INCREASED EVERGLADES FLOWS IMPACT CORAL REEFS

A talk by Dr. Brian Lapointe during the 1997 Reef Awareness Week called "Coral Reefs, Seagrasses and the Sargasso Sea"

Dr. Brian Lapointe of Harborbranch Oceanographic Institution addressed a full house for the Reef Awareness Week luncheon July 25th, 1997 at Cheeca Lodge in Islamorada.

His talk, entitled "Coral Reefs Seagrasses and the Sargasso Sea," detailed in the dynamics of pelagic Sargassum, the floating seaweed in the Sargasso Sea and adjacent waters.

Dr. Lapointe's recent field research indicated the highest growth rate and biomass of Sargassum occurs in the Florida Straits and the Gulfstream where land-based run-off enriches the drifting plants with nitrogen and phosphorus.

Recent observations during 1996 indicate new epiphyte or algal overgrowth on these floating communities, which serve as critical habitat for juvenile loggerhead turtles once they leave their sandy nests on-shore and head out to sea.

"There the turtles join a myriad of fish and other sea-life that depend upon the floating seaweeds for protection and nutrition," stated Lapointe.

The discussion led upstream to consider the increased levels of chlorophyll, nitrogen and phosphorus levels contained in the Everglades runoff and wastewater discharges in the Florida Keys.

Dr. Lapointe presented graphs and data documenting that the increased flow of water from the Everglades into Florida bay over the last few years has been accompanied by a corresponding increase in harmful nutrients, chlorophyll and turbidity, and the decline of the downstream coral reefs.

Wastewater discharges in the Keys have also contributed to to the over-enrichment of local waters.

Lapointe reported the results of his USPA-funded study of Looe Key reef that found chlorophyll levels averaged 0.7 micrograms per liter in 1966.

This level exceeds the critical threshold for eutrophication of coral reefs as established by the case studies of Kaneohe Bay, Hawaii, Barbados, and inshore reefs of the Australian Great Barrier Reef.

Likewise, nitrogen levels at Looe Key were above critical thresholds for healthy coral reefs as evidenced by the "pea-soup" green water at the world famous reef.

Lapointe quoted Dr. James Porter of the University of Georgia of the University of Georgia, who stated that his USEPA studies reflect a thousand percent increase in coral diseases in the Keys in the past year at the randomly-selected sites he is monitoring.

The discussion that followed identified potential solutions such as the immediate need for advanced wastewater treatment (AWT) throughout the Keys and official recognition of the nitrogen problem in the Everglades.

Danny Johnson of the Upper Keys Citizens Association, who co-hosted the event, noted that a citizen committee has been appointed by the Monroe County Commission to help design and implement a Master Wastewater Plan.

Lapointe recommended that the National Academy of Sciences appoint a technical oversight committee to monitor the south Florida ecosystem effort.