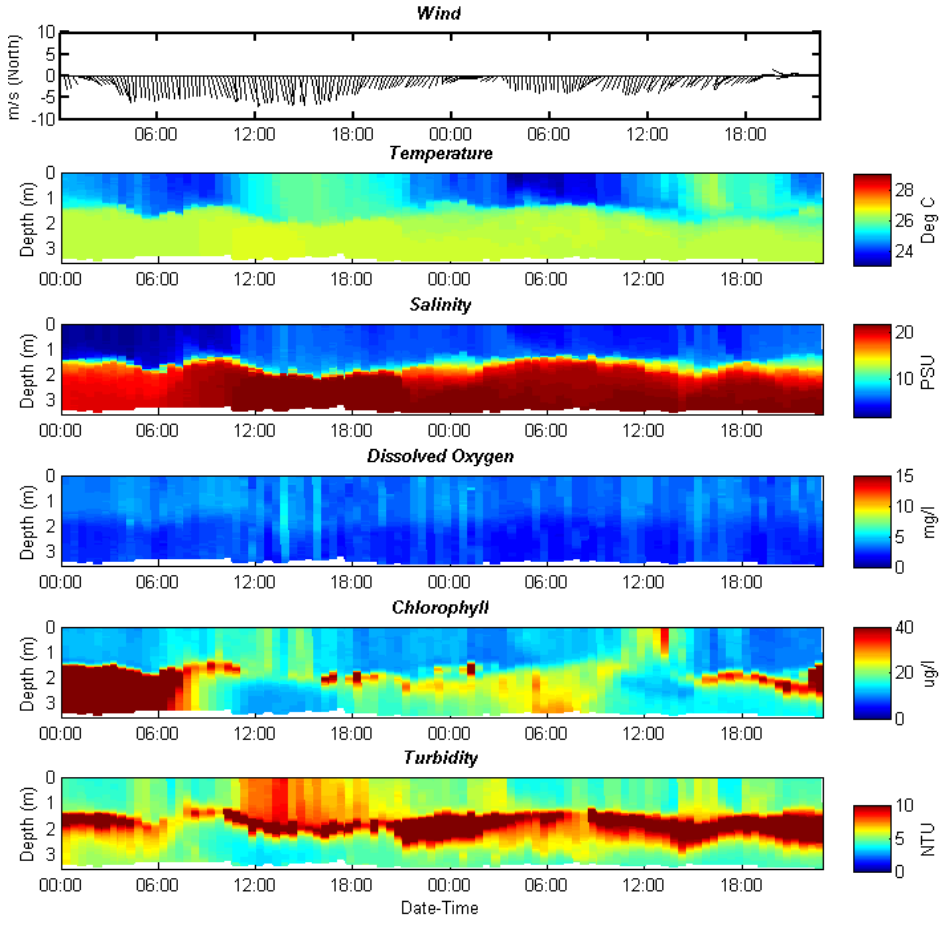

Deep rising — wind-mixing and pathogenic *Vibrio* bacteria

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133 Rosenau Hall

12:00 - 12:50 p.m.

Abstract

Bacteria belonging to the *Vibrio* group are ubiquitous in coastal waters. The vibrios have been attracting media attention throughout history—dating back to 1854 when John Snow traced the origins of a cholera outbreak to a community drinking water well. Infections from contact with pathogenic *Vibrio*-contaminated waters can result in blistering dermatitis, gastroenteritis, or even death. Previously, researchers have predicted "total" *Vibrio* bacterial concentrations based on simple salinity and temperature models. However, more recent predictive models focus on trends of individual pathogenic *Vibrio* species (e.g. *V. cholerae*, *V. vulnificus, V. parahaemolyticus*). This seminar will show that eastern North Carolina's estuaries, which are highly stratified by salinity, create distinct environments for *V. vulnificus*. Creating species-specific *Vibrio* predictive models must take into consideration the disruption of stratified waters by events like strong wind. Differences in *V. vulnificus* concentrations during stratified and mixed conditions will be discussed.