

Florida Bay Update: The return of seagrass dieoff

Penny Hall
Jim Fourqurean



NOTE

Mass mortality of the tropical seagrass *Thalassia testudinum* in Florida Bay (USA)

M. B. Robblee¹, T. R. Barber², P. R. Carlson, Jr.², M. J. Durako², J. W. Fourqurean³, L. K. Muehlstein⁴,
D. Porter⁵, L. A. Yarbro², R. T. Zieman³, J. C. Zieman³

¹ Everglades National Park, South Florida Research Center, Homestead, Florida 33030, USA

² Florida Marine Research Institute, 100 Eighth Avenue SE, St. Petersburg, Florida 33701, USA

³ University of Virginia, Department of Environmental Sciences, Charlottesville, Virginia 22903, USA

⁴ Caribbean Research Institute, University of the Virgin Islands, St. Thomas 00802, U.S. Virgin Islands

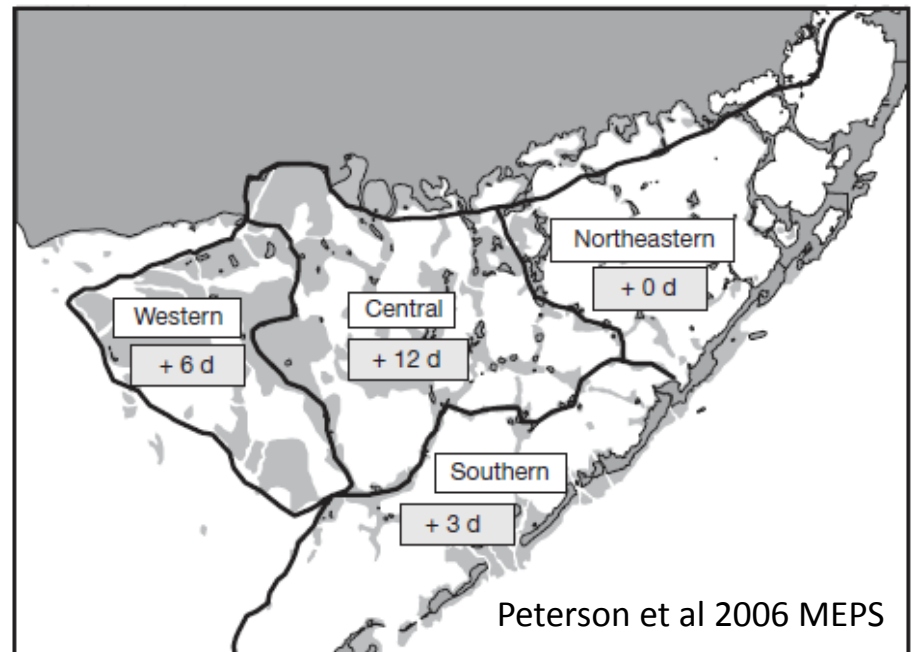
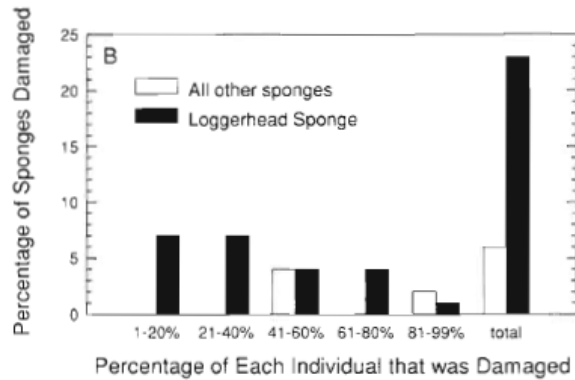
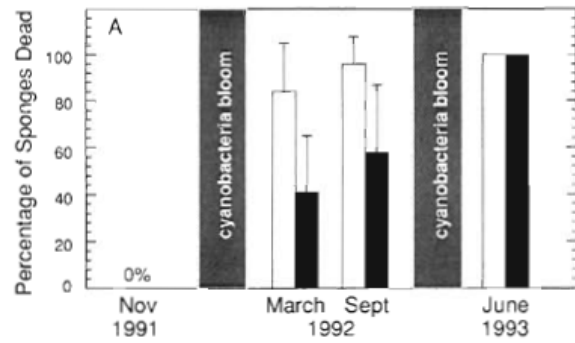
⁵ University of Georgia, Department of Botany, Athens, Georgia 30602, USA

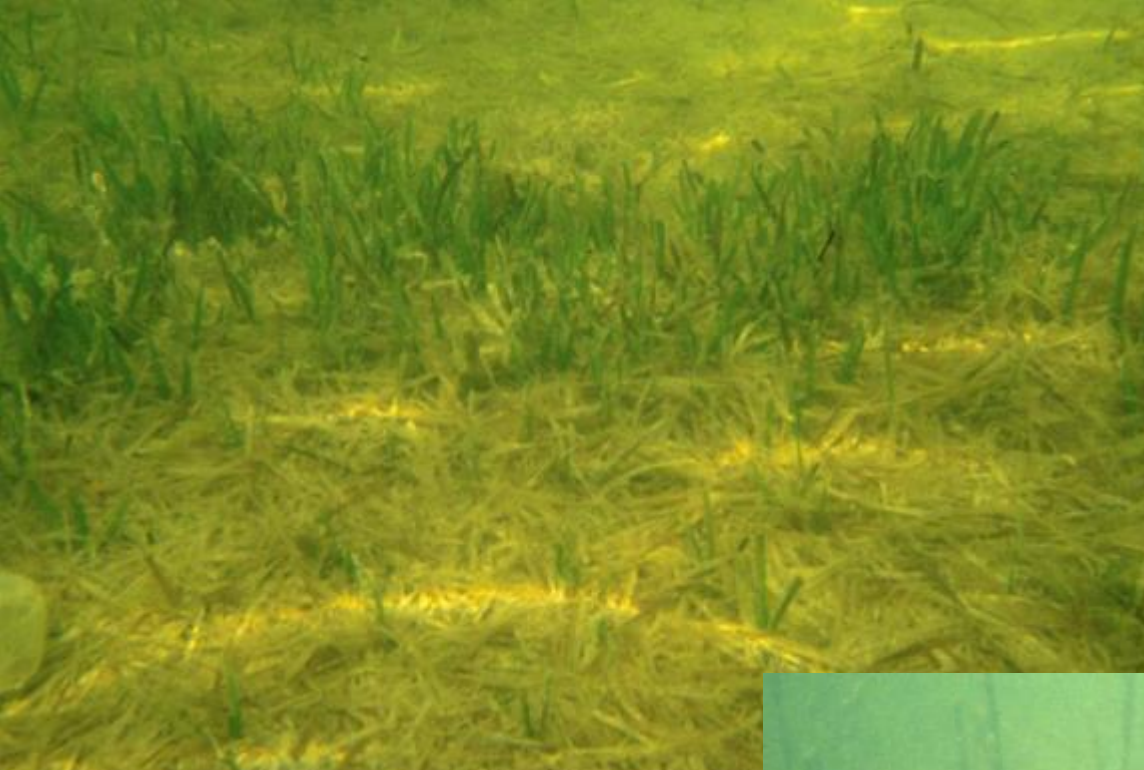


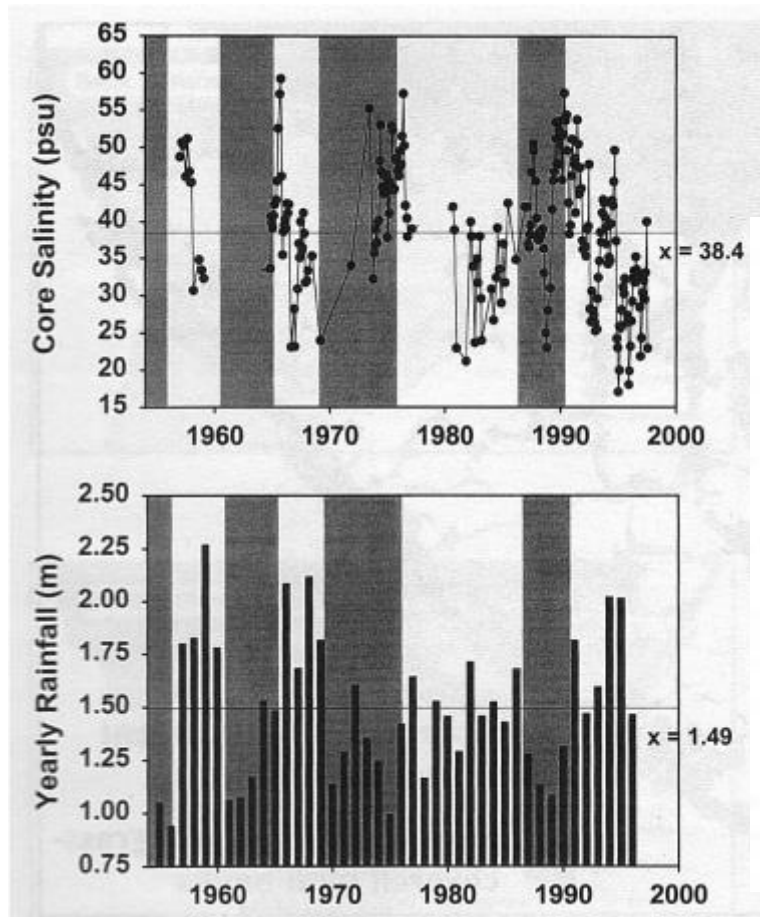




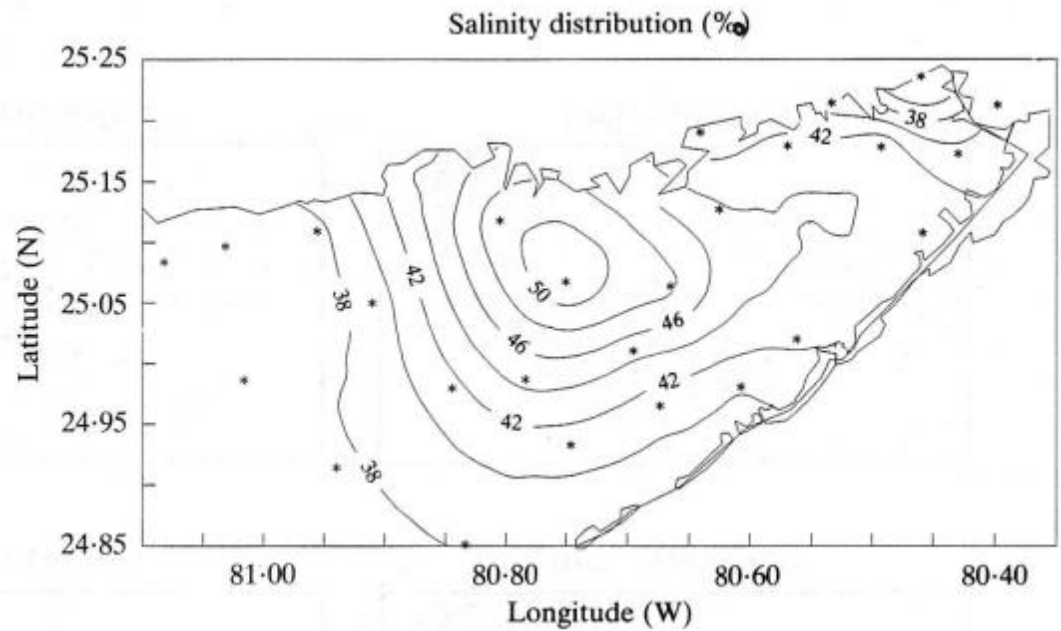
Butler et al 1995 MEPS



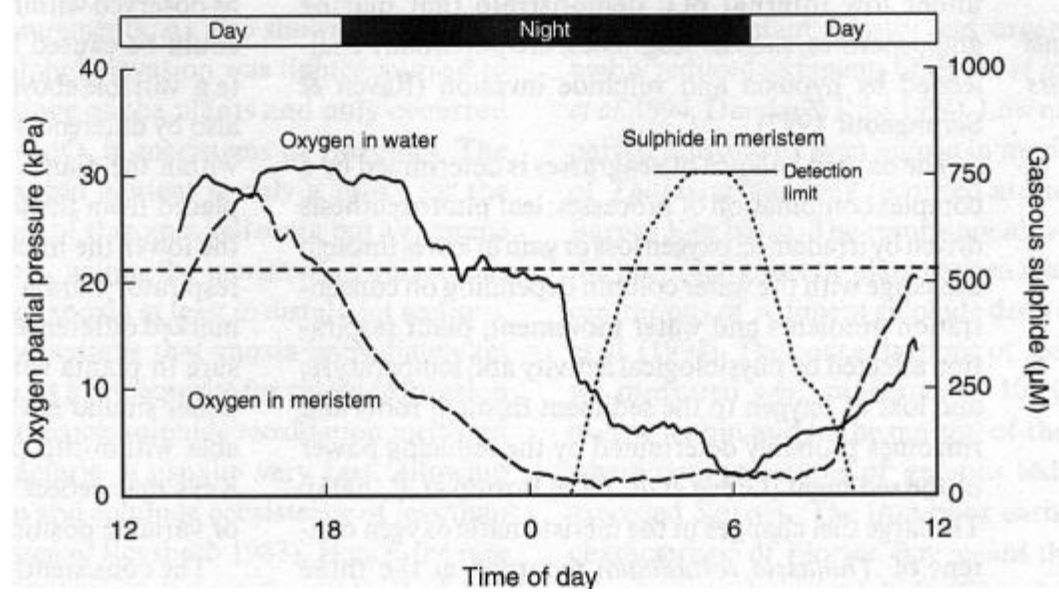




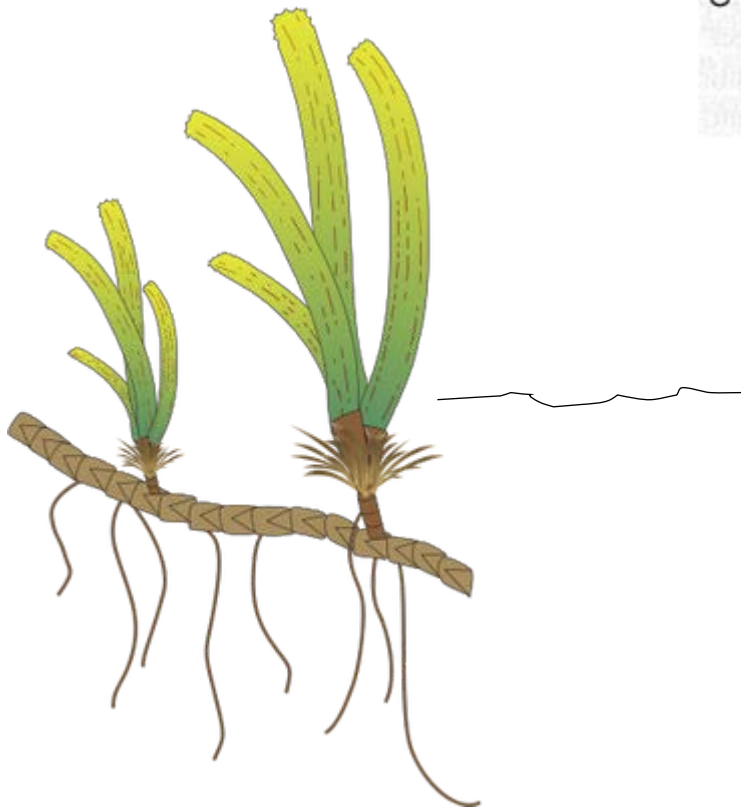
Fourqurean and Robblee 1999 Estuaries



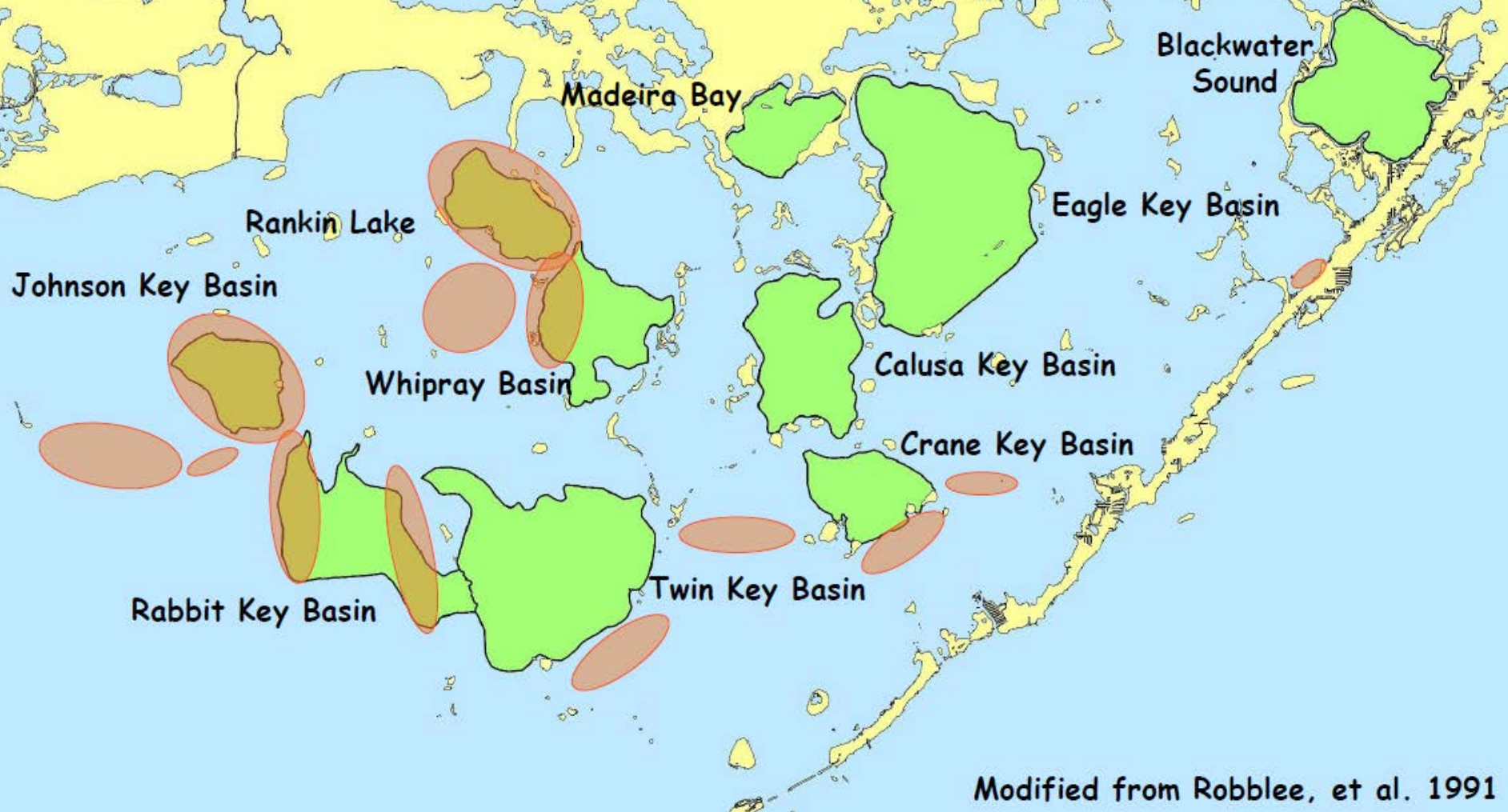
Fourqurean et al 1993 Estuaries==ne Coastal and Shelf Sci



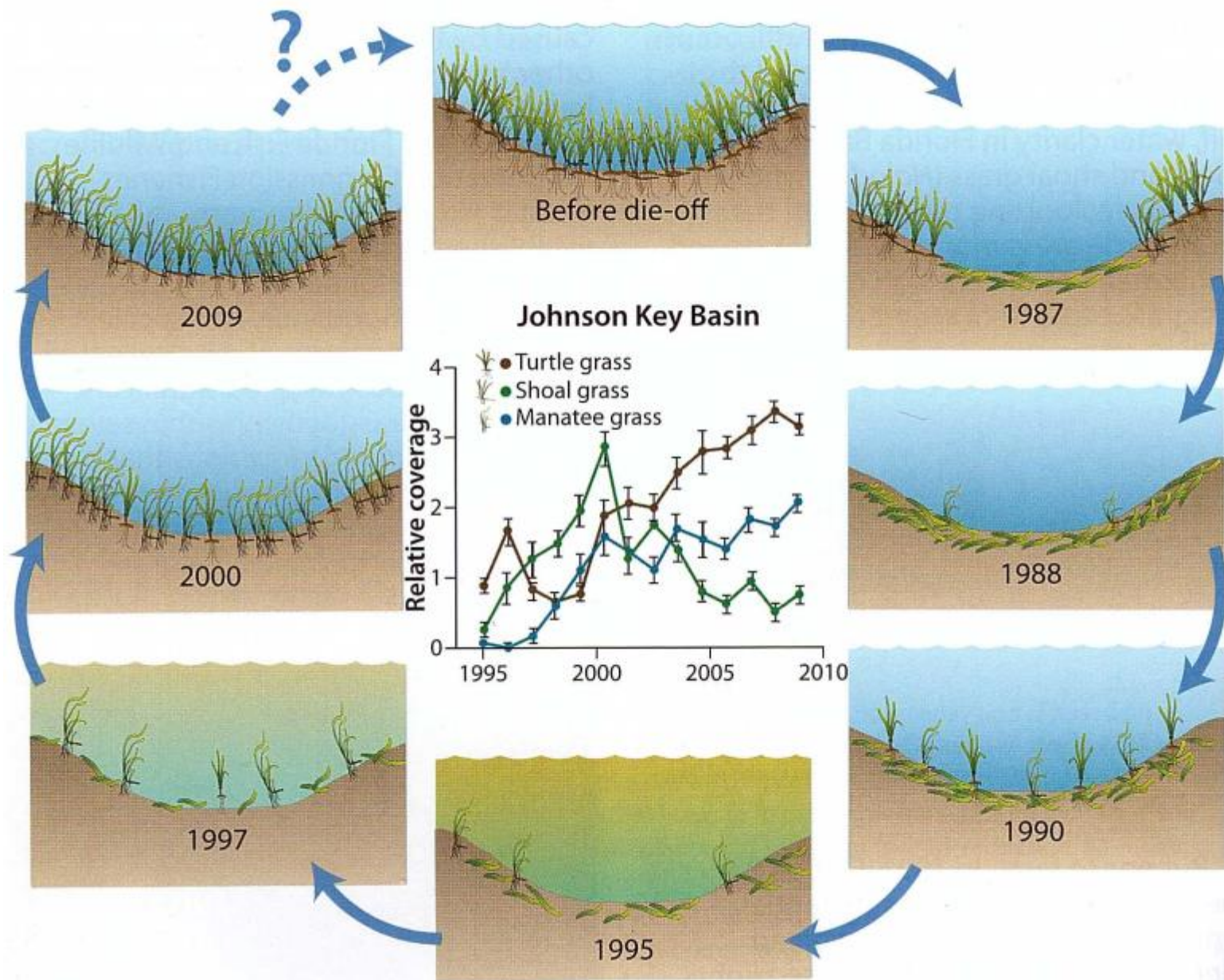
Borum et al. (2005) Journal of Ecology



TURTLEGRASS DIE-OFF LOCATIONS 1987-1990



Modified from Robblee, et al. 1991









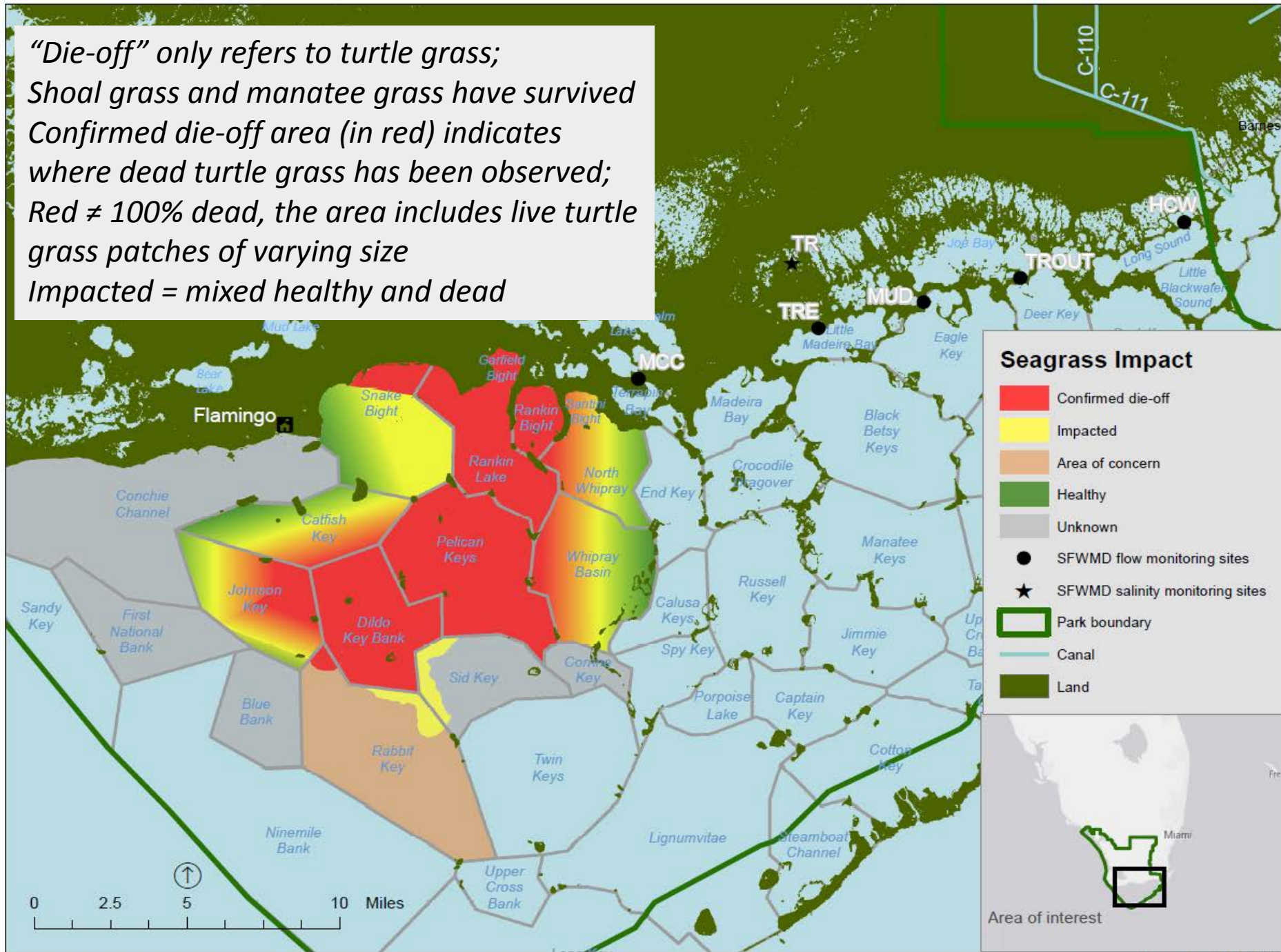




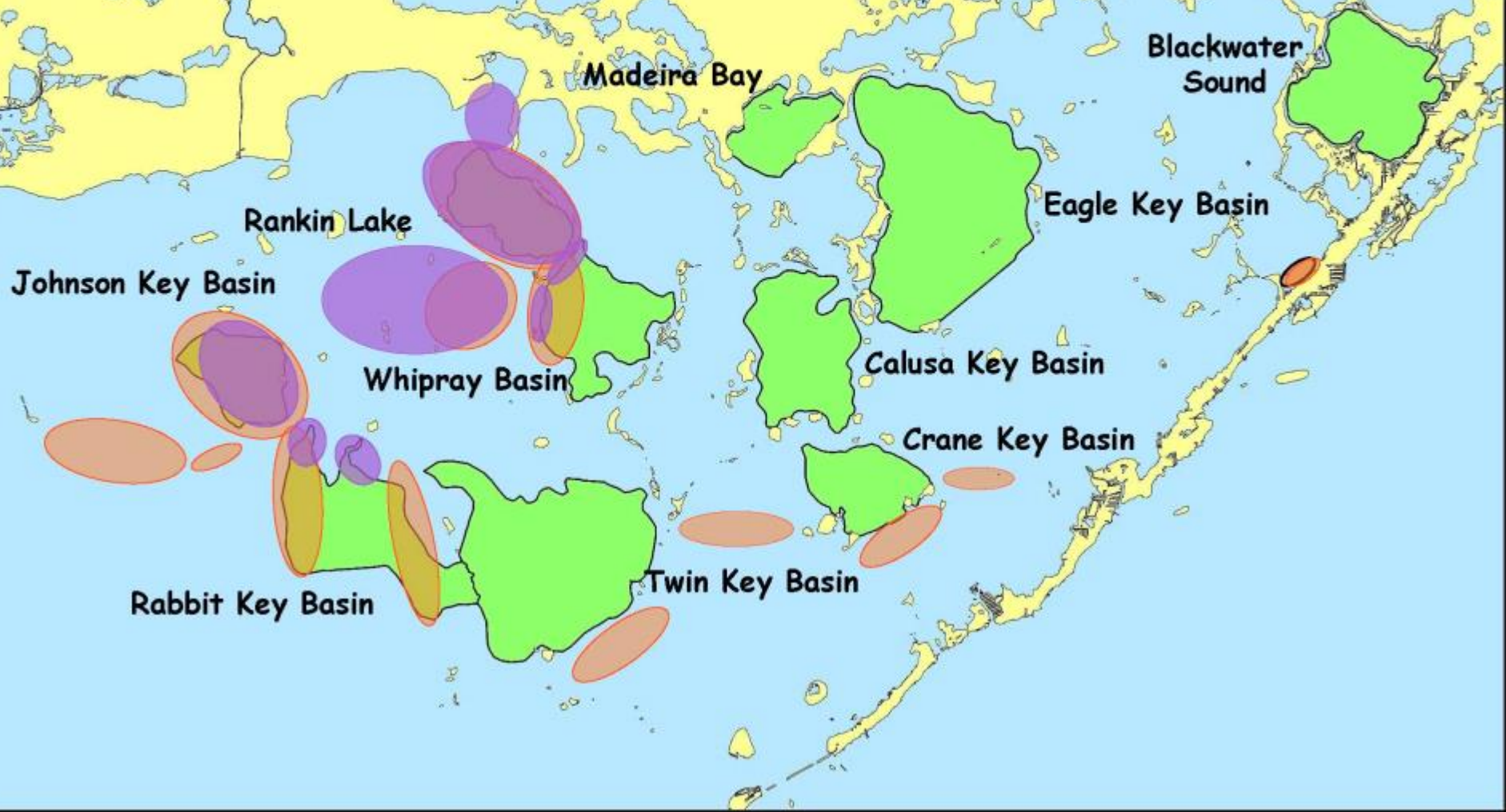
TURTLEGRASS DIE-OFF LOCATIONS 2015



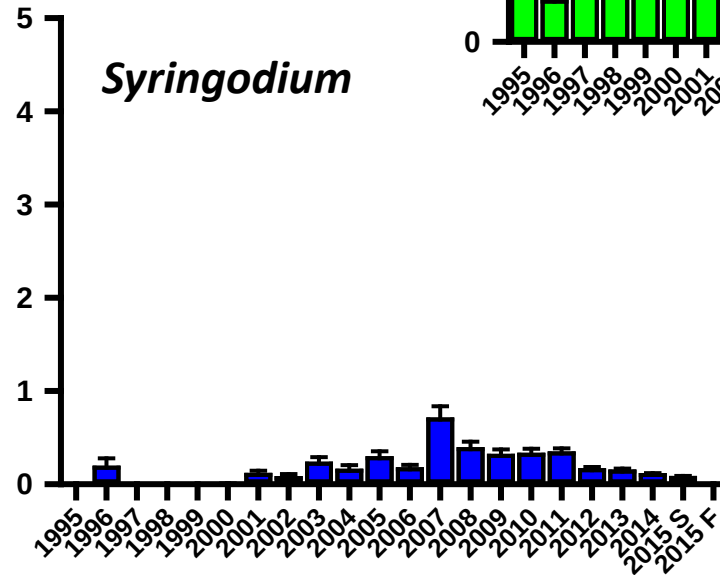
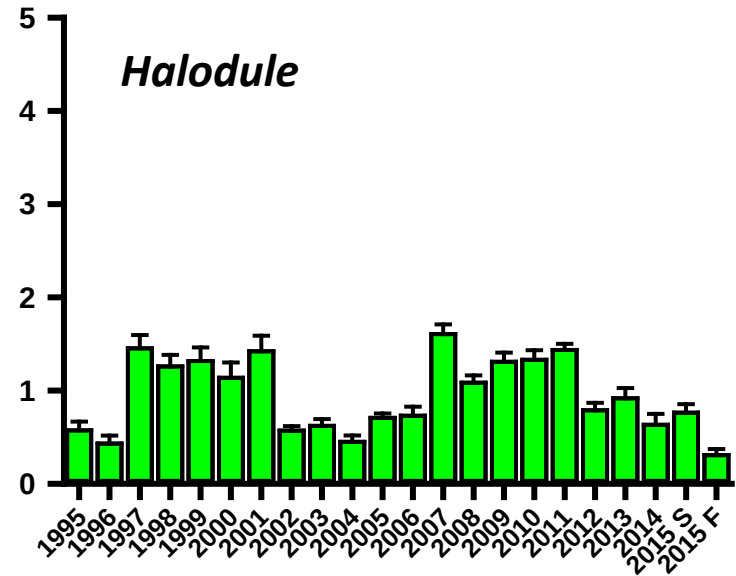
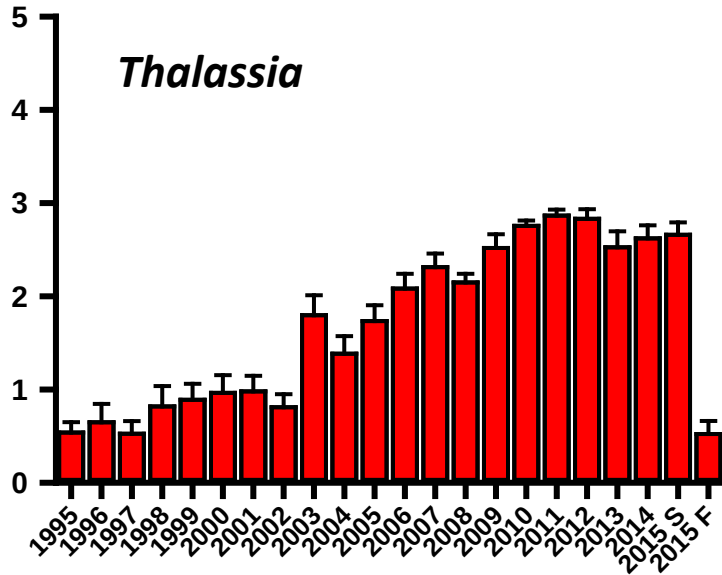
“Die-off” only refers to turtle grass;
 Shoal grass and manatee grass have survived
 Confirmed die-off area (in red) indicates
 where dead turtle grass has been observed;
 Red ≠ 100% dead, the area includes live turtle
 grass patches of varying size
 Impacted = mixed healthy and dead



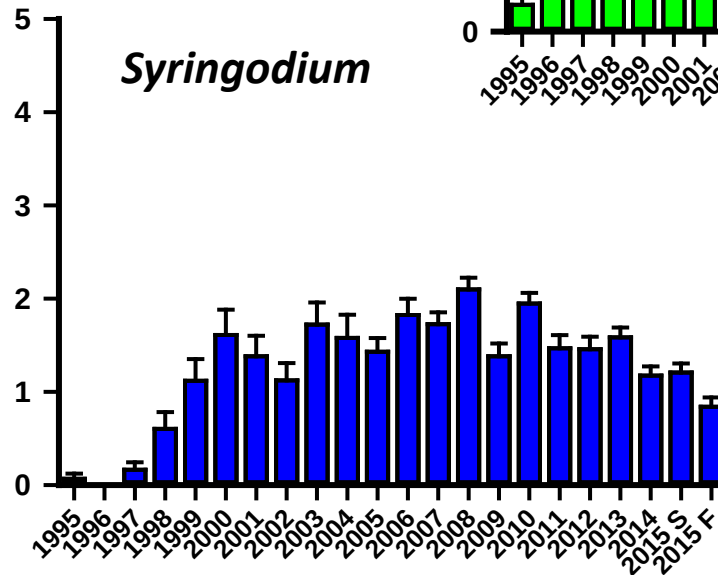
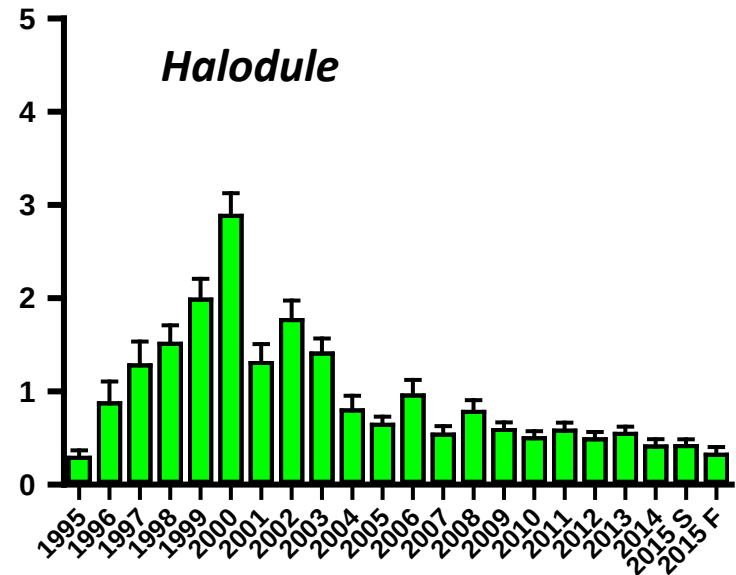
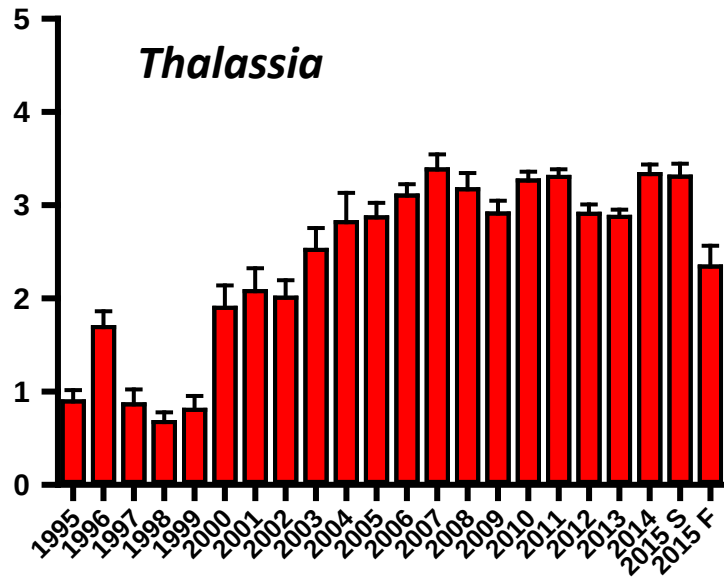
TURTLEGRASS DIE-OFF LOCATIONS 1987-1990 vs. 2015 EVENT

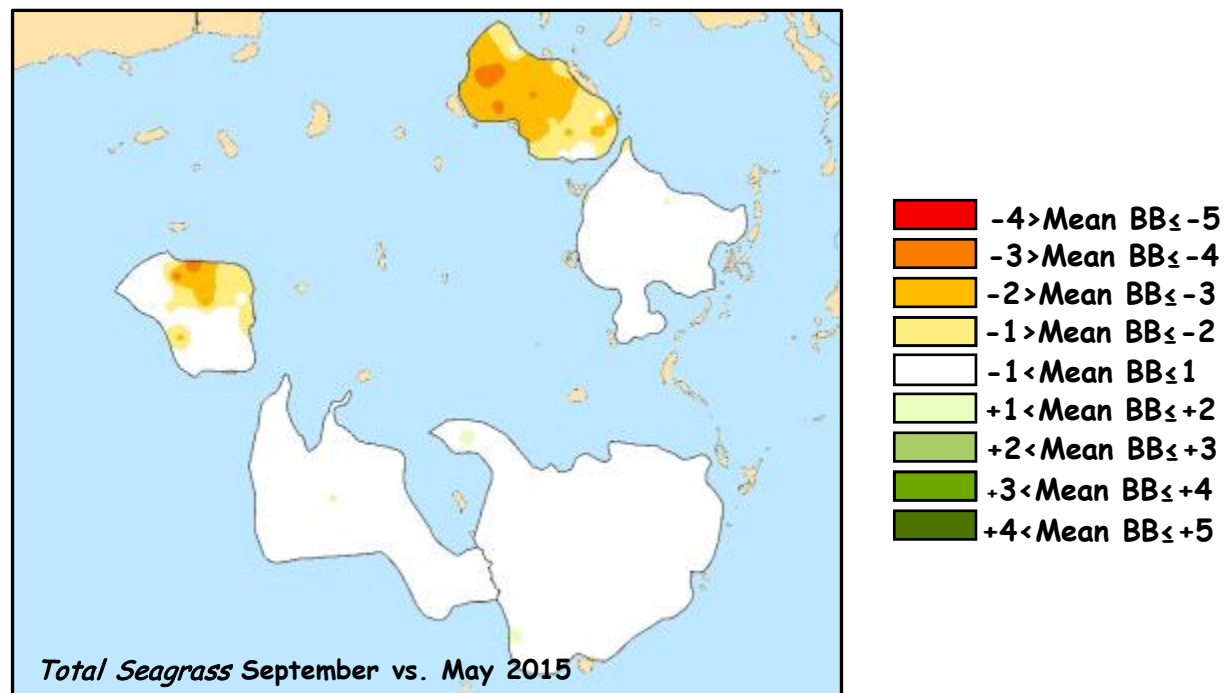
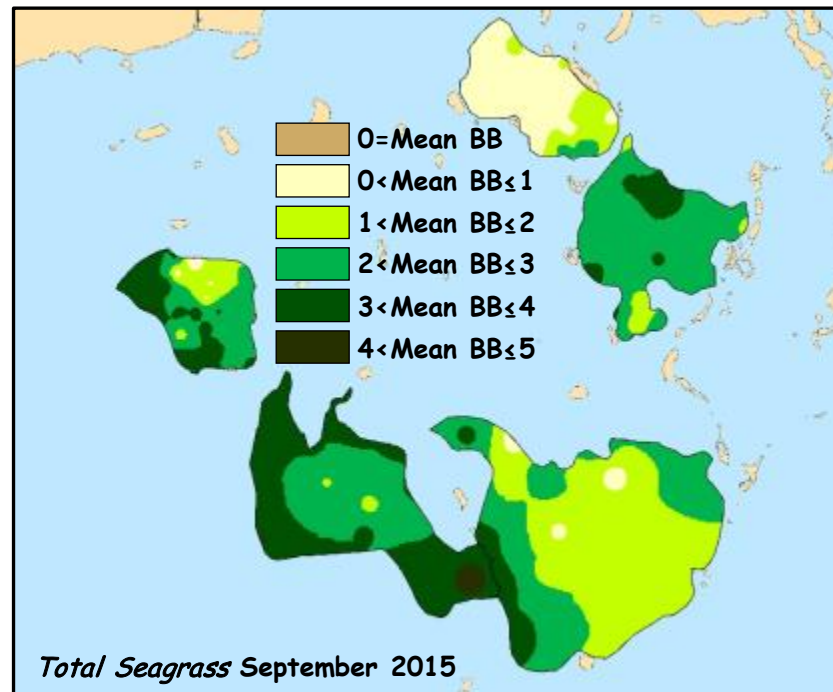
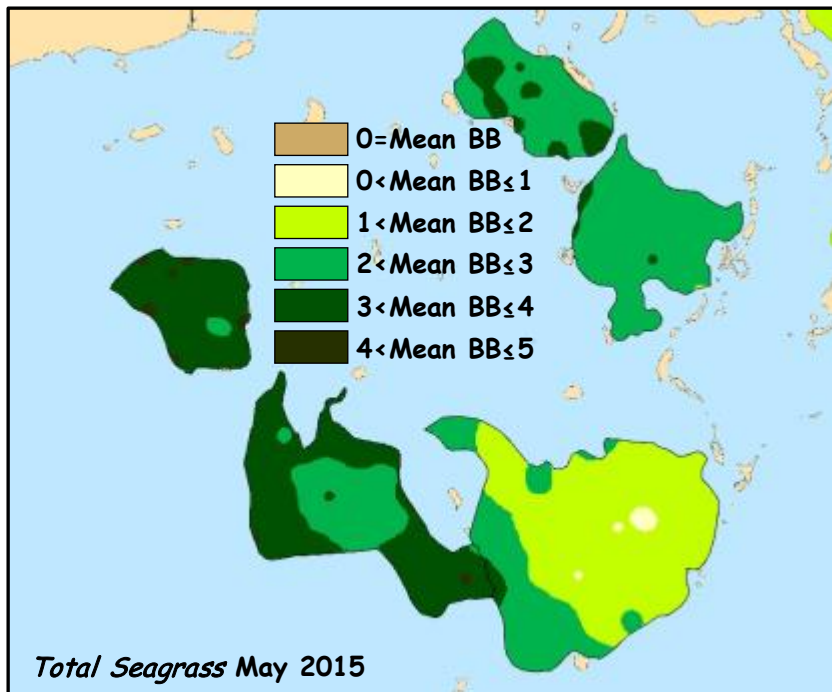


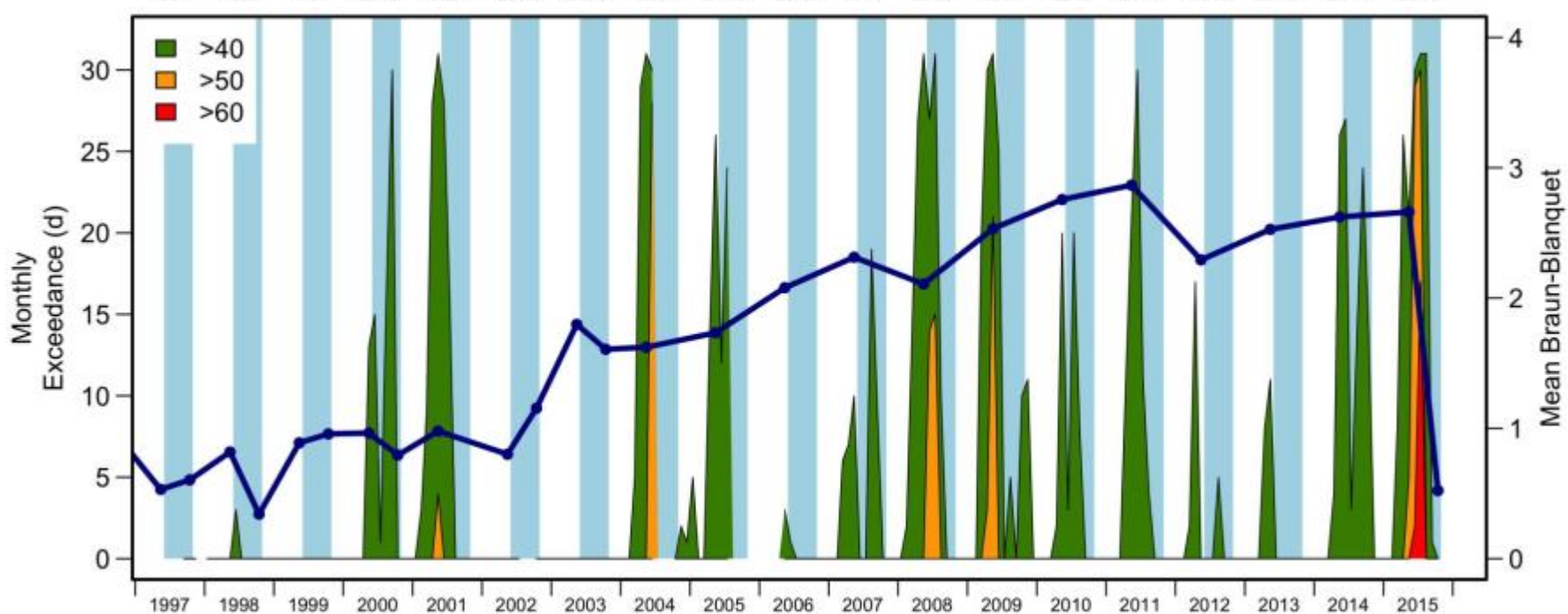
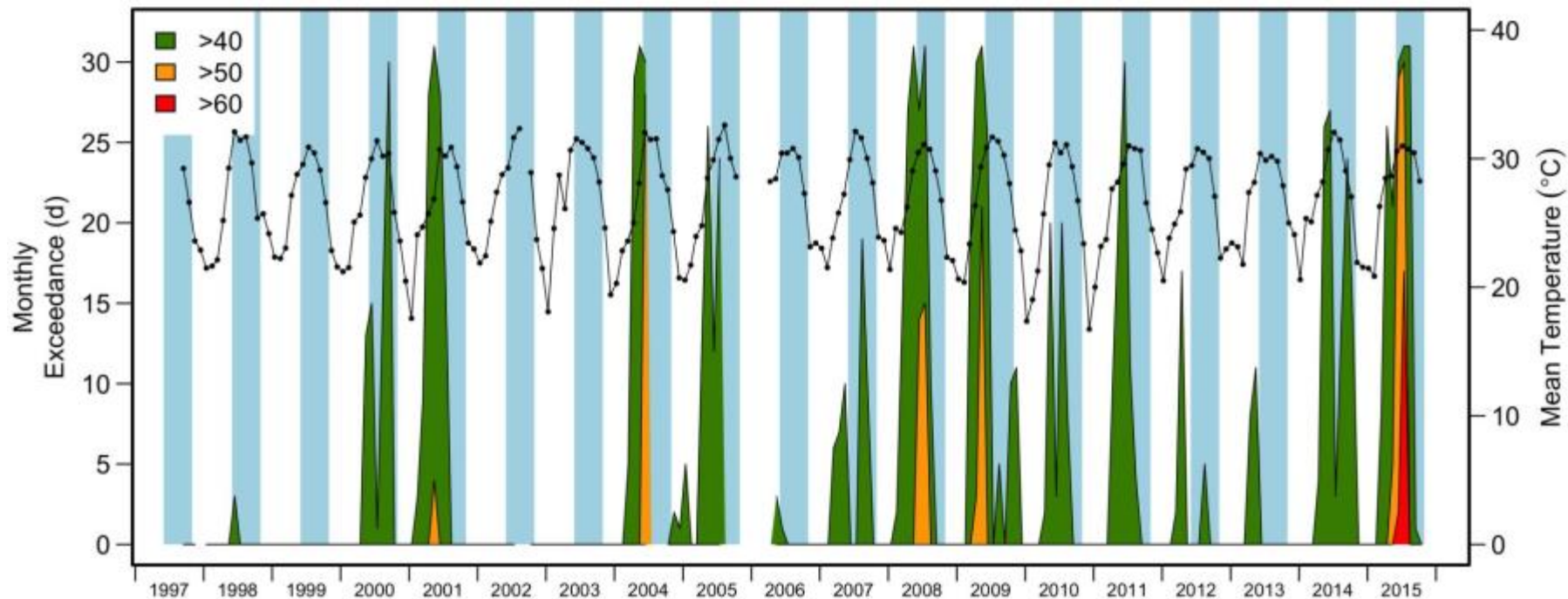
Rankin Lake



Johnson Key Basin







Water balance in Florida Bay is nearly a balance between rainfall and evaporation, so every freshwater source is important in moderating salinity in the central bay

