

Status of the European Green Crab in the Pacific Northwest

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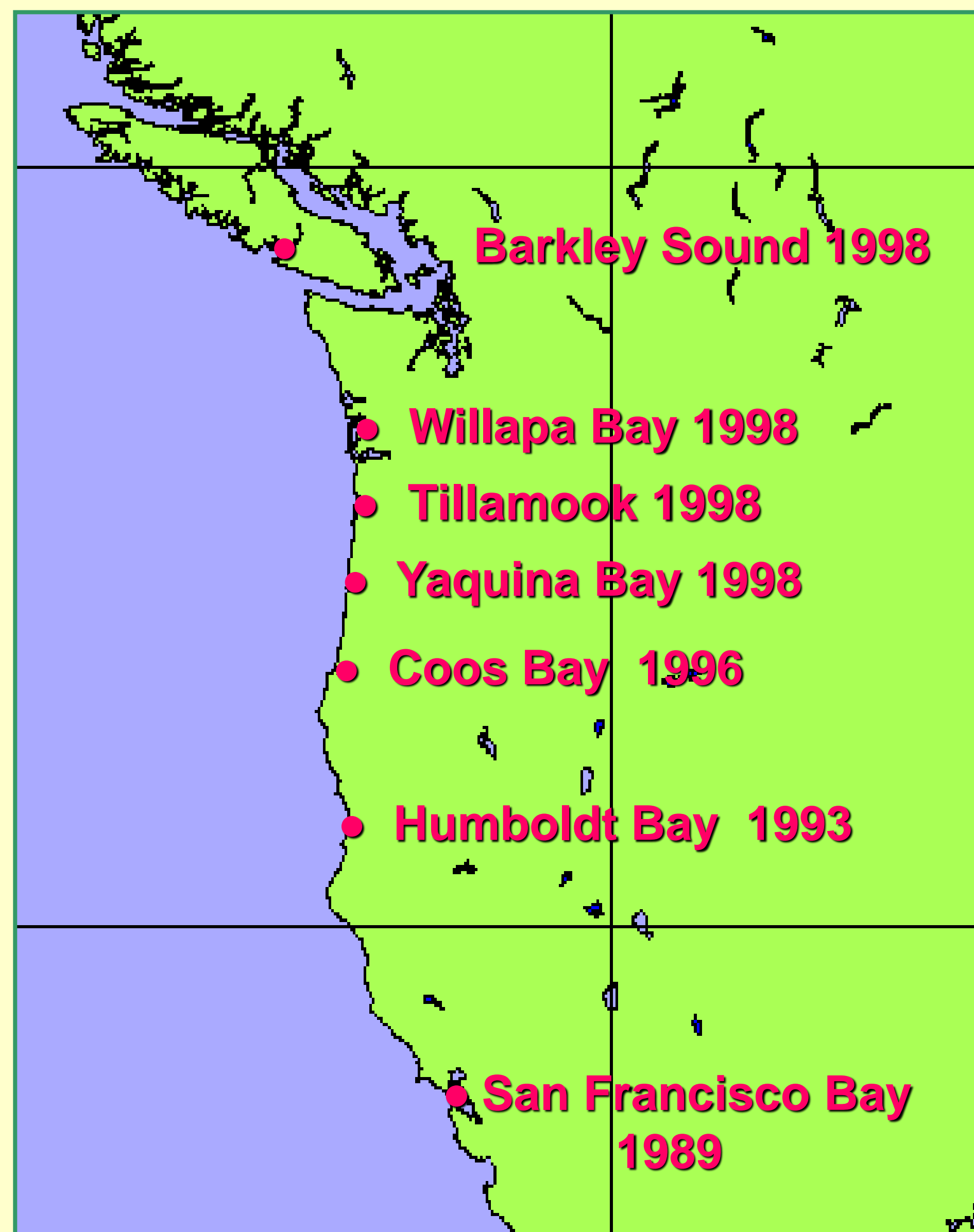
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Range Expansion

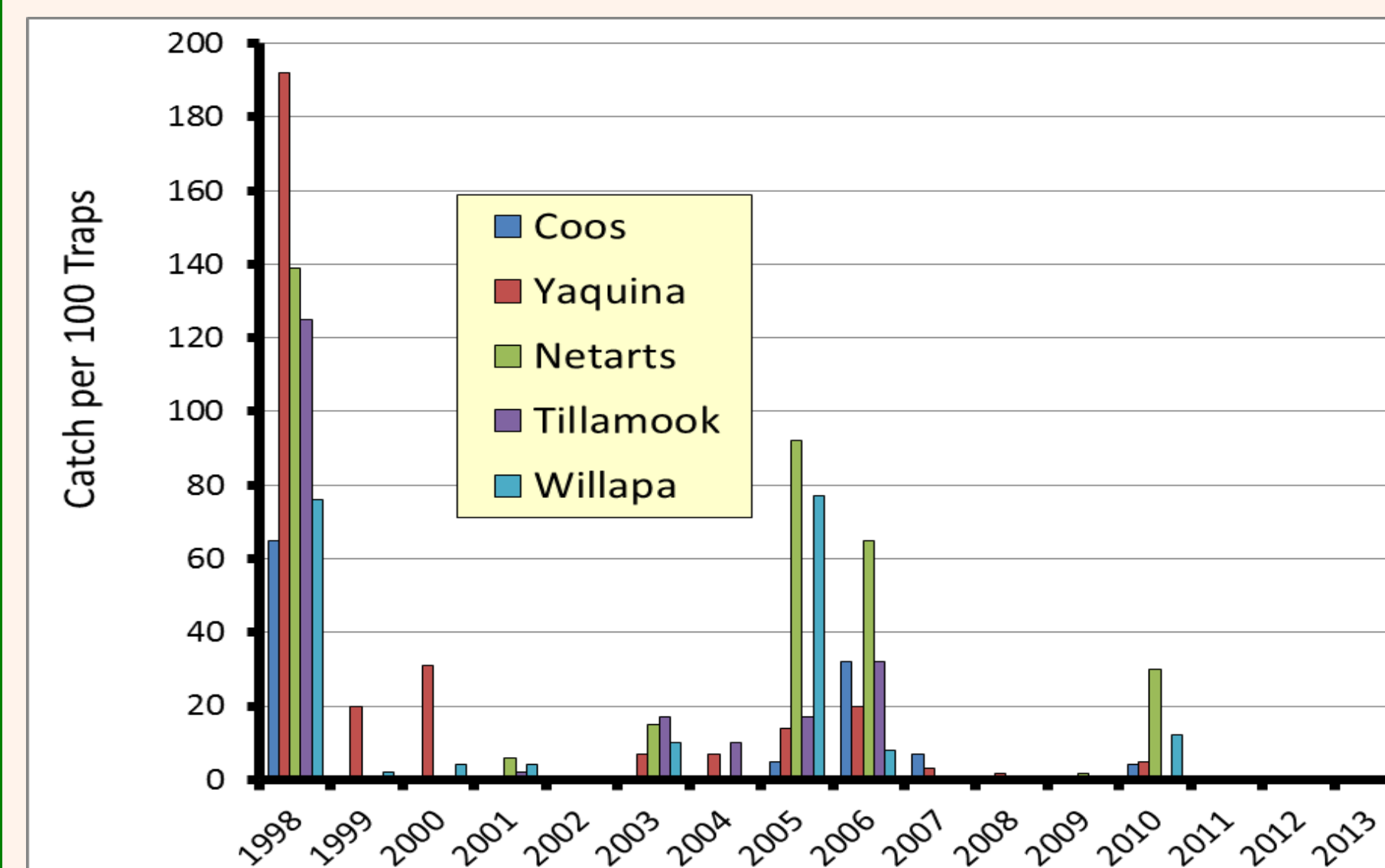
European green crabs were first introduced into San Francisco Bay during the 1980's. From there they spread northward during the 1990's via larvae carried on north-flowing ocean currents. These currents were especially strong during the unusually warm and strong El Niño of 1997-1998. Following this event, young green crabs were discovered in Oregon, Washington and British Columbia.



Northern range expansion of Green Crabs is linked to strong pole-ward coastal currents during the 1990's.

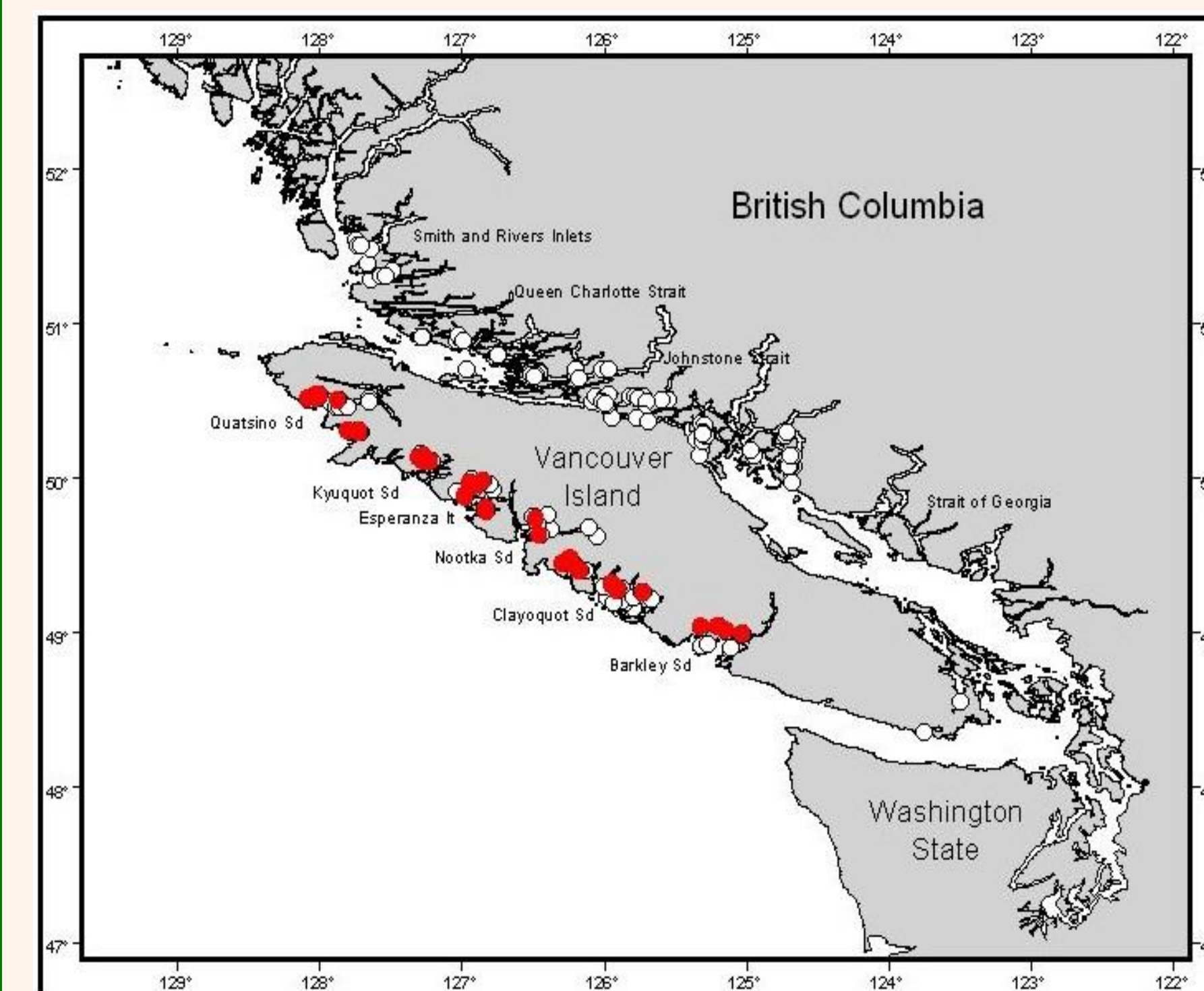
In Oregon and Washington estuaries, significant green crab recruitment occurred only after the warm winters of 2003, 2005, 2006 and 2010.

Year class Strength of 0-age crabs



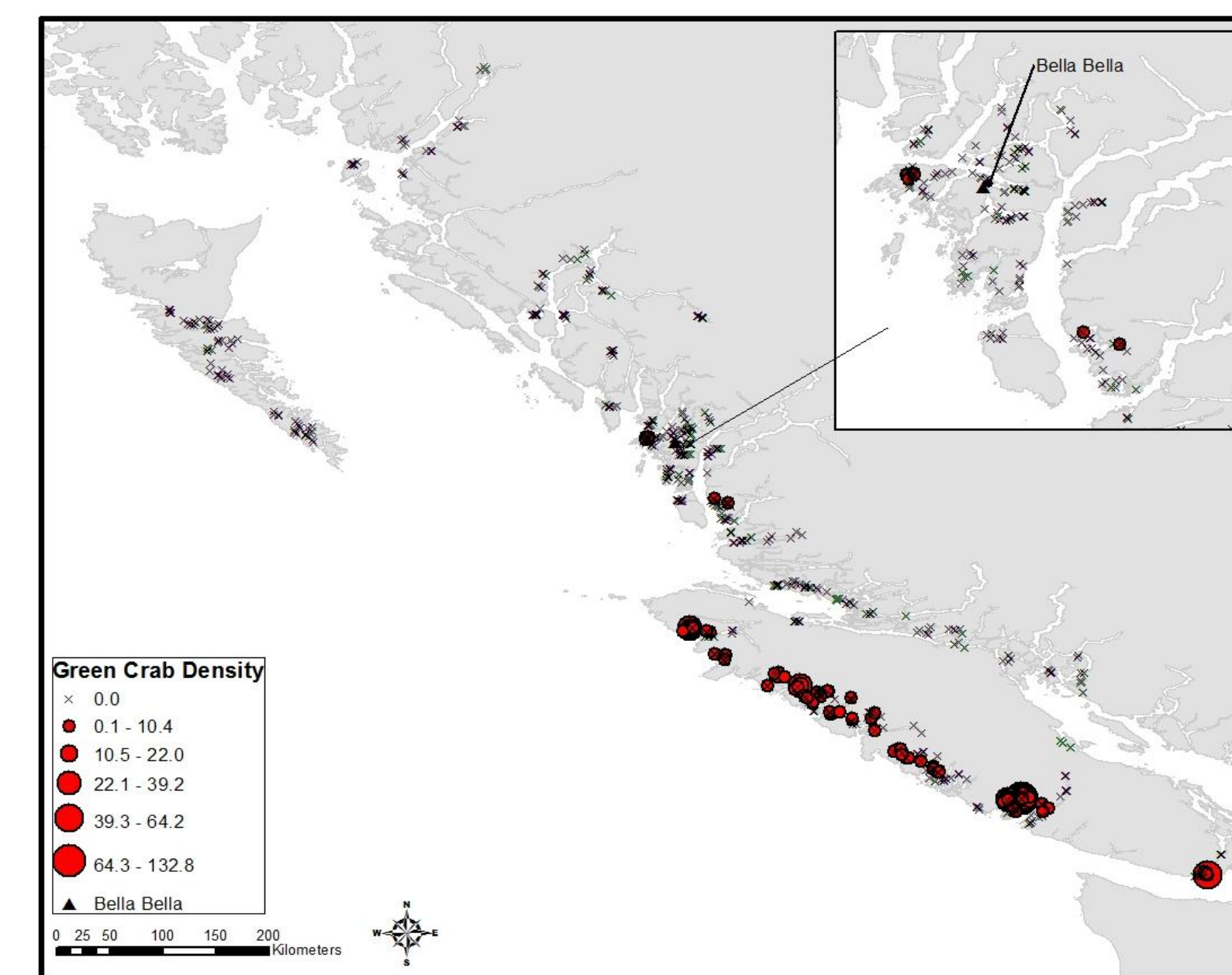
While green crabs have remained rare in Oregon and Washington, they are thriving in the warm inlets on the west coast of Vancouver Island.

Distribution from 2006-2010



In 2011, satellite populations of green crabs were discovered on the Central British Columbia coast around Bella Bella, and around Sooke, just west of Victoria.

Distribution and Abundance 2011-2012



Natural larval transport in ocean currents can account for the Bella Bella, but not for the Sooke range expansion. Transport of shellfish stocks or gear was the likely vector.

Management

DFO has developed regulatory measures for aquaculture and shellfish growers that are designed to prevent the transfer of green crab to uninfected areas.

Collaborative "monitoring" arrangements have been set up between DFO and the First Nations in Bella Bella and in Sooke, with the hope of reducing the reproductive capacity of these two satellite populations. So far, there are no results to report.

Conclusions

- Green crabs have persisted in the Pacific Northwest since 1998.
- Highest green crab densities (>20 per trap) occur on the west Coast of Vancouver Island.
- Ocean conditions that favor green crab recruitment are warm winters and currents that retain the larvae.
- So far, green crabs have not entered the inland sea between Vancouver Island and the mainland. Therefore, it is important that this predator not be introduced to these productive shellfish growing areas via ballast water or shellfish transport.

Acknowledgements

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