the Shellcracker

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

January, 2007

President's Message:

Wow! It seems that it was only yesterday that we were at Camp Ocala having our annual meeting, and now our 2007 meeting is just around the corner. Where did the year go?

With students gone for the holidays and not having to teach classes, this is the time of year that I have a bit more time to sit back and think. This holiday season, I thought about all of the careers that I could have entered and asked myself if I made the right choice. The answer, as in the past, was "Yes!" What better profession to be in than the study and management of our recreational and commercial fisheries, and marine and freshwater systems?

It really hit home, this past holiday season, when a myriad of Christmas cards and letters arrived at our house. Several were from roommates and friends from my undergraduate days. My friends all have good paying successful careers, but their letters all indicated that when they had time away from work, they spent much of it on the water fishing and boating. Their jobs seem only to be a means by which to pay for their time outdoors. In our profession, being outdoors is often a huge part of our job. We daily work in an environment and with resources that my friends wait all year to enjoy.

Many of the other letters came from past students and employees, who now work for county, state, and federal agencies. They love their jobs and their profession. As a past advisor to many of these students, what better Christmas present to receive than a "thank you" from them for helping them pursue their dream of being a fishery/aquatic biologist.

So when you get a chance, sit back and think about all of the fun that you are having in your job, but also keep my friends in mind when you are doing your job. My friends and countless others depend on us for the future of their recreation. They depend on many of you who directly manage our fishery resources, and on me, other faculty, and hundreds of senior biologists/staff to help train the students and young biologists who will someday replace us and be our future managers, researchers, and educators

I hope you had a great year and have an even better one in 2007! See you at Camp Ocala!

Chuck Cichra
President FL AFS

Getting in Touch

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Upcoming Events

Jan 11-13: Public Meeting of the Mississippi River Basin and Gulf of Mexico Watershed Nutrient Task Forced, Arlington, VA.

Jan 18-19: Hydroacoustics for Fisheries Assesssment, Seattle, Washington.

Feb 4-9: ASLO Aquatic Sciences Meeting, Santa Fe, NM.

Feb 7-9: Biennial Congress of the Indian Society of Fisheries Professionals, CIFE, Mumbai. .AFS

Feb 7-11: Southern Division of the American Fisheries Society and Tennessee Chapter of AFS, Memphis, TN.

Feb 15-17: Catfish Farmers of America Annual Convention an fish Farming Tr,ade Show, Orange Beach, AL.

Feb 15-19: Annual Meeting of the American Association or the Advancement Science: Science and Technology for Sustainable Well-Being.

Mar 7-10: AFS Midyear Governing Board Meeting, Atlanta, GA.

Mar 7-10: 25th Annual Salmonid Restoration Conference, Santa Rosa, CA.

Mar 12-15: International Symposium on Tuna and Pelagic Fish Stock Assessments and Management Shanghai, China.

Mar 15-18: National Hydropower Association—Hydropower: The Power of Moving Water, Washington, DC.

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

Feature Article

What's going on at Blue Cypress Lake?

By Nick Trippel
FWC-Melbourne Freshwater Fisheries Lab

Introduction

Blue Cypress Lake (Indian River County), which is 2,645 ha in size, is the largest of the natural lakes in the upper basin of the St. Johns River. Since the mid-1990's, anglers have perceived a continual decline in the number of harvestable-sized largemouth bass *Micropterus salmoides*. To resolve this, they suggested that a mandatory catch-and-release regulation for largemouth bass be placed on this system, similar to regulations on the neighboring Stickmarsh/Farm 13 system. In 2003, a tagging study was initiated by Florida Fish and Wildlife Conservation Commission (FWC) biologists to estimate angler catch and harvest rates and determine if a regulation could indeed be used to improve the fishery. Through this tagging study and subsequent modeling using Fishery Analysis and Simulation Tools (FAST), it was determined that regulation changes may reduce angler effort and would not change the fish population enough to be warranted.

After being presented with these results, anglers then proposed another solution: stock the lake with more largemouth bass. Stocking of fingerling largemouth bass is currently being considered by FWC as a possible management solution to enhance this fishery. Prior to stocking, baseline fisheries data were collected to assess the current largemouth bass population and prey availability in the system. This information will also be utilized to determine whether stocking fingerling bass is a viable management technique to improve bass densities in this lake. Thus, the main objectives of this study are to: (1) assess the abundance and size structure of the current largemouth bass population; (2) determine the current available prey to predator ratio, an index of prey availability; and (3) determine the number of bass to stock, if stocking is deemed appropriate.

Methods

Largemouth bass were sampled using electrofishing in October 2005 and March and May 2006 to collect data for length-frequency and diet analyses. For each sampling event, a total of 28 750-m transects located around the lake's perimeter were each sampled for 15 minutes. All fish were weighed (g) and measured for total length (TL; mm). To examine condition of fish, relative weights (W_r) were calculated. A mean W_r across all size groups in theory reflects ecological and physiological optimality for populations (Anderson and Neuman 1996). Transparent acrylic tubes were also used to obtain diet samples as described by Van Den Avyle and Roussel (1980). Frequency of occurrence, percent by number and percent by total weight were calculated for all prey items found in stomachs for bass collected in each month.

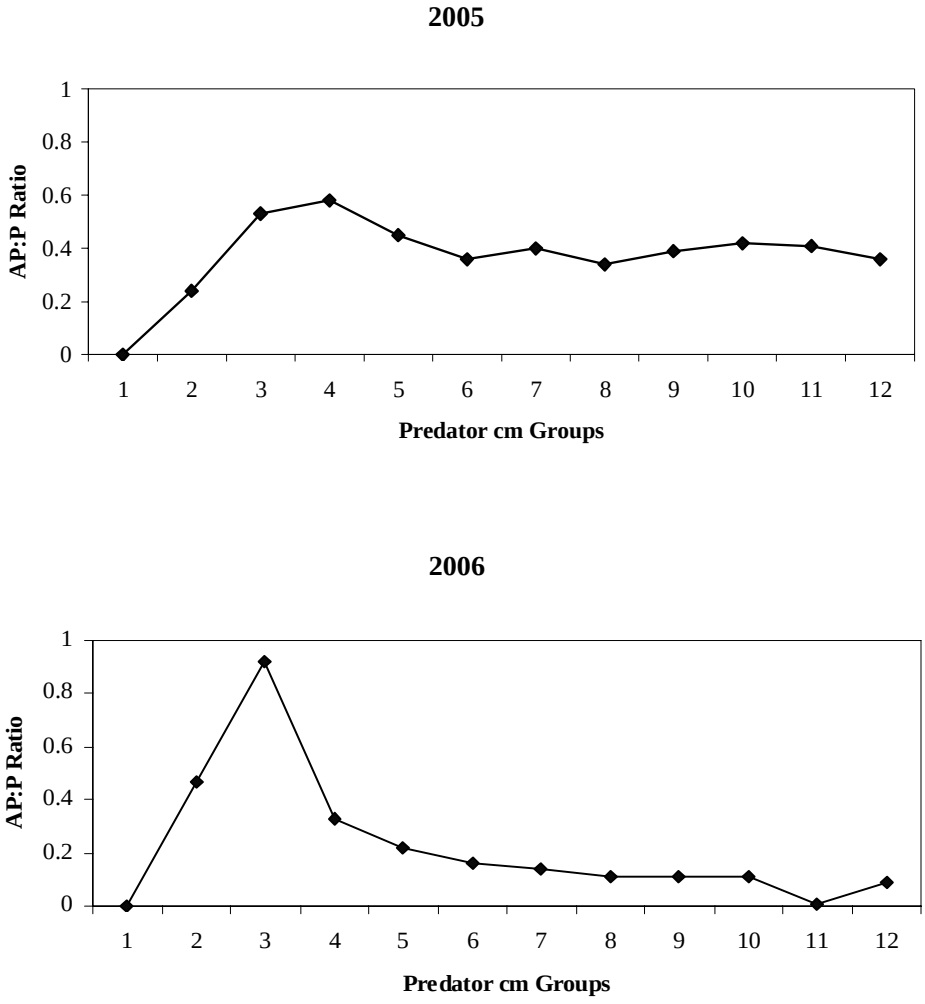
Mini-blocknets were used to collect age-0 largemouth bass and prey availability information during May 2005 and 2006. This information was also used to determine if the waterbody should be stocked and to assess whether data collected by this gear can be used to determine the number of fish to be stocked. A total of twenty blocknets were set at randomly selected sites within the littoral zone, each encompassing an area of 0.01 ha. Each enclosed area was treated with the fish toxicant, rotenone, which was applied at a concentration of 3 mg/L. Total length (mm) and weight (g) were measured for all fish collected within the blocknets. From these data, available prey to predator ratios (AP:P) were calculated using methods described by Jenkins and Morais (1978) with *Lepomis* spp. counted as both predator and prey. The minimum desirable AP:P ratio is 1:1 which means there is one kilogram (kg) of available prey biomass for every one kg of predator biomass.

Results and Discussion

Largemouth bass were sampled throughout this study period using electrofishing and blocknetting. Electrofishing catch rates increased through time, with extremely low catches in October and increasing numbers in March and May. Catch rates ranged from 0.07 to 0.40 fish/min, and fish ranged in size from 162 to 625 mm TL for all sample months combined. The catch of small (< 250 mm TL) individuals was also highest in May, comprising approximately 20% of the catch in that month. Therefore**,** electrofishing samples indicated low abundances of largemouth bass throughout the year. Although catch rates were considerably better during May, this may have been due to low water conditions, which could have concentrated fish and allowed sampling to be more effective. Despite low abundance, fish collected by electrofishing appeared to be in good condition and generally had high relative weights.

During block net sampling in May 2005, only three young of the year bass were collected, therefore no extrapolations were made using this data. In May 2006, a total of 33 young of the year bass were collected, but of these, 30 were collected the first day of sampling in four nets in the southeastern corner of the lake. Only three more were collected in the sixteen other samples. Nonetheless, if this number is extrapolated out to the entire lake, it equates to an average of 67 age-0 bass per acre. The AP:P ratios were also calculated for 2005 and 2006 blocknet data for predator size groups up to 12 cm. These AP:P ratios were low and did not exceed 1 for any size group (Figure 1).

Figure 1. Available Prey to Predator Ratio (AP:P) calculated from 0.01 ha blocknets set. in May of 2005 and 2006 at Blue Cypress Lake.



Grass shrimp *Palaemonetes* spp. and brown hoplos *Hoplosternum littorale* were two of the more common prey items found in bass stomachs (see below), but they were not collected during block net samples. This and the inability to set block nets effectively in all habitats may suggest calculated AP:P ratios were unrealistically low. Despite these sampling biases, however, fish abundances in this lake are considered to be low.

No single prey species dominated the diet samples from largemouth bass in this system. However, grass shrimp were common in all sampling months and all sizes of bass. Brown hoplo and freshwater shads *Dorosoma* spp. accounted for a large proportion of prey items in diet samples. Also found were many rare diet items including lizards, water snakes, two-toed amphiumas *Amphiuma means*, and other unidentified reptile bones. The regularity of items such as these in diet samples and high numbers of empty stomachs may indicate a lack of prey fish available in this system.

Studies thus far reveal that mini-blocknets will not produce all of the necessary data to determine if a waterbody should be stocked and the numbers of fish to be stocked. Blocknet data did suggest low numbers of prey available to predators in this lake, although more common prey items, such as grass shrimp, were not sampled with this gear. Blocknet and electrofishing samples revealed low numbers of small largemouth bass in the system, which suggests there may be high mortality of juvenile largemouth bass during early life stages. Stocking advanced fingerlings may bypass periods of high mortality and allow stocked fish to recruit to harvestable size, assuming there is adequate prey available in the system.

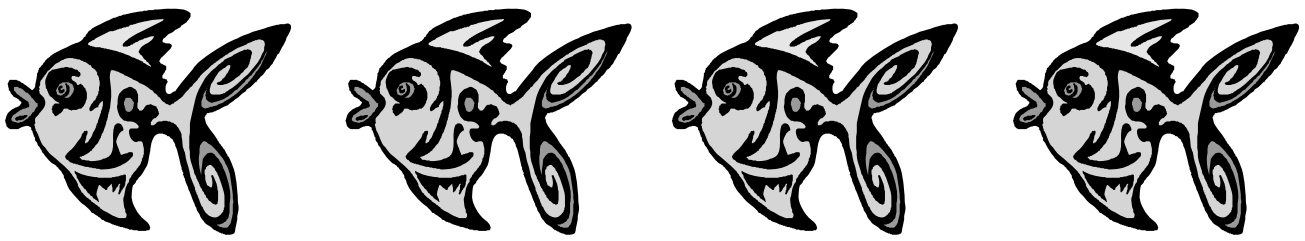
More importantly, the Richloam State Fish Hatchery and Bass Conservation Center (located in Sumter County) was recently completed and fishery managers and researchers are currently attempting to determine a new stocking protocol and assess various stocking techniques in the state of Florida. Therefore, although mini-blocknets did not provide us with all the answers we had expected, Blue Cypress Lake will be experimentally stocked in the spring of 2007 to test several stocking techniques. The results of this study will help to establish a future stocking protocol, possibly improve largemouth bass densities in the lake, and address the concerns of local stakeholders and anglers.

References

Anderson, R. O., and R. M. Neumann. 1996. Length, weight, and associated structural indices. Pages 447-482 *in* B. R. Murphy and D. W. Willis, editors. Fisheries techniques, 2nd edition. American Fisheries Society, Bethesda, Maryland.

Jenkins, R. M., and D. I. Morais. 1978. Prey-predator relations in the predator-stocking-evaluation reservoirs. Proceedings of the Annual Conference Southeastern Association of Fish and Wildlife Agencies 30(1976):141-157.

Van Den Avyle, M.J. and J. E. Roussel. 1980. Evaluation of a simple method for Removing food items from live black bass. The Progressive Fish Culturist 42 (4):222-223.



Annual Meeting and Symposium Announcement
2nd Call for Papers

27th Annual Meeting of the
Florida Chapter of the American Fisheries Society
February 20-22, 2007

We look forward to getting together at the 2007 annual meeting, when this year's symposium will focus on Lake Okeechobee and its outflows to the east and west coast estuaries. We hope this meeting will provide a synopsis of short and long term trends in fish communities and habitats of freshwater and oligohaline environments, and how they may be related to water levels. Several speakers are already onboard to give platform presentations for the symposium, and abstracts on other topics are currently being received and welcomed. **Remember,** p**resentations and posters can be submitted on any topic!**

Details for abstract format, program highlights, directions to the venue, etc., are available on our website (www.sdafs.org/flafs/) and in the October 2006 issue of the Shellcracker. The following is intended simply to outline the meeting and upcoming deadlines:

- **Abstracts are due** to Eric Nagid (eric.nagid@myfwc.com) by Friday, **January 12, 2007**.
- **Pre-registration forms are due** to Linda Lombardi-Carlson by **January 12, 2007**.
- You can lock-in your **shirt size** by writing it in on a completed pre-registration form.
- Contact Eric Nagid about the **symposium or program** at eric.nagid@myfwc.com
- Contact Chuck Cichra about **student travel grants** at fish@ifas.ufl.edu

The meeting will be held at the Ocala 4-H Camp (www.sdafs.org/flafs/doc/ocala4h.html), along Sellers Lake in the Ocala National Forest, east of Ocala, south of SR40, and just off SR19. Directions are available in this issue on page 8 and on our website.

The meeting begins with lunch on Tuesday, February 20 and ends with lunch on Thursday, February 22 (see preliminary schedule in this newsletter).

Accommodations are open cabins, with four twin beds to a bathroom. There are several images of this facility on our website home page.

*** Plan to bring your own bedding (sheets/blankets/sleeping bag, towels, pillow) and towels if you are sleeping overnight (bedding and towels are available in limited supply for a fee).

Interested in contributing something to the Shell-Cracker? Email Jackie Debicella at *jackiedebo@hotmail.com* with any articles or information that you would like to be included in the next issue. The deadline for the next issue is March 30, 2007, so start fishing...

***DRAFT* Program Overview**

Tuesday, 20 February, 2007
11 am to 1:10pm - Registration (also during the session breaks or see Secretary-Treasurer, Linda Lombardi-Carlson)

12:00pm - Lunch
1:00pm - Welcome (Chapter President, Dr. Chuck Cichra)
1:10pm to 5:10pm - Contributed Papers
5:10pm to 6:00pm - Break
6:00pm - Dinner
5:30 to 7:00pm - Registration / Poster Set Up
7:00pm - Formal Poster Session (Drinks, snacks, and presenters will be available)
8:00pm - Bonfire Social

Wednesday, 21 February, 2007
7:30am to 8:10pm - Registration

7:00am - Breakfast
8:00am - Welcome (Symposium Organizer, Eric Nagid)
8:10am to 11:50am - ***Symposium: Lake Okeechobee, waterways, and estuaries***
12:00pm - Lunch
1:00pm - Announcements
1:10pm to 5:00pm - ***Symposium-related papers/ Contributed papers***
5:00pm – Student subunit meeting
6:00pm - Dinner
7:00pm - A short business meeting (Student Travel and Rottmann Award Presentations)
7:30pm - Raffle followed by a Bonfire Social

Thursday, 22 February, 2007
7:30am to 8:10 am -- Registration

7:00am - Breakfast
8:00am - Welcome/Announcements
8:10am to 11:50am - Contributed Papers
12:00pm - Lunch
1:00pm - Awards for Best Papers, Best Posters, Power Tie Award, & Lampshade Award
2.00pm - Continuing Education series. *Patterns and Processes of Fish Reproduction: a primer*
Presented by Dr. Richard McBride

Directions to Ocala 4-H Camp

The Ocala 4-H Center is located in the Ocala National Forest on Sellers Lake. Directions are provided below for those traveling from different parts of the state. Mileage estimates are to be used for general reference only.

From SW:
Take I-75 N to 44 E, head towards Leesburg, turn right onto 441 S, in Eustis, take exit for 19 N (on right), turn left at light and head north on 19 N for ~19 mi., turn left onto NFS 535 at the Fire Control Center/Camp Ocala 4-H Center sign. Center will be on the right about 1/2 mi.

From SE:
Take Turnpike N to 429 N towards Apopka, turn left onto 441 N, once in Eustis, take a right onto 19 N., go for ~19 mi. and turn left onto NFS 535 at the Fire Control Center/ Camp Ocala 4-H Center sign. Center will be on the right about 1/2 mi.

From NW:
Take I-75 S to Ocala, take the exit for 326 E, when 326 ends, turn left onto 40 E, turn right onto 19 S, go for ~4.5 mi. and turn right onto NFS 535 at the Fire Control Center/Camp Ocala 4-H Center sign. Center will be on the right about 1/2 mi.

From NE:
Take 17 S to Palatka, turn right onto 19 S, go for ~42 mi. and turn right onto NFS 535 at the Fire Control Center/Camp Ocala 4-H Center sign. Center will be on the right about 1/2 mi.

Florida Chapter of the American Fisheries Society – 4H Camp Ocala, FL
Annual Meeting Registration: February 20 to 22, 2007

NAME: _____ STUDENT (YES/NO):_____

ADDRESS*:_____

_____

DAY-TIME PHONE: _____E MAIL:_____

AFFILIATION: _____

ARRIVAL DATE/TIME:_____

**This address will be used in our mailing list and should be the one where you want to receive newsletters and other materials.*

What size meeting T-shirt do you want? SMALL MEDIUM LARGE X-LARGE XX-LARGE

PRE-Registration Fees prior to Friday, January 12, 2007 (5pm post-mark):

One-day Registration:	($25.00)	_____
Full Registration:	**($35.00)**	_____

LATE-Registration Fees after Friday, January 12, 2007 (5pm post-mark):

One-day Registration:	($28.00)	_____
Full Registration:	**($40.00)**	_____

Partial Meals and Lodging

Tuesday: 20 February, 2007	Lunch	($7.00)	_____
	Dinner	($13.00)	_____
	Lodging	($25.00)	_____
Wednesday: 21 February, 2007	Breakfast	($4.00)	_____
	Lunch	($7.00)	_____
	Dinner	($13.00)	_____
	Lodging	($25.00)	_____
Thursday: 22 February, 2007	Breakfast	($4.00)	_____
	Lunch	($7.00)	_____

Full Meals and Lodging:	**($105.00)**	_____
Linens (Bring your own or limited supply):	($6.00)	_____
FL Chapter dues (calendar year 2007):	**($10.00)**	_____
Total Amount:		_____
Total Enclosed: (Minimum $10.00 Deposit)		_____
Balance Due:		_____

Dietary Needs: (vegetarian, low fat, etc.) Note: This is a cafeteria-style service and food must be ordered at least a week in advance. Please respond promptly if you need something special, training center staff will try to accommodate.

Please Make Checks Payable to Florida Chapter, AFS and mail to:

Linda Lombardi-Carlson
NOAA Fisheries Service
3500 Delwood Beach Road
Panama City, FL 32408

Phone: (850) 234-6541 x. 213
Fax: (850) 235-3559
Email: Linda.Lombardi@noaa.gov

We can only accept **non-FWC VISA** or **MASTERCARD** on the meeting date.
If you would like to pay your meeting fees with a credit card, then please send a $10 check for your deposit.

Patterns and processes of fish reproduction: a primer

Presented by Richard McBride, Ph. D.
February 22, 2007, Altoona, Florida
As part of the Florida Chapter's continuing education series

Reproduction is a key concept for the study of population dynamics, but it is complex enough that it requires specialized methods and terminology. There is probably no better time to learn about reproduction by fishes, because the successes of recent experimental studies offer cogent evidence about the processes of oogenesis, an accumulation of comparative studies reveals the diversity of reproductive patterns, and a modern literature offers a fairly lucid framework of terminology. This presentation will present a literature review of the patterns and processes of fish oogenesis and fish reproduction, and include time to respond to the interests and questions of the participants.

This 'primer' will introduce the germ cell, oogonial proliferation (mitosis), and oocyte development (meiosis). The focus will be on microscopic approaches, such as with histology and examination of whole oocytes, although reference to macroscopic methods will also be included. Workable definitions will be given to distinguish semelparity from iteroparity and total spawners from batch spawners. Various definitions of fecundity and oocyte synchrony will be reviewed, along with the implications for each. Finally, the diversity of these patters will be examined for fishes of the North Atlantic. The presentation will be limited to oogenesis (i.e., female reproduction), offering little in terms of spermatogenesis. Following the presentation (approximately 45 minutes), an informal, open discussion is encouraged.

This presentation is offered as a 'continuing education' component following the 27th *Annual Meeting of the Florida Chapter of the American Fisheries Society*. It will begin at 2 pm, after this meeting's lunch and awards ceremony, on Thursday, February 22, 2007. The *Annual Meeting* and this presentation will be held at the 4H Camp, Ocala (actually Altoona), FL. If you would like to participate in this 'continuing education' presentation, then you must register for the *Annual Meeting* for at least Thursday, February 22. Pre-registration for a single day is 25$ (late registration, after January 12, 2007, is 28$) and the registration form can be downloaded from: http://www.sdafs.org/flafs/PDF/2007%20Registration%20form.pdf. Lunch preceding the presentation can be purchased for 7$. Those who register for the entire meeting are also entitled to participate. For more information about registration or updates see this issue of the *Shellcracker* or online at http://www.sdafs.org/flafs/index.html. Directions to the 4H Camp are online at http://www.sdafs.org/flafs/doc/ocala4h.html.

If you pre-register for Thursday or the full meeting and you plan to participate in the presentation, then you should also contact Richard McBride (richard.mcbride@noaa.gov) directly. Participants who do so will receive a hardcopy of the powerpoint file at the beginning of the presentation. Those that do not pre-register or contact Rich may still join the presentation, as room allows.

Richard McBride is the current Past President of the Florida Chapter (AFS). He is an international expert on the life history (age, growth, and reproduction) of fishes, with over 25 peer-reviewed publications on the subject. He worked for 10 years with the Florida Marine Research Institute and 2 years with its successor, the Florida Fish & Wildlife Research Institute. He is now employed with NOAA Fisheries, Northeast Fishery Science Center, in Woods Hole, MA.

Student Section

Student Research Highlight

Artificial reef effect of World War II era shipwrecks in the Northern Gulf of Mexico

Nicole M. B. Morris, MS candidate
Department of Biology
University of West Florida

Deepsea fishes and their associated habitats have not been well studied in the northern Gulf of Mexico (Gulf). The effect of artificial reefs in shallow (<100 m) continental shelf ecosystems has been the focus of much research during the past two decades due to widespread reef construction and the fact many populations of reef fishes targeted over artificial reefs remain in poor condition (Patterson et al. 2001). Much of this research has focused on the "attraction versus production debate" (i.e., whether reefs enhance production or simply aggregate fishes). In the northern Gulf, artificial reef studies generally have focused on commercially exploited species and their associated natural and artificial hardbottom habitats on the shelf (Bohnsack 1989; Patterson et al. 2001). Although studies of reef fish communities occupying outer shelf and upper slope environments (100–300 m) have been studied extensively worldwide, few studies have investigated deepsea (> 500 m) fishes associated with hardbottom habitats (Powell et al. 2003). Furthermore, little is know about whether fishes in the deep Gulf utilize shipwrecks as artificial reef habitat.

The objective of this study is to examine the utilization of shipwrecks as habitat by fishes across a depth gradient in the northern Gulf. We examined community structure, diet, stable isotope values ($\delta^{13}C$, $\delta^{15}N$, and $\delta^{34}S$), and age of fishes associated with six World War II era shipwrecks ranging in depth from 87 to 1,964 m. Analysis of fish community structure was accomplished mainly with video collected with a remotely operated vehicle (ROV) flown along transects over, immediately adjacent to, and 300 m away from wreck sites. Fishes also were collected with fish traps and a suction sampler attached to the ROV. Fishes were identified from video to lowest taxonomic level possible and enumerated; samples from traps and the suction sampler aided identification. Biological samples removed from fishes were analyzed to estimate age, diet, trophic position, and source of production. Otolith samples were used to estimate fish age. Analysis of stomach contents revealed fish diet, while trophic position and source of production was inferred from stable isotope (C, N, and S) analysis of fish muscle samples.

Statistical analysis of community structure estimates revealed significant differences existed among wreck sites (ANOSIM: $p < 0.001$) and among sample locations within sites (ANOSIM: $p < 0.001$). Two general trends emerged from the video data collected during this study. The first trend is the three shallowest shipwrecks on outer shelf and slope had rich reef associated fish communities present while the deep wreck sites did not. Second, fish communities over differed from those away from the three shallowest sites while communities did not differ among transect locations at the three deep wreck sites. Fish communities over the three shallowest shipwrecks were different from those away from the shipwrecks. Reef associated fish taxa, such as Lutjanids, Serranids, Carangids, Scorpaenids, and Trachichthyids, were present at shallower shipwreck sites while benthic and demersal fishes were present away. At the three deep wreck sites, fish communities over were similar to those away from wrecks and consisted mostly of Halosaurid, Ophidiiformes, Macrourid, and Anguilliformes species.

Analysis of stable isotope values (n=107) and gut contents (n=56) revealed a range of trophic levels and sources of production as benthic, pelagic, or chemosynthetic. At the two shallowest sites, $\delta^{13}C$ and $\delta^{15}N$ values among fishes indicated a range in feeding across trophic levels, and $\delta^{34}S$ values indicated a range in benthic versus pelagic prey. Stable isotope values among fishes at the Gulfpenn indicated feeding at similar trophic levels and a pelagic source of production. At the three deepest sites, $\delta^{13}C$ and $\delta^{15}N$ values indicated feeding at middle trophic levels. For most fishes captured at deep wreck sites, $\delta^{34}S$ values indicated a pelagic source of production. However, a single cutthroat eel captured at a cold seep site near the Robert E. Lee had stable isotope values indicating some component of its biomass was derived from chemosynthetic production. Stable isotope values for two other cutthroat eels captured at the Robert E. Lee also may indicate some chemosynthetic production. Diet of fishes was determined by analysis of gut contents and corroborate stable isotope results. A total of 97 otolith sections (84 adults and 13 juveniles) was examined for age analysis. Two general trends also emerged from the age data. On the two shallowest wreck sites, fish tended to be larger at age than fishes on deeper wreck sites. At the deeper sites, fishes tended to be older than fishes collected at shallower sites.

RAFFLE UPDATE

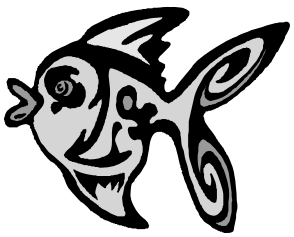
Believe it or not, the 2007 meeting is just around the corner and as always I am looking forward to this year's student raffle. We had a great cache of raffle items last year and this year I am hoping it will be even better. Our success last year was due to the large number of members contributing one or more items. On that note, I am asking ALL members to bring any item you may deem raffleable! Rods, reels, lures, hats, jackets, prints, books, gift certificates……You name it, we can raffle it! So please, do your best to bring an item. I look forward to seeing you all there. -Thanks, Bridget Tiffany

What is the largest bony fish?

If you are like me, you probably waited until the last minute to renew your AFS Membership for 2007. When you renew, please consider this invitation. The Education Section of the American Fisheries Society invites you to join our Section. Education Section activities, including preparation and revision of textbooks, support of student travel to meetings, and compilation of brochures on academic programs and fisheries career opportunities. One focus of the section is undergraduate and graduate education. However, the Education Section also supports lifelong learning of all fisheries professionals. We encourage all fisheries professionals to expand their minds through the pursuit of new knowledge. To that end, we are sponsoring a "Largest Fish" contest.

What is the largest bony fish known to science? If you think you know the answer, email your response to slochmann@uaex.edu. We will provide a small incentive to some lucky individual, randomly chosen from among the respondents with the correct answer. Take some time, explore the possibilities, and see what there is to learn about really big fish. You must be a member of the Education Section to be eligible for the "small incentive."

Steve Lochmann-Education Section, Committee Member



Student Announcements

-Applications for Student Travel Grants to the Annual Florida AFS meeting in February can be found on the website at http://www.sdafs.org/flafs/PDF/travelap.pdf.

-Instructions and applications for the Roger Rottmann Memorial Scholarship can be found at http://www.sdafs.org/flafs/doc/rottmann.html. This is a $500 scholarship available to PhD and Master's level students.

-We have come up with a design for Student Subunit t-shirts and would like to go ahead and place an order. Below is the website link to a rough design for your viewing pleasure. The colors are not finalized yet so please submit suggestions. We need to know how many people want a shirt (quantity and size). They will cost about $10-12/person. People who request a shirt will be expected to bring their payment to the FLAFS meeting in February, or mail the payment before the meeting. Please let Matt (catalm@ufl.edu) know if you are interested.

Here's a link to view the design:
http://customink.com/cink/r.jsp?E=nmbmorris%40yahoo.com&F=flafs

-Please bring at least one item to raffle off during the meeting. Remember proceeds are used to issue student travel grants to next years meeting!

-Congrats to Matt Catalano! Matt placed third for his oral presentation at the Sixth Annual AFS Student Colloquium at Auburn, Alabama.

Florida Chapter AFS
601 W. Woodward Ave.
Eustis, FL 32726

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