

Seagrass epiphytes: useful indicator, potential biological criterion, or forlorn hope?

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Epiphytes on seagrasses have been studied for more than 50 years, and proposed as an indicator of anthropogenic nutrient enrichment for over 30 years. Epiphytes have been correlated with seagrass declines, causally related to nutrient additions in both field and mesocosm experiments, and have quantifiable impacts on light available to host plants. These factors suggest that epiphyte metrics (biomass per unit area or weight of seagrass) should be an effective eutrophication indicator, and might even be a candidate biological criterion if consistent action levels can be identified. A key question is whether location specific modifying factors (grazing pressure, seagrass species, physical environment) cause levels of variation sufficient to negate general applicability. An extensive review of seagrass epiphyte literature was conducted to determine whether, and under what conditions, seagrass epiphyte metrics could be used as a potential biological criterion for nutrient impacts.