

Zooplankton Diel Rhythms
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“Winter” Small boat experiment

The objective of this mini-cruise was to provide a winter time point for our seasonal analysis of variation in the circadian rhythms of a phylogenetically diverse range of zooplankton migrators.

For these experiments zooplankton were collected from surface waters in the evening after they had completed their vertical migration. Individuals were sampled using a Reeve net with a large (20 L) cod end that was deployed to 120 m wire out from the small boat “*Sea Dance*” at 32°19.998’N and 64°33.174’ W (32.33333333, 64.55277778). Sunset during this cruise was 19:24. Two tows were conducted during this mini-cruise (nets in the water at 21:57 and 22:32). Temperature and depth were recorded with an Oddi Star logger (Fig. 1).

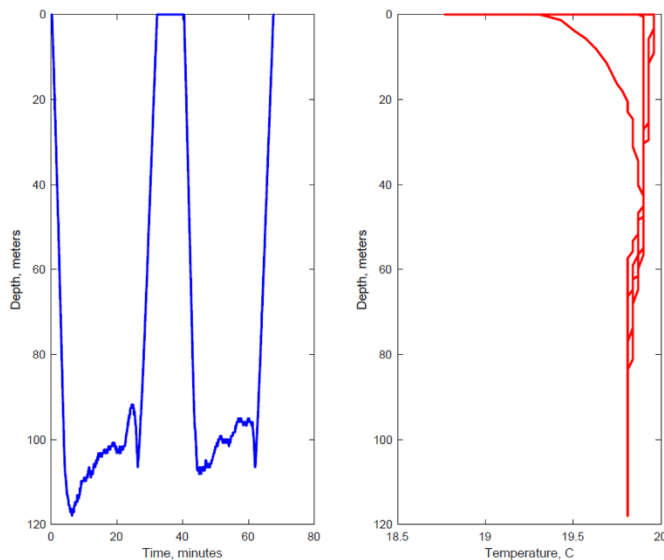


Figure 1: Depth and temperature profiles for the two net tows.

Organisms were left in the cod ends, which were covered with trash bags after retrieval to reduce light and handling stress. Organisms reached the lab at 23:30 and were immediately sorted for physiological experiments. Experiments were conducted in a dark incubator at 22°C with hobo loggers documenting temperature and light levels.

Upon return to the lab individuals were quickly sorted and placed into individual glass respiration chambers that had been pre-filled with 0.2 micron filtered seawater (36 psu).

Experiments were conducted starting at 0:30 3/11/2019 and were concluded on 3/14/2019 at 10:00 with 5 *Pleuromamma xiphias*, 2 *Thysanopoda aequalis*, 1 *Nematobrachion sp.*, 3 *Cuverina atlantica*, 1 *Nanocalanus minor*, 1 *Rhincalanus cornutus*, 1 *Candacia ethopica*.