Effects of non-native species on two life stages of the Olympia oyster, *Ostrea lurida* in the Elkhorn Slough Estuary

Pamela Neeb Wade
Elkhorn Slough Symposium
January 24, 2017
Olympia oyster, *Ostrea lurida*
Australian tubeworm, *Ficopomatus enigmaticus*
1) Are juvenile oysters more likely than adult oysters to be overgrown by non-native species?

2) Does the competitive interaction between oysters and non-native species vary by tidal height?
Oyster racks were placed above and below Mean Lower Low Water (MLLW).
Adult experiments

Tubeworms present and removed

- Oysters and tubeworms
- Oysters

Non-natives present and removed

- Oysters and non-native species
- Oysters
Juvenile experiment

Tubeworms present and removed

oysters and tubeworms

oysters
Adult oysters

Australian tubeworm had a neutral effect on oyster growth.

Non-native species had a facilitative effect on adult oyster growth.

Juvenile oysters

Australian tubeworm had no effect on oyster growth.
Acknowledgements

**Thesis Committee**
Dr. Jonathan Geller
Dr. Scott Hamilton
Dr. Kerstin Wasson

**Lab Assistance**
Martin Guo
Julie Castro
Ariel Towber

**Genetic Analysis**
Melinda Wheelock
Tracy Campbell

**Field Work**
Kristin Meagher
Melinda Wheelock
Angela Zepp
Robin Putney
Meg Kikkeri
Loli Toledo
Stephen Loiacono
Catherine Drake
Martin Guo
Kenji Soto
Jen Keliher
Beth Callaghan
Jackson Winn
Athena Barrios
Ariel Towber
Ashley Wheeler
Emily Schmeltzer
Nicole Barbour (UROC)
Carolyn Mann
Julie Castro

**Resources**
Chela Zabin-Smithsonian
Anna Deck- S.F. Bay NERR
Jillian Bible- Bodega Marine Lab
Brian Cheng- Bodega Marine Lab
John Lambert- Monterey Bay Aquarium
Charlie Endris- Elkhorn Slough Foundation
John Haskins-ESNERR

**Photography**
JR Sosky

**Additional Support**
MLML Invertebrate Ecology Lab
Monterey Bay Aquarium- Education Dept.
Robin, Lacey and Christine
Patrick Wade and family