

NATIONAL INVASIVE SPECIES COUNCIL

+++++

INVASIVE SPECIES ADVISORY COMMITTEE

+++++

MEETING

+++++

TUESDAY,
SEPTEMBER 12, 2006

+++++

SUMMARY

+++++

The Committee met in the Washington Room of the Hotel Washington, 515 15th Street,
NW, Washington, D.C., Ron Lukens, Chair, presiding.

COMMITTEE MEMBERS PRESENT:

| | |
|---|---|
| K. GEORGE BECK (<i>ISAC Vice-Chair</i>) | Colorado State University |
| GARY M. BEIL | Minnesota Crop Improvement Association |
| ALLEGRA A CANGELOSI | Northeast Midwest Institute |
| TIMOTHY CARLSON | Tamarisk Coalition |
| DIANE COOPER | Taylor Shellfish Farms |
| JOSEPH CORN | University of Georgia |
| LUCIUS G. ELDREDGE | Bishop Museum |
| JEROME A. JACKSON | Florida Gulf Coast University |
| MARILYN B. LELAND | Prince William Sound Regional Citizens' Advisory Council |
| RONALD LUKENS (<i>ISAC Chair</i>) | Gulf States Marine Fisheries Commission |
| N. MARSHALL MEYERS | Pet Industry Joint Advisory Council |
| CHARLES R. O'NEILL | New York Sea Grant |
| CRAIG REGELBRUGGE | American Nursery and Landscape Association |
| SARAH REICHARD | University of Washington |
| JEFFREY D. SCHARDT | Florida Department of Environmental Protection |
| DUANE SHROUFE | Arizona Game and Fish Department |

JOHN PETER THOMPSON (*ISAC Secretary*)
KEN ZIMMERMAN

The Behnke Nurseries Company
Lone Tree Cattle Company

STAFF PRESENT:

PHIL ANDREOZZI
KELSEY BRANTLEY
GORDON BROWN
HILDA DIAZ-SOLTERO
CHRISTOPHER DIONIGI
RICHARD ORR
DEAN WILKINSON
LORI WILLIAMS

Program Assistant
Program Analyst
DOI Policy Liaison
USDA Policy Liaison
Assistant Director (Domestic)
Assistant Director (International)
DOC Policy Liaison
Executive Director

WELCOME, MEMBER INTRODUCTIONS, OVERVIEW OF MEETING AGENDA RON LUKENS, ISAC CHAIR

Chair Lukens opened the meeting at 8:05. The Committee members and staff introduced themselves. Chair Lukens then went over several changes to the agenda. There were no objections to going forward with the agenda as amended.

APPROVAL OF MINUTES FROM PREVIOUS MEETING

Chair Lukens called for a motion to approve the minutes from the previous meeting. The motion was made, seconded, and passed without objection.

INTRODUCTORY REMARKS: JIM TATE, DOI SCIENCE ADVISOR and PAUL HOFFMAN, DOI DEPUTY ASSISTANT SECRETARY FOR POLICY, ACCOUNTABILITY, AND HUMAN RESOURCES

Jim Tate introduced Paul Hoffman as the Deputy Secretary in Policy Management and Budget for Performance within the Office of policy, Management and Budget. Mr. Hoffman thanked Jim Tate for his services in helping Interior in its efforts towards eradicating invasive species. He also expressed his appreciation to Lori Williams and Gordon Brown.

Mr. Hoffman said that his home state, Wyoming, has seen its share of impacts from invasive species, particularly on federal lands. In response to these problems, the National Park Service and the Fish and Wildlife Service have developed regional invasive plant management teams that can quickly address new occurrences of invasive species before they reach a high level of infestation. Mr. Hoffman said that NISC, being a federal advisory committee, is a federal partner to the Fish and Wildlife Service and the National Park Service. Thus, they are looking to increase collaboration, and to reach out to ISAC across jurisdictional boundaries as they address the many challenges posed by invasive species.

When it comes to dealing with invasive species, there are several levels of success. Eradication is the highest level of success. However, containment of infestations is another level of success, and one which the ANSTF is attempting to achieve through the implementation of a national management plan for containing and preventing new outbreaks of killer algae. In dealing with invasive species, it is also important to set priorities, not only with regard to the species selected, but also with regard to the geographic areas chosen for control. For example, the Eastern Shore Fish and Wildlife Service has focused its nutria control efforts on 21,000 acres of critical wetland habitat in Maryland.

NISC and its partners should continue to focus on the success of the National Invasive Species Interagency Performance Crosscut Budget. They should also recognize successes in international efforts, such as the establishment of an invasive species panel under the North American Plant Protection Organization, as well as invasive species projects under NAFTA.

Mr. Hoffman concluded his remarks by emphasizing the need to set priorities, and to make intelligent use of limited resources. He also believes that his organization should collaborate with NISC and ISAC to a greater degree in the future.

NISC STAFF REPORT: LORI WILLIAMS

Ms. Williams reported that Secretary Kempthorne has been confirmed as the new Secretary of the Interior. Ambassador Susan C. Schwab is the new U.S. Trade Representative.

NISC staff has been busy working on the plan revision. The steering committee reviewed and used input from all the ISAC/NISC subcommittees in creating a draft outline of the plan revision. They are now receiving detailed comments on this draft from key agencies within the NISC Department. Their goal is to get a draft out for public comment in the first quarter of 2007. NISC staff has continued to work with individual states that are very active on this issue, including Hawaii and Texas. NISC staff has also worked with several departments within USDA and other agencies to set up meetings on the problem of forest pest invasive species. They have also worked with DOD, USGS and FICMNEW on moving forward in the areas of early detection and rapid response.

NISC staff has revised, streamlined, and filed a renewal of the ISAC charter. The new charter has been simplified, and now includes only those elements that FACA specifically requires to be included. What is removed from the charter can be retained, if necessary, in the ISAC operating guidelines. However, all of the key provisions remain unaltered in the charter. The most significant change made to the charter is the removal of the provision on amending and renewing the charter. The section on ISAC officers and duties has also been deleted. The committee membership section was edited to consolidate the representative groups. The section on subcommittees and operation was deleted and consolidated. The section on reports and support for ISAC was deleted, and other sections were shortened. The streamlining of the charter gives the Committee, in consultation with NISC, more flexibility in how they operate. No provisions regarding membership, length of terms, or revisions made in 2005 have changed. ISAC operating guidelines must now be revised to reflect the new charter. To this end, NISC staff proposes to prepare an outline of the operating guidelines to be placed before the leadership and coordination subcommittee for recommendations. Then, at the next meeting, the subcommittee will present a draft to ISAC for adoption. In May, significant progress was made on the website, which should be launched by late October.

Phil Andreozi updated ISAC on two NISC activities. First, they are working with the South Florida Everglades Restoration Task Force, as well as other state and local water management partners to help coordinate their activities on invasive species. Hopefully, *Melaleuca* will be eradicated off of all publicly owned lands in South Florida within the next several years. South Florida is having some new problems with vertebrates, most well-known of which is the Burmese python. After learning about ISAC, the governor of Guam has issued an executive order to create a Guam Invasive Species Council. Guam, the Northern Marianas Islands, Palau and Micronesia have also collaborated to form the Western Pacific Regional Invasive Species

Council, and have requested guidance from NISC in developing management plans. NISC is now working with its federal partners to determine the best response to the Western Pacific Council.

Chris Dionigi reported on the “Threats to Nebraska’s Rivers” conference that he attended in August in Kearney, Nebraska. The meeting was organized by Barbara Cooksley, who now works for Congressman Osborne. Congressman Osborne gave the keynote address, in which he talked about the impacts of invasive species on riparian corridor health, water delivery, and other issues affected by invasives. Agricultural interests were strongly represented at the meeting. On October 16th, there will be a joint scientific session of the U.S. Animal Health Association and the American Association of Veterinarian Laboratory Diagnosticians in Minneapolis, Minnesota, the title of which is “Animal Disease Surveillance in the Next Twenty Years.” In a press release, Bret Marsh, the president of the U.S. Animal Health Association, cited a number of diseases that have come up in previous ISAC meetings, and said that these situations highlight the necessity for robust surveillance systems to quickly detect introductions of animal diseases, as well as the need for multi-agency international cooperation and collaboration in dealing with them. A number of NISC member agencies and bureaus will be represented at the symposium, and Mr. Dionigi would like someone from NISC staff to attend, as well.

Mr. Dionigi then highlighted reserveusa.com, a website run by the National Recreation Reservation Service, as an example of how a number of NISC agencies can work together to do something direct and effective. Project Learning Tree claims to have a great deal of information relative to invasive species. However, it has never been put into a single package, and does not have crosswalks to the national science education standards. However, the Natural Enquirer, a publication targeted at fourth to ninth graders, does have these crosswalks.

NISC MEMBER DEPARTMENT REPORTS: NISC MEMBER AGENCY REPS

USDA: HILDA DIAZ-SOLTERO

Ms. Diaz-Soltero reported that the Economic Research Service allocated \$3.8 million for external competitive research. ARS and NRCS continue to develop their invasive species strategic plan, which will be presented to ISAC upon completion. USDA would like ISAC’s support in strengthening federal systematics capability, and in increasing support for research in both agricultural and nonagricultural systems. The CSREES-NRI program that was previously called “Biology of Weedy and Invasive Plants,” is now called “Biology of Weedy and Invasive Species in Agrosystems.” This program has a 10-year goal of supporting interdisciplinary, experimental, observational, theoretical and modeling studies on invasive species that lead to ecological and economic models. This program is in the President’s proposed budget for 2007, with a proposed increase of \$3 million to support new projects. Congress has not yet approved the FY ‘07 budget for USDA, and will not approve it until after the midterm elections. However, if these funds become available to CSREES, Ms. Diaz-Soltero will report back to ISAC. The USDA APHIS website includes a continually updated report on the implementation of the safeguarding report. The USDA NISC meeting will be held in November.

Ms. Reichard asked Ms. Diaz-Soltero if she would wait to take action on the request for support for systematics work until after the following day's presentation. Ms. Diaz-Soltero said that she would. With regard to the "Biology of Weedy and Invasive Species in Agrosystems" panel, Ms. Reichard asked if there would be another panel focused on nonagricultural ecosystems. Bob Nowierski replied that natural systems are not being covered by any panel. Ms. Reichard said that this is unfortunate. Mr. Beck said that he thought the original request for a budget increase from CSREES had been for \$130 million, rather than for \$3 million. Ms. Diaz-Soltero attributed this discrepancy to the fiscal reality of the country.

DEPARTMENT OF DEFENSE: PETE EGAN

Mr. Egan reported that Al Cofrancesco is finishing a Legacy report on the washing of vehicles coming out of Iraq. At the lab in Vicksburg, Mississippi, an analysis is being conducted on the cleaning of vehicles coming out of BOR sites. This is a continuing project. The Forest Service, in collaboration with the Corps of Engineers, is also working on some studies to find the most appropriate, efficient and effective way to clean vehicles. Legacy now has a report on the website entitled "Invasive Species: Data Management Support Tools for Cooperative Weed Management Areas," which can be accessed by anyone. On August 30th, the FICMNEW Committee had an early detection/rapid response workshop, in which they tried to pull together what all of the different federal agencies are doing. The APHIS emergency response system is quite similar to the military's response system, as well as the Department of Homeland Security's response system. EPA's early detection/rapid response efforts focus mainly on hazardous materials spills. CSREES gave a report on the diagnostic lab system, and USGS gave a report on the system they are working on. They will probably have another meeting in the future to see how they can pull together all of these resources within the federal system. Finally, Mr. Egan offered everyone a copy of the NEPA Desktop Reference System, put together by the Army Environmental Center.

With regard to the collaboration between the Corps and the Bureau of Reclamation on the cleaning of equipment, Mr. Carlson asked if the same technology could be transferred to BLM for use within their jurisdiction, as well. Mr. Barrett replied that the Bureau of Land Management is very interested in this sort of thing, and that, as soon as they come up with anything worthwhile, he is sure they will share this information with ISAC. Mr. Lukens asked if any elements from the early detection/rapid response workshop could be integrated into the upcoming Aquatic Invasive Species Task Force meeting. Mr. Dionigi replied that 25 potential gaps in the EDRR system were identified at the workshop, and that, as soon as the notes from this workshop had been completed and circulated back through the Committee, they would be ready for inclusion in a meeting like the Aquatic Invasive Species Task Force meeting. The global view of EDRR developed at the workshop would also be appropriate for integration in the meeting, as well as the next steps for EDRR identified at the workshop.

NASA: ED SHEFFNER

Mr. Sheffner said that there have been some changes both in the organization of NASA, as well as in the way the applied sciences program is approaching the work that it's doing, and that both of these changes are relevant to invasive species. NASA is more research-focused than the other agencies. Within the applied sciences program at NASA, the invasive species program is a \$1.5 to \$2 million effort per year. Although the overall direction of the agency has remained fairly constant, a new version of NASA's strategic plan is written every two to three years. The most recent version of the strategic plan dates back to 2006, and includes the goal of developing a balance between programs in science, exploration and aeronautics consistent with the redirection of the human space flight program to focus on exploration. The invasive species program element is derived from this goal. In addressing invasive species issues, NASA would partner with government and non-government organizations that have a responsibility to control invasive species. Until recently, the invasive species program was focused primarily on implementation. However, they have realized in the last few years that they need to focus more on the preliminary steps of identification and evaluation. Mr. Sheffner then gave an example of how NASA technology can be used to track a specific species, or to identify particular environments associated with a particular species. He also gave an example of how NASA can work with a partner to address issues identified in the applied sciences program.

The applied sciences program does not want to create new decision support tools, but rather to enhance existing tools. It does not provide long term support for infrastructure or for operational activities. NASA leaves these tasks to its partners. Mr. Sheffner then listed the platforms operated by NASA, as well as the instruments used for data acquisition within the applied sciences program. One of the primary achievements of the applied sciences program in the last three years has been its work on the Invasive Species Forecasting System, one of the outputs of which was the first national habitat suitability map for tamarisk. NASA is now working with USGS to determine how the Forecasting System will be perpetuated, and how this technology will be made available to other organizations for use in making predictive maps for invasive species. Besides the predictive map, a report has been generated on the operation of the ISFS in Grand Staircase Escalante National Park. This report documented the impact of the ISFS on the prediction of invasive species habitat in the Grand Staircase Escalante area, and indicated a significant enhancement in the capability of the National Park Service to direct its invasive species response program in this area. In Yellowstone National Park, a four-year program is underway to develop models for the migration of bison through the park during the course of the year. Another project looks at the effects of fires on the National Park Service area. They are also working with the Department of Agriculture on a project with Mark Kramer at the Ames Research Center on biological control agent modeling of invasive species.

There is a great deal of overlap between the invasive species program and other program elements within NASA. The NASA research program for earth sciences deals with biodiversity and hydrology, land cover, land use change, and climate variability. In applied sciences, 7 of the 12 national application elements overlap with invasive species work.

NASA draws on all of this output in creating projects on invasive species. NASA looks forward to collaborating with NISC in identifying and addressing invasive species issues.

EPA: MIKE SLIMAK

On February 1st, 2005, EPA issued a proposed rule and an interpretive statement regarding the use of aquatic pesticides. The substance of this statement is that the application of a pesticide to or over waters of the U.S. consistent with all the relevant requirements under FIFRA does not constitute the discharge of a pollutant requiring a national pollution discharge elimination system permit under the Clean Water Act. This has been proposed as a revision to 40 Code of Federal Regulation 122.3. The rule is currently being reviewed by the Office of Management and Budget, and is expected to be released in the near future. Several courts have addressed the question of whether or not permits are required for pesticide applications, and have reached different conclusions on the matter. EPA's opinion is that, if one follows the FIFRA label requirement when applying a pesticide, one does not need an NPDES permit. Once the rule becomes final, it will establish the executive branch's view on this issue, and will encourage the courts to follow EPA's reasoning.

Ms. Leland asked what decision had been reached on the ballast water case. Mr. Slimak replied that they are still waiting for a decision on this. Ms. Cooper asked what progress had been made towards reevaluating the use of non-native species in aquaculture relative to the aquaculture effluent rule. Mr. Slimak replied that the reevaluation had been made, and that the rule would not be altered.

DEPARTMENT OF THE INTERIOR: GORDON BROWN

A year and a half ago, the Park Service issued a DVD commemorating a training activity on the management of tamarisk. Copies of the DVD will be available for free.

DEPARTMENT OF COMMERCE: DEAN WILKINSON

Mr. Wilkinson urged everyone to read the Aquatic Nuisance Species Task Force Annual Report on their way home.

**PRESENTATION – AQUATIC WEED MANAGEMENT RESEARCH PROGRAM:
JEFF SCHARDT**

Mr. Schardt requested that his presentation be postponed until the next meeting, in part because priorities have not yet been established for the national research projects that have been identified for aquatic plant management. However, he has been working with several agencies on invasive aquatic plant management, including the Army Corps of Engineers, which has several stations set up throughout the country to handle federal research projects. However, their budget has been curtailed over the last ten years. More biocontrol efforts are required, particularly with regard to expanding problems with toxic and harmful algae and cyanobacteria. This topic could certainly benefit from a national research effort. The purpose of Mr. Schardt's presentation will

be to gain ISAC's support for a national funding effort for these kinds of projects. Mr. Wilkinson asked Mr. Schardt if he had considered giving this presentation to the Aquatic Invasive Species Task Force. Mr. Schardt said this sounds like something they ought to do.

INTERNATIONAL UPDATE: RICHARD ORR

NISC has identified two international issues, within which several gaps have been identified that must be addressed on a regional scale. First, within the Commission on Environmental Cooperation and the North American Plant Protection Organization, two panels are working together to identify the gaps that exist under the protection umbrella. These two organizations hope to develop standards that will help Mexico, Canada and the United States fill these gaps in protection.

The goal of the panel under the CEC is to assist in the development of the North American approach to preventing the introduction of selected invasive species that could harm North America's ecosystems, as well as to work with NAPPO to identify and assess existing gaps in invasive species coverage. So far, four workshops have taken place. Before moving forward under the CEC, a draft risk assessment process needed to be developed in line with international trade standards. This was necessary in order to prevent the three countries from taking three different approaches in addressing the problem. Before moving forward, it was also necessary to identify the CEC's focus. An agreement was made to complete assessments of the snakehead and the sucker-mouth catfish using the draft. This will lead to an additional pathway assessment for aquarium freshwater fish trade. Starting next year, they will be able to conduct other assessments addressing terrestrial animals and terrestrial animal diseases that are not covered under other international agreements. The snakehead assessment is nearly complete. Based on this assessment, it was determined that all three countries are at risk from various species of snakehead. Three separate populations of snakehead are established in the United States. They are no longer being imported into the United States, but are still being imported into Canada. The sucker-mouth catfish assessment is mainly taking place in Mexico, but also in the Southwestern portion of the United States. The sucker-mouth catfish is a common aquarium fish in all three countries. Most importations are from either Southeast Asia, or South America. These assessments have almost reached draft form, and so can be sent out for review. Within the next few years, Mr. Orr hopes that the CEC will move toward a screening process, and the creation of guidelines that can be used by all three countries prior to the importation of fish into North America.

The goal of the panel under NAPPO is to identify the gaps that are current under NAPPO and move forward in filling these gaps, as well as to assist in the development of a comprehensive North American approach to prevent the introduction of invasive species that could harm plant health, and to work with the CEC to identify and address existing gaps in invasive species coverage in North America. Three official meetings have been held so far, in addition to various other communications. Before work could begin under the NAPPO panel, the scope of taxonomic and habitat coverage included under plant health needed to be determined. A white paper was completed on this topic, and negotiations are taking place with the IPPC to determine

the scope of what NAPPO is willing to address. It was decided that NAPPO should provide a Canadian and Mexican representation to the NISC/ANSTF pathways working group. The NAPPO panel will work to develop a regional standard for screening plants for planting before they enter North America. They hope to achieve this goal within two years. Mr. Orr concluded by saying that, once they get some products that can be reviewed, he'll make sure that people have the opportunity to make comments to him that can be taken back to the various panels.

Mr. Beil asked if there is currently a Canadian organization equivalent to NISC. Mr. Orr replied that Canada does not have an organization at the level of NISC, but that they do have a management plan very much like that of NISC. For the past few years, he has been pushing for Mexico to create a management plan with similar goals, as well. Ms. Williams added that uncertainties in the government are slowing down work in Mexico.

With regard to the industry pathways study, Mr. Meyers asked if non-governmental representatives from the affected industries would be invited to participate. Mr. Orr replied that he is constrained by the output process under the CEC, but that he will strive to make such representation possible. Ms. Cooper echoed Mr. Marshall's concern. She also asked how they had chosen the snakehead and the catfish as the species to focus on, and Mr. Orr explained the reasoning behind these choices. Ms. Cooper asked if they have any intention of developing an umbrella plan for all three countries. Mr. Orr replied that, under NAPPO, they are aiming for a regional standard. Under the CEC, they are aiming for guidelines that will provide guidance to national entities in moving forward. Ms. Williams said that a provision in the International section of the management plan called for a North American strategy to deal with invasive species. In the past six years, they have made a great deal of progress in working through the existing North American structures. Some bilateral meetings have been held between Canada and the United States on invasive species.

NISC RESPONSE TO ISAC RECOMMENDATIONS: LORI WILLIAMS

In response to ISAC recommendation IV, ISAC Class II terms have been extended. NISC has met and determined its recommendations for appointment to ISAC Class IV, and will submit these for approval. Within the next two to three weeks, they hope to release the final slate. ISAC Class III members will be eligible for another term. In response to ISAC recommendation I, which was a request for more input on the revision of the management plan, Ms. Williams reported that the subcommittee submittals regarding the current draft were extremely influential. In the future, it may also be helpful to make a draft of the management plan available to the public prior to each ISAC meeting. The pathway ranking guide report is still in the assessment stage, but will be provided at the next meeting if it is ready.

Mr. Orr said that Penny's responsibility is to determine the best way of accomplishing the implementation plan. It will then be presented to the various agencies, either through ISAC or the Aquatic Nuisance Species Task Force. The agencies will determine the best strategy for implementation. Ms. Cooper said that the Task Force also has some guidelines that will be given to the federal agencies for implementation. Mr. Meyers asked if they would continue to work on

the assessment protocols outlined in the pathways report at future meetings. Mr. Lukens replied that some serious flaws had been found in this tool, and that some other approaches to looking at pathways would be explored at a working group meeting the following week in Gainesville. Ms. Williams asked if the results of this workshop would be reported at the ANSTF meeting, or at the next ISAC meeting. Mr. Lukens replied that they would be included in his panel report to the Task Force in November. Mr. MacLean commented that the plan is still very much in draft form, and has not yet been officially reviewed by any federal agency. When they feel that they have a decent product, it will be sent to NISC, the Task Force, and the agencies for review. This process will take a long time.

Ms. Diaz-Soltero addressed ISAC recommendation III by providing input on the NRI funding. Recommendation IV was the extensions. Recommendation V, to append the Definitions White Paper to the National Management Plan, has been communicated to NISC members and policy liaisons, and will be considered as they put together the revision of the plan. With regard to Recommendation VI, that DOD incorporate funding for Asian carp barriers and other such barriers into their regular operations and maintenance account, Ms. Williams said that NISC does not have a complete answer on this issue, but that they are beginning to discuss the matter with the Corps of Engineers. With regard to recommendation VII, that NISC provide ongoing guidance on NISC ISAC subcommittees, Ms. Williams said that they are just beginning to discuss this issue with the policy liaisons, and that they will need more input on this issue from both ISAC and NISC.

In terms of action items, ISAC has received updates on both the Talent decision and the safeguarding report. The PowerPoint that was requested on the pathways assessment tool should be delayed until the tool has been further tested. ISAC also discussed whether or not they should keep an historic record of action items. Ms. Cooper said that she has been keeping an historic record of action items, and that this record will be provided to the Committee members when it has been reformatted. Ms. Cangelosi expressed her disappointment that recommendation VI, which had been presented as an urgent action item, had not been addressed more aggressively.

MEMBERS FORUM: DAVID BRUNNER

ISAC Member David Brunner, National Fish and Wildlife Foundation, was unable to attend the meeting; but submitted an item to be brought forward during the Members Forum. Mr. Lukens read Mr. Brunner's comments into the record. In his statement, Mr. Brunner expressed his concern over the continued lack of funding for rapid response to incipient infestations of invasive species. Dr. Beck said that an educational outreach effort might help in solving this problem. Mr. Wilkinson added that, besides funding, making decisions on what problems to address is also an issue. Mr. O'Neill said that EDRR funding is also a concern at the state level, and the fact that so little has taken place on this issue at the federal level makes things more difficult for the states. Mr. Zimmerman stressed the importance of not putting money into an EDRR fund at the expense of other programs. Mr. Lukens said that the ANS Task Force will be holding a session on rapid response, and stressed the importance of showing some leadership with regard to rapid response at the federal level. Mr. Dionigi said that the EDRR guidelines adopted by NISC in 2003 could

be useful in addressing the EDRR problem, and suggested that they be reviewed and updated. Ms. Diaz-Soltero reported that, in October of last year, a specific recommendation and a letter from ISAC came out to the agencies regarding the establishment of a national EDRR fund. USDA's response was that they already have the capability to do EDRR, although other departments within NISC may need to look into creating their own EDRR funds. Mr. Lukens said that early detection and rapid response should be treated as separate issues. Mr. Schardt said that there needs to be a central clearinghouse for information on new species, since a great deal of research is involved before one can go into rapid response.

PRESENTATION - USE OF TRANSGENIC FISH FOR BIOLOGICAL CONTROL PURPOSES: TIM PATRONSKI

Mr. Patronski gave an overview of a feasibility study conducted by himself and Dr. Ann Kapuscinski on the use of genetic methods for biological control of non-native fish in the Gila River System of the U.S. desert southwest. The Gila River Basin is located in Arizona and New Mexico, and, because it is dry during certain parts of the year, presents severe habitat limitations for fish and other aquatic organisms. Of the 21 species of native fish that are known to be either currently present or to have historically existed in the basin, more than half are listed as threatened or endangered under the Endangered Species Act. In addition to habitat degradation, invasive species are also threatening the recovery of native fish. The primary goal of the study was to provide managers with information on the use of genetic methods for the potential biological control on non-native fish. Literature and ongoing research related to genetic methods was reviewed, genetic methods were compared in terms of their strengths and weaknesses, and ecological, social, and regulatory considerations were addressed.

Finally, a roadmap was developed for a biological control program including research, development and implementation for use of genetic methods for biological control of non-native fish in the Gila River Basin. In order to inform their work, they met with a group of scientists and program managers who are investigating the use of these technologies on common cod in Australia, as well as with scientists and resource managers in the Gila River Basin to identify challenges and potential opportunities that they will need to take into account in developing training materials and the recommended roadmap.

Mr. Patronski and Dr. Kapuscinski identified two key questions that any program investigating the use of genetic methods for biological control must answer: "Will the genetic method work?" and "What are the risks?" Mr. Patronski and Dr. Kapuscinski propose to answer these questions via a seven step approach.

The seven steps are development of genetic methods, efficacy testing, mathematical modeling, target species ecology, risk assessment involving both analysis and deliberation, multi-stakeholder deliberation, and seeking regulatory approval. There are two general approaches to developing genetic methods: sterile release approach, the aim of which is to prevent successful matings in the target population, and the deleterious gene spread approach, the aim of which is to drive a harmful gene throughout the target population. There are six strategies for implementing

the deleterious gene spread approach involving sex ratio distortion: engineered underdominance, conditional lethal, engineered female, specific lethal, engineered fitness disadvantage via selfish gene, and engineered fitness disadvantage via the intentional Trojan gene. The efficacy of these methods is poorly understood at present. For this reason, it is important to take a bet-hedging approach in pursuing these methods.

Efficacy testing must begin at a small scale in combined laboratory environments, and progressively move to more complex testing environments. It is important to begin with the end in mind, and to test for potential unintended changes in fish traits that could reduce efficacy. In terms of mathematical modeling, it is important to start early to uncover inconsistencies and major information gaps. Mathematical models should address population dynamics, including both spatial and temporal aspects, hydrology, variability, and uncertainty. For target species ecology, data must include population dynamics, genetic structure information, spatial distribution and variability, interspecies interactions, and environmental variability. If done right, risk analysis is a very complex process, and must include a certainty analysis.

Mr. Patronski next identified several hazards relevant to the release of transgenic fish, and their potential effects. First, density dependent compensation could have a negative impact on native fish before the biological control effect engages. Second, pest replacement could be an even bigger problem. The probability of transgene spread to the native range of a species is extremely low, but could have a negative impact on the native range of the species. They must also evaluate whether a transgenic fish, if caught, could present any harm to human health. With regard to multi-stakeholder deliberation, traditional approaches for communication in natural resources management applications are much less participatory than necessary. To make these approaches more participatory, they propose a method called the problem formulation and options assessment model. Finally, seeking regulatory approval is a very important component, since, currently within the United States, there are relatively few policies and regulations that apply directly to transgenic fish. They now have an important opportunity to engage in some interagency coordination on this issue, which will give them a framework for making decisions.

It is estimated that 20 years of further development and \$15-\$20 million in 2004 dollars will be required to release a transgenic fish into the natural environment. For ploidy manipulated or triploid sterilized fish, approximately five years of development and \$3-5 million in 2004 dollars will be required to release a fish into the environment. If a transgenic fish were to be released in the U.S. desert southwest or elsewhere, this would be the first intentional release of a transgenic animal in the U.S. This could raise some difficult social and ecological questions. Thus, if agencies and the public decide to pursue this approach, it must be pursued as part of a multi-component integrated pest management approach.

Ms. Cangelosi asked Mr. Patronski to outline some potential risks of using genetic methods, and to elaborate on the estimated time frame for developing a tool that eliminates these risks. Mr. Patronski replied that these are very complicated issues, and that multiple perspectives will be required to figure them out. There are no fail-safe non-transgenic approaches to introducing a sterilized fish. Dr. Nelroy Jackson encouraged Mr. Patronski to work with people who have had

plant management problems in the Gila Basin. Mr. Meyers asked if the transgenic methods are cost effective enough to be applicable in the real world, particularly if multiple invasive species are involved. Mr. Patronski replied that it is important to take as comprehensive an approach as possible, but that funding puts certain restrictions on what they are able to do. Mr. Brown asked if the Australians had actually committed to using a transgenic model in a specific area. Mr. Patronski replied that they have not committed to release to the environment, but that they have invested a good deal of money into the research and development of these methods.

Paul Barrett, with the U.S. Fish & Wildlife Service in Arizona, gave his perspective on the study. The study came about as a result of the Central Arizona Project in the Bureau of Reclamation, which as a result of a jeopardy opinion under the Endangered Species Act, was required to fund a program to disadvantage non-native species. Statewide, Arizona has 33 native fish, 18 of which are threatened, endangered, or extinct. Currently, they are fighting a losing battle with outdated technology. With regard to integrating new technologies, they are running into some regulatory and political roadblocks. However, a lot of money from different funding streams is going into innovative approaches to managing invasive species. Mr. Barrett said that they need to further explore transgenic methods, and suggested that an international symposium, focused on fish, be held to bring people together on this issue. The Central Arizona Project may have some money to help fund this symposium, and the Australians may be willing to help, as well. Mr. Barrett asked ISAC to consider showing some form of support for this symposium.

MEMBERS FORUM: ISAC MEMBERS

George Beck brought up a suggestion made by Ken Zimmerman that the subcommittee co-chairs begin providing agendas for their meetings. This would help the members decide which subcommittee meeting to attend. It might also be helpful to provide the proposed agendas for future subcommittee meetings in reports back to the full committee.

Marshall Meyers reported that the Pet Industry Joint Advisory Council continues to work on habitat expansion, and plans to expand into the terrestrials. They also continue to do newspaper inserts, and are working to get more involvement within the federal government at the grassroots level. They are putting together and circulating a new set of animal care guidelines for pet store personnel that includes the issue of releasing animals into the environment. They have also written a staff handbook which includes a chapter on *Habitattitude*TM.

Lu Eldredge reported that the Bishop Museum is responsible for a session on invasive species at the 21st Pacific Science Conference in Okinawa in June, 2007. They are looking for people to participate in this Conference by presenting papers, and for organizations who would like to help fund or support the Conference. A meeting called "Rats on Islands" will be held in Hawaii and sponsored partly by the University of Hawaii's geography department. The Hawaii Invasive Species Council reallocated its money this year so as to not be able to handle any research requests.

Marilyn Leland, representing the Prince William Sound Regional Citizens Advisory Council, reported that Alaska has begun the formation of its invasive species council. She also commented on the dangers of ballast water exchange, and said that the long term solution will be treatment, rather than exchange.

Ken Zimmerman reported that the Range Management Advisory Committee for the State Board of Forestry has been asked to further develop a paper on matching conservation investments with natural resource management dollars. Since 2001, over \$10 billion in bond measures have passed in California for conservation investments, out of which no money was made available for maintenance or management. Thus, the purpose of the paper will be to explore the economic and political opportunities that exist so that, when bond measures come up in front of the voters again, maintenance and management will be taken into consideration.

Joe Corn reported that he and Chris Dionigi had been discussing a potential agenda item for the next meeting involving diseases in wildlife, and said that, if anyone is interested in being involved in developing the proposal for this agenda item to the steering committee, they should get in touch with either him or Mr. Dionigi. Also, USC has asked the University of Georgia to develop a real time feral swine distribution map, which will help in deciding which domestic swine will need to be tested prior to interstate movement based on potential exposure to feral swine.

Gary Beil said that the Minnesota Invasive Species Council is quite active, and that they put together a calendar every year featuring pictures of invasive species in Minnesota.

Duane Shroufe said that the Association of Fish & Wildlife agencies has initiated an invasive species committee, and that they are hoping to use this committee to communicate issues between states, and to ensure that each state has an invasive species committee or council that's working at the state level. The Association also continues to be represented as an ex officio member of the Aquatic Nuisance Species Task Force, and to focus attention on outreach through its member organizations. Arizona Game & Fish and the Department of Agriculture co-chaired a committee that put together a report based on an executive order issued by the governor that made seven recommendations regarding the future of invasive species in Arizona, including finding funding and organizing a permanent council. The governor has read and accepted this report. Hopefully, Arizona will have a permanent invasive species council within a few months. Finally, Mr. Shroufe introduced John Kennedy, who has been nominated by the Association to replace Mr. Shroufe as the State Wildlife Agency's representative on ISAC.

Ron Lukens said that there needs to be better formal coordination between NISC, ISAC and the ANSTF, particularly since inter-governmental communication is the primary reason that NISC and ANSTF exist. He also encouraged the members to seek out the regional panels in their areas, make sure that their states are participating in these panels, and find opportunities to coordinate and interact with these panels as ISAC members. Finally, he pointed out some examples of invasive species issues related to catastrophic events, and said that ISAC should keep these issues in mind when developing plans.

George Beck asked Gordon Brown why the Vegetative EIS is being held up. Mr. Brown replied that he could not give any particulars as to why this process is moving so slowly, but that he would find out more information, and let the Committee know.

John Peter Thompson said that his county in Maryland is recommending the planting of invasives as landscape solutions. For this reason, he is collecting as many municipal and local manuals as he can to see what the local government is actually asking industry and the public to do, and will report back to ISAC on this issue next year.

Sarah Reichard reported that the Center for Urban Horticulture will have a conference the following week at the University of Washington Botanic Gardens in Seattle on invasive plants in the Pacific Northwest ecosystems. The theme of the conference will be developing partnerships, and creating a Pacific Northwest-wide invasive plant council that will be modeled after some of the EPPCs and IPPCs around the country. In the Pacific Northwest, they are also working with the Washington State Nursery and Landscape Association to implement the St. Louis Codes of Conduct throughout nurseries. In California, the Cal-HIP (Horticultural Invasion and Prevention) program has been successful in preventing the sale of some invasive species, and in implementing the codes of conduct. Ms. Reichard concluded by saying that the codes of conduct can be a good way of engaging industry in dialog and of producing some effective change.

Jerry Jackson said that the Florida Gulf Coast University is continuing its work with the black spiny tailed iguana on Gasparilla Island. This semester, he is teaching an invasive species course at the undergraduate level. At the end of the month, he will be giving a paper on the use of television and radio in environmental education at a symposium at the Wildlife Society meeting in Anchorage. He has also worked with the FLEPPC (Florida Exotic Pest Plant Council) grants committee, which usually gives grants to five or six individuals or groups around the state.

Tim Carlson reported that the Tamarisk Coalition will be co-sponsoring the Tamarisk Research Conference in Fort Collins the first week in October, which will focus on current research in all aspects of tamarisk and restoration activities. This is being sponsored by most of the federal agencies, as well as many of the non-profits around the table. They are also working with NISC and USDA on a revision in the Farm Bill that could provide funding for private landowners for woody invasives control under a riparian buffer.

Jeff Schardt reported that the Florida Department of Environmental Protection, along with the University of Florida, had kicked off a first annual event called "Training the Trainers." Schools were asked to nominate science teachers to come to the University for a two and a half to three day workshop on invasive aquatic plants. They are also training all of Florida's park rangers on invasive plant issues.

Charles O'Neill said that, last November, the New York Invasive Species Task Force had presented the New York Sea Grant Program's study and recommendations to the governor and the legislature, and that they were accepted enthusiastically by both. The legislature and the governor have allocated \$3.5 million to the state's environmental protection fund. The New York

Invasive Species Task Force is moving into implementation, and is considering the creation of an executive council at the commissioner level of the state departments, an advisory committee to advise that council, and a small staff to keep the two working together. They are also looking towards developing a state comprehensive invasive species management plan that will be in some ways patterned after the national plan. Around \$250,000 will be set aside to start up a statewide extension outreach program. There will also be money available to begin setting the groundwork for a New York and Northeast Center for Invasive Species Research, and to train people on how to build a state invasive species database. About a million dollars will be designated specifically to eradication programs. They will support the three existing weed management areas in the state, and expand them into regional invasive species partnerships. They will also support the establishment of another 3 or 4 RISPs, so as to cover the entire state with invasive species management areas. Even if the funding does not come through, Cornell Cooperative Extension has set up a program work team that will coordinate a statewide effort on cooperative extension, invasive species outreach, and faculty coordination.

REVIEW OF DAY 1 ACTION ITEMS: JOHN PETER THOMPSON

Mr. Thompson reported that there had been no recommendations or action items for that day.

PUBLIC COMMENT

Jamie Reaser brought to the Committee's attention the invasion of the Houston Port by a previously unknown species of Paratrechina ant. The ants seem to be attracted to electrical fields, and are having a negative impact on the electrical equipment at the Port. Samples of the ant were given to the USDA identifier, who indicated, based on current policies, that the genus Paratrechina is non-actionable, meaning that there is no authority to do anything about the invasion. Roger Gold, from Texas A&M University, has identified a wide variety of negative impacts that Paratrechina ants are having in the Pasadena/Houston area. There is also considerable concern that the ants could reach NASA. Ms. Reaser offered for the Committee's consideration a briefing paper listing the immediate and long term actions needed to address this issue, and expressed her hope that ISAC would make a recommendation to NISC to encourage the various member departments to take up this matter as an early detection/rapid response initiative.

Ms. Diaz-Soltero suggested that ISAC recommend that APHIS create a pest advisory group to review the Paratrechina genus. Then the advisory group can decide whether a federally funded EDRR effort should be made in this direction or not. If ISAC does not wish to make this recommendation, USDA will take it to APHIS on its own. **Mr. Meyers made a motion to urge the Secretary of Agriculture to initiate the formation of a new pest advisory group to look into the Paratrechina ant situation, to make recommendations as to the pest origin, pest potential, appropriate regulatory stance, and feasibility of eradication or containment. The motion was seconded, and passed.**

Mr. Meyers suggested that the Committee discuss what action they should take regarding Paul Barrett's request that ISAC make a recommendation of support for an international symposium to bring together experts who are working on transgenic issues. He also suggested that the symposium cover the following elements outlined in Mr. Patronski's and Mr. Barrett's presentations: the state of the art, sociopolitical issues, policy and regulatory considerations, economic implications, and ecological risks and benefits. **Mr. Meyers then said that, after some further discussion, he would make a motion to support a symposium that covered these topics.** Mr. Carlson added that they should also support NISC staff participation at this Conference, and have them report back to ISAC on the outcome of the Conference at a future meeting. Mr. Zimmerman said that, although he found the presentations interesting, he doesn't see how the work done by Tim Patronski and Ann Kapuscinski is different from what is being done by ARS in terms of biological control. Mr. Wilkinson said that the symposium should be limited to transgenic methods. Mr. Lukens said that the next step will be to determine how to craft the recommendation to NISC. Ms. Diaz-Soltero wondered why any agency would need ISAC's blessing to hold a meeting, and said that it does not seem fair that ISAC should be obligated to support such a meeting. Mr. Meyers said it is not unfair that ISAC is being asked to support the meeting, because they will not be providing any monetary support. Mr. Brown said that it is entirely appropriate for a group of stakeholders to make a recommendation to call attention to such potentially significant technology. Mr. Zimmerman said that he would feel more comfortable if he could see the motion in a written form before it is called to a vote. Jerry Jackson and Marshall Meyers were charged with drafting the recommendation and presenting it to the Committee the following morning.

Mr. Wilkinson encouraged the Committee members representing states to address the pet release pathways in their states through biological supply houses. Mr. Lukens said that pet amnesty days are also becoming popular. Mr. O'Neill said that 4H is another method of disposing of unwanted pets.

The meeting was recessed for the day at 5:00 pm.

NATIONAL INVASIVE SPECIES COUNCIL

+++++

INVASIVE SPECIES ADVISORY COMMITTEE

+++++

MEETING

+++++

WEDNESDAY,
SEPTEMBER 13, 2006

+++++

SUMMARY

+++++

The Committee met in the Washington Room of the Hotel Washington, 515 15th Street,
NW, Washington, D.C., Ron Lukens, Chair, presiding.

COMMITTEE MEMBERS PRESENT:

K. GEORGE BECK (*ISAC Vice-Chair*)
GARY M. BEIL
ALLEGRA A. CANGELOSI
TIMOTHY CARLSON
DIANE COOPER
JOSEPH CORN
LUCIUS G. ELDREDGE
JEROME A. JACKSON
NELROY E. JACKSON
MARILYN B. LELAND

RONALD LUKENS (*ISAC Chair*)
N. MARSHALL MEYERS
CHARLES R. O'NEILL
SARAH REICHARD
JEFFREY D. SCHARDT

DUANE SHROUFE

Colorado State University
Minnesota Crop Improvement Association
Northeast Midwest Institute
Tamarisk Coalition
Taylor Shellfish Farms
University of Georgia
Bishop Museum
Florida Gulf Coast University
Monsanto Company
Prince William Sound Regional Citizens'
Advisory Council
Gulf States Marine Fisheries Commission
Pet Industry Joint Advisory Council
New York Sea Grant
University of Washington
Florida Department of Environmental
Protection
Arizona Game and Fish Department

JOHN PETER THOMPSON (*ISAC Secretary*)
KEN ZIMMERMAN

The Behnke Nurseries Company
Lone Tree Cattle Company

STAFF PRESENT:

KELSEY BRANTLEY
GORDON BROWN
HILDA DIAZ-SOLTERO
CHRISTOPHER DIONIGI
RICHARD ORR
DEAN WILKINSON
LORI WILLIAMS

Program Analyst
DOI Policy Liaison
USDA Policy Liaison
Assistant Director (Domestic)
Assistant Director (International)
DOC Policy Liaison
Executive Director

REVIEW OF DAY 1

John Peter Thompson reported that, at the previous day's meeting, a recommendation had been made that ISAC urge the Secretary of Agriculture and the APHIS Administrator to initiate the formation of a new pest advisory group to investigate the genus *Paratrechina*, report on the origin of the pest, and make recommendations regarding the appropriate regulatory stance on eradication or containment. This recommendation was as a result of a public comment by Jamie Reaser.

A motion was also made regarding a symposium on transgenics. This motion was reworded by Jerry Jackson and Marshall Meyers to read as follows: "ISAC urges the National Invasive Species Council members to encourage the holding of and participation in an international symposium on transgenic methods for biological control of non-native fish. The symposium should include a broad interdisciplinary approach focusing on the state of the science, socio-political issues, policy and regulatory considerations, economic implications, and ecological risks and benefits."

Chair Lukens called for a new motion based on this wording. The motion was made and seconded. Dr. Beck suggested that the word "non-native" be replaced by "invasive" in the wording of the motion. Mr. Meyers and Dr. Jackson agreed to this amendment. The motion passed without objection.

REPORTS FROM ISAC SUBCOMMITTEES

CONTROL AND MANAGEMENT SUBCOMMITTEE: CHRIS DIONIGI

Dr. Dionigi reported that the majority of the Subcommittee's discussion had focused around early detection and rapid response and the issue of scale. When talking about early detection/rapid response systems, one should be very specific about scale. In terms of structuring funds, they identified a central question: "Where does the fund reside, how is it allocated, and what kinds of things does it support?" Local and regional EDRR efforts need to be made more centralized. The Subcommittee discussed how anecdotal information on invasive species could be transferred to and used by people that have a capacity to do more objective research. They also talked about potential funding for early detection/rapid response programs. For example, the Montana Wheat Trust Fund uses various taxes to fund wheat management projects. Similarly, the taxes associated with oil and gas exploration in the West might be used to fund a conservation activity. Dr. Dionigi concluded by saying that, although the Subcommittee does not yet have any action items to present, they may have something formulated by the next full committee meeting.

Mr. Zimmerman said that, from the private industry side, he is reluctant to support anything that creates a new tax. Dr. Beck made the clarification that they are considering seeking funding from severance taxes that are already in place, rather than from new taxes. Mr. Nowierski added that an Advisory Committee, including industry representation, would help to ensure that funds are

going in the right direction. Mr. Nowierski added that the Control and Management Subcommittee had discussed the importance of education, and that an integrative test management training consortium is now being developed. This consortium will initially be focused on federal agencies, but will eventually link to the university system. An invasive species module will also be developed as part of the consortium. Mr. Lukens suggested that, if they do pursue oil and gas severance tax funding, they make it very clear that they are not trying to redirect funding from already existing coastal programs.

LEADERSHIP AND COORDINATION SUBCOMMITTEE: KEN ZIMMERMAN

Mr. Zimmerman reported that the Subcommittee had begun by looking at the new ISAC charter, and going through the amendments that were made to it. They then discussed the Subcommittee agenda with regard to direction, deliverables, the future of ISAC, policy versus leadership and coordination, the Steering Committee, and recommendations. **A recommendation was made that the first day of the next ISAC meeting be used as an orientation session for the new members. On the second day of the meeting, it was recommended that ISAC work with a facilitator to identify priorities and interests of the membership. On the third day of the meeting, it was recommended that the Committee be broken into subcommittee groups to work with the facilitator to identify future direction for ISAC.** These facilitated discussions would be followed by the development of the draft operating guidelines. The concept behind this new meeting format is to increase interaction with federal liaisons, and to focus goal setting from a proactive and a reactive standpoint. The deliverables that they hope to achieve through this new structure are white papers for NISC agencies, policy direction for NISC agencies, and timely advice on issues forwarded to ISAC for review. The Subcommittee's vision for the structure of future ISAC meetings is to utilize the federal liaisons in subcommittees the first day, hold a full ISAC Committee meeting the second day with subcommittee reports, and to have members forum, federal reports, and general public participation on the third day.

The Leadership and Coordination Subcommittee also discussed whether or not it should be changed into a Policy Subcommittee. Either way, it is the duty of this Subcommittee to develop the draft operating guidelines, interact with the other subcommittees on issues of policy, direction, and recommendations, work on a cross-cut budget, and work with the DFO to push ISAC recommendations to NISC agencies, organizations, and partners. The responsibilities of the Steering Committee will include reviewing the progress of the subcommittees, receiving subcommittees' agendas, developing agendas for ISAC, and interacting with the chair.

The Leadership and Coordination Subcommittee recommended that the Definitions White Paper be distributed to all states and stakeholders as an ISAC product. Ms. Williams suggested that a planning meeting be organized to look at some of these ideas before the next Steering Committee meeting.

Dr. Reichard expressed her confusion regarding the functions of the Leadership and Coordination Subcommittee and the Steering Committee, and asked if they are being redefined. Mr. Thompson replied that the existing guidelines suggest that some of the things they thought

the Leadership and Coordination Subcommittee could do regarding policy are actually the responsibilities of the Steering Committee. Dr. Jackson said that his sense of the function of the Leadership and Coordination Subcommittee is that it should provide guidance to NISC on the types of leadership and coordination needed to manage a national invasive species plan, leaving in-house matters to the direction of the Steering Committee. Mr. Zimmerman said that, in order to do its job, the Leadership and Coordination Subcommittee must receive more communication on recommendations from the other subcommittees. Dr. Jackson concurred.

Mr. Zimmerman identified the following recommendations from the Subcommittee: to hold an orientation for new members on the first day of the next ISAC meeting, to have the subcommittees meet on the second day of this meeting in a facilitated discussion focusing on new ISAC priorities, and to distribute the Definitions White Paper. The recommendations were accepted without objection.

COMMUNICATION, EDUCATION AND OUTREACH SUBCOMMITTEE: CHUCK O'NEILL

Mr. O'Neill reported that the Subcommittee had met with Kelsey Brantley to go over the beta version of the website, invasivespecies.gov. The Subcommittee feels that, although the content of the website is good, it is too wordy. Ms. Brantley will email the Committee members the text of the website, after which the members will have an opportunity to make comments and suggestions through October 11th. They will also have an opportunity to make comments on the navigation of the website through October 11th. The Subcommittee wants to make the website more visually appealing, and to ensure that the site is focused on NISC, but that it can also link quickly and easily to invasivespeciesinfo.gov, other government agencies, and organizations outside of the federal government. The Subcommittee feels that the Definitions White Paper should be presented on the home page of the website. In general, they found the operating principles of the website to be very good. They suggest that the site contain fewer tools and details on invasive species, and instead have links to where these tools and details can be found.

The Subcommittee recommends that NISC take on a full-time staff person dedicated to communications, education, and outreach activities. The Subcommittee also recommends that a PowerPoint presentation on NISC and ISAC be produced and provided to ISAC members, that the existing two page publication explaining NISC be put into a more attractive tri-fold format, that a freestanding display on NISC and ISAC be created for use at major conferences, and that business-card-sized rubberized magnets be printed with the NISC logo, a one line explanation of what NISC is, the website address, and an email address or telephone number for contact.

It is also important to continue thinking about outreach to educators. Mr. Lukens added that, since the website will be managed by the council office, any recommendations on content or navigation can be made directly to the Council office. **The five actionable items were approved without objection.**

Dr. Beck requested that, in the future, the major bullet points of the subcommittee reports be written up and presented on the screen.

PREVENTION SUBCOMMITTEE: RICHARD ORR

Mr. Orr said that the main purpose of the Prevention Subcommittee meeting had been to go over the activities of the various working groups. They also went through the list to see which of the exiting ISAC members wanted to remain on the Prevention Committee or the other working groups. There were no issues to be discussed regarding the Pathways Working Group. A new chair has been chosen for the Risk Analysis Working Group, and they will be moving forward on this soon. The Subcommittee is looking into several options for a new chair for the Aquatic Organism Screening Working Group, and will be moving forward on this soon. As soon as he receives ANSTF's recommendations, Mr. Orr said that he will send out a new list of members on each working group. Finally, Mr. Orr said that the subcommittees offer a good opportunity for tying together ANSTF and NISC responsibilities.

Ms. Cooper requested that the subcommittee chairs encourage the new members to participate on the subcommittees.

PRESENTATION – INVASIVE SPECIES AND FOREST HEALTH: ANNA RINICK, USDA

Ms. Rinick reported that NISC will be hosting a meeting in November on invasive species threats to forest health. It will be stakeholder meeting, which means that it is designed to bring in people from outside the federal government. The meeting will be sponsored by USDA, APHIS, PPQ, and the U.S. Forest Service. The Nature Conservancy is also looking to hold a meeting on this general topic on Capitol Hill. PPQ and the Forest Service ask that ISAC and NISC consider forming a task team on invasive species and forest health as a way to continue discussing this issue after the two meetings are over. By the beginning of next week, a draft agenda of the NISC meeting will be posted on the Plant Protection and Quarantine homepage.

Dr. Reichard said that bringing together stakeholders is a good way to begin addressing the topic of forest health. **Dr. Reichard made a motion to support the formation of an ISAC task team, either under the Control and Management Subcommittee or another appropriate group, to address forest health issues on a more regular basis, and to raise its profile among the agencies and among the stakeholders.** The Nature Conservancy and John Randall are interested in being the non-federal co-chairs of such a group, while PPQ and the Forest Service are equally interested in being the federal co-chairs of this group. **Jerry Jackson seconded the motion.**

Dr. Dionigi asked how many stakeholders would come to the meeting. Ms. Rinick replied that they are expecting about 150 stakeholders out of a total of 170 people at the meeting. She is currently working on several different methods of advertising the meeting.

Mr. Thompson suggested that they hold off on the placement of the task team under a particular subcommittee until April, when ISAC redefines its structure. **Ms. Reichard amended her motion by removing the provision that the task team be under either the Control and Management Subcommittee or another appropriate group. Jerry Jackson concurred, and the motion passed with one abstention.**

PRESENTATION – INTERACTIONS BETWEEN INVASIVE AND ENDANGERED SPECIES: JOHN FAY, USFWS

Mr. Fay began his presentation by saying that an important part of the Endangered Species Act is Section 7, entitled “Inter-agency Cooperation,” which enlists federal agencies to contribute to endangered species conservation activities. Section 7(a)(1) describes the duty of federal agencies to use existing authorities to further the purposes of the Endangered Species Act. Section 7(a)(2) says that a federal agency may not authorize, fund, or carry out an action that would jeopardize a listed species, or adversely modify critical habitat. Furthermore, federal agencies are not only prohibited from jeopardizing a listed species, but are also required to ensure that the actions they authorize, fund, or carry out are not likely to jeopardize a listed species. This is done through consultation with either the Fish and Wildlife Service, or NOAA fisheries.

Consultation can take several forms. If an agency action will have no effect on endangered species, no consultation will take place. If there is an effect, but it is not adverse, an informal consultation will take place. The purpose of an informal consultation is for the consulting agency to get the concurrence of NOAA or FWS that there are no adverse consequences. If there are adverse consequences, then a formal consultation will take place. Mr. Fay does not believe that FWS has ever done a formal consultation on a bio-control project, since people are generally unwilling to undertake a project that will have an adverse effect. However, because the control of invasive species is so important from the standpoint of the Endangered Species program, FWS would be more than willing to take into consideration both the costs and benefits of an invasive species bio-control effort through a formal consultation. FWS encourages action agencies to come to them early for consultations, and to gather as much information as they can before going into a consultation.

Dr. Jackson asked if the Fish and Wildlife Service has the authority to stop an agency from acting against their consultation. Mr. Fay replied that they do not have this authority. Second, Dr. Jackson asked if, before initiating control of an invasive species within the range of an endangered species, the Fish and Wildlife Service must first enter into consultation with itself. Mr. Fay replied that this is certainly possible, since FWS does internal consultations on a wide range of issues. Mr. Fay also stressed that, although agencies are not bound by the Fish and Wildlife Service’s decisions, these decisions do carry considerable weight in court. Mr. Zimmerman made the point that deciding to take no action in dealing with invasive species is an active management decision, although it is not generally viewed this way. Thus, an agency is not likely to seek a consultation on the effects of taking no action on invasive species, even though taking no action could have serious adverse effects.

Mr. Zimmerman then asked if FWS has any means of dealing with these situations. Mr. Fay replied that consultations must be initiated by the action agencies, and that there is no provision for FWS initiating a consultation.

Dr. Dionigi asked Mr. Fay to describe the process by which permits may be obtained for conducting research involving endangered species. Mr. Fay replied that this process is much easier with regard to plants, and that a coalition of botanic gardens around the country, specializing in rare species, will often make seeds available to researchers. In order to conduct research on endangered animals, a permit must be obtained. Dr. Jackson asked if a consultation can be initiated by an outside party. Mr. Fay replied that there is no petition process for consultation, but that an outside party may file a 60-day notice of intent to sue on the condition that an agency does not seek a consultation. Ultimately, it is the responsibility of the agency to seek a consultation. Ms. Cangelosi asked if a third party could sue for a consultation if an agency is not taking action to prevent damage by an invasive species. Mr. Fay replied that this could happen. Mr. Carlson and Mr. Fay discussed some environmental review exemptions involving gas and oil exploration and border control.

After Mr. Fay's presentation, and just prior to Dr. Johnson's presentation, Anna Rinick was recognized for her service to ISAC. Lori Williams presented her with a plaque signed by Jim Tate, DOI Science Advisor to the Secretary.

PRESENTATION OF USDA-BARC SYSTEMATICS PROGRAM: PHYLLIS JOHNSON, USDA-BARC

The Beltsville Agricultural Research Center (BARC) is the flagship research location of the U.S. Department of Agriculture, and the largest and most comprehensive agricultural research center in the world. Ms. Johnson said that she would be speaking both as the Director of BARC, and as the co-chair of an inter-agency working group on scientific collections, since collections are a key part of systematics. Systematics is not only the science of naming organisms and determining their relations to one another, but also of integrating all of the information available on a given organism. Systematics is important not only to agriculture, but also to foreign trade and markets, conservation, the environment, and public health.

Systematics is critical to keeping out invasive species and identifying them if they appear, as well as to finding biological control organisms for invasive species after they appear. BARC's activities in systematics require research, and the ability to identify organisms found at ports of entry. Much of this revolves around managing the information contained in the collections of organisms, including the U.S. National Fungus collection, the National Collection of Animal Parasites, and the insect collection, among others. Ms. Johnson then gave a number of examples of how these collections have been used to tell whether or not a species is invasive. This information was even used to clear up an accusation of biological warfare against the United States. Thus, it is important to preserve the collections, and to continue training systematists.

Unfortunately, despite the growing need to train systematists and to preserve collections, universities across the country are abandoning systematics curricula and disposing of collections. Federal funding for systematics research has also been decreasing. BARC has been looking for a way to avert this crisis. A major meeting was convened in 2002 with Dr. Peter Raven, from the Missouri Botanical Garden, and a former president of AAAS. This meeting resulted in a report saying that more people need to be trained in systematics, and that the collections need to be preserved. BARC has also been working to increase the visibility of this issue. An effort funded by the National Science Foundation, called LINNE, also came out with a report a couple of years ago emphasizing the need for better infrastructure for taxonomy and systematics.

Even with such huge collections, only 20 percent of the species on earth have been classified. Many of these unclassified species are potentially harmful, and collections and systematics research are the only way to deal with this problem. It has been suggested that a world center for systematics be created to consolidate all of this activity. Many collections need better facilities, and most need more staff and operating money.

Ms. Diaz-Soltero gave Ms. Johnson and ISAC a preview of an effort being made within the Systematics Subcommittee of the Federal Advisory Committee related to invasive terrestrial animals and pathogens. The Subcommittee has prepared a document, which will be published soon, entitled "Protecting America's Economy, Environment, Health, and Security from Invasive Species Requires a Strong Federal Program in Biological Systematics." The document will be written in such a way as to reach people who are not scientists. The Subcommittee has also designed a survey that will go out to all federal agencies that either provide systematics efforts or need systematics efforts, and will ask them to describe the status of their programs, and to envision a ten year plan to strengthen all aspects of their systematics programs. Upon receipt of this data, a comprehensive federal effort will be put in place to enhance all the appropriate agencies' capabilities in systematics. Afterwards, they will work with the universities, federal agencies, botanical gardens and zoological parks to find a way to draw new people to the area of systematics, and to support their education. Finally, they will work with other countries to determine where systematics capabilities need to be strengthened internationally. The second paper to come out of this effort will lay out a systematics program to enhance federal capabilities. It would be very helpful to have ISAC's support in pushing forward this paper.

Dr. Reichard asked the agencies to comment on whether or not they've been able to increase funding for systematics. Ms. Diaz-Soltero replied that systematics was one of the five priority areas identified in the guidance sent by the Deputy Secretary of Agriculture for the FY '06 budget. For FY '06, they received an increase of \$1 million for BARC. Ms. Johnson pointed out that they need money both for the training of systematists, as well as for the creation of jobs for systematists after they have finished their training.

Mr. Zimmerman asked what national program Ms. Johnson is working under, and when this program will be up for review. Ms. Johnson replied that her work is related to plant health programs, animal health programs, and germ plasm programs.

Plant Health will be up for review some time in the near future. Mr. Zimmerman also asked what ISAC can do to help. Ms. Johnson recommended that ISAC emphasize to the administrators the need to request funding for these programs.

Dr. Jackson commented on how they have failed to reach the public regarding the importance of systematics. Ms. Johnson said that this is the purpose of the systematics exhibit at the Botanic Garden, among other public outreach activities.

Mr. Thompson moved that ISAC recommend to NISC that they issue a letter of support for adequate and continuing financial support for systematics research, education, and operations, including the care and maintenance of systematics collections. The motion was seconded. Ms. Williams clarified that NISC cannot write such a letter. Mr. Thompson agreed to amend the motion to say that the letter will be issued by ISAC. Dr. Jackson suggested that “and staffing” be added after the words “continuing financial support.” Dr. Beck suggested that the word “classical” be added to describe the type of systematics being referred to. The new motion reads: **“ISAC will issue a letter of support for adequate and continuing financial support and staffing for systematics research, education, and operations, including the care and maintenance of classical systematics collections. The mover and the seconder agreed to these amendments, and the motion passed without objection.**

LEGISLATIVE UPDATE: LORI WILLIAMS

Ms. Williams reported that NISC is trying to make a more complete legislative chart to track the more important invasive species bills in Congress. It has been a difficult Congress in which to move legislation, and very little progress has been made on these bills. In the following months, they hope to do summaries of legislation in different areas, such as aquatic invasive species, and invasive species issues related to agriculture.

Mr. Carlson reported that the Tamarisk and Russian Olive Control and Demonstration Act was taken to a vote at the House several days after ISAC’s last meeting. Staff at a number of the Senator’s offices believe that the Act will be taken to a vote at the Senate before the end of the September session.

Ms. Cangelosi said that, since ISAC’s last meeting, there was a House hearing on a draft ballast water-related bill. On the Senate side, there has been no movement of the more comprehensive version of the National Aquatic Invasive Species Act. The Commerce Committee Bill, which is a ballast water only bill in the Senate, will be addressed before the end of this session. This bill has been endorsed by the administration, but opposed by other groups. It is not likely that 363 will be passed before the end of the Congress. Thus, they are looking to the next Congress as an opportunity to reintroduce comprehensive legislation. Mr. Wilkinson added that some progress has been made on 363, in that OMB has signed off on a particular approach to ballast water and a discharge standard.

Mr. Lukens asked if the passing of 363 could potentially delay a more comprehensive approach to invasive species. Ms. Cangelosi said that it might diminish the movement toward a comprehensive national policy around aquatic invasive species. Mr. Wilkinson concurred.

Mr. Shroufe gave an update on HR 5108, called “The Lower Colorado Multi-Species Conservation Program Act.” As part of this program, users of Colorado River Water were given Section 10 permits allowing a certain take of endangered or threatened species from the river system in exchange for contributing money to a 50-year plan to conduct certain activities that will help endangered and threatened species along the river.

Dr. Tate asked if there is any bill before this Congress that ISAC members would like NISC to look into. Ms. Leland asked if they could get an updated list of the status of the invasive species bills currently before Congress after the beginning of the new Congress, but before the next ISAC meeting. Ms. Williams replied that the list is being updated on a monthly basis, and offered to send it out with the weekly report once a month. Dr. Reichard asked if anything could be done to move forward HR 4294. Ms. Williams said that they would look into this.

PRESENTATION ON ISAC 1 PARTING THOUGHTS: MARSHALL MEYERS

Mr. Meyers began by saying that ISAC had accomplished a great deal of what was outlined in the original plan. He then encouraged ISAC to stay within this framework in its future deliberations. He also encouraged the agencies to come to ISAC for advice on how to achieve and meet the goals laid out in the plan. With 57 action items, and approximately 168 identifiable actions, the plan is extremely complex. To further complicate the matter, ISAC must work with 35 different federal agencies, making them the only multi-agency/multi-department federal advisory committee. Mr. Meyers suggested that, in restructuring ISAC, they find a way to deal with some of the agencies on a one-to-one basis. It is estimated that 126 of the 168 identifiable actions are completed, established, or in progress.

The question remains as to whether NISC and ISAC are relevant. Thus, the exiting members leave ISAC with the following questions: (1) Is NISC providing needed leadership and coordination as called for in the executive order and the plan, and if not, what are the impediments? (2) Is NISC properly utilizing ISAC as an advisory committee, and if not, how can this be remedied? (3) Does ISAC have sufficient membership depth and diversity, and if not, why not? And finally, (4) Is ISAC structured and functioning optimally? With regard to this question, Mr. Meyers suggested that they reconsider staggered terms, since this would provide continuity.

ISAC’s accomplishments include having significant input in the initial plan, and helping to develop, define, and implement the cross-cut budget, the Control and Management guidelines, and the Definitions White Paper. Most importantly, however, they have achieved collaboration among diverse interests.

Some specific suggestions for NISC are: (1) Deal with leadership and coordination at the NISC

level, rather than at the staff level. (2) Pick three or four cross-cutting issues to work together on at the inter-agency level. (3) Identify and remove any barriers to progress on moving forward as NISC. (4) Utilize ISAC as an advisory committee. (5) Meaningfully involve ISAC in the development of future plan revisions. (6) Task ISAC to respond to a specific issue or question being addressed by the agencies. (7) Continue to focus on advancing broad cross-cutting initiatives such as education and outreach, overall funding for invasive species prevention, and EDRR.

Some suggestions for ISAC are: (1) Respond to questions involving national policy issues with benefit of ISAC's broad input. (2) Give integrated advice and avoid piecemeal responses.

With regard to agency reports, Mr. Meyers said that they are, for the most part, inadequate. He recommended that, instead of being given orally, these reports be put in writing and distributed to ISAC members prior to each meeting. This way, ISAC members can read the reports ahead of time, and come prepared to ask questions. Also, the minutes for each meeting must be circulated within 30 to 45 days of the close of the meeting. The list of action items should be emailed to everyone as close to the end of the meeting as possible.

The role of subcommittees, working groups and task teams needs to be clarified and restructured. ISAC deliberations also require restructuring. ISAC needs to focus on major policy issues. Non-ISAC participants should serve as resources, but should not be included in the deliberation process. ISAC should consider doing more deliberating in its executive sessions. ISAC deliberations and elections should be transparent, and reflect the consensus of ISAC, free from external manipulation.

Mr. Zimmerman requested that ISAC be given a copy of Mr. Meyers PowerPoint presentation to reflect back on as they move forward. Mr. Lukens also requested a copy of the presentation in a paper format. Mr. Tate, Ms. Cooper, Ms. Williams, and Ms. Diaz-Soltero expressed their appreciation for all the work done by the exiting ISAC members.

Mr. Wilkinson said that he would like clarification on Mr. Meyers' recommendation that the agencies seek ISAC input on various policy issues. Also, he would like to know more specifically what the agencies can do to better meet ISAC's information needs. Regarding the second question, Mr. Meyers suggested that they send out a report template to the agencies, and ask them to fit their reports to this template.

MEMBERS FORUM: ISAC MEMBERS

Mr. Meyers said that he will be writing to the general counsels of all 35 agencies to try to get more information on FICMNEW and ITAP, since there is a lot of activity going on in these two organizations that ISAC should be more aware of.

Dr. Beck said that he is working on a chapter on invasive weeds for a CRC publication due to come out sometime early next year. He then asked if ISAC members would like him to try to get

the Definitions White Paper included in this publication, which will be circulated internationally. Mr. Lukens asked if, based on the content of the CRC publication, it would be appropriate to have the Definitions White Paper appended to it. Mr. Schardt asked about the status of the White Paper as a NISC or an ISAC document. Ms. Williams replied that the White Paper is an ISAC document, but that it has been circulated around the agencies for review. Ms. Williams hopes that the agencies will not feel the need to wordsmith the document, although she expects that they will. They are looking for a NISC endorsement. Dr. Beck said that, for the CRC publication, the White Paper would be labeled as an ISAC document. Mr. Lukens asked Dr. Beck to inquire into the process by which the White Paper can be published, and then report back to ISAC before agreeing to anything. Mr. Meyers added that they need to ensure that ISAC retains the copyright on this document.

Mr. Carlson said that there will be a tribal conference on invasives in the first part of November in Nevada. He also said that he is involved in a watershed initiative on the San Juan River, which connects Mexico, Colorado, Arizona and Utah. The initiative is focused on riparian restoration associated with woody invasives.

Mr. Meyers and Dr. Reichard commented on the positive experiences they have had working on ISAC.

REVIEW OF DAY 2 ACTION ITEMS: JOHN PETER THOMPSON

Mr. Thompson identified several action items made that day:

- (1) ISAC urges NISC members to encourage the holding of and participation in an international symposium on transgenic methods for biological control of invasive fish.**
- (2) The Leadership and Organization Subcommittee made several recommendations that will be referred to a planning meeting. The planning meeting will provide guidance to the Steering Committee prior to the next ISAC meeting.**
- (3) The Communications and Outreach Subcommittee recommended the filling of staff positions with full-time employees to address outreach needs, and the development of a PowerPoint presentation, a NISC/ISAC pamphlet, a stand-alone presentation, and marketing magnets.**
- (4) A recommendation was made to create a task team addressing invasive species and forest health.**
- (5) ISAC recommends that NISC support adequate and continuous funding and staffing for classical systematics research, education, and operations, including the care and maintenance of systematics collections.**

Mr. Lukens said that it would be useful to have the agency reports displayed on the screen. Mr. Zimmerman requested that the letter to NISC staff also be sent to the Director at ARS, Ed Knipling.

DISCUSSION OF NEXT ISAC MEETING

Mr. Schardt said that they are looking to hold the next ISAC meeting in Florida, at the end of April/early May. For field trips, they will look into either the Miami or the Fort Lauderdale area. The Florida Department of Environmental Protection has offered to provide transportation, and to handle the logistics of this meeting. Ms. Williams suggested that they hold the orientation meeting for the new members in Washington before the full meeting in April, so as to get this out of the way. Mr. Meyers suggested field trips to ornamental fish farms, the tropical fish lab in Florida, and a fish import facility. Mr. Schardt suggested that they also look into the inter-agency cooperation among federal, state and local groups in South Florida for controlling all of these plants. There was a general consensus among the Committee members to hold the meeting in south Florida in late April/early May.

PUBLIC COMMENT

Mr. Brown spoke on behalf of Kari Duncan, who wanted to inform ISAC that the proposed rule to add silver and large-scale silver carp to the list of injurious wildlife under the Lacey Act was published two weeks ago in the Federal Register. Ms. Duncan also wanted to call attention to the fact that a listing would prohibit importation and interstate transportation. The public comment period is open until November 6th.

Doug Holy reported that he has been involved over the past year with a committee set up to deal with terrestrial invasives in the Great Lakes area as part of the Great Lakes Collaboration Strategy. They started work on this committee in February, and completed a draft action plan in April, which was approved in July by the Midwest Natural Resources Group. They used the NISC National Management Plan for Invasive Species as a model for this action plan. The Committee separated its work across multiple agencies, including USDA, the National Resources Conservation Service, the Forest Service, and the Bureau of Land Management, among others. Not only are they taking advantage of federal partnerships, but also of other, non-federal organizations around the Great Lakes area. The Great Lakes Terrestrial Invasive Species Committee has written a letter to NISC requesting its support. Mr. Holy also reported on the North American Pollinator Protection Campaign. Many pollinators around the globe are in decline. The National Academy of Sciences is finishing a report on the status of North American pollinators, the results of which will be presented at a symposium hosted by the North American Pollinator Protection Campaign, USDA, the Department of Agriculture, the Forest Service, and NRCS. The symposium will be held on October 18th, and will be open to the public.

The meeting was adjourned at 3:30 pm.