**TEACHER-RESEARCHER NETWORKING PLAN**

Timothy Dwyer – Polar Gigantism in Antarctica

*Pre-Expedition Networking*

* Periodic communication with the team has come in the form of emails and phone calls between Dwyer and Woods.
* Woods has shared a reading list of journal articles for Dwyer to familiarize himself with the scope of the research and its significance.
* Woods, Tobalske, and graduate student Steven Lane traveled to Friday Harbor, where Dwyer is based, for five days in early June. Dwyer accompanied and assisted the team in field collections of sea spiders in the region, as well as deployment and recovery of instrumentation.
* Dwyer and Woods met specifically to outline lesson plans (including a middle-school appropriate math lesson based around Fick’s Laws of diffusion) and an outreach strategy involving PolarTREC journals and the research team’s Polar Giants Squarespace website.

*Networking in the Field*

* Dwyer will meet with the team initially to outline and build a presentation for a PolarConnect event in mid October
* The team will discuss oxygen diffusion rates as they relate to surface area-to-volume ratios, as well as other factors that may be limiting size in invertebrates
* Scientific diving under the ice is a fantastic means of engaging the public, particularly with respect to explaining physical factors limiting life in the Antarctic: temperature, salinity, oxygen partial pressures and diffusion rates
* The team will make a point of meeting weekly to discuss changes to these goals

*Post-Expedition Networking*

* Dwyer will offer Woods, Moran, and Tobalske guidance in developing age-appropriate lessons for primary and secondary school students
* Lesson plans will be communicated, reviewed, and adapted over email and through phone conversations
* Using photos taken during the expedition, we will develop a field guide to the different species of sea spiders encountered for use with students
* Once lesson plans are finalized, Dwyer will travel to visit Woods & Tobalske or Moran to implement the inquiry-based lesson in one or more local schools with which the researcher has an existing relationship