Systematics and comparative phylogeography of jellyfishes (Scyphozoa: Discomedusae) in the Tropical Eastern Pacific: The effects of Environmental Perturbations on Communities and Species Across Micro-Evolutionary Scales

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The outside lecture I attended was the Ph.D. defense of Holly F. Swift. Her work was based upon the discomedusae group of jellyfish. She began with an overview of integrative taxonomy and her argument that there currently exists a taxonomic impediment. The taxonomic impediment is a theory that the growth in finding new taxonomic groups has slowed or halted in response to how scientists approach identifying new groups in taxonomy. She then introduced the three epochs of taxonomy: taxonomic splendor where many new groups were being classified and many new species were being recorded graphically, taxonomic respite where ecology of jellyfish flourished, and molecular taxonomy which is where we find ourselves currently. She then discussed the study of cryptic species and diversity found in the northern Pacific Ocean, and the barcoding gap anomaly she discovered. A 3D PCA analysis using morphological data was performed. She followed up this study with an analysis of diversification and evolution radiations regarding jellyfish along the Central and Northern American coasts, stating that it is very difficult to classify when a radiation occurs and at which point it can be called rapid. One such example of rapid radiation are cichlids in South Africa.