the Shellcracker

FLORIDA CHAPTER OF THE AMERICAN FISHERIES SOCIETY *http://www.sdafs.org/flafs*

July, 2010

President's Message:

Greetings to all chapter members!

As mid-summer approaches, our focus (normally) turns to the number of hurricanes forecasted but this year most of our attention has been on the BP Deepwater Horizon explosion and subsequent oil spill. Our parent society president (Don Jackson) has provided a response from AFS to the oil spill in the July issue of Fisheries and the executive committee has drafted an Oil Spill Initiative. This initiative contains several objectives, in particular the coordination of state and federal agencies to form committees to properly review information pertaining to the oil spill. AFS will provide summaries from these committees at this year's meeting in Pittsburg, as well as, holding special sessions on the oil spill with invited speakers from state, federal, private, and fishing industry.

The theme for the 2010 AFS annual meeting is "Merging Our Deeper Currents." I hope you are able to attend this year's parent society meeting in Pittsburg. In addition to catching up with colleagues and discussing research, be sure to set aside time for at least one of the twelve continuing education courses including two instructed by current and past FL AFS members (Basic Fish Population Modeling using Excel by Mike Allen and Introduction to Programming in R for Fisheries Scientists by Matt Catalano).

Our FL chapter executive committee and newly appointment 2011 Southern Division (SD) meeting program chair and organization committee continues to plan for a fabulous 2011 SD annual meeting in Tampa (Grand Hyatt, Jan 13-16, 2011). The committee is discussing the budget and inquiring for sponsorships. The first announcement for the 2011 SD Spring Meeting is posted in this month's issue of the AFS Southern Division News and abstract submission will become available online September 1. Further meeting announcements and information is located on the SD website (http://www.sdafs.org/meetings/2011/default.htm). Just as a reminder, the FL chapter 2011 meeting will not be held, so be sure to make plans for the SDAFS in January 2011.

Sincerely,

Linda Lombardi
FL AFS Chapter President

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Upcoming Events

January 13 – 16, 2011: Southern Division AFS Spring Meeting. Tampa, Florida. www.sdafs.org/meetings/2011/default.htm

Check out our Parent Society's calendar at http://www.fisheries.org/afs/calendar.html for other events not listed here!

New Titles

Planning and Standard Operating Procedures for the Use of Rotenone in Fish Management. Brian Finlayson, Rosalie Schnick, Don Skaar, Jon Anderson, Leo Demong, Dan Duffield, William Horton, and Jarle Steinkjer, editors. 128 pages. Published by the American Fisheries Society. May 2010

Interested in contributing something to the Shellcracker? Email Kevin Johnson at *kevin.johnson@myfwc.com* with any articles or information that you would like to be included in the next issue. The deadline for the next issue is September 30th, 2010, so start fishing...

Feature Article

Fish assemblages in tidal and non-tidal freshwater tributaries of the Indian River Lagoon

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INTRODUCTION

The Indian River Lagoon (IRL) along the east coast of Florida is situated between the Carolinian and Caribbean zoogeographic provinces and as such contains one of the most diverse ichthyofaunas in North America (Gilmore 1995). Most of freshwater inflow to the lagoon occurs via three tidal rivers (St. Sebastian, St. Lucie, and Loxahatchee Rivers) and numerous non-tidal tributaries. The IRL and associated coastal tidal freshwater rivers and streams are recognized as habitats at risk that support many species of particular concern classified by the FWC (Florida Fish and Wildlife Conservation Commission) as "Species of Greatest Conservation Need" (SGCN)) and are in need of assessment, protection, and restoration (Musick et al. 2000, FWC 2005, Florida's Wildlife Legacy Initiative).

While the estuarine fish communities in the IRL have been the focus of substantial research, the adjacent rivers and tributaries have received little systematic survey (Springer 1960, Paperno and Brodie 2004, Paperno et al. 2006). These tributaries are important in the life history of many species, and the changes in the species composition and utilization within these habitats can serve as indicators of environmental stress. Many SGCN have been reported from these tidal freshwater habitats including the opossum pipefish (*Microphis brachyurus*), the bigmouth sleeper (*Gobiomorus dormitor*), and the lesser known centropomids (i.e., tarpon snook (*Centropomus pectinatus*), swordspine snook (*C. ensiferus*), smallscale fat snook (*C. parallelus*), and largescale fat snook (*C. mexicanus*)). While this group can represent a significant component of the biota in these systems, their distribution and habitat requirements are poorly understood. These species also belong to a group of tropical peripheral (TP) fishes, defined as marine species of tropical origin that require use of freshwater habitats at some phase of their life history, and whose habitats and ranges are so limited that they could be classified as either threatened or endangered (Gilmore and Hastings 1983, Musick et al. 2000). Although the Florida's Wildlife Legacy Initiative classifies the population status of many of these species as "low" and their population trend as "unknown" or "declining," they have received little attention and there have been no quantitative surveys within the smaller non-tidal tributaries such that the importance of these systems to the SGCN remains undetermined.

Throughout the IRL and south Florida, many of these freshwater tributaries are subject to increasing stress from development, pollutant loading, habitat destruction, channel dredging, and hydrologic alterations. Changes in specific environmental factors (e.g., temperature, salinity, turbidity) or available habitat, whether natural or anthropogenic in nature, may have a pronounced effect on the resident communities (Jones et al., 1996; Fraser, 1997; Young et al., 1997). These effects may be felt more by species with strict habitat requirements such as TP species (Gilmore and Hastings, 1983; Gilbert, 1992). The objectives of this study were: to describe the overall fish communities within these small tidal and non-tidal tributaries; and to determine the relative resource value of these tidal and non-tidal systems for SGCN (TP species) along Florida's central east coast.

MATERIAL AND METHODS

*Study Area***:** The St. Sebastian River (SSR) is located along the central east coast of Florida and borders the southeastern part of Brevard County and the northeastern part of Indian River County (Figure 1). The SSR is one of the major sources of freshwater discharge to the adjacent IRL; it is divided into two tributaries (the North and South Prongs) which provide natural drainage and two canals (C 54 and Fellsmere canals) which receive water from agriculture land and the St. Johns River marshes to the west (Bergman and Donnangelo, 1998). The majority of the river's shoreline is covered by vegetation that we classified as either overhanging or emergent vegetation. The overhanging vegetation is composed of mangroves, oaks,

wax myrtle, marsh fern, and the exotic Brazilian pepper. Emergent and marsh vegetation include cattail, swamp lily, panic grasses, common reed, and smartweed. Unvegetated riverbanks exist in areas that have been denuded either through removal of Brazilian pepper or the construction of docks and sea walls.

Turkey Creek (TC) and Crane Creek (CC) are non-tidal tributaries located north of Cape Malabar along the western shore of the IRL (Figure 1). Each creek receives freshwater input from the adjacent urban watersheds. The shorelines within these tributaries are characterized by either seawalls or some natural vegetation (marsh, pine forest, and cypress) similar to SSR, although the presence of mangroves in these tributaries is less prominent (Suphunvorranop and Clapp 1984).

Sampling Methods: Sampling was conducted with standardized methodologies utilized in FWC's Fisheries Independent Monitoring program. A combination of seines (21.3-m center-bag seines and 61-m center bag seines) and electrofishing methods were used to expand the habitats and species sampled, while still providing a link to historic data collections in the SSR. Each month, in addition to existing 14 21.3-m seine collections in SSR, we deployed four 21.3-m seines along randomly selected shoreline stations (<1.8-m water depth) in TC. In order to increase our opportunity to collect larger, more mobile species (e.g., mullet, tarpon, etc.), we also deployed a 61-m seine (<2.5-m water depth) along two randomly selected sites in TC, and three sites in SSR. There were no suitable deployment sites for the seines in CC. From each sample, up to 40 individuals of each fish species and selected invertebrate species (i.e., penaeid shrimp, horseshoe crabs, and *Callinectes* crabs) were randomly culled and measured (any remaining individuals were counted). All individuals collected were identified to the lowest practical taxonomic level.

We conducted standardized quarterly electrofishing within each system to compliment the seine sampling and to provide valid statistical comparisons of species abundance patterns between systems. First, we collected and processed all individuals along a random100-m transect of shoreline habitat in order to characterize the whole fish community. At each sampling location, water quality data, detailed habitat characteristics, and environmental conditions were documented. Then, we conducted non-random point sampling directed at specific habitats; however, in this method we only collected and processed TP species. At each point site sampled, we recorded the specific habitat characteristics of a 3-m section of shoreline located directly between the anode booms of the electrofishing boat. To evaluate variation between tidal and non-tidal tributaries, we conducted multivariate analyses on seasonal data using PRIMER (Clarke and Warwick 1994). Seasonal designations for all analyses were defined as winter (December–February), spring (March–May), summer (June– August), and fall (September–November); winter and spring were designated dry seasons, and summer and fall, wet seasons. Pairwise comparisons (years and seasons) of species assemblages and physical data were made using analysis of similarity (ANOSIM). Similarity percentage (SIMPER) was used to determine the similarity of samples and which taxa were responsible for differences between groups.

Preferred habitats for TP species were limited to four species that were collected in suitable abundances. To assess habitat selection, we used Ivlev's Electivity Index *(E):*

$$E_i = (d_i - a_i) / (d_i + a_i)$$

where d_i is the proportional use of the i^{th} habitat by a particular species, and a_i is the proportional availability of the i^{th} habitat in the study area. Values of E range from 1 to -1. Values from 0 to 1 indicate the habitat was used in greater proportion than its availability in the system (preference), while values from 0 to -1 indicate the habitat was used in lesser proportion than its availability in the system (avoidance) (Jacobs 1974).

RESULTS

From July 2007 to June 2009, over 471,000 fish and macroinvertebrates were collected using seine and electrofishing methods. The SSR had the highest catch-per-unit-effort (CPUE = number fish haul^{-1}) in 21.3-m seines (CPUE=1135.4 fish haul^{-1}), followed by TC (CPUE=805.5 fish haul^{-1}). In contrast, TC had the highest catch rates in the 61-m seines (CPUE=60.5 fish haul^{-1}) followed by SSR (CPUE=39.7 fish haul^{-1}). No seines were hauled in CC during the study period; however, electrofishing in this tributary (CPUE=50.6 fish haul^{-1}) produced catch rates higher than in either TC (CPUE=32.0 fish haul^{-1}) or SSR (CPUE=22.1 fish haul^{-1}).

Mutlivariate analyses of the 21-m seine data indicated that physical (ANOSIM, r=0.267, p<0.012) and community differences (ANOSIM, r=0.708, p<0.001) existed between the tidal and non-tidal tributaries during the study. Pairwise results of the fish community data indicated that there were no differences between years and only small differences between seasons. The TC community was characterized by freshwater (*Lepomis* spp., *Lucania goodei*, and *Labidesthes sicculus*) and marsh (*Poecilia latipinna* and *Gambusia holbrooki*) taxa while SSR was characterized by seasonal recruits (*Mugil curema, M. cephalus,* and *Micropogonias undulatus*) and estuarine taxa (*Lagodon rhomboides*, juvenile *Eucinostomus* spp., and *E. harengulus*).

Mutlivariate analyses of the 61-m seine data indicated there were no significant physical difference (ANOSIM, r=0.103, p<0.094) in the habitats sampled with this gear although, community differences (ANOSIM, r=0.134, p<0.039) existed between tidal and non-tidal tributaries during the study. Pairwise results of the fish community data indicated that there were no differences between years and only small differences between seasons. Abundance patterns of many of these taxa did not differ markedly between tributaries with only modest differences in most. The TC community was characterized by higher abundance of *Trinectes maculatus, Diapterus auratus,* and *Eugerres plumieri* while the SSR community was characterized by greater abundance of *E. harengulus*, juvenile *Eucinostomus* spp., and *M. curema*.

Multivariate analyses of the electrofishing data indicated that no significant physical (ANOSIM, r=0.051, p=0.166) or community (ANOSIM, r=0.276, p<0.001) differences existed between freshwater reaches of the tidal and non-tidal tributaries. Pairwise results of the fish community data indicated that there were no differences between years and only small differences between seasons. Pairwise results of the physical data indicated that significant seasonal changes existed within the three tributaries. The non-tidal communities were more closely related to each other (SIMPER, 51.89%) than to the SSR (CC: SIMPER, 54.93%; TC: SIMPER, 53.32%). These differences could be attributed the higher incidence of freshwater centrarchids (*Lepomus* spp.) and cichlids in CC and TC and a greater incidence of certain estuarine taxa (*Lutjanus griseus* and *C. undecimalis*) in the tidal SSR.

A total of 10,092 individuals classified as SGCN species, including 1,452 that represented TP species, were collected by seining and electrofishing in the three tributaries during the study period (Table 1). The CPUE and species richness (number of species) of TP species in each tributary decreased with increasing distance from Sebastian Inlet. Tropical peripheral species were most abundant in the SSR (number of species= 13, CPUE=2.41 fish haul^{-1}), followed by TC (number of species= 8, CPUE=1.68 fish haul^{-1}), and CC (number of species= 4, CPUE=0.90 fish haul^{-1}). The SSR contained five species that were unique to this tributary (*Agonostomus monticola, Awaous banana, C. ensiferus, Ctenogobius pseudofasciatus,* and *Gobioides broussonetii*). Four species were common to all three tributaries (*C. parallelus, Dormitator maculatus, Eleotris amblyopsis,* and *G. dormitor*); however, two of the most abundant TP species, *Lophogobius cyprinoide*s and *Evorthodus lyricus,* were not recorded from CC. No TP species were unique to either TC or CC.

The use of electrofishing methods successfully collected species in the upper reaches of the tributaries that were not able to be sampled with seines (e.g., Figure 2). Several species exhibited markedly different distribution patterns between the wet and dry season. In the SSR, seven species (*C. parallelus, C. pectinatus, D. maculatus, E. amblyopsis, G. dormitor, L. cyprinoides,* and *M. brachyurus*) were recorded throughout the river during the wet season, but were rarely collected near the river mouth during the dry season. In TC, the same was observed for *C. parallelus* and *G. dormitor*. In contrast, *M. brachyurus* from TC were commonly collected in downstream samples during the dry season, but primarily collected from the upstream reaches during the wet season. *Gobiomorus dormitor* was collected in all three creeks, but while it showed no obvious wet-dry season patterns in the SSR, it was collected almost exclusively during the wet season in TC and CC.

Microhabitat associations of TP species were only analyzed for fish captured with electrofishing methods. The four species collected in suitable abundances to conduct Habitat Electivity analyses included *C. parallelus* (n= 16), *D. maculatus* (n= 21), *G. dormitor* (n= 28), and *L. cyprinoides* (n= 24). To illustrate, *C. parallelus* displayed an apparent preference for deeper habitats with shell hash substrates and overhanging cover characterized by trees and shrubs, which may provide shade or structure. Meanwhile *G. dormitor* utilized a number of habitat types, but showed a strong preference for shorelines characterized by overhanging oak trees, panic grasses, and swamp lily and selected against deep shorelines, shorelines with overhanging man-made structure (e.g., docks), and shorelines dominated with cattails and common reed (Figure 3).

DISCUSSION

Fish communities differed between the tidal and non-tidal tributaries, despite relatively small differences in the measured physical conditions between systems. The non-tidal tributaries were characterized by a higher abundance of typical freshwater and marsh taxa (centrarchids, cichlids, poeciliids, and atherinids). In contrast, the SSR species composition contained many euryoecious estuarine taxa including the seasonal juvenile recruits of several sciaenids, gerreids, centropomids, and lutjanids. Although overall seasonal physical conditions were similar between tidal and non-tidal tributaries, a closer proximity to Sebastian Inlet and higher-salinity bottom waters associated with tidal stratification in the SSR likely enables estuarine and coastal-spawning species to take greater advantage of this habitat. The diversity of TP species also differed between tributaries, and species richness decreased with increasing distance from Sebastian Inlet. The highest number of species was observed in the SSR, including five species that were unique to this tributary.

The TP species that utilize these freshwater habitats in the IRL are linked by their life histories to the marine environment (Gilmore and Hastings 1983). The freshwater rivers (i.e., St. Sebastian, St. Lucie, and Loxahatchee) that are accessible to coastal waters have been shown to provide critical habitats for threatened populations of TP species (Gilmore 1995, Frias-Torres 2002). The current study demonstrated that non-tidal tributaries located at a considerable distance from coastal access can also provide suitable and potentially critical habitat to portions of these same populations; however, the utilization of these non-tidal habitats appears to decrease as distance from coastal marine waters increase. Four TP species were common to all three tributaries, including three sleepers (*D. maculatus*, *G. dormitor*, and *E. amblyopsis*) and the smallscale fat snook, *C. parallelus*. Many of the TP species enter estuaries from marine waters as larvae or juveniles, and their transport into distal tributaries may be related to locomotive capabilities or estuarine hydrology.

Within the three studied tributaries, TP species were collected year round; however, there were seasonal differences in abundance for some species. *Centropomus parallelus*, *C. pectinatus*, *A. monticola*, and *L. cyprinoides* were most abundant during the periods that coincided with juvenile recruitment periods. We also observed seasonal differences in the species distributions within the creeks that were related to seasonal changes in the physical environment. During dry season conditions, several species were distributed further upstream, suggesting that the utilization of available habitats may be influenced by physical or biological conditions such as salinity or habitat availability. With the absence of freshwater input, downstream salinity levels adjacent to the estuary can increase, and motile species that are dependent on freshwater habitats could be expected to shift their distributions towards more suitable (i.e., lower salinity) upstream habitats. Alternatively, higher water levels associated with wet season conditions may provide increased access to inundated downstream habitats or food resources that are not otherwise available during the dry season, or species may transition into theses tributaries during the wet season making them more susceptible at downstream sites during this period. In a unique case, this common wet-dry season distribution pattern differed for *M. brachyurus* within TC where nearly all downstream collections were recorded during the dry season. In this case, however, all downstream samples were collected with seines, whereas all upstream samples were collected by electrofishing, so there may be a gear effect partially responsible for the observed seasonal distribution patterns. It is clear that the TP species uses the entire tributary system and that their seasonal distributions may be directed by physiological or behavioral stimuli.

Tropical peripheral species exhibited a wide variety of habitat preferences. Small-bodied species such as *L. cyprinoides*, and *D. maculatus* exhibited the strongest preferences for shallow, non-rocky substrates with emergent aquatic or terrestrial grasses and vegetation. These shallow, inundated grasses could be providing either suitable cover or forage habitat for these species. In contrast, *C. parallelus*, which was often collected at subadult sizes, exhibited a stronger preference for deeper habitats with cover, and was collected in association with dead trees, shrubs, and inundated overhanging cover. Few species were collected in association with unvegetated habitats, docks, seawalls, or dense reedy structure such as cattails, which are often indicative of disturbed habitats.

This study demonstrated that the instantaneous physical conditions present within tidal and non-tidal tributaries in the northern IRL do not differ greatly from each other, but there can be seasonal differences between the fish communities that utilize these two types of systems. Future management of these non-tidal tributaries should consider possible impacts on SGCN, particularly the subset of threatened populations of TP species. Furthermore, this study identified seasonal distribution patterns that indicate TP species utilize natural shoreline habitats along the entire length of tidal and non-tidal tributaries, however, the proximity of the tributary to marine habitats may influence its potential value to these species. Future management decisions should consider potential impacts to natural vegetation and structure, and maintain a continuum of these habitats throughout the system, particularly in areas where anthropogenic impacts have already occurred. Systematic surveys of threatened TP populations and consideration of impacts to them should be conducted prior to implementing proposed disturbances to tributaries outside the geographic range of this study.

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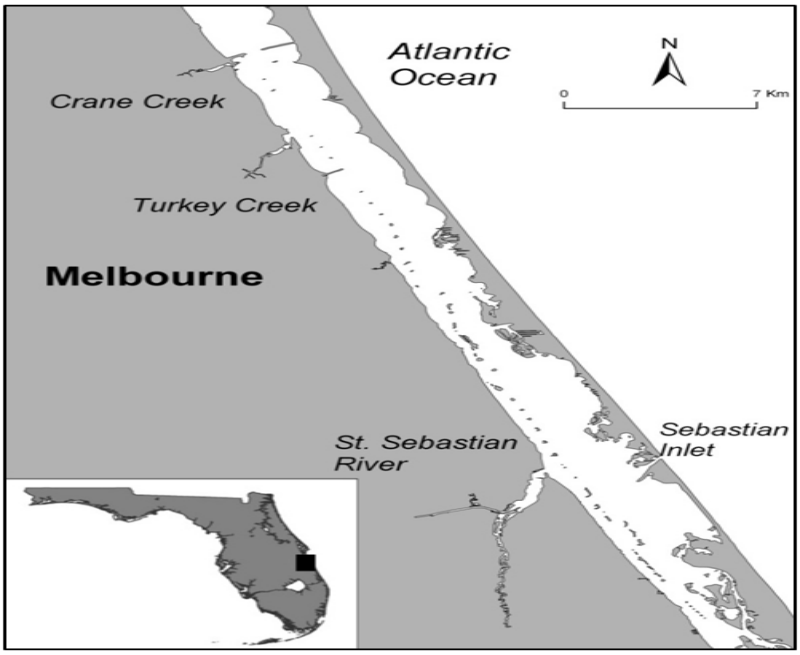


Figure 1. Map of the study area along Florida's east coast.

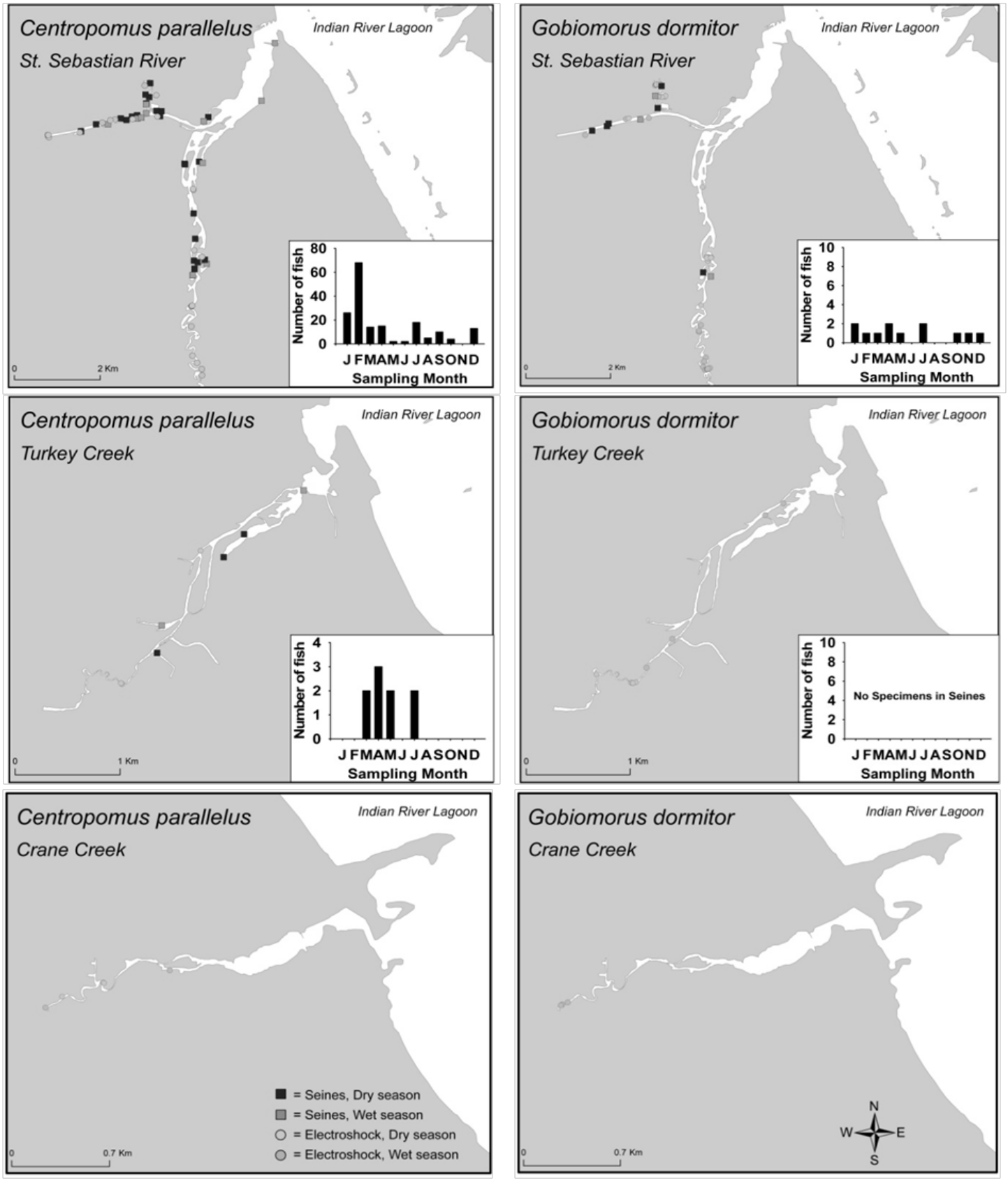


Figure 2. Maps showing the seasonal distribution of the smallscale fat snook, *Centropomus parallelus*, on the left column; and the bigmouth sleeper, *Gobiomorus dormitor*, on the right column, collected in the St. Sebastian River, Turkey Creek, and Crane Creek from July 2007 to June 2009, in 21.3-m and 61-m center bag seines (squares), and electrofishing gear (circles). The insert bar graph represents pooled monthly abundances collected in seine hauls, no suitable places for seines in Crane Creek.

A) *Centropomus parallelus* B) *Gobiomorus dormitor*

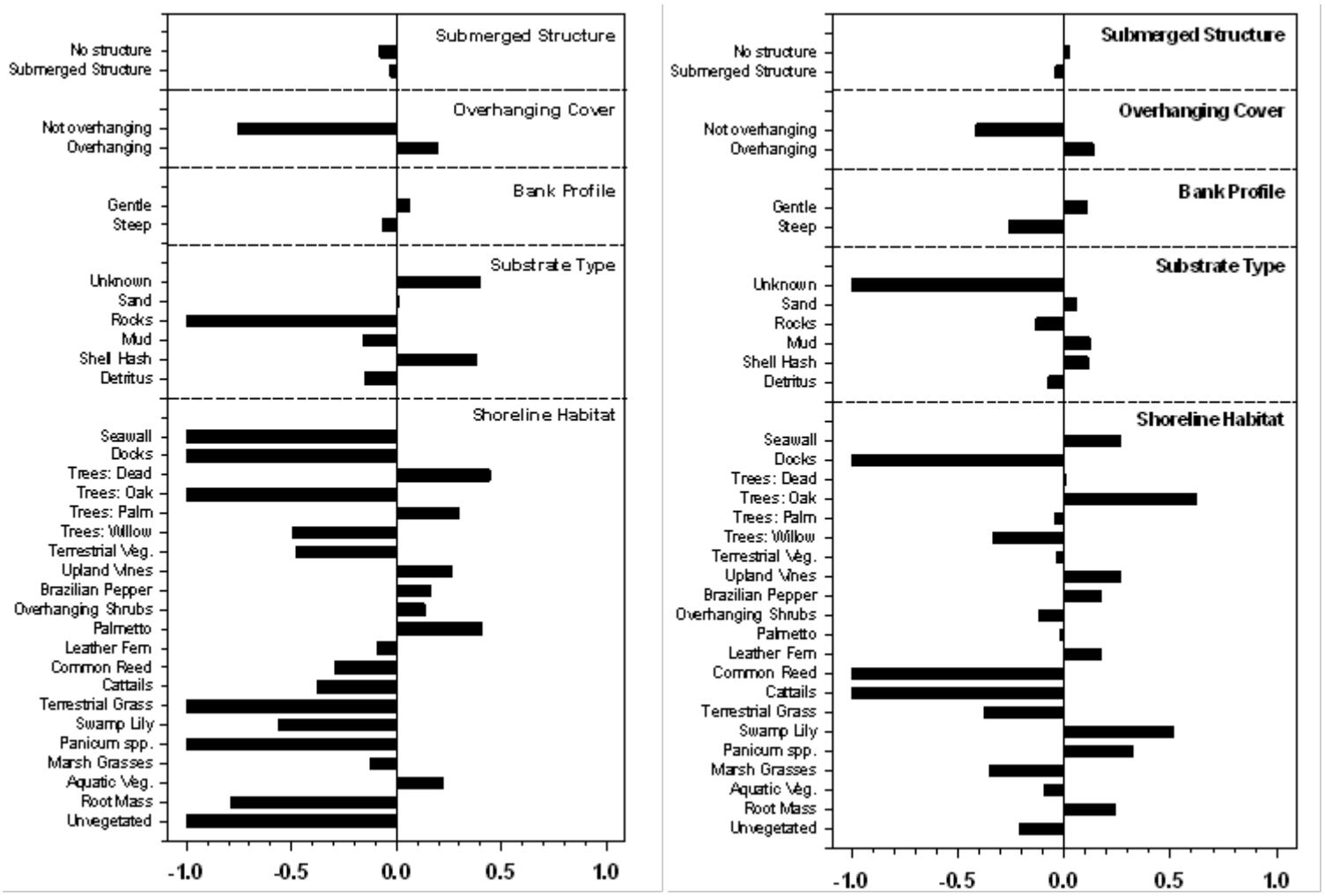
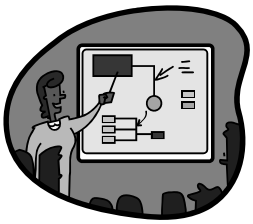


Figure 3. Microhabitat associations for A) smallscale fat snook, *Centropomus parallelus*, and B) bigmouth sleeper, *Gobiomorus dormitor*, collected by electrofishing in Crane Creek, Turkey Creek, and St. Sebastian River combined. Black bars represent the Ivlev's Electivity Index, which ranges from -1.0 (negative selection) to +1.0 (positive selection). Specific habitats are listed on the Y-axis.

Table 1. Summary by tributary of Tropical Peripheral species (TP) and Species of Great Conservation Need (SGCN) with low (L) or unknown (U) status and declining (D) or unknown (U) trend, collected during northern Indian River Lagoon tributary sampling, July, 2007 June, 2009. Effort, or the total number of hauls, is labeled 'E'. Taxa are arranged alphabetically.

Species	Common Name	TP	SGCN				Tributary			Totals
			Status		Trend		Crane	Turkey	Sebastian	
			L	U	D	U	E=30	E=176	E=469	E=675
Agonostomus monticola	Mountain Mullet	X	X				.	.	12	12
Albula vulpes	Bonefish		X				.	.	7	7
Anguilla rostrata	American Eel		X			X	12	1	23	36
Archosargus probatocephalus	Sheepshead		X				60	116	436	612
Awaous banana	River Goby	X	X			X	.	.	1	1
Centropomus ensiferus	Swordspine Snook	X	X			X	.	.	1	1
Centropomus parallelus	Smallscale Fat Snook	X	X			X	7	20	206	233
Centropomus pectinatus	Tarpon Snook	X	X			X	.	1	17	18
Centropomus undecimalis	Common Snook		X				78	505	2,279	2,862
Ctenogobius pseudofasciatus	Slashcheek Goby	X	X			X	.	.	28	28
Cynoscion nebulosus	Spotted Seatrout		X				.	1	4	5
Dormitator maculatus	Fat Sleeper	X				X	16	32	85	133
Eleotris amblyopsis	Largescaled Spinycheek Sleeper	X				X	1	2	7	10
Epinephelus itajara	Goliath Grouper		X				.	.	1	1
Eugerres plumieri	Stripped Mojarra		X				114	695	2,989	3,798
Evorthodus lyricus	Lyre Goby	X					.	1	243	244
Gobioides broussonetii	Violet Goby	X					.	.	4	4
Gobiomorus dormitor	Bigmouth Sleeper	X	X			X	3	9	54	66
Lophogobius cyprinoides	Crested Goby	X					.	218	448	666
Lutjanus griseus	Gray Snapper		X				12	27	229	268
Megalops atlanticus	Tarpon		X				.	3	7	10
Microphis brachyurus	Opossum Pipefish	X	X		X		.	13	23	36
Paralichthys albigutta	Gulf Flounder		X				.	.	1	1
Paralichthys lethostigma	Southern Flounder		X				.	.	5	5
Pogonias cromis	Black Drum		X				.	.	18	18
Sciaenops ocellatus	Red Drum		X				.	8	966	974
Syngnathus louisianae	Chain Pipefish		X		X		.	.	3	3
Syngnathus scovelli	Gulf Pipefish				X		.	21	11	32
Trachinotus falcatus	Permit		X				.	.	8	8



2011 Southern Division AFS Spring Meeting
Grand Hyatt Tampa Bay
January 13-16, 2011 Tampa, Florida

Mark your calendar now for the 18th annual SDAFS Spring Meeting that we (the Florida Chapter) are co-hosting at the beautiful waterside Grand Hyatt Tampa Bay. The room rate (single or double) is $139.00, however, please do not book rooms at this time. Details regarding accommodations, reservations procedures and meeting registration will be available soon at the Division's meetings website (**http://www.sdafs.org/meetings/2011/default.htm**). This meeting promises to once again be an effective forum for the exchange of ideas, presentation of research papers (completed and in progress), to conduct technical committee and Division business, and other professional interactions.

We are continuing to plan for this meeting, **so please help out and volunteer!** If you would like to get involved with any part of the meeting planning please contact our General Meeting Chair, Eric Nagid, eric.nagid@myfwc.com. If you already signed up to help out with a certain committee at the recent FL Chapter meeting, we have your name down and may be contacted, if not please contact Eric or committee chair to offer your help. The following are the committee chairs that we have commitments from, if you do not see your name and would like to chair a committee contact Eric, thank you.

Program Chair (talks & symposium) & Abstract Submissions, Dave Kerstetter, kerstett@nova.edu

Local Arrangements, Kerry Flaherty, kerry.flaherty@myfwc.com

Registration – TBD

Finances, Travis Tuten, travis.tuten@myfwc.com

Posters – TBD

Advertising/Communication, Kevin Johnson, kevin.johnson@myfwc.com

Fundraising/Sponsorship, Wes Porak, wes.porak@myfwc.com

Audio/Visual – TBD

Workshops/Continuing Education – TBD

Raffle – TBD

Meeting Fundraising & Sponsorship!

Wes Porak, with the help of others, have been hard at work compiling an extensive list of potential meeting sponsors with the goal of raising $40,000. Fundraising is one of the most important parts of meeting planning, so if you know of potential sponsors or would like to get involved with the solicitation of funds, please contact **Wes Porak** (**wes.porak@myfwc.com**). Wes has also created a guideline for the solicitation of funds from potential sponsors.

FIRST CALL FOR SYMPOSIA AND PAPERS

2011 SOUTHERN DIVISION SPRING MEETING

The general schedule for the upcoming Spring Meeting will be similar to past years, and is as follows: Thursday - Technical Committee meetings; Friday - EXCOM and continuing education workshops; and Saturday and Sunday morning - Technical Sessions, Symposia, and Poster presentations.

SOLICITATION OF PROPOSALS FOR SPECIAL SESSIONS, WORKSHOPS, AND SYMPOSIA
DUE DATE FOR SYMPOSIUM PROPOSALS IS 1 OCTOBER 2010.

The Program Committee is now soliciting proposals for either half-day or full-day special sessions that can be included in the Spring Meeting agenda. Symposia may be scheduled in 2-hour time blocks ranging from 2 hours to day-long sessions and may include individual presentations, panel discussions, and other innovative formats designed to achieve the organizers' goals. Organizers should note that contributed papers will be 20 minutes (which includes a 5-minute discussion). Proposals should state symposium objectives, format, amount of time required, a tentative list of participants and topics they will cover, and visual aids required. Computers with PowerPoint capability will be provided. Sessions having broad appeal and relevance to fisheries will receive highest priority. Symposium titles, moderators, and titles/authors will also be included in the Spring program.

Organizers will be responsible for submitting abstracts for all presentations in their sessions (deadline and Abstract guidelines are described below in the Call for Contributed Papers). Session organizers will be notified regarding acceptance of proposals by 1 November 2010. Proposals for sessions should be submitted to:

David Kerstetter
Chair, SDAFS Program Committee
NSU Oceanographic Center
8000 North Ocean Drive
Dania Beach, FL, 33004
954-262-3664 (office) or kerstett@nova.edu

FIRST CALL FOR CONTRIBUTED PAPERS

Individuals desiring to present research and management results and/or progress of ongoing work should submit abstracts online at the Southern Division website provided in the following paragraph. Technical presentations will be scheduled for 20 minutes – 15 minutes for the presentation followed by a 5-minute question/answer period. Moderators will strictly enforce the time limit. PowerPoint presentations are required.

Poster presentations will be encouraged due to the number of attendees at the meeting. Posters will be exhibited throughout the meeting duration, and poster authors will be available at specific, scheduled times to talk about their work and answer questions. Abstracts, either for presentation or poster, should be submitted online at the Division website (http://www.sdafs.org/abstracts) – this link will become active on or shortly after 1 September 2010. Please state during submission whether the abstract is for a poster or for a presentation.

Abstract submission should include the paper's title, author names and addresses (include phone, fax and e-mail if available), and text. It is assumed that the first author listed will be the presenter unless otherwise noted. Students competing for the "Student Best Paper Award" should indicate during submission. The text should be no more than 200 words. Be sure to state the study objectives, principal results, and conclusions within the abstract. If the principal contact person for correspondence regarding the abstract is someone other than the presenter, please specify.

Student Section

Student Research Highlight

Travis Moore

Nova Southeastern Oceanographic Center
Pelagic Fisheries Research Lab

Here at the Fisheries Research Laboratory at NSU's Oceanographic Center, some exciting fisheries science research is being conducted. I am is conducting my thesis research project on the trophic ecology and dynamics of the marine fishes located in the coastal pelagic ecosystem, with an emphasis on higher order species inhabiting the mid-range coastal pelagic waters to the true blue pelagic waters. The target group of fish species includes wahoo, king mackerel, and blackfin tuna, as well as other smaller species of the families Carangidae, Coryphaenidae, and Scombridae. These species support valuable recreational fisheries and provide a vital ecosystem link between the inshore and offshore communities. For those reasons and because a desire to see recreational angers and marine fisheries science work cooperatively to improve the future, I chose and developed this project with the assistance of Dr. David Kerstetter.

To examine the trophic dynamics, the project is using a combined approach that includes a traditional gut-content analysis of the collected samples and a stable isotope analysis of the muscle tissue in an effort to characterize and illustrate the predator-prey relationships within the coastal pelagic ecosystem. While we are collecting opportunistically from recreational angling and Florida FWC dockside sampling, most of the samples have come from big game fishing tournaments in south Florida. Some of the tournaments I have had the privilege to attend in 2010 include the Yamaha Contender Miami Billfish Tournament, Mad Dog Mandich Classic, Bluewater Invitational, as well as the Pompano Beach Saltwater Shootout and Slam. At all these tournaments, I set up a booth next to the weigh-in station and put on an informal marine fisheries science display for the public as we collect biological samples, with the greatly appreciated assistance of fellow labmates. To my amazement I have drawn large crowds of spectators at each of the tournaments that are very interested in marine fisheries science. The Miami Billfiish Tournament was a three day tournament and my biggest success so far. Each day of the tournament there was a large crowd eager to view and learn more about the pelagic fishes brought in. Jeremy Shockey, of the Super Bowl Champion New Orleans Saints, even spent a good hour and half at the booth captivated by what we were doing.

Having the opportunity to sample fish species at such large and public venues has turned out to be extremely successful in two fashions. First, many of the teams and anglers participating in the tournaments are at the professional level, and they know where to find the fish. Because of this I have been able to sample large pelagic fishes in relatively large numbers, as well as build up working relationships with the local fishing teams. By having such a strong relationship with these fishing teams, I am able to acquire more accurate fishing reports and conditions from out on the water. Secondly, the publicity and public outreach achieved at the tournaments is beyond expectations. I never expected the crowds to show so much interest in fisheries science. Along with the crowds, more and more professional tournament and recreational anglers are becoming interested in taking an active role in marine fisheries science and conservation. These tournaments have provided a great venue for the general public to see what fisheries science is all about every time I collect biological samples.

My research project examining the trophic ecology and dynamics of the marine fishes within the coastal pelagic zone started out as an ambitious thesis project, but it has evolved into so much more. This coming January I hope to present preliminary data at the AFS Southern Division meeting. By the time this project is ultimately completed I hope to have achieved a greater public awareness of fisheries science and a greater understanding of the trophic ecology in the coastal pelagic ecosystem.