

Review of Heare *et al.*, Evidence of *Ostrea lurida* Carpenter, 1864 population structure in Puget Sound, Wa.

Summary

This paper documents results of reciprocal outplant experiments for Olympia oyster using three geographically distinct sources of broodstock in Puget Sound, Washington. The results, expressed in terms of survival, growth and reproduction and linked back to environmental data, suggest population level structure within the sound. The authors acknowledge that more work (molecular studies) would add to understanding this structure and the implications of future broodstock collection for restoration efforts. The paper presents data and analyses that inform ongoing work and initiates discussion of possible implications for restoration of the species. My comments are largely editorial, the paper needs only minor revisions before publication.

Editorial comments

- Remove the parentheses from the taxonomic authority in the title – *lurida* was originally described in *Ostrea*.
- Use of &/and is inconsistent through the document, particularly in references to Figures and literature cited.
- In references to Figures, use of Figure and Fig. is inconsistent.
- Be consistent in the use of site names or designations; use gazetteer names for broodstock sources and Southern/Central/Northern/Hood Canal for outplant locations. Interchangeable use of names makes the document more difficult to read, not simpler.
- Bible and Sanford (2016) is cited in the document (lines 57, 62, 144, 297) but not listed in the references.
- Refer to Figure 1 in the Bays of Origin section beginning on line 83.
- On line 114, delete “and oysters were removed from mesh bags” from the first sentence; this is covered in the subsequent sentence.
- Consider adding buoy locations from the Environmental Monitoring section (starting on line 118) to Figure 1.
- Wickham (2014) is cited in the document (line 122) but both Wickham (2011) and Wickham (2014) are listed in the references; check the date for the citation and remove the other reference from the list.
- On lines 160-161, change “Singmann, Bolker and Walker, 2015” to “Singmann et al., 2015”.
- On line 172, change “H2O” to “H₂O”.
- On line 211, insert actual numbers rather than placeholders for mortality of Oyster Bay sourced oysters outplanted at the Southern site.
- Re-order figures or re-visit text in the sections on Growth (starting line 215) and Brooding Females (starting line 230) so that Figures are cited in numerical sequence.
- On line 274, change “referred to from here on as populations for simplicity” to “(populations)”; the rationale for this was already described on lines 77-78.
- On line 302, remove “) mm” following “6.4SD”.
- On line 405, delete “and use it” following “(Oyster Bay)”.
- On line 457, delete the period following “J”.

- On line 511, change “M. Edie” to “Edie, M.”
- Article titles for Aitken and Whitlock (2013), Camara et al. (2008) should be in sentence case.
- Kawecki and Ebert (2004), Palumbi et al. (1997) and one of the Whickham references (2011 or 2014) were not cited in the document.
- Italicise *Ostrea lurida* in Trimble et al. (2009) and White et al. (2009).
- Remove the gazetteer names from the outplant sites in the caption to Figure 1. Suggested caption: Figure 1. Olympia oyster (*Ostrea lurida*) broodstock and outplant sites in Puget Sound, WA. Broodstock collected from Fidalgo Bay (F), Dabob Bay (D) and Oyster Bay (O). Outplanted to Northern (F), Hood Canal (D), Central (C) and Southern (O) sites.