Dear Journal of Plankton Research Editor,

Please find enclosed our manuscript entitled “Dynamics of *Teleaulax* cryptophyte prey during the decline of red water blooms in the Columbia River Estuary” submitted for publication as an original research article in the Journal of Plankton Research.

The mixotrophic *Mesodinium rubrum* is a globally distributed nontoxic ciliate that relies on the acquisition and use of chloroplasts derived from its cryptophyte prey, *Teleaulax amphioxeia*. While most studies have focused on the ciliate, we use continuous flow cytometry to examine patterns in abundances and division rates for free-living *Teleaulax*-like cryptophytes both in the laboratory and during a 4-week survey in the Columbia River estuary carried out in 2013. Cryptophyte division rates, estimated for the first time in the field, were positively correlated with concentrations of dissolved inorganic nitrogen and phosphorus, suggesting nutrient availability, rather than light conditions, limited the growth of the cryptophytes at that time. Abundances of cryptophyte prey followed closely ciliate abundances, suggesting a tightly-coupled predator-prey relationship. Overall, our results suggest that the growth of *M. rubrum* was limited by prey availability during the survey. Our findings significantly advance the field of plankton research by highlighting the importance of prey availability for understanding the dynamics of these globally occurring blooms. Additionally, the

All individuals listed agreed to be listed as authors and approved the submitted version of the manuscript. The manuscript contains original data that has not been previously published or is in review elsewhere.