



© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)

Welcome to the Walt Dineen Society

A forum for communicating about South Florida Ecosystems

Who is Walt Dineen?

J. "Walt" Dineen (1937-1990) was, for close to three decades, a highly respected biologist/ecologist in South Florida. He was Everglades Project Leader for the Florida Game and Fresh Water Fish Commission, and Director of Environmental Sciences at the South Florida Water Management District. Walt was one of the first to develop a broad regional perspective for the Everglades ecosystem, and to use that understanding to influence and improve management practices. Perhaps his most valuable contribution to the Everglades was his strong, personal demonstration of the importance of having well-informed scientists participate in the management and policy debates. For his early role in this process, we honor his name.

Mission

The Walt Dineen Society is an informal, non-affiliated forum, dedicated to the task of substantially improving the communication of technical information on the ecosystems of South Florida, among the natural, physical, and social scientists and the management and policy leaders who work in this region. The Society considers that frequent exchanges of research results, and multi-disciplinary discussions designed to integrate new information with the old, are essential steps leading to improved understandings of the natural components and ecological processes of the South Florida systems. It is these intellectual processes that will assure that our understanding of both the natural and managed systems continue to mature (i.e., "the whole [of our understanding] is greater than the sum of its parts"). By supporting a communications process that is organized from the perspective of systems, in contrast to an issues or project-driven perspective, we believe that science will be in the strongest position to make substantial contributions to the important management and policy questions raised by the restoration programs.

Walt Dineen Society Conferences

To achieve these goals, the Society sponsors conferences pertaining to the ecosystems of South Florida. The main priority of these conference is to encourage everyone who is conducting studies in the natural and physical sciences in South Florida to report on their on-going and completed work. These conferences differ from other technical conferences in the region in that:

- 1 they are systems-focused;
- 2 we encourage participation by all researchers and students of the natural systems of South Florida; and
- 3 the conference is organized to maximize the opportunities for the integration of new information from a broad array of disciplines.

For more information about upcoming or current conferences, please refer to our [Conference Page](#). Program information and abstracts from the first Walt Dineen Conference are available at the [Conference Archive](#).

For further information

To learn more about the Walt Dineen Society or Conference, contact:

John Ogden
 South Florida Water Management District
 3301 Gun Club Rd.
 West Palm Beach, FL 33416
jogden@sfwmd.gov



© 1997 Walt Dineen Society

FIRST CONFERENCE

May 22-24, 1997

[1997 Conference Program](#)

[Index to authors from the 1997 Conference](#)

For More Information

Please direct any questions concerning the Walt Dineen Society or Conference to: Dan Childers [Phone: 305/ 348-3101 FAX: 305/ 348-4096]

For general information about the Society, please visit the [Dineen Walt Dineen Home Page](#).

[Conferences](#)

[Programs](#)

[Index to Authors](#)

[Walt Dineen Home](#)





© 1997 Walt Dineen Society

[Conferences](#)

[Programs](#)

[Index to Authors](#)

[Walt Dineen Home](#)

Walt Dineen Society Annual Conference '97

Guide to Sessions

Thursday, May 22, 1997

- 13:00 - 14:30 [Session I: Upland Plants](#)
- 15:00 - 16:15 [Session II: Environmental Management](#)
- 17:00 - 19:30 [Session III: Posters](#)

Friday, May 23, 1997

- 9:00 - 10:15 [Session IV: Wetlands](#)
- 10:45 - 11:45 [Session IV: Wetlands - cont.](#)
- 12:45 - 14:15 [Session V: Bird Studies](#)
- 15:00 - 16:30 [Session VI: Bird & Other Animal Studies](#)

Saturday, May 24, 1997

- 9:00 - 10:15 [Session VII: Marine Ecology](#)
- 10:45 - 12:00 [Session VII: Marine Ecology - cont.](#)

[Complete Conference Program](#)
[Adobe PDF; 550K]

[Walt Dineen Society](#)





© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)

Walt Dineen Society Annual Conference '97

Daily Schedule of Sessions - Thursday, May 22

SESSION VII: MARINE ECOLOGY

TIME	AUTHOR(S)	ABSTRACT	TITLE
9:00- 9:15	Maloney and Bigger	97701	Analysis of sponge mortality in Florida Bay
9:15- 9:30	Byrne and Meeder	97702	Ground water delivery to Biscayne Bay
9:30 - 9:45	Halley et al.	97703	Seagrass facies and phases recorded in the sediments of Florida Bay
9:45 - 10:00	Oehm et al.	97704	The effects of nutrient enrichment on soil microbial processes in mangroves
10:00 - 10:15	Ross et al.	97705	The southeast saline Everglades revisited: vegetation and soil changes during the last century
10:45 - 11:00	Smith et al.	97706	Patterns of growth and recruitment in mangrove forests following catastrophic disturbance in relation to soil nutrients
11:00 - 11:15	Davis and Childers	97707	Salinity and organic matter transformations as controls on wetland-water column interactions in a south Florida mangrove
11:15 - 11:30	Willsie et al.	97708	Seagrass monitoring in the Florida keys National Marine Sanctuary
11:30 - 11:45	Telesnicki et al.	97709	Water use in mangrove communities of Biscayne National Park, FL
11:45 - 12:00	Rose and Fourqurean	97710	Spatiotemporal patterns of the seagrass <i>Thalassia testudinm</i> in the Florida Keys National Marine Sanctuary

[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)

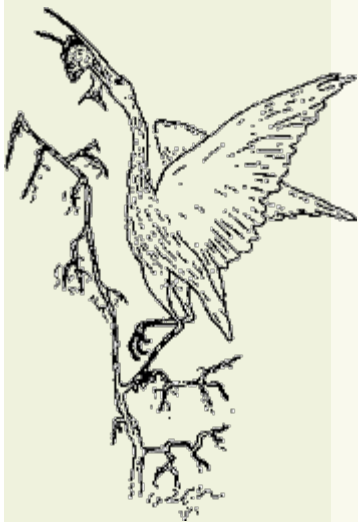

This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.



Walt Dineen Society Annual Conference '97

Session VII: Marine Ecology

Abstract #: 97701



© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)**ANALYSIS OF SPONGE MORTALITY IN FLORIDA BAY**

Barbara A. Maloney and Charles H. Bigger

Dept. of Biology, Florida International University, Miami, FL

ABSTRACT

Between January 1991 and 1994 there were a series of algal bloom incidents in Florida Bay that occurred at the same time as mass mortalities or disappearances of sponges, seagrass beds, juvenile fish and shellfish. Both the algal bloom and perhaps suspended fine sediments were blamed for the sponge mortalities. The major hypotheses advanced for the sponge death were physical clogging of the filter feeding mechanism by the putative bloom cyanobacteria and its mucus or toxins produced by the cyanobacteria. (Grantham, 1993). In October 1993, four species of sponges (*Aplysina californis*, *Ircinia campano*, *Spheciospongia vesparium*, *Appotos sp.*) were collected from a normal area east of the Marine Lab in Long Key, Florida and transplanted into the mortality area where a single species, *Cirayhydra alloclada*, was still growing. Accordingly, the sponges in this study were in three areas: 1) offshore, in the bloom area 2) inshore in a control area at the Marine Lab and 3) in a flow-thru sea water tank at the Marine Lab. Tissue was sampled daily over a five day period and fixed in Parducz's fixative or gluteraldehyde with osmium tetroxide as a postfixative and prepared for light, transmission electron and scanning electron microscopy. No physical clogging, by the dominant bloom species of cyanobacteria, *Synechococcus elongatus* or calcium carbonate particulates was found.

A special thanks to Florida Marine Research Institute, South Florida Regional Laboratory for assistance in collecting samples.

[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)


This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.



Walt Dineen Society Annual Conference '97

Session VII: Marine Ecology

Abstract #: 97702



© 1997 Walt Dineen Society

GROUND WATER DELIVERY TO BISCAYNE BAY
 Michael Byrne and John Meeder
 U.S. Geological Survey, Miami, FL 33156
ABSTRACT

Salinity and specific nutrient concentrations exhibit an offshore profile in the upper Biscayne Bay aquifer suggestive of groundwater discharge into the nearshore bay. By 400 M the upper groundwater salinity is usually near normal marine and the benthic communities are dominated by Thalassia testudinum from that point further offshore. Initial flow measurements indicate groundwater discharge of nutrient rich waters in the inshore areas which are dominated by Halodule wrightii and Penicillus -Batophora communities and filamentous algae.

The objectives of this study are: 1) to quantify the groundwater nutrient load to nearshore Biscayne Bay, 2) identify the source of nutrients and 3) document their effects on the benthic communities. This report focuses on the groundwater aspects of this National Park and SFWMD funded research.

Fifteen pairs of wells were drilled along five transects perpendicular to The Biscayne Bay shore line from a distance of 50 to 800 M off shore. Transects are located south of Dinner Key and north of Mowry Canal. The wells at each station consist of an upper well above a semi-impermeable layer (1-3 M) and a lower well (5-7 M). Wells and surface water were sampled in June, September, 1996 and January 1997. Samples were analyzed for salinity (in the field) and the following nutrients; NO₂, NO₃, NH₄, TP, chlorophyll, TOC, TN, SRP, and APA. Upper aquifer concentration to TP and ammonia (10 to 20 times surface water concentrations) levels are high.

Biscayne Bay National Park is conducting a study to return sheet flow to the bay. This research will establish the impact groundwater has prior to the return of sheet flow.

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)
[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)


This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.



Walt Dineen Society Annual Conference '97

Session VII: Marine Ecology

Abstract #: 97703



© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)**SEAGRASS FACIES AND PHASES RECORDED IN THE SEDIMENTS OF FLORIDA BAY**Halley, R.B., Holmes, C.W., Prager, E.J., and Shinn, E.A
US Geological Survey, Coastal Center, St. Petersburg, FL 33701**ABSTRACT**

Widespread seagrass mortality in Florida Bay during the past decade is unique to human memory and has raised concerns about ecosystem health. However, the sedimentary record of Florida Bay indicates great variation of seagrass cover in the more distant past. In east-central Florida Bay, sediments clearly record the presence and absence of sea grass in sediment facies deposited during the last two centuries. Sea grass and grass-free (mud) facies are defined by the texture, composition, and structure of sediment. Seagrass facies have a chaotic structure, a significant coarse fraction, and contain fossil species of carbonate-producing epibionts. In contrast, mud facies (grass-free) are characterized by sediments that have a laminated structure, less shelly fauna, and are typically finer grained than grassy areas. Seagrass and mud facies accumulate in mudbanks as deposits of locally allochthonous (transported) and autochthonous (produced in situ) carbonate sediment originating in the Bay. Mudbanks slowly migrate in response to wave-induced suspension and traction sediment transport, eroding on exposed margins and accumulating on protected sides. Mudbanks vary greatly in the amount of seagrass cover but for the past 30 to 50 years have been dominated by seagrass facies.

Several researchers have applied facies analyses to mudbank cores in order to document changes in seagrass cover in the past. Newly applied dating techniques and studies of recent erosion and accumulation indicate that in the early 1800s seagrass cover was much like that of today. However, during the mid-1800s, the influence of sea grass greatly declined, and a phase of physical sedimentation became prevalent. This physical phase dominated until the 1920s and 1930s when seagrass facies returned to the area. The phase change from physical to seagrass-dominated sedimentation during the early part of this century may be associated with decreased circulation and freshwater inflow during that time. Although the causes of seagrass loss in the mid 1800s are subject to speculation, it is clear from the sedimentary record that areally extensive changes in seagrass cover have occurred in the past.

[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)


This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.



Walt Dineen Society Annual Conference '97

Session VII: Marine Ecology

Abstract #: 97704



© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)**THE EFFECTS OF NUTRIENT ENRICHMENT ON SOIL MICROBIAL PROCESSES IN MANGROVES**

N.J.Oehm, D.L. Childers, S.E Davis

FIU, Miami, FL 33199

J. Day, B.Perez, E.Reyes, and M.Sutula

LSU, Baton Rouge, LA 70803

D. Rudnick and F. Sklar

SFWMD, West Palm Beach, FL 33170

ABSTRACT

Mangrove wetlands are among the most productive ecosystems in the world and have been the subject of nutrient cycling studies for their commercial and ecological importance. This study takes place in the mangroves found in the Taylor Slough area of Everglades National Park, USA. The Everglades is a highly oligotrophic, carbonate-based system and recent work has demonstrated a phosphorus limitation in both the southeastern Everglades mangroves and the freshwater microbial community. We examine the effects of nutrient enrichment on carbon fluxes in the mangrove soils found along the salinity gradient of Taylor Slough. Triplicate soil cores are collected quarterly from creekside and inland sites at each of three locations and slurried for nutrient enrichment incubations in a nitrogen-phosphorus factorial treatment. All fluxes are calculated using carbon dioxide, methane and sulfide production and are normalized for differences in soil and water chemistry. We present preliminary results from the first year of this study and discuss the differences in carbon flux between creekside and inland sites.

[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)


This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.



Walt Dineen Society Annual Conference '97

Session VII: Marine Ecology

Abstract #: 97705



© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)
THE SOUTHEAST SALINE EVERGLADES REVISITED: VEGETATION AND SOIL CHANGES DURING THE LAST CENTURY

 M. S. Ross, J. F. Meeder, G. Telesnicki, P. L. Ruiz, and J. P. Sah
 Southeast Environmental Research Program, Florida International
 University, Miami, FL 33199
ABSTRACT

Holocene sea level rise has caused salt water encroachment into coastal areas for at least 6000 years, but in the last century the rate of encroachment has been altered by anthropogenic activities affecting the availability of upstream water resources. Marsh vegetation and soils, and adjacent tree island vegetation were examined in 55 sites SE of the Atlantic Coastal Ridge between Turkey Point and Taylor Slough in 1994-95. Both marsh and tree island vegetation exhibited well-defined compositional and structural gradients with distance to the coast. Since an earlier study by Egler (1952), the boundary of the mixed graminoid-mangrove and sawgrass communities shifted inland by as much as 3.3 km, and a low-productivity band appearing white on B&W and CIR photos moved interiorward by an average of 1.5 km. The shift in this "white zone" was less pronounced in areas receiving fresh water overflow through gaps in the C-111 Canal than in adjacent areas cut off from upstream water sources by roads or levees. Sub-basinal differences in response to sea level rise were also documented from changes in the vertical and horizontal distribution of mollusk assemblages, which include many good indicators of salinity. Subbasinal time lines for the transition from fresh to brackish-water assemblages were developed based on soil accretion rates from Pb210 dating methods. The rates of salt water encroachment in Joe Bay, Highway Creek, and Turkey Point subbasins were several times the rate indicated by sea level rise alone, while Taylor Slough exhibited less encroachment than predicted by sea level rise. The timing of the acceleration of saltwater encroachment, when present, also appeared to differ among subbasins.

[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)


This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.



Walt Dineen Society Annual Conference '97

Session VII: Marine Ecology

Abstract #: 97706



© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)
PATTERNS OF GROWTH AND RECRUITMENT IN MANGROVE FORESTS FOLLOWING CATASTROPHIC DISTURBANCE IN RELATION TO SOIL NUTRIENTS

Smith III, T.J., Wiebe, W.J. & Merickel, J.A.

Biological Resources Division, U.S. Geological Survey, Miami, FL and University of Georgia, Athens, GA.

ABSTRACT

Hurricane Andrew passed over the southwest coast of Florida in August 1992 causing a gradient of disturbance in mangrove forests from minor to catastrophic. We established a series of permanent plots from Rookery Bay in the north to Flamingo in the south to measure initial patterns of mortality, continuing storm related mortality, and the growth of survivors and new recruits. Soil porewater nutrients (nitrogen and phosphorus), sulphide and salinity were measured over time at a subset of plots. Initial mortality was both size and species dependent. Larger individuals of all species were killed and *Rhizophora* suffered higher initial mortality than either *Avicennia* or *Laguncularia*. Continuing mortality has also been concentrated in larger size classes and has been greater for *Avicennia* and *Laguncularia*. Recruitment at most, but not all, plots has been dominated by *Laguncularia*. *Rhizophora* dominated recruitment at a single plot and *Avicennia* has recruited in very low numbers in all plots. Growth, measured as basal area increase, has been greatest for all species in plots subjected to intermediate levels of disturbance and least in plots suffering either catastrophic disturbance or little disturbance at all. Soil nutrient pools appear to have played a secondary role. Plots with higher levels of phosphorus had slightly higher growth rates and plots with high sulphide levels had decreased rates of growth. After five years, areas of catastrophic disturbance are not close to approaching prestorm levels of forest biomass.

[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)

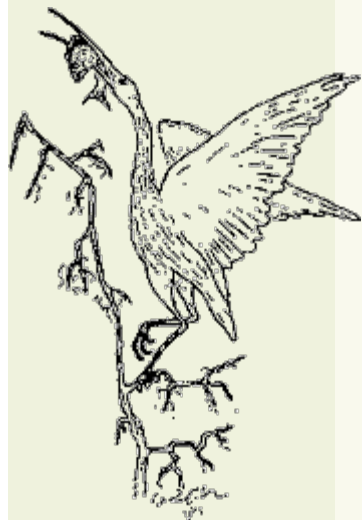

This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.



Walt Dineen Society Annual Conference '97

Session VII: Marine Ecology

Abstract #: 97707



© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)
SALINITY AND ORGANIC MATTER TRANSFORMATIONS AS CONTROLS ON WETLAND-WATER COLUMN INTERACTIONS IN A SOUTH FLORIDA MANGROVE

Stephen Davis and Daniel Childers
 Department of Biological Sciences, Florida International University,
 University Park, Miami, FL 33199

ABSTRACT

In August and November 1996, we quantified wetland-water column fluxes and processes in dwarf and fringe mangroves of Everglades National Park. We hypothesized that key organic matter transformations are maximal at 0-5 ppt, and that movement of this zone controls nutrient availability and flux. We used dwarf mangrove enclosures, in-channel mangrove flumes, prop root enclosures, and serial filtration experiments to [hierarchically] test our hypothesis. Island enclosures showed significant uptake of NH_4 ($15.3 - 31.2 \mu\text{M}/\text{m}^2/\text{hr}$) and significant release of NN ($46.4 \mu\text{M}/\text{m}^2/\text{hr}$) and TP ($4.4 \mu\text{M}/\text{m}^2/\text{hr}$). SRP fluxes varied. Flume data showed a relationship between salinity and nutrient dynamics, particularly with P exchange. Red mangrove prop roots tended to take up NH_4 and SRP while releasing NN and TP; NH_4 and NN fluxes were always greater when prop roots contained epibiont communities. We performed serial filtrations on water incubated for 2 days in the root bag enclosures; this suggested a conversion of organic P to SRP in the presence of red mangrove prop roots (with and without epibionts). Data from January 1997, which also included a time-series serial filtration experiment where fresh and saline waters were mixed to different salinities, will allow us to more fully address our hypothesis.

[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)

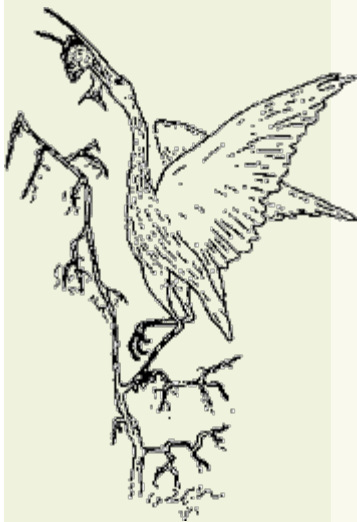

This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.



Walt Dineen Society Annual Conference '97

Session VII: Marine Ecology

Abstract #: 97708



© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)**SEAGRASS MONITORING IN THE FLORIDA KEYS NATIONAL MARINE SANCTUARY**Willsie, A.A.¹, Fourqurean, J.W.¹, Durako, M.D.² and Zieman, J.C.³¹ Southeast Environmental Research Program and Department of Biology, Florida International University, Miami, FL, 33199;² Florida Marine Research Institute, Florida Department of Environmental Protection, 100 8th Ave. SE, St. Petersburg, FL 33701;³ Department of Environmental Sciences, University of Virginia, Charlottesville, VA 22903.**ABSTRACT**

The purpose of seagrass monitoring in the Florida Keys National Marine Sanctuary (FKNMS) is to measure the status and trends of seagrass communities to evaluate progress toward protecting and restoring the marine resources of the Sanctuary. Specific objectives are: 1) To provide data needed to make unbiased, statistically rigorous statements about the status and temporal trends of seagrass communities in the Sanctuary as a whole and within defined strata; 2) To define reference conditions in order to develop resource-based water quality standards; and 3) To provide a framework for testing hypothesized pollutant fate/effect relationships through process-oriented research and monitoring. To reach these goals, four kinds of data are being collected in seagrass beds in the FKNMS: 1) Distribution and abundance of seagrasses using rapid assessment Braun-Blanquet surveys; 2) Demographics of the seagrass communities using leaf-scar counting and population demographics techniques; 3) Seagrass productivity of the dominant species of seagrass (*Thalassia testudinum*) using the leaf-mark and harvest method; and 4) Seagrass nutrient availability using tissue concentration assays. We assess both inter-annual and intra-annual trends in seagrass communities. The mix of site types is intended to monitor trends through quarterly sampling at a few permanent locations and to annually characterize the broader seagrass population through less intensive, one-time sampling at more locations. Clear spatial and seasonal patterns in productivity, demographics, distribution, abundance, and elemental content are present in the data.

[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)


This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.



Walt Dineen Society Annual Conference '97

Session VII: Marine Ecology

Abstract #: 97709



© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)**WATER USE IN MANGROVE COMMUNITIES OF BISCAYNE NATIONAL PARK, FL**

G.J. Telesnicki, M.S. Ross, S. Oberbauer, J.F. Meeder, and P.L. Ruiz
 Southeast Environmental Research Program, Florida International
 University, Miami, FL 33199

ABSTRACT

Water use for *Rhizophora mangle* & *Laguncularia racemosa* were estimated for scrub and paralic mangrove communities along a coastal gradient in Biscayne National Park, FL. Flow measurements were based on a Stem Heat Balance model. In this method, radial and vertical heat conduction are partitioned and separated from convective sap transport by measuring differential temperature over short sections of live stem trunk. Rainfall, barometric pressure, relative humidity, solar radiation, temperature, and wind speed data were collected to assess the relationships between climatic variables and stem flow. Predawn moisture stress and stomatal conductance were also measured on the same or adjacent trees through a diurnal cycle. Sap flow and stomatal conductance showed typical diurnal flow patterns. Individual sap transport rates were expressed on a leaf area basis, which allowed us to scale up observed species and site differences among individuals to the community and ecosystem levels.

[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)


This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.



Walt Dineen Society Annual Conference '97

Session VII: Marine Ecology

Abstract #: 97710



© 1997 Walt Dineen Society

[Conferences](#)[Programs](#)[Index to Authors](#)[Walt Dineen Home](#)
SPATIOTEMPORAL PATTERNS OF THE SEAGRASS THALASSIA TESTUDINUM IN THE FLORIDA KEYS NATIONAL MARINE SANCTUARY

Rose, C.D. and Fourqurean, J.W.

Department of Biology and the Southeast Environmental Research Program, Florida International University, University Park, Miami, Florida, 33199

ABSTRACT

In this paper we present data from an on-going seagrass monitoring program in the Florida Keys National Marine Sanctuary (FKNMS) focusing on patterns and variability of blade productivity of the seagrass *Thalassia testudinum* (turtle grass). Data have been collected 4 times from December 1995 through December 1996 from 26 permanently established stations in the FKNMS. Sites were surveyed using Braun-Blanquet transects, and blade productivity of *T. testudinum* was measured using a modification of Zieman's (1974) leaf-marking technique in 6 replicate quadrats at each site. Density, standing crop, and blade productivity, of *T. testudinum* is extremely variable and peaks during the summer. Productivity ranged between 0.18 - 8.31 mg SS-1 d-1 and increased by ~390 % from December 1995 to August 1996, which corresponded with increases in density (~ 40 %), abundance (~ 50 %), and standing crop (~ 87 %). Due to the large number of variables (22) and significant correlations within the data set, Principal Components Analysis was utilized to reduce the analysis to 6 independent principal components that described ~ 81 % of the total variation in the data. Temporal and spatial analysis of these components were used to describe large-scale or regional patterns of seagrass communities in the FKNMS, including the effects of seasonality, water depth, nutrient availability, seagrass density, and macrophyte species composition.

[Home](#) | [About Us](#) | [Browse](#) | [Ask an Everglades Librarian](#) | [FIU Libraries](#)


This site is designed and maintained by the Digital Collections Center - dcc@fiu.edu
 Everglades Information Network & Digital Library at Florida International University Libraries
 Copyright © Florida International University Libraries. All rights reserved.





© 1997 Walt Dineen Society

[Conferences](#)

[Programs](#)

[Index to Authors](#)

[Walt Dineen Home](#)

FIRST ANNUAL CONFERENCE

May 22-24, 1997

INDEX TO AUTHORS

AUTHOR	SESSION	ABSTRACT#(s)
Abbott, G.	Env. Mgmt.	97203
Anderson, G.	Posters	97306
Bass, O.	B&A Studies	97602
Bean, D.	B&A Studies	97605
Bennett, K.J.	Env. Mgmt.	97202
Bennetts, R.E.	B&A Studies	97601
Bern, A.	Wetlands	97408
Bigger, C.H.	Marine Ecology	97701
Bossart, G.	Bird Studies	97501
Bouton, S.N.	Bird Studies	97504
Brandt, L.A.	Wetlands	97405
Brashear, C.B.	Posters	97302
Browder, J.	B&A Studies	97602
Byrne, M.	Marine Ecology	97702

Campbell, M.	Posters	97302
Carrington, M.E.	Upland Plants	97104
Cherkiss, M.	Posters	97302
Childers, D.L.	Posters Wetlands Marine Ecology	97309 97404 97704 , 97707
Cleaves, S.	Posters	97306
Comiskey, E.J.	B&A Studies	97606
Coronado- Molina, C.	Posters	97308 , 97309
Cox, A.C.	Upland Plants	97106
Daoust, R.J.	Wetlands	97404
Davis, S.E.	Marine Ecology	97704 , 97707
Day, J.	Posters Marine Ecology	97307 , 97308 97704
Dehring, F.	Posters	97302
Dong, Q.	Wetlands	97407
Doren, R.	Upland Plants	97101
Dreitz, V.J.	B&A Studies	97601
Durako, M.D.	Marine Ecology	97708
Ecklund, A.	B&A Studies	97603
Fitz, H.C.	Wetlands	97403
Fontaine, T.	Wetlands	97401

Fourqurean, J.W.	Marine Ecology	97708 , 97710
Frederick, P.	Upland Plants Bird Studies	97103 97503 , 97504 , 97505
Fry, B.	Wetlands B&A Studies	97408 97601
Gawlik, D.E.	Bird Studies	97502
Gebelein, J.	B&A Studies	97602
Gongora, A.	Posters	97304
Gross, L.J.	B&A Studies	97606
Halley, R.B.	Marine Ecology	97703
Hicklin, J.	Posters	97301
Hernandez, M.	Posters	97305
Hodgens, M.	Env. Mgmt.	97204
Holmes, C.W.	Marine Ecology	97703
Huang, Haolon	B&A Studies	97602
Huston, M.A.	B&A Studies	97606
Jaffe, R.	Posters	97304 , 97305
Kelley, M.H.	Env. Mgmt.	97202
Kieckbusch, D.K.	Posters	97311
Kitchens, W.	Wetlands B&A Studies	97405 97601

Koptur, S.	Upland Plants	97102
Laha, S.	Env. Mgmt.	97204
Lee, D.W.	Upland Plants	97105
Loftus, W.	B&A Studies	97603
Lynch, H.	Bird Studies	97504
Makemson, J.	Env. Mgmt.	97201
Maloney, B.A.	Marine Ecology	97701
Mazzotti, F.J.	Env. Mgmt. Posters	97201 , 97202 , 97302
McCormick, P.	Wetlands	97407
McVoy, C.	Wetlands	97406
Mealey, B.K.	Bird Studies	97501
Meeder, J.	Env. Mgmt. Marine Ecology	97205 , 97702 , 97705 , 97709
Merickel, J.A.	Marine Ecology	97706
Miller, J.	Posters	97302
Morgenstern, C.	Env. Mgmt.	97201
Morrison, D.	B&A Studies	97605
Mullahey, J.J.	Upland Plants	97104
Mumford, P.L.	B&A Studies	97604
Nath, A.	Env. Mgmt.	97203

Newman, S.	Wetlands	97402
Oberbauer, S.F.	Upland Plants Marine Ecology	97102 97709
Oehm, N.J.	Marine Ecology	97704
Owen, D.	Env. Mgmt.	97201
Pages, C.	Bird Studies	97501
Park, W.	Posters	97310
Parks, G.M.	Bird Studies	97501
Perez, B.C.	Posters Marine Ecology	97309 97704
Platt, W. J.	Upland Plants	97101
Prager, E.J.	Marine Ecology	97703
Prieto, L.	Env. Mgmt.	97204
Reyes, E.	Posters Marine Ecology	97307 , 97308 97704
Richards, J.	Wetlands	97408
Roberts, R.E.	Upland Plants	97106
Rodriguez, D.L.	Wetlands	97404
Rose, C.D.	Marine Ecology	97710
Ross, M.	Env. Mgmt. Marine Ecology	97205 97705 , 97709
Rudnick, D.	Marine Ecology	97704

Ruiz, P.	Env. Mgmt. Marine Ecology	97205 97705 , 97709
Rutchev, K.	Wetlands	97401
Sah, J.P.	Marine Ecology	97705
Salatas, J.	Bird Studies	97505
Shinn, E.A.	Marine Ecology	97703
Sklar, F.	Wetlands Marine Ecology	97401 , 97402 , 97403 , 97407 97704
Slater, H.H.	Upland Plants	97101
Smith, T.J. III	Posters Marine Ecology	97306 97706
Sorrentino, D.	B&A Studies	97605
Spalding, M.	Bird Studies	97504
Stoddard, P.K.	Posters	97302
Surdick, J., Jr.	Upland Plants	97103
Sutula, M.	Posters Marine Ecology	97307 , 97309 97704
Tansel, B.	Env. Mgmt.	97204
Telesnicki, G.	Env. Mgmt. Marine Ecology	97205 97705 , 97709
Vilches, M.T.	Env. Mgmt.	97204
Whelan, K.R.T.	Upland Plants	97102
Wiebe, W.J.	Marine Ecology	97706

Willsie, A.A.	Marine Ecology	97708
Wise, M.	B&A Studies	97605
Wu, Y.	Wetlands	97401 , 97403
Zieman, J.C.	Marine Ecology	97708

