**GULF & SOUTH ATLANTIC REGIONAL PANEL**
**ON AQUATIC INVASIVE SPECIES**
**MINUTES**
**Wednesday and Thursday, April 1-2, 2009**
**Shreveport, Louisiana**

On Tuesday, March 31, 2009 Panel members participated in a field trip to Lake Caddo to observe invasive plant species as well as some eradication methods. Earl Chilton handled all logistic through the Texas Parks and Wildlife Department. Panel members thanked Chilton for providing this opportunity.

On Wednesday, April 1, 2009, Chairman Earl Chilton called the meeting to order at 8:30 am. The meeting began with introductions of the Panel members and guests. The following were in attendance:

**Members and Proxies**
Lad Akins, REEF, Key Largo, FL
Diane Altsman, EPA/GOM Program, Stennis Space Center, MS
James Ballard, GSMFC, Ocean Springs, MS
Paul Carangelo, Port of Corpus Christi Authority, Corpus Christi, TX
Earl Chilton, TPWD, Austin, TX
Lisa Gonzalez, HARC/Galveston Bay Foundation, The Woodlands, TX
Scott Hardin, FFWCC, Tallahassee, FL
Leslie Hartman, TPWD, Palacios, TX
Dewayne Hollin, Texas Sea Grant, College Station, TX
Chuck Jacoby, University of Florida/Florida Sea Grant, Gainesville, FL
Isis Longo, LDWF, Baton Rouge, LA
Susan McCarthy, FDA, Dauphin Island, AL
Marilyn Barrett O'Leary, At-Large Member, Pontchatoula, LA
Chris Page, SCDNR, West Columbia, SC
Bob Pitman, USFWS, Albuquerque, NM
Steve Rider, ADWFF, Montgomery, AL
Don Schmitz, FDEP, Tallahassee, FL
John Teem, FL Dept. of Agriculture and Consumer Services, Tallahassee, FL
Keith Weaver, GDNR, Social Circle, GA

**Staff**
Nancy K. Marcellus, GSMFC, Ocean Springs, MS

**Others**
Jacoby Carter, USGS, Lafayette, LA
Amy Richard, UF Center for Aquatic & Invasive Plants, Gainesville, FL
James Seales, LDWF

## Public Comment

Chairman Earl Chilton provided the opportunity for public comment. No public comments were received.

## Review and Adoption of Agenda

**Scott Hardin made a motion to adopt the agenda. Don Schmitz seconded the motion and the agenda was adopted.**

## Review and Approval of Minutes

**Marilyn O'Leary made a motion to approve the minutes from the December 9-12, 2008 meeting held in Savannah, Georgia. Leslie Hartman seconded the motion and the minutes were approved.**

## Northern Louisiana Aquatic Invasive Species Management Overview

James Seales gave a PowerPoint presentation entitled "Lake Bistineau Update on Giant Salvinia".

Giant Salvinia (*Salvinia molesta*) General Facts:

- Free-floating aquatic fern native to coastal region of southern Brazil
- Reproduces vegetatively by fragmentation
- Has the ability to double in biomass in 7 to 10 days
- First found in U.S. in South Carolina - 1995
- Found in Toledo Bend - 1998
- 11 states now have infestations
- Initially spread from the aquarium and water garden industry
- Documented in Lake Bistineau - March 13, 2006

Control efforts began shortly after discovery of giant salvinia on Lake Bistineau and included physical removal and herbicide applications. The plants were widely scattered on the lower one third of the lake and it soon became evident that the plants were too widespread for eradication to be a possibility. Giant salvinia covered approximately 500 acres on Lake Bistineau in April of 2007. By December of 2007 salvinia had expanded to cover approximately 4500 acres despite herbicide applications to 4156 acres of giant salvinia on Lake Bistineau. Subfreezing temperatures last winter damaged the salvinia in the open areas. High water during late winter and early spring of 2008 helped reduce the amount of giant salvinia in Lake Bistineau. Intensive large scale herbicide applications were conducted for 2 weeks in April of 2008. Seventeen spray crews from throughout the state treated over 4900 acres of giant salvinia and other aquatic vegetation. Gates were opened on July 15, 2008 to draw Bistineau down for control of giant salvinia. The Lake dewatered slowly at a rate of 2 to 3 inches per day to allow salvinia to strand in place. Giant salvinia will die if

allowed to thoroughly dry and desiccate. As of October 11, 2008, salvinia coverage following drawdown approximately 730-1,000 acres. Much of the remaining salvinia were found in shallow inaccessible areas where herbicide applications are very difficult. Fluctuating the water level by closing the gates and allowing the lake to partially refill should allow some of the remaining salvinia to drift onto areas that can be dewatered.

Seales also reported that salvinia weevils were initially stocked in two enclosures in August of 2007. The weevils survived through the winter and floating enclosures were constructed to sustain the weevils during a drawdown. It will take 3 to 5 years before any noticeable impact to salvinia on the lake occurs if the weevils adversely affect it at all.

**The Natural History of an Urban Nutria (*Myocastor coypus*) Population 2005-2008 and the Implications for Management and Control**

Jacoby Carter from the USGS National Wetlands Research Center in Lafayette, Louisiana presented to the Panel.

Nutria are an aquatic rodent from S.A. valued for it's fur. It can weigh up to 17 kg (37 lbs) and has a round tail, orange incisors, webbed feet, and nipples on back. It has a high reproductive rate with an average litter size of 7 to 8, a gestation period of 19 weeks and 3 months to sexual maturity. They are generalist feeders.

The Worldwide Status of Nutria:

- Over exploitation in their native range lead to efforts to raise nutria in captivity in France (1880's) and Argentina (1920's)
- Nutria were first introduced to North America in California (1899) with the first successful captive reproduction in N.A. in Quebec (1927)
- As of 2006 nutria were in 30 countries on 4 continents
- They have been eradicated twice (California, England) and established population had died out in the Scandinavian Countries. Introduced populations have died out on one part of the African Continent but survive in another
- In their native range the primary concern in over exploitation and sustainable harvest.

Nutria can damage the marsh and under some circumstances can cause marsh loss. These areas are often termed "eat outs". Muskrats have also historically caused "eat outs" and at one time nutria were promoted as a better alternative to muskrats. So to some extent, eat outs may be thought of as a natural process.

There are three different control strategies being used in the U.S. for nutria:

1. Use of state trapping regulations. No special incentives. Most states.

2. Federally funded state run program with incentives to trappers (pay per tail) in Louisiana (south of I-10/I-12 only).

3. Federal (USDA-WS) program to eradicate nutria on the DeMarVa Peninsula (and beyond?).

Carter indicated that observation at the Urban Site started in September 2005 and continues to the present. The primary focus of the study was to test nutria research technology. Population estimation was a secondary goal.

What was done at the Urban Site?
- Mark/Recapture using PIT tags, Hav-a-Heart traps, and a variety of bait.
- Tested two different telemetry systems, GPS and traditional system.
- Sign surveys including noting of scat, observation of feeding, recovery of dead animals.
- Camera trap monitoring.

Problems Encountered: low capture rates and small population size. They observed nutrias and nutria sign throughout the study period, even during times they were not able to capture nutria for mark-recapture.

Significant Observations:
- Nutria feeding on acorns.
- Grass a significant portion of diet (nothing else to eat).
- Population was reproducing at study site, not just transient.
- Average weight lower than at other sites studied.
- Evidence of depredation, most likely by dogs.
- Nutria not in all apparently suitable habitats. Barriers to movements or competitive exclusion?

What do nutria want? Not much - just a place to live with:

Water: A constant source of water (deep enough to swim)

Food: Seem to prefer at least some wetland/aquatic plants, but will even eat lawn grass.

Shelter: A place to dig a burrow.

How do they get there? They can use rivers, streams, coulees, canals, and drainage tunnels as corridors and have been documented reaching islands over 2 miles from shore in the Gulf of Mexico.

What limits their distribution? Unknown but we conjecture weather. Given time and a swimable or walkable water route, they seem to be able to get almost anywhere.

Summary: Nutria control may need to consider "non-traditional" non-marsh habitat, otherwise reinvasion is likely.

**Synopsis of the Rat Lung Worm Study**

John Teem presented a Final Report of a 2 year study "Human Health Risks Associated with Channeled Apple Snails in the GSARP Region" to discuss the parasite, *Angiostrongylus cantonesis*. The life cycle of *A. cantonesis* requires infection of a rat host in addition to a snail host. The predominant channeled apple snail in the GSARP region is *Pomacea insularum.*

Assessing the Heath Risks Associated with Channeled Apple Snails in the GSARP Region:

- Collect apple snails from New Orleans and Miami, send samples to the CDC in Atlanta to assay for the presence of the rat lung worm using DNA-based detection assays (PCR).
- Develop an in-house capacity to detect the rat lung worm using PCR. Test channeled apple snails from a third location (to be determined).
- Develop a mathematical model to predict the spread of channeled apple snails.

PCR Detection of Rat Lung Worm in Infected Snails:

- Miami: 60 analyzed, all negative
- New Orleans: 60 analyzed, 5 positives.

Mathematical Model Objectives:

- Create partial differential equations that model the diffusion of a species over time through a spatial domain.
- Create a grid of polygons representing the spatial domain, in which each polygon represents a geographic area with specific properties related to the diffusion of the species.
- Model the diffusion of the species through the grid, calibrating the diffusion rate with experimental data.
- Generate new grids using existing GIS data maps.
- Model the effects of biocontrol efforts on spread.

Conclusions:

- Five snails from New Orleans were found to be positive for rat lung worm.
- No samples were positive for the parasite in snails taken from Miami, Florida or Picayune, Mississippi. However, both sites had previously had cases of infected paratenic hosts (a gibbon and a horse, respectively).
- No samples were positive for the parasite in snails taken from Houston, Texas or Everglades National Park, Florida.
- Results suggest that rat lung worm infections of channeled apple snails are not widespread throughout the GSARP region.

- DNA-based detection assays for the rat lung worm were transferred from the CDC to the Florida Department of Agriculture and Consumer Services.

- Additional testing can be performed in the future to better define the geographic distribution of the parasite in the GSARP region.

- A mathematical model was devised for modeling the spread of an invasive species through a spatial domain.

- A software product was produced allowing a user to generate an invasive species diffusion model video for a geographic area.

- http://www.math.fsu.edu/~jgutierr/jbg_personal/scilab_en.html

Recently an outbreak of the rat lung worm occurred in Hawaii. Two people are in a coma since December of 2008. Infected people ingested raw produce from their gardens that may have had a small infected slug. *Parmarion martensi*, a non-native slug from Asia may be the cause of the recent outbreak. Slugs like *P. martensi* may pose a greater risk than apple snails for transmitting *A. cantonesis* to humans in the GSARP area.

Future Directions:

1. Continue testing samples in other GSARP areas to refine the map.

2. Identify other mollusk species that are infected in the GSARP region.

3. Survey plants imported from Asia or Hawaii for *P. martensi.*

**Preliminary Investigation of Island Applesnail (*Pomacea insularum*) Distribution and Control Methods Applicable for Natural Areas in Southern Louisiana**
Jacoby Carter - USGS National Wetlands Research Center, Lafayette, Louisiana

Conclusions of the preliminary investigation:

1. The apple snails could become extensively distributed without early intervention.

2. There ARE potential control options and an integrated pest management control approach may be successful. This would include:

    a. Mechanical and Chemical Control

    b. Biological Control

c. In areas where possible use of saltwater.

3. Two chemical control agents were tested - one approved and one not. Both have their respective advantages and disadvantages.

4. One mechanical and one biological control option were tested (biocontrol selected due to availability for commercial production but others should work).

5. Will test "spray on" molluscicide for egg mass control.

**Invasive Plant Education: A Recipe in the Making**
Amy Richard - UF/IFAS Center for Aquatic and Invasive Plants

The Center for Aquatic and Invasive Plants (CAIP) was established in 1978 by the Florida legislature. Their goal is to develop environmentally sound techniques for the management of aquatic and natural area weed species and to coordinate aquatic plant research activities within the State of Florida through research, teaching and extension (outreach).

The CAIP serves aquatic and invasive plant researchers (academic, industry, graduate students, and agency managers); natural resource/field personnel, county extension agents, park biologists, teachers, students of all ages, and the general public. Since 1980 they have maintained an Aquatic, Wetland and Invasive Plants Information Retrieval System (APIRS) with more than 71,000 annotated records of scientific literature (http://plants.ifas.ufl.edu/APIRS). Subjects include biological control (6,360), chemical control (8,782), mechanical control (2,418), government control (4,448), utilization, distribution, biology, ecology of aquatic plants, and more.

The primary CAIP website http://plants.ifas.ufl.edu (since 1995) contains the following:

- Over 600 pages completely revised and updated.
- New data-driven infrastructure.
- 102 plant ID videos online.
- Enhanced navigation, delivery and appearance.
- Invasive Species Management Plans for Florida - added to 42 plant information pages
- Educational products, photographs, and information on 500 plant species.

In 2005, they launched an education program about native, non-native and invasive plants for use by science teachers and other educators (language arts, social studies, park rangers, etc.). The goals are to capture the attention of educators, their students and eventually their parents; inform them of challenges and costs associated with invasive plants in Florida and around the world; and provide useful information on how they can help. (http://plants.ifas.ufl.edu/education)

Richard indicated that they would be conducting a Plant Camp on June 13, 2009 and invited all Panel members to attend. The goals of the Plant Camp are to create excitement and interest among teachers who will pass it along to students and also assist with curriculum development.

Pitman suggested linking this website to the GSARP website. Schmitz also mentioned the possibility of adding the Center for Aquatic and Invasive Plants as a member of the Panel. Since there were no available vacancies to the Panel membership or additional funding to support it, the Panel did not consider membership.

**Update on Invasive Lionfish**

Lad Akins gave a PowerPoint presentation entitled "Born in the Wrong Sea... Lionfish in the (tropical) Western Atlantic" and discussed the range of lionfish over the years.

REEF Lionfish Field Operations:

- 18 week-long projects throughout the Bahamas, Turks and Caicos, and Cayman Islands
- 220+ volunteers
- Collection/documentation - 3000+ specimens to date
- Education/Outreach via talks and media.

Western Atlantic Sizes:

- Smallest collected = 28mm
- Largest collected = 474mm
- Max size in native range ~320-350mm

Early tagging data:

- 86 fish tagged

- 14 recovered, 16 sighted
- 30 days - 7 months after tagging
- All at same dive sites
- Growth rates up to ~20cm/yr.

Lev Fishelson, Tel Aviv University was quoted, *"...the majority of the prey [of lionfish] are small-bodied fish (3-5 g body weight), like damselfish, cardinal fish, and anthiases, it is estimated that... [80 lionfish in 1km of reef] will consume over 50,000 fish yr-1."* (625 fish per year or 2.8 kg per year)

Lionfish reproduction:

- Spawn in pairs
- Lionfish release two buoyant egg balls
- Fecundity is ~30,000 eggs per spawn.

Early Detection, Rapid Response, and Removal Workshops in the Caribbean:

- Bahamas - November 2008
- Turks and Caicos - February 2009
- Cayman Islands - March 2009
- Bonaire - April 2009
- Belize - June 2009

Future Efforts:

- Distribute field guide
- Conduct Florida Keys ED/RR workshops
- Removal effort research and awareness in PR/USVI
- Tagging studies (acoustic and visual)

- Trapping studies.

For more information: James Morris - NOAA; Lad Akins - REEF; Pam Schofield - USGS; or Stephanie Green - Simon Fraser University.

## USFWS Triploid Grass Carp Program Review

Doug Keller, Chairman of the Mississippi River Basin Panel on Aquatic Nuisance Species sent a letter to the Regional Panel Chairs, ANSTF, and the AFWA-Fisheries and Water Resources Policy Committee regarding an external review of the National Triploid Grass Carp Ploidy Inspection and Certification Program.

In 1985 the USFWS established a Triploid Grass Carp Ploidy Inspection and Certification Program (Triploid Program) to provide assurances to state natural resource management agencies that shipments of grass carp alleged to be all triploid do not, within the confidence limits of the Triploid Program, contain diploids. The Triploid Program has evolved from years of cooperation with private grass carp producers, resulting in a set of standards which the FWS uses to implement the Triploid Program.

In August 2008, the USFWS hosted a workshop with the purpose of initiating dialogue among the USFWS, state agencies, and private fish farmers to discuss the Triploid Program and to improve its effectiveness. The discussions and recommendations from the workshop support many of the recommendations in the Plan addressing grass carp and confirm that a review of the Triploid Program is warranted.

The Mississippi River Basin Panel (MRBP) is interested in implementing recommendation in the Plan and has identified the independent scientific review of the Triploid Program as a high priority. The MRBP proposes to work with the other Regional Panels, natural resource managers, grass carp stakeholders and professional societies (e.g. World Aquaculture Society, American Fisheries Society) to develop an evaluation of the production, certification, and shipment of triploid grass carp. The purpose of the review is to provide recommendations, where necessary, to increase effectiveness of each stage in the process of using triploid grass carp as a management tool.

As Chairman of the GSARP, Earl Chilton advised that he will be working on this review with the MRBP and will keep the Panel updated on the progress.

## Members Forum

Florida - Scott Hardin reported on the 5th Nonnative Pet Amnesty Day held March 21, 2009 at the Miami MetroZoo. Approximately 500 people attended the event, and 100 animals were surrendered, including 21 snakes, 22 lizards, 40 turtles and tortoises, 7 birds, 8 mammals and 2 fish. Media

coverage at the Amnesty Day event included local and national news stations, international tv, newspapers and commercial television shows.

Don Schmitz provided the following update on Florida Invasive Plants:

- State budget cuts will likely impact the amount of invasive aquatic plants controlled in Florida during the next few years.

- Isolated (3) *Salvinia molesta* populations have been found and are under treatment in the Panhandle.

- Topramezone, a bleaching herbicide similar to fluridone, is effective on fluridone tolerant hydrilla and is being tested in Florida under an EUP.

- Biological control efforts have failed to find insects/pathogens for hydrilla in Southeast Asia and Africa after several years of searching for biological control agents. These research projects will likely be terminated by July 1, 2009.

- A planthopper insect, *Megamelus scutellaris*, a biological control agent for water hyacinth has been recommended by the USDA Technical Advisory Group (TAG) for field release and likely will be released within the next year or two in Florida.

- Two new plant species have been found in Florida and have become established: *Luziola subintegra* (water grass), a native of South America, rooted in water bodies and creates dense mats, and *Azolla pinnata* (feathered mosquito fern), a native of Southeast Asia and Africa, a floating plant that creates a dense canopy.

Alabama - Steve Rider provided the following update:

Alabama ANS Management Plan
- Submitted to National ANS Task Force for preliminary review in December 2008. Have not received any comments from the Task Force.
- Public comment period ended January 28, 2009.
- Most comments/concerns should be easily addressed.
- A few groups/organizations are concerned with one species in the Plan and submitted several recommendations.

Island Apple Snails
- Island apple snails were collected and verified from Langan Park, Mobile County, in June 2008.
- Other invasive species collected included: Tilapia spp., red swamp crayfish, Asiatic clam, coontail, and parrotfeather.

- A plan of attack to control the apple snails was developed.

Invasive Species Collection
- Two black tiger prawns were collected in Mobile Bay in September and October, 2008.
- An 8 pound red tilapia phenotype was caught from a pond in Houston County.

South Carolina - Chris Page reported that they are dealing with 28% budget cuts at this time. They have cooperated with North Carolina on the Lake Walley project. They have reported one new infestation of hydrilla and continue to provide samples from areas with hydrilla.

North Carolina - Although North Carolina was not represented, Trish Murphey provided the following. The brochures are being well received. Several boxes have been distributed to different DENR offices and also to the private sector. Murphey is also making contacts with Rob Emens from Water Resources about the possibility of developing a plan.

Texas - Earl Chilton reported that they are being directed by the Sunset Commission to develop a white list for invasive species. There will be a separate list for aquatic/exotic plants. It will take approximately 1-2 years to develop this list. Procedures and risk analysis will be developed for each species on the list. They are currently working on a risk analysis for water spinach and will use it as a model for other species.

Leslie Hartman mentioned a case in Dallas with a specific oyster introduction from Thailand. She also reported that they continue to fight biofuel battles.

Lisa Gonzalez reported on the pocket field guide for the Galveston Bay estuary. They are working on a companion guide for invasive species. The Master Naturalist program is working well as a distribution point. The guide should be complete by the fall meeting and she will bring copies for the Panel.

Louisiana - Isis Longo provided the following update:

Work in progress:
- Louisiana Aquatic Nuisance Species Pathway Protocol being developed under contract with USGS.
- Creation of state priority list of water bodies in need of treatment and state aquatic vegetation control plan.
- New mechanical removal shows promise for salvinia.

Updates:
- Salvinia weevils overwinter successfully
- Apple snails thriving in southern Louisiana.
- Recent MARAD developments.

- Shrimp virus/VHS info.
- Louisiana Aquatic Invasive Species Council.

Georgia - Keith Weaver reported that they have received informal comments back from the Task Force for the Georgia Plan. These comments are consuming 90% of his time. Weave also mentioned that a conservation officer found hundreds of pounds of corbicula passing through Georgia to New York.

Mississippi - Dennis Riecke provided the following report for Mississippi.

- Last meeting of the State AIS Task Force was November 2007.
- State Management Plan for AIS was last revised in June 2008.
- Mississippi Department of Environmental Quality employees are trying to complete inclusion of revisions to the State Management Plan for final review and submission to Governor Barbour.
- March 2009 - I proposed lists of species for the approved, restricted and prohibited species list for inclusion in the State Management Plan document:

Approved Species List - **no restrictions or permits** required for the possession, use, culture, sale, import, export or transport within the State of Mississippi, unless otherwise required by State or Federal laws or regulations.

1. All Native Species
2. The following Non-native Species:
   Common Carp - *Cyprinus carpio*
   Gold Fish - *Carassius auratus*
   Triploid Grass Carp - *Ctenopharyngodon idella*

Restricted Species List - **permits are required** for the possession, use, culture, sale, import, export, or transport within the State of Mississippi (those currently being cultured within the state):

1. The following Non-native Aquatic Species:
   Diploid Grass Carp - *Ctenopharyngodon idella*
   Bighead Carp - *Hypophthalmichtys nobilis*
   Silver Carp - *Hypophthalmichtys molitirx*
   Black Carp - *Mylopharyngodon piceus*
   Tilapia Species - all species of tilapia in the Genera - *Tilapia, Oreochromis, and Sarotherodon*
   Australian Red Claw Crawfish - *Cherax quadricarinatus*

Malaysian Prawn - *Macrobranchium rosenbergii*

2. Other Non-native Aquatic Species which meet all the following criteria:
   a. A scientific risk assessment has been conducted for the species using an approved methodology;
   b. The results of the approved scientific risk assessment have been submitted to the Mississippi Aquatic Invasive Species Task Force for evaluation;
   c. The Mississippi Aquatic Invasive Species Task Force has determined that the non-native species is unlikely to be an invasive species (i.e. a species whose introduction does not cause or is unlikely to cause economic or environmental harm or harm to human health).
   d. The Mississippi Aquatic Invasive Species Task Force recommends that the non-native species be added by the MDWFP to the Restricted Species List.

Prohibited Species List - **It is illegal to** possess, use, culture, sell, offer for sale, import, export, or transport within the State of Mississippi live individuals or specimens of the following species (except as otherwise allowed by Federal and State laws and regulations):

1. All Non-native Aquatic Species **not listed** on the Approved Species List or the Restricted Species List.
2. All Non-native Aquatic Species **listed as Injurious Wildlife Species in the Federal Lacey Act** - U.S.C. § 42(a)(1).
3. All Non-native Aquatic Species **listed on the Federal Noxious Weed List** at 7 C.F.R. § 360.200.
4. All Non-native Aquatic Species **listed on the Mississippi Noxious Weed List** - Rule 41: Regulation of Noxious Weed Under Sections 69-25-1 through 69-25-47, Chapter 380, Laws of Mississippi 1974.

## Discussion on Alternative Funding Sources for AIS Demonstration Projects

Chilton identified several funding sources for ANS projects through www.grants.gov. Many were available from the National Science Foundation. Ballard also indicated that USDA may be able to supply funds for ANS projects on private lands. He included a copy of the grant outline in the Panel meeting folder. Panel members agreed that this was a good idea to pursue these funding sources. Panel members also agreed to search for sources for ANS control and/or outreach projects and forward that information to Chilton. Progress will be reported on at the next meeting.

## Aquatic Nuisance Species Task Force Update

Ballard reported that all Panels had written letters to the ANS Task Force requesting them to fully fund state plans and to increase funding for all of the Panels. In response to these letters, the ANSTF

announced that there will be a special session to discuss this issue at the next meeting to be held in May 2009. Pitman added that states can also lobby to ask FWS to increase funding to the Panels.

**Vote to Move Chuck Jacoby to an At-Large Member**

**Paul Carangelo made a motion to approve Chuck Jacoby as an At-Large member of the GSARP. Marilyn O'Leary seconded the motion. The motion was unanimously approved.**

**Work Group Updates to the Panel and Future Directions for All Work Groups**

**Early Detection/Rapid Response**
- Discussion to restructure rapid response plan
- Leslie to work with this group
- Update taxonomic experts with current information
- Cooperation between states as an appendix to rapid response plan

**Research and Development**
- Discussion to identify funding sources and projects
- Guidelines for rapid assessments
- Initial survey document listing species of concern - plans were to update it - not clear what that information would be used for - take off list.

**Education and Outreach**
- Multi-agency funding
- Consistency with national plan - James to send copy to Chuck
- Rat lung worm - discussion to inform persons of risk

**Pathways and Prevention**
- Inventory of Species Prevention Plans - check with Pam
- Prohibited species list linked - Tom Jackson working on
- Shrimp virus issue/VHS issue
- Review pathways document
- HAACP process could be of use for pathways - link to website.

**Information/Management**
- Prohibited Species lists linked to website
- Database of researchers working on invasive species.

**Eradication/Control/Restoration**
- Group has never met.
- Management techniques document could be developed.
- Group could maintain a list of links to get information rather than developing a document.

Schmitz reported that he, Perry, Riecke, O'Leary and Hartman have developed a draft safety and emergency protocols document. Plans are to have the document available for review by the full Panel at the next meeting. At that meeting they will also discuss distribution of the document.

## Other Business

Bob Pitman alerted the Panel that the Brown Tree Snake Control Team will be expanding its partnership to include some funding with DOD due to the increase risks from Guam from military movements. He will send the draft cooperative agreement to Ballard for distribution to the full Panel.

Diane Altsman announced that the U.S. EPA's Gulf of Mexico Program is now accepting nominations for 2009 Gulf Guardian Awards. First, second, and third place awards are given in seven categories: Business, Civic/Non-Profit Organization, Partnerships, Youth/Education, Individual, Government, and Bi-National. All 21 winners in seven different categories receive an impressive marble and glass memento, press coverage on their project, and recognition by their peers. All winners receive a professional video about their project and/or effort that is presented on the evening of the Gulf Guardian Awards ceremony. Altsman encouraged the Panel to make nominations for invasive species work being done in the states.

Dennis Riecke reported that he has fulfilled his contractual obligations on the invasive species brochures. Any further printing of the revised brochures would require permission from Ray Rendall, Exotic Species Project Coordinator, Division of Fish & Wildlife, Minnesota Department of Natural Resources (651) 259-5131 - jay.rendall@dnr.state.mn.us. Upon permission he would release the electronic copies. Riecke suggested that each state receiving the brochures report on their effectiveness at the next meeting.

## Next Meeting

North Carolina was selected as the next meeting location. The first week of November 2009 was selected as the time frame.

## Public Comment

Chilton provided the opportunity for public comment. No public comments were received.

***There being no further business the meeting adjourned at 11:25 am.***