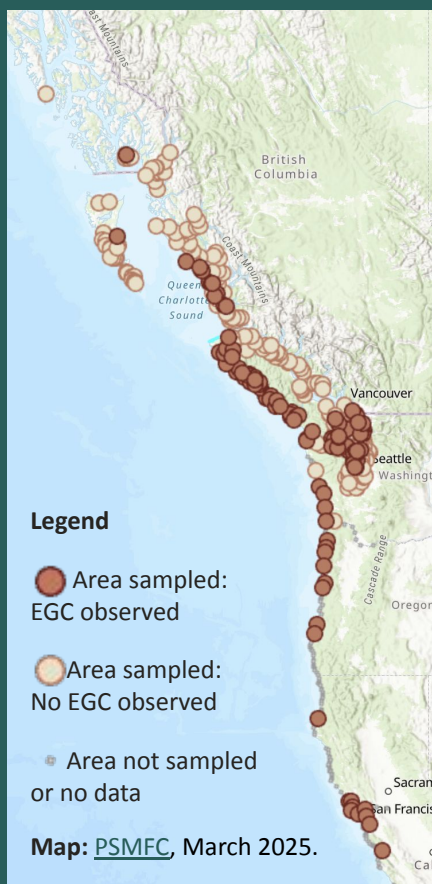


Don't Get Crabby, Get Proactive! Managing European Green Crab in a Changing Climate

Summary: The European green crab (*Carcinus maenas*) poses significant threats to shellfish industries, Tribal food sources, and estuarine habitats in the Pacific Northwest. Its recent population increases in the Pacific Northwest, facilitated in part by warming waters, have led to disaster and emergency declarations by the Lummi Indian Business Council, Shoalwater Bay Indian Tribe, and Washington State Governor Jay Inslee,¹ and coordinated efforts between agency and Tribal partners to respond to and contain European green crab populations.²



Geography:

Native to Northeast Atlantic Europe and northern Africa, this species arrived to North America's West Coast in 1989 in San Francisco Bay, purportedly by hitching a ride from the East Coast in seaweed used as packing material.⁵ Its current distribution extends from central CA to southeast AK.



Major predator of clams, mussels, & oysters

Destroys aquatic vegetation, including eelgrass (*Zostera marina*)³ while searching for food, degrading habitat for many species, including salmon, shellfish, and waterfowl



Eats & outcompetes juvenile Dungeness crabs (*Metacarcinus magister*)

Impacts: European green* crab has direct and indirect **negative ecological impacts** on **culturally** and **economically important PNW species**.

*They're not always green! Color varies from red and brown to dark green.

Climate Connections:

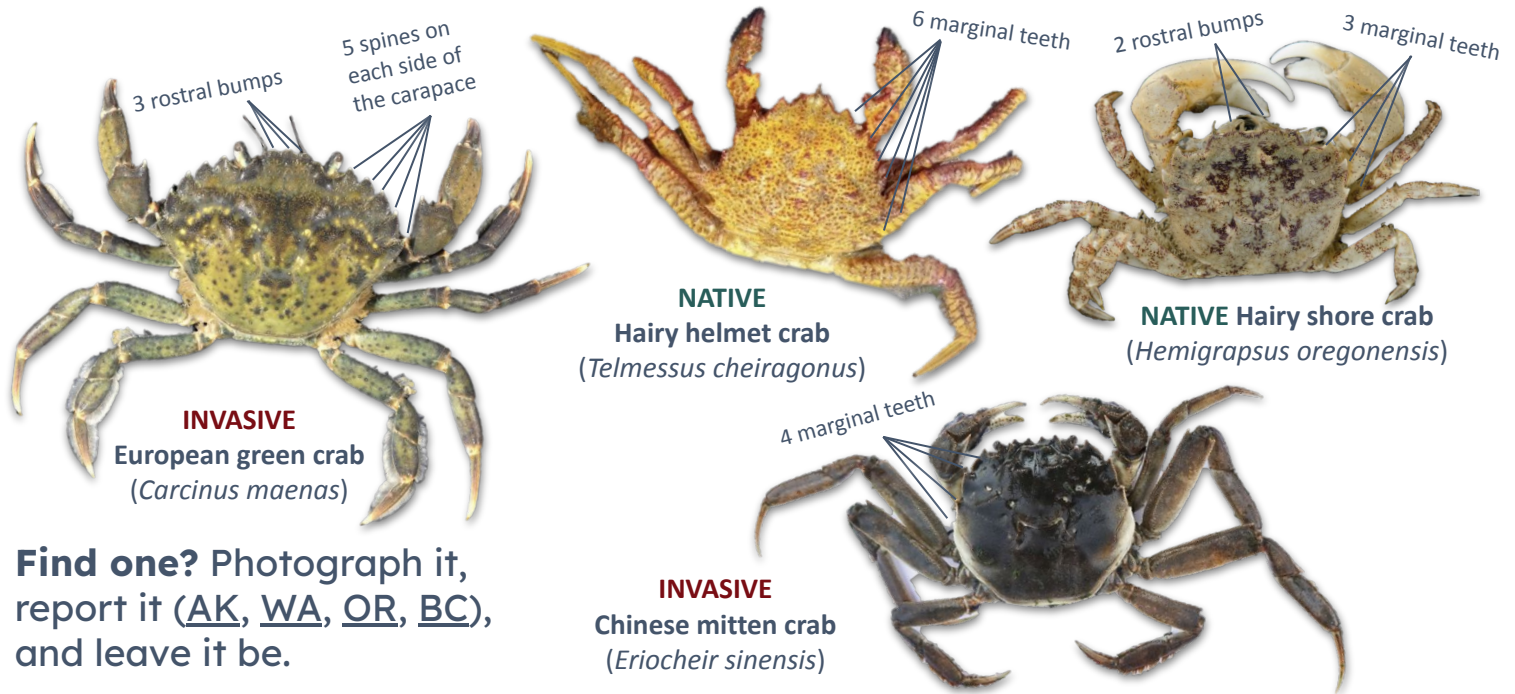
- **Milder winters** are linked to the recent **spread** and **establishment** of European green crab in the eastern Salish Sea.⁴
- Large northward jumps in its West Coast distribution are associated with El Niño events and the Pacific Blob marine heatwave, as **warm water increases larval survival** and **changing ocean currents impact larval transport**.⁵
- In both native and introduced parts of the European green crab's range, **warmer temperatures** have been linked to **smaller body size**, **longer reproductive season**, and **faster development**.⁶
- Red rock crabs (*Cancer productus*) can potentially reduce European green crab through **predation**, but **higher temperatures** may restrict red rock crab distribution and survival, thereby **limiting their impact**.⁷
- In lower latitudes, **warming temperatures** increase white shark (*Carcharodon carcharias*) overlap with and odds of predation on Southern sea otters (*Enhydra lutris nereis*),^{8,9} thereby **indirectly reducing** Southern sea otter **predation** on European green crab.¹⁰

Management and Climate Adaptation Options

- **Resist:** Although European green crab have been found throughout the West Coast, early detection & rapid response can still protect vulnerable waters, including parts of the Salish Sea, from invasion.
- **Accept:** Where complete eradication is infeasible or impractical, control actions may still suppress populations below a specific level of impact (“functional eradication”).¹¹
- **Direct:** Promote the conservation of predators, such as Southern sea otters and leopard sharks in southern parts of the European green crab’s West Coast range.
- **Get creative:** European green crabs harvested in removal efforts may also serve other uses, such as using trapped crabs as fertilizer,¹² or bringing attention to the issue with tasty treats like crab soup or whiskey (but **beware misidentifying and accidentally harming native species**, and mind local regulations in OR,¹³ CA,¹⁴ WA,² and BC).

How to tell if you have a European green crab or something else:

Best bet: Count the number of spines (marginal teeth) next to the eye—European green crabs have five!



Find one? Photograph it, report it (**AK, WA, OR, BC**), and leave it be.

References: [1] [State of Washington Emergency Proclamation by the Governor 22-02](#). [2] [European Green Crab 2025-2031 Management Plan for Washington](#). [3] [Howard et al., 2019](#). [4] [Du et al., 2024](#). [5] [Yamada et al., 2021](#). [6] [Monteiro et al., 2023](#). [7] [de Rivera, 2021 NW RISCC symposium](#). [8] [Moxley et al., 2019](#). [9] [Tanaka et al., 2021](#). [10] [Jeppesen et al., 2025](#). [11] [Green & Grosholz, 2020](#). [12] [Cruickshank, 2023. The Narwhal](#). [13] [Oregon Dept. of Fish & Wildlife: Crabbing & Clamming](#). [14] [California Recreational Ocean Fishing Regulations](#). Map (front page): [Pacific Marine and Estuarine Fish Habitat Partnership, Pacific States Marine Fisheries Commission GIS, Oregon Coastal Management Program](#). [Hairy shore crab photo](#): Florida Museum of Natural History (CC BY-NC). [Hairy helmet crab photo](#): Terry M (CC BY-NC). [Chinese mitten crab photo](#): Peter van der Sluijs (CC BY-SA).

Links to explore:

- [Map of European Green Crab \(EGC\) on the West Coast, USA and Canada](#)
- [Washington Sea Grant’s European Green Crab page](#)
- [Washington Department of Fish & Wildlife’s European Green Crab Hub](#)