

ORAL PRESENTATION

THE ROLE OF CORE SPECIES IN REGULATING DIATOM NETWORK ASSEMBLY

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Benthic microbial mats on carbonate platforms contain distinctive cyanobacterial and algal species capable of thriving in low-nutrient, desiccation-prone and often high light environments. The diatom component of these mats has been well described in the karstic regions of the Caribbean, including the Everglades, and contains a consistent core species assemblage, some of which appear to contribute to the maintenance of the cohesive structure of mats. Core species may be defined by their apparent or measured roles, or by the degree to which they are positively or negatively associated with other species. We used network analytical approaches to determine the role of core species in potentially regulating the appearance of others along gradients of core species relative abundance. Core species are associated with tighter networks of fewer species that whose abundances are highly correlated with each other, compared to assemblages with fewer core species.