaw



# Responding Together

Invasive green crab

Early Detection







## Current Monitoring & Early Detection Efforts

- Metlakatla Indian Community
- PWSRCAC – Cordova, Valdez, Kodiak
- Kenai Fjords National Park
- National Parks – Glacier Bay & Wrangell St Elias
- USGS – Izembek (Alaskan Peninsula)
- USFWS
- Seldovia Village Tribe
- ADFG - Ketchikan, Foggy Bay
- KBNERR
- NOAA



## Trap Types

- Folding Fukui traps
- Shrimp traps
- Minnow traps





5  
baited  
traps





- Identify
- Measure
- Record
- Release native animals alive





## Invasive European Green Crab (EGC) Beach Walk Crab Molt Monitoring 2023

**For each crab molt seen** use tally marks under the carapace shape to count up to 16 per shape, then circle the total in the table on the back.

Observer(s): \_\_\_\_\_ Date: \_\_\_\_\_

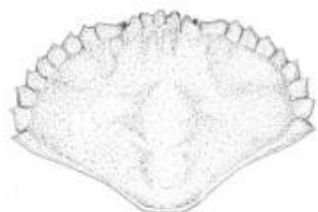
Location started (description or GPS): \_\_\_\_\_

Location ended: (description or GPS): \_\_\_\_\_

Distance walked: \_\_\_\_\_ Beach Habitat (wrack line, driftwood etc.): \_\_\_\_\_

Time started: \_\_\_\_\_ Time ended: \_\_\_\_\_

Invasive EGC (five spines): \_\_\_\_\_



Red Rock: \_\_\_\_\_



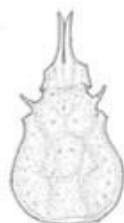
Helmet: \_\_\_\_\_



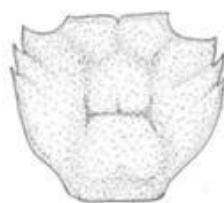
Dungeness: \_\_\_\_\_



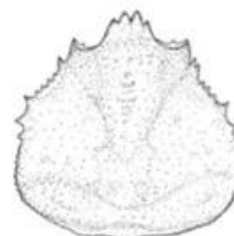
Pygmy rock: \_\_\_\_\_



Decorator: \_\_\_\_\_



Shore: \_\_\_\_\_



Tanner: \_\_\_\_\_



Kelp: \_\_\_\_\_

You can share additional observations on the back as needed. Take pictures of any carapace you can't identify, take pictures of any suspected EGC. Please return data sheet to:



Scan the QR code or call 1-877-INVASIV to report observations of any invasive, non-native species or unusual plants or animals.



I think I found an  
invasive green  
crab!!!!  
**Now what?**





- Photograph
- Detailed location
- Report





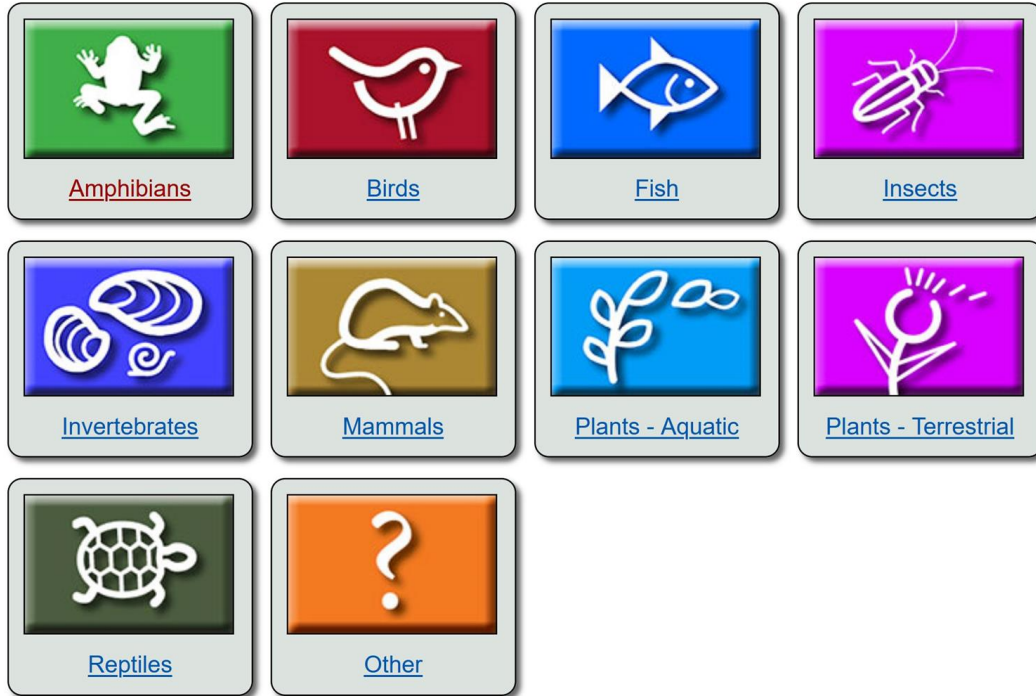
- Photograph
- Detailed location
- Report

**Reports of suspected  
invasive green crab  
will be investigated  
and confirmed.**



# Report Invasive Species

1-877-**INVASIV** (1-877-468-2748)





# Report Invasive Species

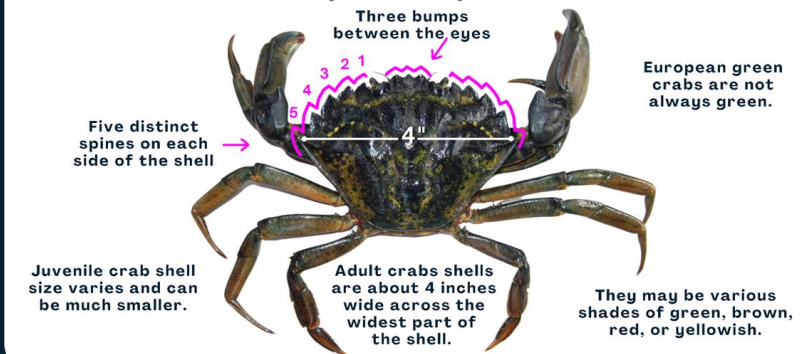
## 1-877-INVASIV (1-877-468-2748)



### FOUND IN SOUTHEAST ALASKA INVASIVE EUROPEAN GREEN CRAB

Salmon and shellfish habitat is destroyed by European green crabs.

#### How to Identify a European Green Crab



#### Spotted a European Green Crab? Now what do you do?

- Take multiple photos of the live crab or the crab shell. Collection and transport is prohibited.
- Note the number of crabs, the location (GPS coordinates or landmarks), and type of habitat.
- Report immediately to the Alaska Department of Fish & Game 1 (877) INVASIV.

#### NATIVE CRABS THAT LOOK SIMILAR TO EUROPEAN GREEN CRABS



**Green Shore Crab**

Three spines on each side of shell and only two bumps between the eyes.

Adults are not larger than 1.5 inches wide across the widest part of the shell.



**Red Rock Crab**

Greater than 5 spines on either side of the shell.

Adult are about 6.5 inches at the widest part of the shell. Their shell is dark red and fan shaped.

It is illegal to release nonnative and invasive species into Alaska waters or lands.



Scan the QR Code or call the invasive species hotline at 1-877-INVASIV to report observations of any invasive, nonnative species, or unusual plants or animals.



Education

Monitoring

Research

Training



Kachemak Bay National Estuarine Research Reserve  
Alaska Center for Conservation Science  
UNIVERSITY of ALASKA ANCHORAGE

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