Jackie Collier, School of Marine and Atmospheric Sciences – Stony Brook University
“Finding a Better Way to Remove Nitrogen from Residential Cesspools Based on Microbiology and Microbial Ecology”

Abstract:
Wastewater is a major source of N to waters around Long Island because the typical backyard cesspool/leachring technology used for on-site wastewater treatment does not effectively remove N, allowing it to be transported into groundwater and coastal ecosystems. N removal is a biological process driven by diverse microorganisms. The Center for Clean Water Technology (CCWT) is working to improve the N removal performance of on-site wastewater treatment systems by understanding and harnessing the microbiology and microbial ecology of nitrogen transformations in on-site wastewater treatment systems. In particular, CCWT is testing a relatively simple but potentially very effective passive nitrogen removal barrier system. I will summarize how the microbiology of these systems is expected to work and what we're learning about how they actually do work.

Bio:
Jackie Collier is a microbial ecologist who has been at Stony Brook University since 2002.
She earned her undergraduate degree from the University of Texas at Austin (BS in Biology) and graduate degree from Stanford University (PhD in Biology), and after a postdoctoral fellowship at Scripps Institution of Oceanography joined the faculty at Rensselaer Polytechnic Institute for a few years before moving to Stony Brook.