

## ORAL PRESENTATION

### ULTRASTRUCTURE AND MOLECULAR EVIDENCE REVEAL ARAPHID PENNATE ANCESTRY FOR A ROUND, UNDESCRIBED TROPICAL DIATOM

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Recent sampling of diatoms in Guam has revealed a wealth of undescribed diversity. One of these undescribed taxa, tentatively referred to as “starry centric,” is a round diatom with elongate chloroplasts that radiate from an internal cup-like structure in the center of the valve. This cup-like structure is similar to structures found in the araphid pennate diatom genera *Cyclophora* and *Hustedtiella*, and in fact preliminary molecular phylogenetic analysis suggested a close relationship between “starry centric” and *Cyclophora*. Further investigations into the ultrastructure of these diatoms (determined by TEM) and a more expansive, 3 gene molecular phylogenetic analysis have continued to suggest a close relationship between these two taxa. While this is hardly the first round diatom suggested to be derived from an araphid pennate lineage, it might be the most distinct synapomorphy (in this case, the cup-like structure in the valve) uniting two such morphologically dissimilar diatoms.