SOUTH PUGET SOUND BIOBLITZ: NEARSHORE INVERTEBRATES

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"Fostering sustainable shellfish resources and a healthy marine environment through research and education."

WHAT IS A BIOBLITZ?

A BioBlitz brings experts together with members of the community to record as many species within a designated location and time period as possible. Our BioBlitz focused on invertebrates living in the nearshore in South Puget Sound.

VISION

To increase scientific literacy of residents and inspire active stewardship within the South Sound community.

OUTCOMES

1. A species list of invertebrates identified at each survey location was compiled and will be made publicly available at our website – pacshell.org
2. Participants were trained to conduct field sampling of invertebrates using scientific protocols and were taught basic identification skills alongside experts
3. Interpretation of the ecological relevance of invertebrates to broader ecosystem health was messaged throughout the event to promote a deeper understanding and appreciation for benthic foodwebs
4. This event brought together a number of local organizations, naturalists, university staff/students, agencies and tribes that study and monitor invertebrates as indicators for estuarine health

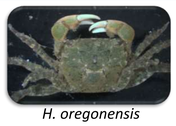
SURVEY METHODS

- Intertidal beach surveys were conducted systematically at four South Sound beach locations; Frye Cove County Park, Priest Point Park, Tolmie State Park and Woodard Bay Conservation Area
- A series of five cores (10cm x 15cm) were dug along three 50m transects that ran parallel to shore at three different elevations
- Contents of cores were passed through a 2mm hand sieve
- PVC quadrats (0.5m^2) were used to assess epibenthic species at one central point along each 50m transect
- Small pit traps were deployed for ~2hrs to assess mobile species living in the wrack line
- After benthic surveys, participants searched the beach to identify additional organisms not found during the survey
- Specimens were either identified and photographed in the field by biologists or collected for further examination/identification

CITIZEN SCIENTISTS

A total of 200 people participated in our one-day event on August 11th, 2018. This included 150 people interacting with our displays and biologists at the WET Science Center and 50 people conducting beach surveys. A total of 15 biologists joined the event as survey leaders and/or interpreters at the WET Science Center. Several participants were volunteer naturalists and marine biology students. Participants joined us from four counties; Thurston, Pierce, Grays Harbor and Adams. Most participants were engaging in citizen science and beach monitoring for the first time.

BioBlitz participants interacting with live marine invertebrates on display at LOTT's WET Science Center (*left*). Dany Burgess, taxonomist at WA Dept. of Ecology's Benthic Lab, shares her expertise of Puget Sound polychaetes with a young scientist (*right*). Invertebrates (*below*) collected during the South Sound BioBlitz, August 11th, 2018.



H. oregonensis

H. crassicornis

Traskorchestia sp.

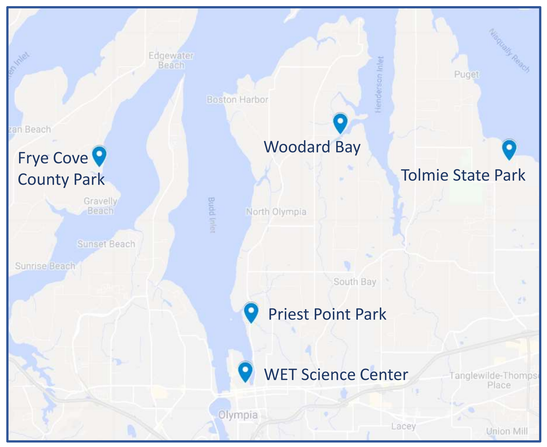
Glycera sp.

Bugula sp.

Dendronotus sp.

Photo Credits: Dany Burgess

BIOBLITZ LOCATIONS IN SOUTH SOUND



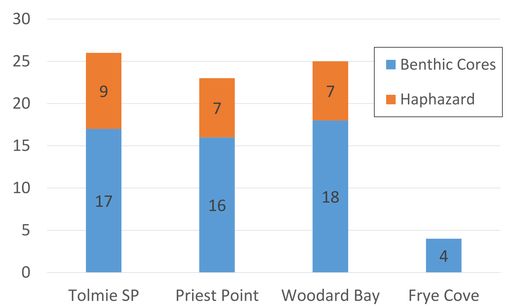
BioBlitz coordinators, Katie Houle (*left*) and Yvonne Shevalier (*right*) collect data while leading beach surveys at Woodard Bay and Tolmie State Park. BioBlitz participants pose for a team picture after their survey at Priest Point Park (*bottom*), led by PSI biologist Aimee Christy.

MOST COMMON BENTHIC INVERTEBRATES

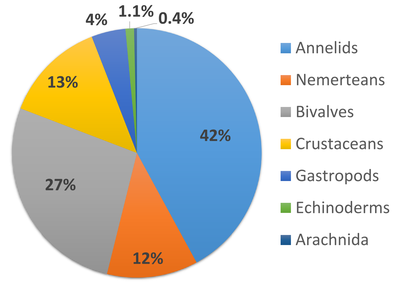
1. Bloodworms – *Glycera sp.*
2. Ribbon worms – *Nemertea*
3. Bent-nose macoma – *M. nasuta*
4. Baltic macoma – *M. balthica*
5. Manila clam – *V. philippinarum*
6. Littleneck clam – *Leukoma* staminea
7. Varnish clam – *Nuttallia obscurata*
8. Eastern softshell – *Mya arenaria*
9. Beach hoppers – *Traskorchestia sp.*
10. Green shore crab – *H. oregonensis*

PRELIMINARY RESULTS

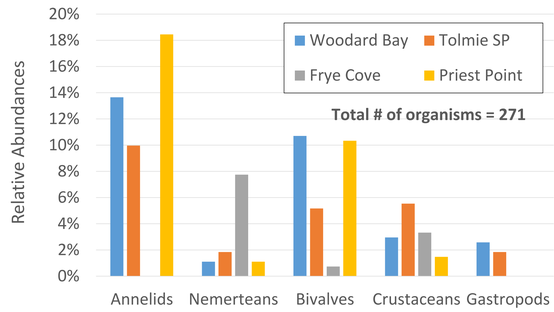
Total Number of Taxa – ALL SITES



Relative Abundances of Common Taxa in Benthic Cores (All Sites)



Relative Abundances of Common Taxa in Benthic Cores



A SPECIAL THANK YOU

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