

NATIONAL INVASIVE SPECIES COUNCIL

++++

INVASIVE SPECIES ADVISORY COMMITTEE

++++

MEETING

++++

MONDAY,  
OCTOBER 1, 2007

++++

SUMMARY

++++

The Committee met in Potomac / Susquehanna Rooms of the Sheraton College Park Hotel, 4095 Powder Mill Road, Beltsville, Maryland, at 8:00 a.m., Dr. K. George Beck, Chair, presiding.

**COMMITTEE MEMBERS PRESENT:**

PETER ALPERT	University of Massachusetts
DR. K. GEORGE BECK, Chair	Colorado State University
GARY BEIL	Minnesota Crop Improvement Association
E. SHIPPEN BRIGHT	Maine Lakes Conservancy Institute
DAVID BRUNNER	National Fish and Wildlife Foundation
TIMOTHY J. CARLSON	Tamarisk Coalition
EARL CHILTON, II	Texas Parks and Wildlife Department
JANET CLARK	Center for Invasive Plant Management
DIANE COOPER	Taylor Shellfish Farms
JOSEPH CORN	University of Georgia
LUCIUS G. ELDREDGE	Bishop Museum
MILES FALCK	Great Lakes Indian Fish and Wildlife Commission
CHRISTOPHER FISHER	Colville Confederated Tribes
AMY FRANKMANN	Michigan Nursery and Landscape Association
E. ANN GIBBS	Maine Department of Agriculture
CATHERINE HAZLEWOOD	The Nature Conservancy
JEROME A. JACKSON	Florida Gulf Coast University
JOHN KENNEDY	Wyoming Game and Fish Department
MARILYN LELAND	Prince William Sound Regional Citizens Advisory Council
ROBERT McMAHON	University of Texas at Arlington
CHARLES R. O'NEILL	New York Sea Grant
JAMIE REASER	Pet Industry Joint Advisory Council
JEFFREY D. SCHARDT	Florida Department of Environmental Protection
JOHN PETER THOMPSON	The Behnke Nurseries Company
KEN ZIMMERMAN	Lone Tree Cattle Company

**COMMITTEE MEMBERS ABSENT:**

CELIA SMITH	University of Hawaii
JEFFREY STONE	Oregon State University
JENNIFER VOLLMER	BASF Corporation

**NISC STAFF PRESENT:**

KELSEY BRANTLEY	ISAC Coordinator / Program Analyst
CHRISTOPHER DIONIGI	Assistant Director (Domestic)
MARY JOSIAH	Administrative Specialist
RICHARD ORR	Assistant Director (International)
LORI WILLIAMS	Executive Director

**NISC STAFF ABSENT:**

PHILLIP ANDREOZZI	NISC Pacific Regional Coordinator
-------------------	-----------------------------------

**NISC POLICY LIAISONS PRESENT:**

GORDON BROWN	U.S. Department of the Interior
HILDA DIAZ-SOLTERO	U.S. Department of Agriculture
PETER EGAN	U.S. Department of Defense
JIM HESTER	U.S. Agency for International Development
PAUL HOFFMAN	DOI Deputy Assistant Secretary for Performance, Accountability and Human Resources
ARNOLD KONHEIM	U.S. Department of Transportation
BRUCE LEWKE	U.S. Department of Homeland Security
MICHAEL SLIMAK	U.S. Environment Protection Agency
DEAN WILKINSON	U.S. Department of Commerce

## **WELCOME/INTRODUCTIONS**

Dr. Beck called the Advisory Committee to order at 8:06 a.m. He asked for introductions, and called for approval of the minutes from the previous meeting.

## **APPROVAL OF MINUTES**

Dr. Reaser presented corrections to the minutes and said that the minutes excised important technical information from the record. Ms. Williams said that minutes are not supposed to capture everything that was said or capture every discussion, but should focus on presenting the main points. After brief discussion, the Committee accepted Dr. Reaser's corrections to the minutes. Mr. Bright suggested that in the future, the meeting minutes should be more streamlined.

## **NISC STAFF REPORTS**

*Lori Williams, NISC Executive Director*

Ms. Williams reported that NISC submitted the National Invasive Species Management Plan update for Clearance to OMB. Ms. Williams was optimistic that the plan would clear. The Pacific Initiative has been launched and Phil Andreozzi is in Guam to support the Pacific Regional Invasive Species Initiative. NISC staff has been discussing rapid response eradication efforts as well as legal authority issues regarding vertebrate invaders. Staffers have continued to reach out to the 26 state invasive species councils and encouraged discussion of increased regional cooperation.

There has been continued concern over forest pest issues, particularly emerald ash borer. At the request of the Department of State, NISC will assist with the coordination of technical input on the Ninth Conference of the Parties of the Convention on Biological Diversity. The timeline for developing the US position is not currently available. Staff is looking at the issue of using potentially invasive plants as biofuels. Ms. Williams discussed ideas that could improve the focus of ISAC meetings.

Ms. Diaz-Soltero said that there was over \$500 million provided in the budget for the Department of Energy to deal with looking at plants and plant materials for biofuels. ARS obtained a \$3 million grant to conduct an analysis of whether it would be practical to grow arundo as a biofuel. It may be advisable for ISAC to put recommendations before all Federal agencies instead of one department. Mr. Brown said that the more specific and the more directly applicable to agency missions the ISAC recommendations are, the more helpful they are in providing guidance for implementation.

Approval of the template to request input for items to be worked on from the NISC agencies was tabled and taken up later in the meeting.

## **NISC RESPONSE TO ISAC RECOMMENDATIONS**

Ms. Williams introduced the NISC response to ISAC recommendations. On the topic of an operational framework for the National Center for Biological Invasion, Mr. Schardt said that he would like to organize a small team of six to eight people and to make field trips to the more established centers around the country. Those interested in serving on the task team for a center were instructed to meet with Mr. Thompson during one of the Committee meeting breaks. Ms. Diaz-Soltero indicated that for those in the Department of Agriculture it would seem a useless exertion of ISAC's talent to work on a center given that there are other issues in USDA and in other agencies that require ISAC's assistance. Dr. Beck said that he didn't think that ISAC, over the course of the next year, would be able to develop what a center "would be," or develop how to fund it. Since ISAC needs to formulate a general conception of what the center would look like as a finished product, perhaps a discussion on the topic would be fruitful nonetheless.

Mr. Thompson said that he is trying to push for a needs assessment, which will help define the next step in the process. The discussion of "what is a center," is somewhat premature.

Mr. Zimmerman presented the Committee with the template that was created in Miami. The template consisted of a questionnaire that could be sent to member agencies requesting items of concern for ISAC. The Committee approved the template with the National Management Plan action item containing a hypertext link to the Plan.

Ms. Williams said that the outreach position could not be filled during the continuing resolution; but hopefully in the upcoming year NISC can move forward and fill the position.

## **NISC MEMBER DEPARTMENT REPORTS**

### ***Department of Commerce: Dean Wilkinson***

Mr. Wilkinson gave the report for the Aquatic Nuisance Species Task Force. The task force has decided to look at the issue of rapid response. At the request of the task force, Federal agencies are in the process of identifying anything that is a regulatory or statutory limitation in terms of who may mount a rapid response. Mr. Wilkinson thought that there had been little success in implementing state management plans because of a lack of resources, despite the high quality of many of the plans. Recently, NOAA has completed two reports dealing with no ballast on board and the efficacy of ballast water exchange.

### ***Department of Agriculture: Hilda Diaz-Soltero***

Ms. Diaz-Soltero presented the ISAC recommendations to USDA, the Do No Harm Report for APHIS, the Do No Harm Report by ARS, and the grants work on invasive species for 2007. Ms. Diaz-Soltero worked quickly through the four detailed documents and encouraged questions from the Committee members. She said that under the current draft of the Farm Bill, the programs that NRCS has under its authority as well as those programs that the Farm Services Agency has responsibility for would be combined, with the agencies working as partners.

### ***Department of the Interior: Gordon Brown***

Mr. Brown reported that he received a report from the US Geological Survey that work is continuing on the national framework for invasive species early detection, rapid assessment, and rapid response. Also, the Global Invasive Species Information Network will expand its work between NASA, USGS, and other agencies. As part of Mr. Brown's report, Jenny Ericson from

the National Wildlife Refuge System spoke about a volunteer program that involves mapping. Ms. Ericson said that the amount of money the Refuge System spends on invasive species has increased from \$6 million in 2004 to \$9.7 million in 2006. However, in 2004, \$107 million worth of invasive species programs were unfunded- that number increased to \$361 million in 2006. Ms. Ericson said that through a competitive grants program established via a \$1 million yearly appropriation from Congress, the Refuge System had 1,800 volunteers contributing 40,000 hours to the management of 144,000 acres from 2005 to 2007. The Refuge System is also working with a mapping program with the Nature Conservancy and the USGS to help refuge managers standardize data collection as well as help to serve as an early detection mechanism on the refuges. To prepare volunteers and staff, the Refuge System developed online training programs.

***U.S. Agency for International Development: Jim Hester***

Jim Hester gave the report from USAID. USAID has 1,500 officers in 100 countries with a budget of \$10 billion. In order to carry out much of its work, USAID contracts with other Federal agencies such as Interior or APHIS. Each USAID project undergoes an environmental impact assessment that encompasses the issue of invasive species. Mr. Hester gave several examples of USAID projects around the world where USAID is instrumental in implementing phytosanitary import and export controls. In summary, USAID acts as an international entity that is interested in invasive species that provides a receptacle in which U.S. interests can be incorporated.

***Department of Homeland Security: Bruce Lewke***

Bruce Lewke explained the role of Customs and Border Protection in conducting inspections and presented slides of several invasive species that were intercepted with extreme prejudice by vigilant inspectors. Mr. Lewke explained that the Smithsonian is CBP's basic identifier when USDA cannot identify a species. CBP's interceptions ranged from thrips on cut flowers from someone's backyard, to red palm mites on cruise ship passengers.

***Department of Transportation: Arnold Konheim***

Mr. Konheim presented the report from the Department of Transportation. He explained that while DOT has no direct authority with respect to invasive species, the department does devote resources to working on invasive species. The Office of the Secretary has been working on disinsection particularly targeting mosquitoes, which may act as vectors of yellow fever, malaria, dengue fever, encephalitis, and West Nile virus. DOT is looking into implementing non-chemical techniques for disinsection as well as using air curtains to prevent mosquitoes or flies from coming onto plane or coming from a plane. Netting and heat are other techniques DOT is looking at in order to stop invasive species from hitching rides on aircraft. Recently, the Civil Aviation Organization Assembly passed a resolution calling for the World Health Organization to conduct a consultation on non-chemical disinsection.

## **PRESENTATION: IUCN REPORT ON IMPROVING BIOSECURITY AT U.S. PORTS OF ENTRY**

*Dr. Jamie Reaser, ISAC Member (Pet Industry Joint Advisory Council)*

Dr. Reaser said that prevention is often the most cost effective means for minimizing invasive species transfer and impact, despite receiving less public attention and less funding than programs focusing on eradication and control. It is hard to take credit for things that did not occur. The National Invasive Species Management Plan called for the council co-chair agencies, as well as the Department of State in conjunction with the U.S. Trade Representative's Office, to establish an ongoing process to consider the risks of invasive species in a manner that is transparent, non-discriminating, and based on sound science. EPA's Office of International Affairs is interested in the relationship between trade liberalization and biological invasion. To evaluate this relationship they worked with the IUCN to evaluate barriers and opportunities for routine empirical valuation of the probable linkages between market access agreements and invasive species.

IUCN visited nine ports in an 18-month period. At each of the ports, IUCN interviewed agricultural specialists and officers from CBP as well as Fish and Wildlife inspectors. Dr. Reaser said that they saw a large amount of variability among the ports. One size will never fit all in terms of policy and procedure at the ports. Staff size and morale issues were significantly different among the ports. There was a disproportion in terms of the effort and priority put into the training process. CBP officers said that after training they still did not feel comfortable assuming agricultural responsibilities. Canine units are down and there has been a switch from using Ag-oriented beagles to drug and thug oriented Labradors. Most inspectors require three years on the job to achieve competence. Many leave prior to staying three years and reaching competence.

In EPA's, the data that are currently available are not useful for trade policy decision-making. The Fish and Wildlife Service has no access to the automated information system. Since data entry is done by a consultant in South Dakota, there can be a lag time of three months or more before those data are entered. Dr. Reaser said that the bottom line for the recommendations is that many of the issues that the ports are facing are not scientific and technical in nature, but managerial. Dr. Reaser presented a handout to the Committee containing a detailed list of recommendations. If inspection capacities are going to be improved, it needs to be done across departments and across agencies.

Dr. Reaser said that it would be great if ISAC presents a recommendation that encourages NISC to review and read the report. At the very least, ISAC should support the recommendation that NISC look at developing a crosscutting approach to inspection authorities and resources.

## **MEMBERS' FORUM**

*Catherine Hazlewood, The Nature Conservancy*, said that invasive species are generally a top priority for the Nature Conservancy and that there are about 10 people who are tasked with creating organization-wide invasive species products and tools.

*Diane Cooper, Taylor Shellfish Farms*, noted a frustrating trend that she sees is that there are fewer stakeholders involved in efforts at the state level on invasive species. State invasive species councils that are comprised of only governmental or agency representatives who lack operational and technical knowledge of how particular industries operate. This scenario can make it difficult to formulate plans that industries and states are expected to implement.

*Marilyn Leland, PRSWCAC*, spoke about the Alaska meeting that will occur in mid-May.

*Tim Carlson, Tamarisk Coalition*, said that his organization is working with the seven states in the Colorado watershed to develop an impact assessment of the non-native phreatophytes throughout the watershed. Also, the Coalition is developing a voluntary riparian wildlife habitat restoration fund with the oil and gas industry in the inter-mountain west.

*Chuck O'Neill, New York Sea Grant*, announced the signing of a law creating the New York Invasive Species Council, a new coordinating body patterned after NISC. The council will be comprised of the same groups that formed the prior council with the addition of stakeholder representatives. A contract has gone to Cornell University to start the New York State Center for Invasive Species Research. Mr. O'Neill will be the program leader for that project.

## **WORKING LUNCH PRESENTATION: USE OF INVASIVE SPECIES AS BIOFUELS AND CLIMATE CHANGE**

*Louis Zizka, U.S. Department of Agriculture*

Dr. Zizka's presentation focused on giving the Committee a sense of the impact that global climate change, in particular carbon dioxide, is having on invasive weed biology. Examining the carbon dioxide trapped in ice cores, one finds that for a million years prior to the present, carbon dioxide levels stayed between 200 and 300 parts per million. Today it is over 380 parts per million. Dr. Zizka said that there are a couple of very strong lines of evidence that suggest that human activity is a significant contributor to the increase in carbon dioxide. The increase in anthropogenic emissions parallels very closely the overall increase of carbon dioxide in the air. Adding carbon dioxide in areas where the level of water vapor is high (like the tropics) will not make much of a difference. Adding carbon dioxide where there is little water vapor (like the poles) will see an increase in surface temperature. The data suggest that the link between global warming and the spread of an invasive species is real.

We should pay attention to the resources (sunlight, water, nutrients, and carbon dioxide) plants need to grow because any perturbation in those resources is going to affect not only all plant biology but also all life. The amount of carbon in the atmosphere has increased 22% since 1960. Weeds are better adapted to respond to a change in resources than crops- weeds are the number one limitation on crop productivity. Non-native weeds affect health from aerobiology (allergies) to the spread of disease.

Dr. Zizka compared an urban site and a rural site with respect to invasive weed growth and found that 90% of the urban site's biomass was comprised of invasive weeds. Dr. Zizka thought that perhaps the conditions that occur in urban areas, with their higher levels of carbon, are much like the fifty-year predictions with regard to climate change. These conditions seem to favor invasive weeds. The evidence to date indicates that rising carbon dioxide has or could potentially affect weed crop interactions. Dr. Zizka said that global warming is an issue, not a polemic, and should be confronted.

If Dr. Zizka had his druthers, he would try to give land managers the resources they need to do the best job that they can. That is, if a particular species is going to appear in an area given a certain temperature change, land managers should know about it and change their tactics appropriately.

On the topic of using kudzu for the production of ethanol, Dr. Zizka said that plants that have economic value tend not to become wild. Using existing kudzu is a chance to turn something bad into a good opportunity without specifically cultivating an invasive weed.

As a recommendation, Dr. Zizka said understanding the impact of global warming and funding the development of a simple model that land managers could use, like a plant hardiness map, would be very helpful. Certain species seem to have become better adapted at living in high carbon environments, like urban areas and along roadsides. Over time, a high carbon environment may select for those species that are best adapted to survive in them, hence their prevalence. In regards to carbon sequestration, Dr. Zizka said that the idea that plants will be the planet's saviors for carbon dioxide is not really supported by the data.

## **BALLAST WATER UPDATE**

*Rich Everett, U.S. Coast Guard*

*Dean Wilkinson, U.S. Department of Commerce, NOAA*

Mr. Rich Everett from the Coast Guard said that ships entering the US EEZ have three options, they can conduct mid-ocean ballast water exchange, they can retain water, or they can treat that water using a process approved by the Coast Guard. The National Invasive Species Act directed the Coast Guard to extend the program of regulations established for the Great Lakes to the rest of the country. Every vessel entering a port of the U.S. must file a report with the Coast Guard explaining what their ballast water management practices are, how much they are going to discharge, and where the water comes from. The Coast Guard's intention is to establish a ballast water discharge standard that will provide a uniform basis and metric for vessels to manage their ballast. Mr. Everett anticipates that the DPEIS will be published in the fall, with three public meetings to follow in the winter. Mr. Wilkinson said that the EPA, in accordance with a court ruling put out an advance notice of proposed rulemaking last June. Under a court order, the EPA has begun the rulemaking process.

Mr. Everett said that one of the drawbacks the Coast Guard faces is that they do not know the relationship between propagule, pressure, and probability of establishment is for one of the estimated 10,000 species that are in transport in ballast each day.

## **PRESENTATION: APHIS REVISIONS TO PPQ REGULATION Q-37**

*Faith Campbell, The Nature Conservancy*

Ms. Faith Campbell from the Nature Conservancy gave the presentation on the APHIS revisions to PPQ Regulation Q-37. Ms. Campbell focused her remarks on the plants for planting pathway by which forest pests are introduced to North America. There is agreement that the current system of regulation is not working. The U.S. is importing 2.5 billion plants per year, many of which are coming via plane. Pest risk assessments are resource intensive and are done on the basis of lists of known pests. The possibility for evolution and hybridization further complicates risk assessment. There is a wide agreement that the long-term solution to closing this pathway is to work with industry to develop best management practices and clean stock programs. APHIS has come up with the concept of NAPRA (Not Authorized for Import Pending Pest Risk Assessment) as a temporary category into which they could put plants that qualify under some set of criteria as possibly harboring damaging pests. Ms. Campbell said that the Nature Conservancy would like APHIS to publicly say what goal it is trying to achieve and what level of protection it is trying to achieve. They would also like to see APHIS establish the NAPRA category quickly. Ms. Campbell expects thousands of taxa to be in the NAPRA category when it

is fully implemented. The best thing that ISAC could do is to emphasize the importance of swift action on Q-37.

Ms. Page added that invasiveness or weediness potential is an area that APHIS is currently working on. APHIS uses a tool to indicate whether there is a possibility of harm or if there is some risk with a species. A lot of safeguarding will be moved offshore because of a safeguarding review that was done five to seven years ago. Ideally, the pest risk should be managed in the country of origin as often as possible. Ms. Campbell said that APHIS is overwhelmed with incoming plants and with demands for risk assessment for plants, fruits, etc. Mr. Dickerson underscored the high level of cooperation and mutual support from the Nature Conservancy and APHIS on this issue.

## **REVIEW OF DAY ONE ACTION ITEMS**

Mr. Thompson reviewed the action items from the day in chronological order. The following action items were discussed and approved:

- 1) A template to be used by NISC agency members to advise ISAC
- 2) Formation of a task team to look at the inherent issues in setting up a National Invasive Species Center for biological invasions
- 3) ISAC's request that NISC member agencies review and comment back to ISAC on the IUCN report
- 4) Request to place presentations like Dr. Zizka's on the NISC website
- 5) Approval of the minutes with corrections by Dr. Reaser
- 6) That ISAC recommend that USDA focus attention on Q-37 revisions and report on the progress of the revisions at the next ISAC meeting.

Following approval of the action items, Mr. Zimmerman requested that each of the Committee members select three priority items from a list of ten suggestions for future ISAC work.

## **PUBLIC COMMENT**

There was no public comment.

*The meeting recessed at 5:11 p.m.*

NATIONAL INVASIVE SPECIES COUNCIL

+++++

INVASIVE SPECIES ADVISORY COMMITTEE

+++++

MEETING

+++++

TUESDAY,  
OCTOBER 2, 2007

+++++

SUMMARY

+++++

The Committee met in Potomac / Susquehanna Rooms of the Sheraton College Park Hotel, 4095 Powder Mill Road, Beltsville, Maryland, at 8:00 a.m., Dr. K. George Beck, Chair, presiding.

**COMMITTEE MEMBERS PRESENT:**

PETER ALPERT	University of Massachusetts
DR. K. GEORGE BECK, Chair	Colorado State University
GARY BEIL	Minnesota Crop Improvement Association
E. SHIPPEN BRIGHT	Maine Lakes Conservancy Institute
DAVID BRUNNER	National Fish and Wildlife Foundation
TIMOTHY J. CARLSON	Tamarisk Coalition
EARL CHILTON, II	Texas Parks and Wildlife Department
JANET CLARK	Center for Invasive Plant Management
DIANE COOPER	Taylor Shellfish Farms
LUCIUS G. ELDREDGE	Bishop Museum
MILES FALCK	Great Lakes Indian Fish and Wildlife Commission
CHRISTOPHER FISHER	Colville Confederated Tribes
AMY FRANKMANN	Michigan Nursery and Landscape Association
E. ANN GIBBS	Maine Department of Agriculture
CATHERINE HAZLEWOOD	The Nature Conservancy
JEROME A. JACKSON	Florida Gulf Coast University
JOHN KENNEDY	Wyoming Game and Fish Department
MARILYN LELAND	Prince William Sound Regional Citizens Advisory Council
ROBERT McMAHON	University of Texas at Arlington
CHARLES R. O'NEILL	New York Sea Grant
JAMIE REASER	Pet Industry Joint Advisory Council
JEFFREY D. SCHARDT	Florida Department of Environmental Protection
JOHN PETER THOMPSON	The Behnke Nurseries Company
KEN ZIMMERMAN	Lone Tree Cattle Company

**COMMITTEE MEMBERS ABSENT:**

JOSEPH CORN	University of Georgia
CELIA SMITH	University of Hawaii
JEFFREY STONE	Oregon State University
JENNIFER VOLLMER	BASF Corporation

**NISC STAFF PRESENT:**

KELSEY BRANTLEY	ISAC Coordinator / Program Analyst
CHRISTOPHER DIONIGI	Assistant Director (Domestic)
MARY JOSIAH	Administrative Specialist
RICHARD ORR	Assistant Director (International)
LORI WILLIAMS	Executive Director

**NISC STAFF ABSENT:**

PHILLIP ANDREOZZI	NISC Pacific Regional Coordinator
-------------------	-----------------------------------

**NISC POLICY LIAISONS PRESENT:**

GORDON BROWN	U.S. Department of the Interior
HILDA DIAZ-SOLTERO	U.S. Department of Agriculture
PETER EGAN	U.S. Department of Defense
JIM HESTER	U.S. Agency for International Development
PAUL HOFFMAN	DOI Deputy Assistant Secretary for Performance, Accountability and Human Resources
ARNOLD KONHEIM	U.S. Department of Transportation
BRUCE LEWKE	U.S. Department of Homeland Security
MICHAEL SLIMAK	U.S. Environment Protection Agency
DEAN WILKINSON	U.S. Department of Commerce

## **REVIEW OF DAY 1**

Mr. Thompson reported that several items had been considered at the end of day 1, including a motion to improve the template and several action items.

### **PRESENTATION : UNIVERSITY OF GEORGIA BUGWOOD NETWORK**

*G. Keith Douce, University Of Georgia*

The University of Georgia is a land grant institution charged with instruction, research and outreach. The Bugwood Network began as a partnership between the College of Agricultural and Environmental Sciences and the Warnell School of Forestry and Natural Resources in 1994. The purpose of the Network is to integrate information technology with biology using a multi-discipline and multi-taxa approach. Dr. Douce then listed the Bugwood Network personnel: G. Keith Douce, Ph.D. entomology, David J. Moorhead, Ph.D. forest ecophysiology, Salina McAllister, administrative assistant, Charles T. Barger, technology coordinator, Joseph H. LaForest, Forest Health and IPM specialist, Anna Bowden, digital imaging and publication design, Rebekah Hyte, database entry, and Walter B. Sikora, Ph.D. insect taxonomy. The position of invasive species and natural resources specialist is currently vacant. Within the USDA, the Bugwood Network cooperates with the Forest Service, APHIS, CSREES, and the Natural Resources Conservation Service. Additionally, the Network cooperates with state departments of agriculture, state departments of forestry and natural resources, university IPM programs, exotic pest plant councils, the National Park Service, the National Biological Information Infrastructure, NGOs, and many international cooperators.

The Bugwood Network's mission is to lead in development, consolidation and dissemination of information and programs focused on invasive species, forest health, natural resources, and agricultural management through technology development, program implementation, training, applied research and public awareness at state, regional, national and international levels. The Bugwood Network believes that invasive species issues must be viewed within ecosystem and management contexts. The Network defines ecosystem health to include forestlands, agricultural, pasture, utility lines, home and commercial landscapes, and natural areas, and believes that all of these different types of areas must be taken into account when considering invasive species pathways.

The Bugwood Network integrates, develops, provides and delivers programs and information to a very wide audience. It also fosters collaboration between UGA, state, university, federal and international partners, and works to integrate the interests associated with traditional agriculture, the green industry, regulatory agencies, educational institutions, forestry and natural areas. The Network's primary activities include applied research, outreach programming, and information systems. Under the category of applied research are herbicide trials, web interface development, invasive species distribution mapping, e-learning methodology and implementation, invasive plant responses to silvicultural practices, and digital imaging and photography. Under the category of outreach programming are: county extension agent training programs, county landowner meetings, agency/partner meetings, and professional training programs.

The Network is currently addressing the spread of cogongrass in the State of Georgia, and maintains a website on cogongrass programs throughout the region. They also maintain a regional infestation database, coordinate efforts across agencies, develop control prescriptions, monitor control efforts, verify ID of reports, and conduct DOT and county road maintenance training.

Dr. Douce then showed a series of slides depicting various outreach publications developed by

the Network, and funded by cooperating agencies. Much of this information has also been consolidated on the Network's website or on CD-ROMs, thus enabling them to integrate information from across agencies. The Network is currently in the process of developing a publication to be entitled "Invasive Plants of the United States: Identification and Control," which will be available in early 2008, and which will include information on 200 invasive plant species across the country.

In terms of information systems, the Network has dedicated IT support, and operates its own servers. It also operates 20 web sites, which collectively received 120 million hits in 2006, and hosts web sites for many groups, including the Southern Forest Insect Work Conference and the Exotic Pest Plant Council.

The Bugwood Network has three different information systems: The Bugwood Image Database System (IDS), the BugwoodWiki, and the Early Detection and Distribution Mapping System (EDDMapS). The Networks' database backbone links all resources on the site, as well as outside resources. It also incorporates FIA damage agents, ESA common names, invasive plant lists and the regulated pest list, handles non-biological subjects, and links the Network to major systems such as PLANTS, ITIS, GPOD, and NAPIS. The Network currently has 65,000 images on 9,900 subjects from 1,200 photographers. These images are available at no cost for educational use. However, the photographer and the system must be credited.

Dr. Douce then commented on the high resolution of the images available on the Bugwood Network's website, and said that the Network's website can be used to search by name, genus, or family. In developing interfaces, Dr. Douce commented on the importance of altering terminology to suit different target audiences. The [invasive.org](http://invasive.org) site integrates various lists and taxonomies in determining which species are invasive. Dr. Douce also commented on the importance of having live links.

Dr. Douce next gave some examples of projects, cooperations and strategies that have been used to build information in the systems. In getting images and information about species that are not native to the U.S., they have been working with organizations such as the European Pest Plant Organization. The Network has also been working with APHIS, PPQ, the Australian Pest and Disease Image Library, Colorado State University, Montana State University, and a number of collaborators across Europe to obtain quality images and information for importation into the BugwoodIDS. Images generated by the National Science Foundation's Partnership for Enhancing Expertise in Taxonomy program will also be incorporated into BugwoodIDS.

Finally, Dr. Douce talked about the Early Detection & Distribution Mapping System (EDDMapS), which was developed in cooperation with the SE-EPPC to provide a more accurate picture of invasive plant distribution across the South. Through this system, one can access data and training materials, and report infestations. Dr. Douce concluded his presentation by saying that the Center for Invasive Species and Ecosystem Health is a clearinghouse for invasive species, forest health, and IPM resources.

Mr. Brunner asked if the BugwoodWiki will be accepting general inputs from the public and, if so, how they will ensure data quality. Also, he asked if this system could serve as a platform for a national level invasive species wiki. Finally, he asked what software platform they are using. Dr. Douce replied that they have been using in-house developed software because they are grant funded, and do not have the resources to build. Dr. Douce said that the general public will not be able to make contributions to the system any time in the near future. Finally, Dr. Douce said that he could envision the BugwoodWiki being the basis for the development of a national invasive species wiki.

Ms. Clark asked Dr. Douce how he anticipates connecting and working with the other invasive species centers. Dr. Douce replied that their philosophy in working with other centers is to build a network to maximize and leverage the exchange of information. He then recommended the development of a formal mechanism for exchanging and integrating information on a national level.

Ms. Gibbs asked Dr. Douce if the Bugwood Network's information on cogongrass is assisting the people who are addressing this issue on the ground. Dr. Douce replied that the Network is providing assistance through database support, as well as through on-the-ground training.

Dr. Alpert asked Dr. Douce if he sees a need for a National Center for Invasive Species and, if so, what it should do. Dr. Douce replied that the regional centers need to do a better job of integrating information, and that a national center could act as a framework or backbone to the regional centers.

Mr. Falck commented on the overlap in information being provided by the Bugwood Network and by other systems, and asked Dr. Douce how the Network intends to promote communication between the other existing invasive species information systems. Dr. Douce replied that one of the major obstacles to communication and integration across systems is the absence of a standardized taxonomy, and said that it will be necessary to build keys to promote integration across systems.

## **PRESENTATION: NRCS PLANT MATERIAL CENTERS FOR RESTORATION MATERIALS**

*Tim Carlson, ISAC Member  
Tamarisk Coalition*

The NRCS Plant Material Centers are dedicated solely to the selection and propagation of eco-type specific plant materials. There are a total of 27 Plant Material Centers, each located in a different ecosystem-based region. One of the missions of the centers is to provide plant materials to combat invasive species. Some of these materials work by competing directly with invasive species, while others are used for conservation purposes after or during invasive species control.

Re-vegetation is a pressing need in areas in the western states where invasive species projects are underway. There are three steps in the revegetation process: identification of the plant materials best suited for restoration in the ecosystem, identification of appropriate revegetation techniques, and development of the plant materials themselves. The Plant Material Centers have a great deal of expertise and capability in these areas. The Tamarisk Coalition feels that this expertise and capability is under-utilized. **The Tamarisk Coalition requests from ISAC that USDA and NRCS identify resource requirements at these plant material centers that will provide important restoration, eco-type specific plant materials, and technology development needs.**

Ms. Hazlewood asked Mr. Carlson if the lack of necessary resources at the Centers is due to a low authorization level, to the fact that adequate funding has not been requested, or to the fact that the money has not been appropriated. Mr. Eschman replied that NRCS has received about 50 percent of the funding they requested for the Centers.

Mr. Thompson said that the nurseries industry has a need for the Plant Material Centers because, although it is their job to supply plants commercially, they are running into some difficulties when it comes to the identification and supply of eco-type specific plants.

Mr. Falck made a similar comment, saying that, in the State of Wisconsin, they are also having problems finding good sources of eco-type plants and information on effective propagation techniques. Mr. Eschman agreed that restoration efforts require partnerships, since the Centers need help in the identification of eco-type plants and the collection of seeds.

***Mr. Bright requested that Mr. Carlson, Ms. Diaz-Soltero and Ms. Hazlewood get together to write-up the recommendation made by Mr. Carlson so that it could be voted on later in the afternoon.***

## **DISCUSSION: RANKING OF SUGGESTIONS FOR FUTURE ISAC WORK**

***George Beck, ISAC Chair***

Chairman Beck announced the results of the committee members' ranking of suggestions for future ISAC work. The top three suggestions are:

- to make recommendations to NISC on how federal agencies can be more effective in assisting other levels of government through means other than providing more monetary resources (Suggestion #7)
- to identify critical gaps not necessarily limited to regulatory or legal and federal invasive species programs and efforts other than funding (Suggestion #8)
- to identify emerging issues, trends and developments that may impact invasive species, and to make preliminary recommendations to NISC on how these issues should be considered (Suggestion #10)

*These top three issues will be made the focus of the next ISAC meeting in May. Chairman Beck suggested that the remaining issues be referred to appropriate subcommittees for ongoing consideration.*

## **DISCUSSION: DEFINITIONS WHITE PAPER**

***Ken Zimmerman, ISAC Vice-Chair***

Mr. Zimmerman said that some of the recommendations made by the committee at its last meeting appear to be inconsistent with the Definitions White Paper, and that it is critical for the committee to clarify what is meant by "do harm." Also, they must ensure that adequate time is set aside in their meetings for the review of action items and recommendations. Mr. Zimmerman also feels that ISAC should recommend a mechanism to facilitate the review of all communications, documents and recommendations from ISAC to NISC and other state and federal agencies to ensure that they only contain language that is consistent with the Definitions White Paper.

Dr. Alpert said that the Definitions White Paper does not need to be changed, since its language is not inconsistent with any of ISAC's recommendations. Ms. Cooper said that the lack of clarity in the Definitions White Paper is a significant problem, particularly since the White Paper is intended for dissemination throughout the federal agencies, and confusion regarding terminology could lead to the implementation of policies that are inconsistent with ISAC's original intentions. Mr. O'Neill concurred with Ms. Cooper, adding that a number of states are beginning to use the Definitions White Paper. Mr. Kennedy and Dr. Beil also concurred.

Ms. Hazlewood suggested that ISAC's recommendation regarding the Farm Bill be amended to include an additional sentence suggesting that, in assessing whether or not a species is invasive, the Definitions White Paper be referenced. **Dr. Reaser recommended that a footnote be added to the end of every recommendation or document that ISAC forwards to an agency, encouraging them to reference the Management Plan, the Definitions White Paper, and the Executive Order in preparing a response or in taking an action.**

Ms. Cooper and Mr. Thompson said that quality of life is a gray area, and that the meaning of harm has not been adequately defined in the White Paper. It is important that the issue of harm be given adequate consideration, or else it will be discarded in favor of a definition that equates non-native with invasive. Dr. Jackson said that ISAC has a responsibility to properly define and encourage the proper use of the term invasive species.

Mr. O'Neill said that the Definitions White Paper must be more broadly disseminated. Ms. Williams said that they will send the White Paper out again, and reference it in the management plan. She also said that she would take the recommendations of the committee members into account at the next policy liaison meeting.

Mr. Wilkinson suggested that the Definitions White Paper be forwarded to the state departments of agriculture by Ann Gibbs, to the state fish and game commissions and departments of natural resources by John Kennedy, and to state invasive species councils by Lori Williams. Mr. Jackson supported this recommendation.

Ms. Williams clarified that the Definitions White Paper had already been sent out to all of the state fish and wildlife agencies.

Dr. Chilton suggested that the White Paper be sent out to the states with the idea that it be forwarded to those agencies within the states that are responsible for invasive species management.

Ms. Leland asked that the final version of the White Paper be sent out to all of the ISAC members, as well.

Mr. Zimmerman recommended that a copy of the Definitions White Paper be sent to all presenters prior to arriving at an ISAC meeting.

## **PRESENTATION: EFFECTS OF CLIMATE CHANGE ON AQUATIC INVASIVE SPECIES AND IMPLICATIONS FOR MANAGEMENT RESEARCH**

***Britta Bierwagen, USEPA***

Ms. Bierwagen works for the EPA in the Global Change Research Program, which is part of the Office of Research and Development. They are also part of the Climate Change Science Program, which includes all of the other federal agencies. Over the last 18 months, they developed a report for which the public comment period has just closed. This report was posted in the Federal Register, and will soon to be sent out for peer review, after which it will hopefully be published as a final EPA report.

Five key lessons can be taken from the report. The first lesson is that climate change will affect aquatic invasive species throughout the invasion pathway. The second lesson is that important research gaps exist in understanding climate change effects and interactions with other stressors. The third lesson is that most AIS activities do not take climate change effects into account,

potentially jeopardizing management goals. The fourth lesson is that capacity exists to incorporate this information, although tools may not. The fifth lesson is that more information is needed on impacts and adaptation options for effective management.

Ms. Bierwagen next gave a brief overview of climate change and its effects on aquatic ecosystems. Changes in air temperature influence changes in water temperature. Changes in precipitation timing and amount affect water quantity and quality, as well as the timing of flows. Thermal expansion and polar melting cause sea level rise. Increasing atmospheric CO<sub>2</sub> decreases pH.

There is mounting evidence that climate change is already occurring, and will continue into the future. In terms of precipitation, the southeast and middle areas of the United States have gotten wetter over the last 50 years, while the southwest and the Pacific Northwest areas have gotten drier. However, changes in precipitation are not nearly as clean cut as changes in temperatures, and vary much more according to seasons and regions.

The possible effects of climate change on aquatic invasive species vary considerably. Climate change may create conditions that are favorable to some invasive aquatic species, but unfavorable to others. Some climatic changes may counteract one another. Additionally, other stressors, such as land use changes, water quality changes, and human-induced disturbances, such as fire, channelization, and dams, may also exacerbate or ameliorate climate change effects on AIS.

The report focused on aquatic invasive species because the EPA implements the Clean Water Act, and thus is much more involved in aquatic ecosystems than in terrestrial ecosystems. Also, a number of EPA offices are involved with aquatic invasive species issues. The report includes a literature overview on climate change and invasive species, with a focus on AIS, an inventory of state-level AIS management activities, a review of AIS management plans for their adaptive capacity, and a description of research needs and information gaps for AIS managers.

The process of creating the report involved two workshops in 2006, during which needs and gaps were identified, research for the Special Section in Conservation Biology was synthesized, and state and regional AIS management plans were analyzed. In terms of recommendations, more information and research is needed on the effects of climate change on AIS management activities, each step in the invasion pathway, AIS impacts (both ecological and economic), specific species and invaded ecosystems, and interacting stressors.

Next steps will include presentations to other EPA offices, presentations to ISAC and to the ANSTF, and follow-on case studies and workshops to provide information on revising AIS management plans to account for climate change effects. In terms of ongoing research activities, EPA STAR and USDA grants will soon be awarded on this topic, while the Special Section in Conservation Biology will be published in June of 2008.

Mr. Bright asked Ms. Bierwagen what the international community has to say on the effects of climate change on AIS. Ms. Bierwagen replied that people in Europe and New Zealand are beginning to grapple with this issue, as well. Dr. Alpert asked if the grants through the STAR and USDA programs are the results of an ongoing solicitation. Ms. Bierwagen replied that it was a one-time solicitation that may or may not be repeated.

Dr. Chilton asked if Ms. Bierwagen's office would act as a clearinghouse for the research and information that they are requesting. Mr. Bierwagen replied that her office does not generally act as a clearinghouse, and that they would disseminate the information through more indirect routes.

Mr. Thompson commented that invasive species is a highly complex and constantly evolving issue, particularly when climate change and restoration issues are taken into account. For instance, climate change may have an effect on what types of plants may be used to restore a certain area.

Mr. Wilkinson added that short-term projected climate change could also be an important factor in developing invasive species management plans. Ms. Bierwagen replied that the climate community is working on improving its ability to make short-term projections.

## **MEMBERS FORUM**

***Earl Chilton, II, Texas Parks and Wildlife Department***, reported that a Texas Invasive Species Coordinating Committee has been formed, and has held its first meeting. The committee was developed along the same lines as the National Invasive Species Council, and also has an advisory committee, which is slated to have 60 members. The Texas Parks and Wildlife Department is in the process of developing a management plan for the control of various invasive species in Caddo Lake, including giant salvinia, water hyacinth, hydrilla, and Brazilian elodea. The first draft of this plan will be finished by mid-October. Dr. Chilton is working with John Goolsby at the USDA to develop biocontrols for *Arundo donax* along the banks of the Rio Grande, and has identified three so far: a fly, a scale bug, and a wasp. Hull fouling is an ongoing issue. Also, they are in the process of finalizing the Texas Aquatic Invasive Species Comprehensive Management Plan for the ANS Task Force.

***Janet Clark, Center for Invasive Plant Management***, reported that the Montana State University Center for Invasive Plant Management worked closely with the Fish and Wildlife Service to develop the online learning modules, and is interested in continuing this work. They are also planning to hold a National Cooperative Weed Management Areas Conference in Reno, Nevada from April 15<sup>th</sup> to April 17<sup>th</sup>. This conference is being financially supported by the Department of Transportation and the Bureau of Land Management.

***Ann Gibbs, Maine Department of Agriculture***, reported that the Maine legislature passed a resolve last year directing the Department of Agriculture to develop a process and criteria for listing invasive terrestrial plants. Ms. Gibbs has been including many different groups in this discussion, and has set up a small steering committee with representatives from the environmental community and industry, which will be meeting in the middle of October. The State of Maine just received a survey request from APHIS regarding emergency preparedness. Maine has also been trying to coordinate some efforts with state departments of agriculture to address the firewood pathway.

***Jamie Reaser, Pet Industry Joint Advisory Council***, reported that the Pet Industry Joint Advisory Council is now expanding the Habitattitude education outreach campaign into terrestrial systems. Habitattitude has already been adopted in Canada. Mexico and New Zealand have shown an interest in the program, as well. The PIJAC is in the process of finishing up codes of conduct for water gardeners and water garden retailers. The PIJAC has also formed a Pet Zoonosis Committee of veterinarians, epidemiologists, individuals from trade and outreach, educators and policy experts to focus on diseases of companion animals that are transmittable to humans. They are working on a number of education and outreach activities related to this issue,

as well as working with the CDC to tighten up some of the policy guidelines for importation. PJAC is cosponsoring and organizing an international conference on amphibian declines and chytrid mycosis, a disease caused by an invasive pathogen of the scientific name *Batrachyella dendrobatidis*. The conference will be held November 5<sup>th</sup> through 7<sup>th</sup> in Tempe, Arizona. A session at this conference will be dedicated to developing codes of conduct and protocols for biosecurity for the importation of amphibians as relates to BD and other viruses. Finally, Dr. Reaser reminded the committee members that a recommendation had been made at the September 12, 2006 meeting that “The Secretary of Agriculture initiate formation of a new pest advisory group to look at the Argentine ant situation to make recommendations as to the pest origin, pest potential, appropriate regulatory steps, and feasibility of eradication or containment.” **She then recommended that the Secretary of Agriculture be asked to reopen the new Pest Advisory Group.** Ms. Diaz-Soltero pointed out that, because the ant is affecting an urban area, USDA does not have authority to address the issue. Mr. Orr said that, if left unchecked, the ant invasion will expand beyond the urban area. Mr. Orr said that he would send an email to the USDA requesting that this issue be reopened.

## **WORKING LUNCH PRESENTATION: LEGISLATIVE UPDATE**

*Lori Williams*

Mr. Kennedy reported that the Association of Fish and Wildlife Agencies’ Invasive Species Committee continues to work on establishing a set of principles, priorities, and essential elements of comprehensive legislation involving invasive species in order to help guide the Association, as well as guide the individual state members involved with the Association of Fish and Wildlife Agencies. The Committee already has a draft of these guiding principles. Mr. Kennedy then said that, if anyone on ISAC would be willing to assist in the review of this document, he would very much appreciate it.

Ms. Hazlewood reported that ballast water bills are now moving in both the House and the Senate. On the House side, the House Transportation and Infrastructure Committee has marked up and reported out a bill that provides a mechanism for addressing ballast water that is similar to what has occurred in the Senate in years past. In both the House and Senate legislation, language has been added to indicate that presidentially designated agencies should use their available authority in the area of early detection/rapid response. In the Senate, the Ballast Management Act of 2007 was reported out by the Senate Commerce Committee. Over the years, the legislation has been periodically strengthened in response to stakeholders’ concerns that the legislation would supersede application of state authority on ballast water, as well as potential EPA authority on ballast water discharge under the Clean Water Act. However, Senator Boxer still opposes the bill. The Senate Commerce Committee has agreed to continue to work with EPW to resolve concerns so that they will be able to pass the bill by unanimous consent. Mr. Kennedy expects that the ballast water bill will be passed by this Congress. House staff appears optimistic that the House bill will pass by a noncontroversial vote.

The Nature Conservancy has also been tracking two different bills that would enhance federal agencies’ capacity to address invasive species. First, a bill to enact the Natural Resource Cooperative Agreement Act, which would give the Park Service the authority to cooperate with adjacent landowners in dealing with problems that exist on both the landowners’ and the Park Service’s land, has already passed in the House, and is likely to pass in the Senate.

Second, a bill to enact the Refuge Ecology Protection Assistance and Immediate Response Act, which would give grants to the National Refuge System and provide enhanced authority to address invasive species, will soon be marked up in the House. With any luck, a companion bill will soon be introduced in the Senate.

In terms of funding, Senator Reid has introduced a bill that would provide a model for funding that is similar to the state revolving funds under the Clean Water Act. The goal of this bill would be either to eradicate invasive species where possible, to focus on early response, or to prevent the spread of invasive species into new ecosystems. This is a big picture authorization, with authorization loans of about \$100 million. However, the bill is limited to states west of the 100<sup>th</sup> meridian. The Nature Conservancy would like to get the bill changed so that it will be nationally scoped.

The House has already passed a Farm Bill with modest funding, while a version of the Farm Bill may or may not be marked up in the Senate Agriculture Committee. The House bill has general support from many members of the conservation community, but does not provide any opportunities for the improvement of management and prevention of invasive species. On the Senate side, Senator Harkin, chair of the Senate Agriculture Committee, wants to transfer a significant amount of the funding that has historically gone to crop subsidies to conservation programs, but cannot get agreement on this measure from members of his committee. One particularly controversial issue with regard to the Farm Bill has to do with the transfer of 1,800 agricultural inspection jobs from the USDA to the CBP upon creation of the Department of Homeland Security. This has become an issue because the agencies are concerned that current inspection systems are not working as well as they should. Ms. Gibbs added that Senator Feinstein has introduced a bill to transfer the inspection jobs from the DHS back to APHIS. Mr. Lewke, with Customs and Border Protection, said that the CBP opposes the reintegration of the inspection positions back into the USDA, largely for logistical reasons.

Ms. Williams reported that the House Natural Resources Committee's Subcommittee on Fisheries, Wildlife and Oceans held a hearing on a bill to reauthorize the National Aquatic Nuisance Prevention and Control Act (NANPCA.) The primary focus of the hearing was on the idea of screening, particularly with regard to improvements advocated in the Lacey Act. This was not a legislative hearing. However, most of the stakeholders seemed to recognize that there are gaps and weaknesses in terms of how they deal with the importation of animals, fish and wildlife, and that these weaknesses need to be investigated.

## ISAC SUBCOMMITTEE REPORTS

### *Prevention Subcommittee* *Jamie Reaser*

On behalf of the Prevention Subcommittee, Dr. Reaser presented five items for ISAC's consideration. First, with regard to the importation of wildlife, the subcommittee feels that there may be a gap in the ability to address diseases coming in through wildlife that may affect native wildlife. **In order to determine the nature and extent of this gap, the subcommittee has put together a questionnaire to be sent out to the member departments of NISC, which would then distribute the document to the agencies and agency divisions related to wildlife prevention. When the subcommittee receives the survey results, they will summarize them, and provide this summary at the next ISAC meeting in Alaska.** The survey questions are: (1) What are your greatest concerns regarding the introduction of disease agents via wildlife and wildlife product imports into the U.S.? (2) What authorities and/or policy options are available to you to support measures to prevent the introduction of disease agents via wildlife and wildlife

product imports into the U.S.? (3) What is the budget associated with these programs? (4) How many positions staff these programs, and, if possible, what are the job titles and grade levels? (5) What do you perceive to be the greatest current challenges to U.S. efforts in this regard, and what opportunities do you see to raise the capacity of the U.S. Government to prevent the introduction of disease agents via wildlife and wildlife products? Mr. Brown and Mr. Slimak pointed out that the agency divisions will not be able to respond to the questionnaire unless they receive it as a formal data call from OMB. Mr. Brown said that they would find a way to get the survey through.

The Prevention Subcommittee has volunteered to review and provide feedback on the water gardening codes of conduct being developed by PIJAC and the American Nursery and Landscape Association, with the possibility of bringing them back to ISAC for future consideration or endorsement.

The Prevention Subcommittee's longest discussion was on gaps in authority. On this topic, the subcommittee would like to offer a recommendation which reads, **"ISAC recommends that NISC give high priority to completing the identification of gaps in domestic regulation and authorities for screening assessment, and request a status report at the next ISAC meeting."** Another issue brought up by the Prevention Subcommittee is how the increasingly multi-cultural nature of the U.S. is influencing the introduction of invasives into U.S. environments. With regard to this issue, the Prevention Subcommittee would like to request a presentation by the Smuggling Introduction and Trade Compliance Unit of USDA on the operations, community outreach, and enforcement efforts to limit the spread of invasive species through ethnic food markets. Finally, Dr. Reaser presented two action items regarding the biofuels issue. The first action item is to invite the Department of Energy to join the National Invasive Species Council so that they can increase dialogue with the DOE on issues related to biofuels and others issues that may come up. The second action item is to invite DOE and USDA to give a joint presentation at the next ISAC meeting on the linkages between biofuels and invasive species, particularly as they relate to perceived risks and existing policies and programs that address these risks.

### *Research Subcommittee* *Hilda Diaz-Soltero*

Ms. Diaz-Soltero reported that the Research Subcommittee will collaborate with the Systematics Subcommittee on educating and advocating for the understanding of the systematics crisis. Second, the Research Subcommittee will look at the Systematics Subcommittee's draft products and provide input. Third, the Research Subcommittee will assist in providing information on systematic resources at universities, schools, and aquariums.

**Chairman Beck reported that his subcommittee recommends that DOE be invited to become a member of NISC, that the Federal Government not promote planting invasive species for biofuels, and that federal agencies use Latin names on all of their work on invasive species. The subcommittee also feels that predictive models and maps are needed of invasive species range changes under different climate scenarios, and would support research to generate this kind of information.** Mr. Slimak said that he would be happy to communicate this recommendation to the Climate Change Science Program. He also said that a number of climate change science program reports are up for public comment right now, including one that his agency worked on that deals with adaptation options. This report is available at [usgcrp.gov](http://usgcrp.gov).

*Communication, Education and Outreach Subcommittee*  
*Chuck O'Neill*

Mr. O'Neill reported that the Communication, Outreach and Education Subcommittee had revisited the issue of Earth gauge, particularly with regard to the dissemination of invasive species messages. They also discussed what these messages should be, and how they can be condensed into 30 or 60 seconds. They also discussed the *invasivespecies.gov* website, and how existing invasive species educational materials can be better harmonized. The Communication, Outreach and Education Subcommittee offers one recommendation and one action item to ISAC. The recommendation reads as follows: **"ISAC recommends that NISC give full priority, including staffing and support, to the development of the NISC website, *invasivespecies.gov*, to serve as the Council's official website. ISAC further recommends that *invasivespecies.gov* include a portal to all NISC member departments and invasive species web resources, and that NISC direct departments to harmonize invasive species web outreach messages as portrayed in said portal. ISAC further recommends that *invasivespecies.gov* serve as a portal to regional, state, and tribal invasive species councils, task forces, advisory committees, and natural resource management agency invasive species policy information and education web resources."** The action item is that ISAC request NISC provide ISAC with a no more than three page synopsis of each department's invasive species web presence by around January 15<sup>th</sup>, so that the Subcommittee will be able to give a brief overview of the existing federal invasive species web presence to the full ISAC at the Alaska meeting.

*ISAC Organizational Issues Task Team*  
*Ken Zimmerman*

Mr. Zimmerman reported that the Task Team on ISAC Organization Issues recommends that subcommittees meet the evening before the ISAC regular committee meetings. Also, in order to get policy liaisons to attend subcommittee and task team meetings, agendas must be made available well in advance. Ms. Williams will be sending out a list of who is on each subcommittee, and members will be allowed to sign-up for subcommittees up to 30 days after the meeting of October 2<sup>nd</sup>. Mr. O'Neill suggested that subcommittees meet during two different time slots to allow people to be on more than one subcommittee. Dr. Chilton recommended that they cut down on the number of presentations at full committee meetings in order to allow more time for the subcommittees to meet. Another item discussed by the Task Team was the idea of building ISAC meetings around particular themes, such as regional themes based on the meetings' locations. In general, the committee members spoke in favor of the idea of structuring ISAC meetings around regional themes. Dr. Reaser encouraged the committee to find ways to continue the work of the subcommittees within the context of the full committee meetings. She also recommended that the Alaska meeting be used as an opportunity to bring tribal issues to the forefront of their discussions. The Task Team determined that the subcommittees do not need to be restructured. Finally, the Task Team feels that coordination needs to be improved, duplication of efforts needs to be reduced, and the subcommittees need to be made more relevant.

**MEMBERS FORUM (cont.)**

*Jerry Jackson, Florida Gulf Coast University*, reported that he had spoken last week on invasive species issues at the Florida Wildlife Rehabilitators meeting, and strongly encouraged other ISAC members to look into rehab groups in their own areas, since rehabilitators can provide useful information about the appearance of exotics in a particular area. Dr. Jackson is also on the steering committee for an invasive species conference that will be held in Southwest Florida the first week of December.

*Amy Frankmann, Michigan Nursery and Landscape Association*, reported that Michigan's nursery industry is working with the Michigan Department of Agriculture to rewrite its nursery law and its plant pest law to require more stringent inspections. The Michigan Nursery and Landscape Association is looking to find the highest risk pathways in order to ensure that these areas are being inspected. Also, they are partnering with groups that the industry has not historically partnered with, and are putting on an invasive plant workshop for consumers, which will be held in the spring.

*John Kennedy, Wyoming Game and Fish Department and Chair of the AFWA Invasive Species Committee*, reported that the Invasive Species Committee continues to work on organization and direction of the Committee and establishing priorities. Mr. Kennedy is attempting to improve coordination and communications between this committee and other invasive species organizations so that they can be more productive. The mission and charge of the committee are focused on the needs of the states and collaboration with the federal agencies, other invasive species committees, ISAC, NISC, and Congress. Also, on behalf of the Association of Fish and Wildlife Agencies and state fish and wildlife agencies, Mr. Kennedy offered to give a presentation to NISC and ISAC on the Association of Fish and Wildlife Agencies, and specifically on the Invasive Species Committee, in Alaska.

*Miles Falck, Great Lakes Indian Fish and Wildlife Commission*, reported that the majority of his time recently has been spent fund-raising, since the Department of Interior's funding for invasive species in tribal communities has been reduced from two million dollars nationwide to less than one million dollars. The importance of this funding to the Great Lakes Indian Fish and Wildlife Commission's programs is that it constitutes their baseline funding, and enables them to go after matching funds. Mr. Falck said that he is open to suggestions on the most effective bureaucratic procedure for pursuing this funding. He also stressed the importance of ensuring that grant programs include tribes as eligible applicants, and said that, because tribal communities tend to be more dependent on natural resources and subsistence economies, invasive species can have a greater impact on tribal communities. **Mr. Brown suggested, as a way to address to funding problem, that they request NISC to identify other available sources of funding for Indian support.**

*Peter Alpert, University of Massachusetts*, reported that renewed research efforts are being made with regard to the ability to predict invasiveness from species traits and habitat characteristics. Also, there is more evidence that introduced species can evolve to become more invasive after they arrive.

*Ship Bright, Maine Lakes Conservancy Institute*, said that ISAC needs to encourage more states to create state invasive species councils, because a great deal of work needs to be done at the state level. Mr. Bright also believes that ISAC needs to get back to focusing on the economic side of invasive species issues, since everyone cares about money.

*Gary Beil, Minnesota Crop Improvement Association*, reported that the Minnesota Invasive Species Council is alive and well, and has seen the Definitions White Paper. One of the biggest concerns now in the State of Minnesota is the emerald ash borer threat, in response to which an education program on the proper movement of firewood has been implemented. Currently, restrictions prohibit the movement of firewood further than 50 miles.

*Lu Eldredge, Bishop Museum*, reported that he has been working with Tim Carlton on an overview of the introduction of cryptogenic marine and estuary species in Hawaiian waters, and that they now have a preliminary number of 421 species, of which 369 are invertebrates, 25 are macroalgae, 11 are flowering plants, and 18 are fish. In about two weeks, Dr. Eldredge will be

attending the 8<sup>th</sup> Pacific Island Conservation Conference in Alotau Papua New Guinea. The invasive species portions of this conference are being organized by the Pacific Invasive Learning Network, and the program officer from the South Pacific Regional Environment Program. The survey of the offshore islets of the main Hawaii Islands looking for introduced species has been nearly completed. A ten-year re-survey of Pearl Harbor, funded by the Legacy Program, will begin in December. There are major objections to the super ferry that has recently been introduced to Hawaii, one of which is its potential to introduce species.

**PRESENTATION: INVASIVE PLANT ATLAS OF NEW ENGLAND (IPANE) PROJECT**

*Les Mehrhoff, University Of Connecticut*

IPANE's first grant was for the development of an early detection and rapid assessment program for the six New England states. All of IPANE's funding came from two grants from the U.S. Department of Agriculture: \$1.26 million for 2001-2005, and \$497,000 for 2005-2007. IPANE's partners are the University of Connecticut, the Silvio O. Conte National Fish and Wildlife Refuge, the New England Wild Flower Society, and the Center for International Earth Science Information Network. IPANE also set up an advisory board and held several board meetings.

The IPANE program's vision is to establish a Rapid Assessment Network for New England, and to both assess the current status of invasive plants throughout the 6-state region, as well as to create a trained network of volunteers that can detect new incursions of potentially invasive species. Further, through knowledge gained from research and data analysis, and on account of increased outreach and data dissemination, both rapid response to new invasions and management and control of existing populations of invasive plants can be swift and effective.

IPANE program components include the regional list of invasive species and potentially invasive species, a herbarium search, volunteer coordination and training, atlas databases, the atlas website, research initiatives, predictive modeling, outreach and user support services, and the early detection/rapid response network. IPANE has worked with a variety of different people, including land managers, conservationists, government agencies, legislators, and academics, as well as members of the green industry and the general public, who have used IPANE's data in a variety of different ways.

One of the key components of IPANE's program is the volunteer network, since this is their mechanism for gathering information. IPANE's goal is to train 25 volunteers per state in the first three years of the program. They now have a volunteer coordinator, and have trained over 900 volunteers, about 600 of whom are active. They also offer volunteer support through their website, and have developed verification and quality control mechanisms to ensure that the data they receive are reliable and usable. They run at least one training session per year in each state. Some of the volunteers are interested in management as well as data collection. Accordingly, IPANE is training some of the volunteers in management as appropriate.

IPANE's website, [ipane.org](http://ipane.org), includes a catalog of species, maps, databases, and a spontaneous reporting mechanism. There are currently two databases on the website: the herbarium specimen database, and the current field database. A third database is being developed. The field database includes field forms which can be downloaded, taken out into the field, and filled out by the volunteers. The information in the databases is used to generate the maps. The website includes a separate list of early detection species for each of the six states. They are considering creating a separate list for each county. Mr. Mehrhoff talked about how the maps can be used to target species for their volunteers to seek out in particular areas.

Mr. Mehrhoff then talked about the Localized Early Detection Network, a spinoff of the IPANE program that uses untrained people to keep an eye out for invasive species in the White Mountain National Forest.

IPANE wants to add to its list of species, expand into invertebrates, and is considering using pocket PCs for data entry. They also hope to develop more predictive models, make these available to the general public through their website, set up more local early detection networks to get the public involved, and go global. Another potential project is IPANE Junior, which would get school children involved in looking for invasive species. They are also developing an IPANE Asia website, since many native U.S. species are invasive in Asia.

Mr. Mehrhoff shared several success stories about IPANE's early detection capabilities, and stressed the importance of sharing early detection information and alerts. Last week, a meeting of the four Atlantic provinces of Canada was held in Nova Scotia to determine what they should do about invasive species. Mr. Mehrhoff spoke at this meeting on the importance of sharing information. The four provinces agreed that they are going to focus on various aspects of invasive species. Mr. Mehrhoff also stressed the importance of creating a unified early detection program, and of developing a list serve for detectors.

IPANE has met with five of the six New England states to begin to put a task force in place. Also, Mr. Mehrhoff has been working with Randy Westbrooks to develop protocols for a national system similar to IPANE. They are also trying to set up interagency coordination and partnering with all the different groups involved.

Dr. Reaser suggested that, instead of indicating the presence or absence of species on the maps, Mr. Mehrhoff instead indicate presence or non-detection. Mr. Fisher asked how many of the new records indicate new detections. Mr. Mehrhoff replied that very few of the records indicate new detections.

Ms. Gibbs said that the work that IPANE is doing is very important. Dr. Alpert asked what it would take to ensure the future of IPANE. Mr. Mehrhoff said that they need about \$250,000 more per year. Dr. Jackson recommended that Mr. Mehrhoff go to the breeding bird atlas people in his state for help in working out the kinks in the program.

## **MEMBERS FORUM (cont.)**

*Christopher Fisher, Colville Confederated Tribes*, reported that two of the dams on the Columbia River systems within or bordering the State of Washington are not meeting performance measures for the survival rates of fish. In response to this situation, a fund has been created, called the no-net impact fund, which will contribute about \$1.5 million per year to this project. One of the parties to this agreement, the Washington Department of Fish and Wildlife, is proposing a study to evaluate the predator community around these types of projects. Mr. Fisher's concern is that the results of this study will indicate that walleye are, in fact, impacting survival of endangered species, and that this issue will then have to be taken up with the sport fishing associations, which are very strong in these areas.

## ISAC RECOMMENDATIONS

Recommendation 1: “ISAC requests NRCS to identify the annual needs (staff, facilities, equipment, and other requirements) of the 27 Plant Material Centers throughout the United States so that they can fully provide important restoration plant materials and develop technologies for re-establishment of ecotype specific plant species not currently commercially available.”

A motion to accept this recommendation was made and seconded, and the motion carried.

Recommendation 2: “ISAC recommends that NISC agencies reference the Definitions White Paper, the National Management Plan, and the Executive Order in a footnote as general practice.” A motion to accept this recommendation was made and seconded, and the motion carried.

Recommendation 3: “ISAC should advise NISC to increase invasive species funding for tribes and tribal organization.” A motion to accept this recommendation was made and seconded, and the motion carried.

Recommendation 4: “ISAC recommends that NISC invite DOE to become a member.” A motion to accept this recommendation was made and seconded, and the motion carried.

Recommendation 5: “ISAC recommends that NISC complete a needs assessment based on ISAC survey to find out what authorities or funding exist to deal with these issues. Richard Orr is the POC to collect the data from these surveys.” The motion carried.

Recommendation 6: “ISAC recommends that NISC give high priority to completing the identification of gaps in domestic regulation and authorities for screening. Request a status report at the next meeting.” The motion carried.

Recommendation 7: “ISAC recommends that NISC agencies adopt a policy stating that invasive species should not be planted as a source of biofuels.” The motion carried.

Recommendation 8: “ISAC recommends that federal agencies use scientific Latin names.” The motion carried.

Recommendation 9: “ISAC recommends that there is a need for more predictive models and maps of invasive species range changes under different climate scenarios and support to generate information.” The motion carried.

Recommendation 10: “ISAC recommends that NISC forward to the climate change science program office a recommendation that there be more research on the linkage between climate change and invasive species.” The motion carried.

Recommendation 11: “ISAC recommends that NISC give full priority, including staffing and support, to the development of the NISC website to serve as the council’s official website. ISAC further recommends that the website include a portal to all NISC member departments and invasive species web resources, and that NISC direct departments to harmonize invasive species web outreach messages as portrayed in said portal. ISAC further recommends that the website include a portal to regional, state, and tribal invasive species councils, task forces, advisory committees, and natural resource management agencies, invasive species policy, information, and education web resources.” The motion carried.

Recommendation 12: "ISAC requests that NISC provide to ISAC a concise, no more than three-page synopsis of their department's invasive species web presence by early 2008 in order that the communication, education and outreach subcommittee can present to the full ISAC at the Committee's May, 2008 meeting an overview of the Federal Invasive Species web presence and preliminary identified gaps. The Communication, Education and Outreach Subcommittee further requests that NISC provide guidance on how ISAC can assist in identifying gaps in the Federal Invasive Species outreach web presence, and recommending priority actions to fill such gaps." The motion carried.

Recommendation 13: "ISAC recommends that the Secretary of Agriculture reopen the New Pest Advisory Group to look at the Paratrechina ant situation to make recommendations as to the pest origin, pest potential, appropriate regulatory stance, and feasibility of eradication or containment." A motion to accept this recommendation was made and seconded, and the motion carried.

## **MEMBERS FORUM (cont.)**

*John Peter Thompson, The Behnke Nurseries Company*, reported on several eradication efforts in his area. He also reported that he is working with ARS and the arboretum in putting together a gaps in knowledge conference to be held in January or February at the arboretum on invasive species. Mr. Thompson hopes that one of the primary issues at this conference will be sterility in cultivars. Also, Mr. Thompson continues his efforts to get the Wall Street Journal interested in invasive species. Finally, Mr. Thompson reported on ARS's 80 pound turkeys.

Chairman Beck advised ISAC members to look at the state committees they already have before pushing for a state invasive species council.

Ms. Hazlewood reported that the CEO of the Nature Conservancy resigned yesterday.

## **PUBLIC COMMENT**

Dr. Lee VanWychen of the Weed Science Society of America thanked the committee for its efforts in involving the Department of Energy in invasive species issues with regard to the bio-based energy initiative.

Chairman Beck went over the agenda for the following day's activities. Ms. Leland invited the committee members to email her suggestions for additional activities on the Alaska trip. She also said that she will be sending out an email soon with more information on the Valdez trip. On behalf of the USDA, Ms. Diaz-Soltero thanked David Brunner for his participation in ISAC. Ms. Williams said that a notice will be sent out by late November requesting nominations for ISAC members. There will be nine vacancies on the committee.

*The meeting recessed at 5:00 p.m., and adjourned after returning from the NISC-sponsored field trip to the USDA Beltsville Agricultural Research Center on Wednesday, October 3, 2007.*