Indiana State Survey Coordinator (SSC): Dr. Christopher M. F. Pierce

Purdue University, Department of Entomology

901 West State Street

West Lafayette, Indiana 47907 Telephone: (765) 494-9522 E-mail: cpierce@purdue.edu

State Survey Committee Members:

Name	Organization	Discipline
Dr. Christopher Pierce	Purdue University	Entomology/ Invasive Species
Dr. Robert Waltz, SPRO	IN Dept. Natural Resources	Entomology/ Regulatory Science
Gary Simon, SPHD	USDA APHIS PPQ	Regulatory Science
Dr. Steve Yaninek	Purdue University	Biological Control/ Invasive Species
Phil Marshall	IN Dept. Natural Resources	Forest Health
Cloyce Hedge	IN Dept. Natural Resources	Plant Ecology/ Identification
Ellen Jacquart	The Nature Conservancy and IPSAWG	Plant Ecology/ Identification
James Carroll	USDA APHIS PPQ	Forest Health
Jim Pheasant	CERIS	NAPIS
Gail Ruhl	Purdue University	Plant Disease Diagnostics
Dr. Karen Rane	Purdue University	Plant Pathology
Dr. Cliff Sadof	Purdue University	Ornamental Pests/ Identification
Dr. Chris Oseto	Purdue University	Entomology/ Identification
Dr. Ray Martyn	Purdue University	Center for Crop Biosecurity
Dr. Peter Hirst	Purdue University	Horticulture
Steve Cain	Purdue University, E.D.E.N.	Disaster Education & Outreach
Jodie Ellis	Purdue University	Entomology/ Outreach Education
Glenn Nice	Purdue University	Weed Science

Cooperative Agreement Representative

State Plant Regulatory Official (SPRO): Dr. Robert D. Waltz

Indiana Department of Natural Resources Division of Entomology and Plant Pathology

402 West Washington, Room W-290

Indianapolis, Indiana 46204 Telephone: (317) 232-4120 Facsimile: (317) 232-2649 E-mail: bwaltz@dnr.state.in.us

State Plant Health Director (SPHD): Gary Simon

USDA APHIS PPQ

120 Professional Court, Suite D Lafayette, Indiana 47905 Telephone: (765) 446-0267 Facsimile: (765) 446-8274

E-mail: Gary.W.Simon@aphis.usda.gov

Table of Contents	Page
Indiana SSC and SCC	1
Indiana State Plant Regulatory Official and State Plant Health Director	2
Table of Contents	3
January Accomplishments	4
February Accomplishments	5
March Accomplishments	6
April Accomplishments	7
May Accomplishments	8
June Accomplishments	9
Indiana CAPS State Survey Committee meeting minutes (April 13 th , 2006)	10
Indiana CAPS State Survey Committee meeting minutes (June 6 th , 2006)	15
NAPIS Data for Indiana (January 1 through June 30 th , 2006)	16

January Accomplishments:

- In January, I began to purchase supplies for the upcoming FY 2006 surveys.
- In January, I began compiling information and writing the FY 2006 Annual Accomplishment Report.
- I continued to work on the development of the Indiana CAPS website.
- In conjunction with Dr. Robert Waltz (IDNR), Dr. Tim Gibb (Purdue Entomology) and myself, we began producing an article for the Indiana Academy of Science titled: An overview of arthropod activity in Indiana during 2005.
- I was invited to give a presentation to the Indiana Arborist Association Annual Conference and gave a talk titled: Exotic Invaders in the U.S. Indiana.
- I continued to process and assimilate native bark and longhorned beetle samples from the exotic bark and longhorned beetle survey.

Month	Date	Task
January	Wednesday, 26 th	Professional Landscape Management School, Evansville,
		Indiana

February Accomplishments:

- I began to purchase supplies and contacting sites to participate in the upcoming FY 2006 SWPM survey.
- I continued to compile information and write the FY 2005 Annual Accomplishment Report.
- I continued to work on the development of the Indiana CAPS website.
- I attended meetings for the Invasive Plant Species Assessment Working Group and the Indiana Exotic Forest Pests Advisory Committee in Indianapolis, Indiana.
- I continued working with Dr. Robert Waltz (IDNR), Dr. Tim Gibb (Purdue Entomology) and myself, in producing an article for the Indiana Academy of Science titled: An overview of arthropod activity in Indiana during 2005.
- I continued, with the help of my intern, to develop more taxonomic information, keys, and reference materials for individuals participating in the SWPM survey as well as the Indiana Department of Natural Resources Nursery Inspectors.
- I continued to process and assimilate native bark and longhorned beetle samples from the exotic bark and longhorned beetle survey.

Month	Date	Task
February	Tuesday, 8 th	IPSAWG (Invasive Plant Species Assessment Working Group)
		Meeting (9:00-12:00) at the NRCS office in Indianapolis,
		Indiana.
	Friday, 11 th	Indiana Exotic Forest Pests Advisory Committee Meeting (1:00-
		4:00 PM) at the Forestry Conference Center at the Indiana
		Government Center in Indianapolis, Indiana.

March Accomplishments:

- I submitted the FY 2005 Indiana CAPS Annual Accomplishment Report.
- I continued to work on the development of the Indiana CAPS website.
- I continued, with the help of my intern, to develop more taxonomic information, keys, and reference materials for individuals participating in the SWPM survey as well as the Indiana Department of Natural Resources Nursery Inspectors and USDA APHIS PPQ Officers.
- I continued working with Dr. Robert Waltz (IDNR), Dr. Tim Gibb (Purdue Entomology) and myself, in producing an article for the Indiana Academy of Science titled: An overview of arthropod activity in Indiana during 2005.
- I took part in ISIS (Integrated Survey Information System) Training. United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) Plant Protection and Quarantine (PPQ). Valparaiso, Indiana.
- I was a Symposium Organizer for the Annual Meeting of the North Central Branch of the Entomological Society of America in Bloomington, Illinois. F. Miller, and C. M. F. Pierce. 2006. What you need to know and how to prepare for these new nemeses of our natural resources in North America. Annual Meeting of the North Central Branch of the Entomological Society of America. Bloomington, Illinois.
- I served as a moderator, Sections: A, B, Ca, Cb, Cc, Cd, Cf, and D. Annual Meeting of the North Central Branch of the Entomological Society of America. Bloomington, Illinois. March 2006.
- I presented with Venette, R. C., and C. M. F. Pierce. 2006. Future invasive forest pests of concern for the North Central Branch. Annual Meeting of the North Central Branch of the Entomological Society of America. Bloomington, Illinois.
- We released the Indiana Cooperative Agricultural Pest Survey: Purdue University Extension Entomology. http://www.entm.purdue.edu/CAPS/

Month	Date	Task
March	Tuesday, 14 th	ISIS (Integrated Survey Information System) Training
	Sunday, 26 th	ESA NCB Meeting, Bloomington, Illinois
	Monday, 27 th	ESA NCB Meeting, Bloomington, Illinois
	Tuesday, 28 th	ESA NCB Meeting, Bloomington, Illinois
	Wednesday, 29 th	ESA NCB Meeting, Bloomington, Illinois
	Thursday, 30 th	ER CAPS Committee Conference Call: Sirex survey

April Accomplishments:

- I continued to work and update information on the Indiana CAPS website.
- I deployed and began to sort through, and identify samples from the SWPM survey.
- I continued, with the help of my intern, to develop more taxonomic information, keys, and reference materials for individuals participating in the SWPM survey as well as the Indiana Department of Natural Resources Nursery Inspectors and USDA APHIS PPQ Officers.
- I continued working with Dr. Robert Waltz (IDNR), Dr. Tim Gibb (Purdue Entomology) and myself, in producing an article for the Indiana Academy of Science titled: An overview of arthropod activity in Indiana during 2005.
- I coordinated and lead the Indiana CAPS State Survey Committee Meeting (9:00-11:30 AM), 116 WSLR at Purdue University.
- I attended the Indiana Exotic Forest Pests Advisory Committee Meeting (1:00-4:00 PM) at the Forestry Conference Center at the Indiana Government Center in Indianapolis, Indiana.
- I gave a presentation with James Pheasant to IPSAWG titled: Invasive plant species data in Indiana: The role of the Indiana CAPS program and the NAPIS database. Invasive Plant Species Assessment Working Group Meeting in Butlerville, Indiana.
- I contacted Dr. Amanda Hodges, SPDN Entomology Coordinator about Purdue University hosting a Coleoptera Workshop: Specialized Taxonomic Training for Entomologist (SWPM) in the Central Plant Board (North East and North Central U.S.). We agreed to continue discussions about this project and will talk later in the fall semester.

Month	Date	Task			
April	Tuesday, 4 th	Deployed and set SWPM traps			
	Wednesday, 5 th	Deployed and set SWPM traps			
	Thursday, 6 th	Deployed and set SWPM traps			
	Friday, 7 th	Deployed and set SWPM traps			
		1			
April	Thursday, 13 th	Indiana CAPS State Survey Committee Meeting (116 WSLR)			
		9:00 – 11:30 AM			
	Thursday, 14 th	Indiana Exotic Forest Pests Advisory Committee Meeting (1:00-			
		4:00 PM) at the Forestry Conference Center at the Indiana			
		Government Center in Indianapolis, Indiana.			
April	Monday, 17 th	ER CAPS Committee Conference Call			
	Tuesday, 18th	Surveyed SWPM traps			
	Wednesday, 19 th	Surveyed SWPM traps			
	Thursday, 20 th	Surveyed SWPM traps			
_					

May Accomplishments:

- I continued to work and update information on the Indiana CAPS website.
- I continued to survey, sort through, and identify samples from the SWPM survey.
- I continued, with the help of my intern, to develop more taxonomic information, keys, and reference materials for individuals participating in the SWPM survey as well as the Indiana Department of Natural Resources Nursery Inspectors and USDA APHIS PPQ Officers.
- I continued working with Dr. Robert Waltz (IDNR), Dr. Tim Gibb (Purdue Entomology) and myself, in producing an article for the Indiana Academy of Science titled: An overview of arthropod activity in Indiana during 2005.
- I gave a presentation to the Hamilton County Parks Department titled: Emerald ash borer in Indiana: Here to stay in Carmel, Indiana.
- I organized a monthly teleconference for the Central Plant Board SSC's to discuss and update each other on what was going on in our individual

Month	Date	Task				
May	Tuesday, 2 nd	ER CAPS (Central Plant Board) State Survey Coordinators Tele-				
		conference (10:00 AM)				
	Wednesday, 3 rd	Surveyed SWPM traps				
	Thursday, 4 th	Surveyed SWPM traps				
May	Wednesday, 10 th	Invasive Plant Species Assessment Working Group (IPSAWG)				
		Meeting				
May	Monday, 15 th	ER CAPS Committee CAPS conference call: 10:30 AM EST.				
	Tuesday, 16 th	Surveyed SWPM traps				
	Wednesday, 17 th	Surveyed SWPM traps				
May	Wednesday, 24 th	State Fair Meeting (Indianapolis, DNR Forestry Conference				
		Room: 1:00 - 4:00 PM)				
May	Tuesday, 30 th	Surveyed SWPM traps				
	Wednesday, 31 st	Surveyed SWPM traps				

June Accomplishments:

- I coordinated and lead the Indiana CAPS State Survey Committee Meeting on June 6th, (9:00-12:00am), 104 Smith Hall at Purdue University.
- I began working on the Semi-Annual Report for FY 2006.
- I continued to work and update the Indiana CAPS website.
- I continued working with Dr. Robert Waltz (IDNR), Dr. Tim Gibb (Purdue Entomology) and myself, in producing an article for the Indiana Academy of Science titled: An overview of arthropod activity in Indiana during 2005.
- I continued to survey, sort through, and identify samples from the SWPM survey.
- I continued, with the help of my intern, to develop more taxonomic information, keys, and reference materials for individuals participating in the SWPM survey as well as the Indiana Department of Natural Resources Nursery Inspectors and USDA APHIS PPQ Officers.
- I am serving on the Program Committee for the Annual Gypsy Moth Review meeting that will be held in St. Louis, Missouri in November.

Month	Date	Task
June	Monday, 6 th	Indiana CAPS Committee Meeting (9:00-12:00am), 104 Smith
		Hall, Purdue University
June	Monday, 13 th	Surveyed SWPM traps
	Wednesday, 14 th	Surveyed SWPM traps
June	Monday, 27 th	Surveyed SWPM traps
	Wednesday, 28 th	Surveyed SWPM traps

Indiana CAPS State CAPS Committee April 13th, 2006 Meeting Minutes

Attendance

Christopher Pierce
Gary Simon
Bob Waltz
Steve Yaninek
Gail Ruhl
Karen Rane
Jodie Ellis
Phil Marshall
James Carroll

Review of FY 2005

- Development of Indiana's Most Unwanted List
- Indiana Academy of Science: Insects and other Arthropods of Economic Importance in Indiana, 2004 (C. M. F. Pierce, T. J. Gibb, and R. D. Waltz)
 - In production, Insects and other Arthropods of Economic Importance in Indiana, 2005 (C. M. F. Pierce, T. J. Gibb, and R. D. Waltz)
- Increased invasive insect species reference collection
 - Fact sheets and digital photographs in development
- Invasive plant pest information
 - Doug Keller, IDNR and Ellen Jacquart, TNC
- Surveys
 - Hot Zone survey, Old world bollworm survey, Sudden oak death survey, Asian gypsy moth survey, Emerald ash borer, European gypsy moth, Giant hogweed survey, Karnal bunt of wheat, Kudzu, Pine shoot beetle survey, Siricid trap design survey

Review of FY 2006

- Giant African land snail CAPS
- Hot Zone survey CAPS
 - Bark beetles
 - Jewel beetles
 - Longhorned beetles
 - Sirex (more news after April 17th, 2006)
- Old world bollworm CAPS
- Sudden oak death CAPS/ IDNR
- Asian ambrosia beetle survey IDNR/ CAPS
- Nun moth and pink gypsy moth In progress
- Asian ambrosia beetle survey IDNR/ CAPS
- Emerald ash borer IDNR/ USDA APHIS PPQ/ Purdue
- European gypsy moth IDNR
- Kudzu IDNR
- Giant Hogweed IDNR Division of Nature Preserves

- Asian gypsy moth USDA APHIS PPQ
- Karnal bunt USDA APHIS PPQ
- Pine shoot beetle USDA APHIS PPQ

Proposals for FY 2007

- Giant African land snail CAPS
- Hot Zone survey CAPS
 - Bark beetles
 - Jewel beetles
 - Longhorned beetles
 - Siricid complex (Sirex and Urocerus spp.)
- Old world bollworm CAPS
- Sudden oak death CAPS/ IDNR

Indiana "Most Wanted List"

Exotic Invasive Pests of Concern to the State of Indiana

- FY 2006 Exotic Invasive Pests of Concern to the State of Indiana
- Additions or subtractions to the list
- Potential Additions for Insects (see appendix)
 - Southern Mole Cricket
 - Oriental Beetle
 - Asiatic Garden Beetle
 - European Chafer
- It was suggested that Exotic Invasive Pest List should reflect the following categories from the publication "Insects and Other Arthropods of Economic Importance in Indiana in 2004":
 - Agriculture
 - Fruit and Vegetable Production
 - Household and Structural (Urban)
 - Landscape and Ornamental Production
 - Natural Resources
 - Nurseries
 - Public Health
 - Stored Food and Grain
 - Stores
 - Solid Wood Packing Materials
 - Turfgrass
- Categories will allow statistics (agricultural) and economics to their importance to the state
- Categories will allow for easier search capabilities for public
- Pests (insects, diseases, pathogens, nematodes, and micro-invertebrates) should placed into appropriate category
- Some pests may be in multiple categories
- Committee members with specialization in each discipline should review pest list and bring edits to the June 6^{th} meeting.

• Committee members should also note if the pest is either exotic or invasive and distribution if in Indiana

Indiana CAPS Website

- New Indiana CAPS Website is up and running (http://www.entm.purdue.edu/CAPS/)
- Up and running since March 21
- Surveys, Reports, Publications, and Presentations
- Suggested that a Website sub-committee be created
- Committee will develop and create a pest page template and review information that will be presented to the public
- Committee will be responsible for updating pest information placed on the Indiana CAPS website
- Sub-committee will present information to CAPS SCC
- Sub-committee
 - Christopher Pierce insects
 - Karen Rane pathogens
 - Weeds Potentially Glen Nice (*see committee membership)

Committee Membership

Do we need to up date committee membership to reflect invasive species needs? AD HOC
members can be added to the committee to add input on invasive pests of concern

Soybean Commodity Survey - 2008

- ENTM Dr. Christian Krupke Purdue University
- Plant Pathologist? Weed scientist? Glen Nice?

Aquatic Weeds

- <u>Doug Keller</u> IDNR (Invasive plants)
- Dr. Carole Lembi Purdue University (Invasive aquatic plants)
- Glen Nice was nominated to help bolster invasive weed specialty to the SCC and that he may have interest in reviewing web information for the CAPS homepage
- Glen Nice has been offered to serve on the SCC. His acceptance or declining of the position will sent out when it is announced.

Indiana CAPS Issues

- The ER CAPS Committee is investigating how we can improve how CAPS is implemented in the eastern region.
- Central to our investigation is determining what pressing issues do the State Plant Regulatory Officials (Dr. Robert Waltz for Indiana) feel need to be addressed that would make the CAPS process better.
- The request is for develop the top three issues facing CAPS.
 - Indiana concerns
 - Taxonomic capabilities and support of surveys
 - Lack of coordination (top down)
 - Do not establish baselines (commodities)

- National Insect Identifier at Purdue status
- Identifier is expected to be in place by the fall of 2006
- Christopher Pierce will contact Amanda Hodges on the potential of having a bark and longhorned beetle taxonomic class for the Central Plant Board states that is being held for the Southern Plant Board in late-May.

Invasive Species Awareness Month – June

- The Nature Conservancy has been thinking about promoting <u>June</u> as Invasive Species Awareness Month in Indiana
- Try to coordinate activities around the state that will focus attention on invasive (plant and animal).
- Who is planning or might be interested in having an invasive-related event in their area in June?
- Try to help coordinate and focus media and legislative attention on these events.
- Please contact Ellen Jacquart for more information: ejacquart@tnc.org

Schedule next meeting

Next Indiana CAPS Meeting will be on June 6th, 2006 in Smith Hall, Room 104 from 9:00 AM to 12:00 PM.

- Committee members with specialization in each discipline should review pest list and bring edits to the June 6^{th} meeting.
- Committee members should also note if the pest is either exotic or invasive and distribution if in Indiana
- Note if meeting minutes are missing information; please contact Christopher Pierce so that they can be added.

Appendix

Invasive Scarab Beetles that deserve to be on our "most unwanted list"

1. Southern Mole Cricket (Tim Gibb)

2. Oriental Beetle, Exomala orientalis (Coleoptera: Scarabaeidae)

Introduced into Connecticut in the 1920's, oriental beetle now occurs in most of the northeastern states and has spread across the Mid-Atlantic States into the Midwest. This insect is a serious pest of ornamentals and turfgrass. The larval stages (grubs) feed on the roots of grasses and woody ornamentals whereas the adults feed on the blooms of roses, phlox, petunias, daisies and other flowering plants. Larvae are often transported across state boundaries on nursery stock, but may also be transported in sod.

3. Asiatic Garden Beetle, Maladera castanea (Coleoptera: Scarabaeidae)

This insect was first discovered in New Jersey in 1922, but has since spread to most of the northeastern states, west to Ohio and south to South Carolina. This insect is a serious pest of turfgrass and ornamental plants. Larvae of the Asiatic garden beetle feed on the roots of turfgrass and many other plants whereas the adults feed on the foliage and blooms of over 100 plant species of vegetable, herb, fruit and ornamental plants such as butterfly bush, roses, dahlias, asters, chrysanthemums, cosmos, delphinium, petunia, phlox and zinnia. It is suspected that larvae are often transported across state boundaries on nursery stock and sod.

4. European Chafer, Rhizotrogus majalis (Coleoptera: Scarabaeidae)

European Chafer is native to western and central Europe and was discovered in Newark, NY in 1940. Since then, this insect has spread into Connecticut and upper New York, west to Michigan, where it is considered the most serious white grub pest of home lawns, and south from West Virginia to Maryland. Although the adults apparently do not feed, the larvae feed on the roots of turfgrass and many species of ornamental plants including conifers. Unlike many of their white grub cousins, European chafer grubs tend to favor drier conditions and will remain near the soil surface to feed much later into the fall. This fact, combined with their larger size, significantly increases the likelihood of damage. Again, it is suspected that larvae are often transported across state boundaries on nursery stock and sod.

Indiana CAPS State CAPS Committee June 6th, 2006 Meeting Minutes

Attendance

Christopher Pierce

Gary Simon

Bob Waltz

Steve Yaninek

Gail Ruhl

Karen Rane

Jodie Ellis

Ray Martyn

Glenn Nice

Vicki Cassens & Eileen Luke (*represented James Pheasant who was not in attendance)

FY 2006 Budget

- Discussed current status of revisions to the FY 2006 budget.
- Mike Fouts, IDNR, has sent out the revisions to APHIS.

New Invasive finds in Indiana

- Asian ambrosia beetle is now found in 33 counties in Indiana.
- Potential find of Giant Hogweed was ruled not Giant Hogweed
- Roman snail population was found in Connersville, Indiana.
 - Fact sheet and pest page will be developed for release.

NAPIS (National Agricultural Pest Information System)

- Questions arose of why NPDN samples do not got automatically into NAPIS
 - o Data accessibility is the major concern
- State work plans for each state should be posted on the Restricted site
 - o Remove financial plans if states are worried
 - o Allows for communication of what states are doing
- Restricted Site
 - o Possible integration of Restricted site and NAPIS database to integrate
- What is coming soon?
 - o Clickable maps that will allow to get records of pests to that county

Indiana "Most Wanted List" Pests of Concern to the State of Indiana

- The Indiana CAPS committee decided to compile a list of Pests of Concern to the State of Indiana with regard to potential economic impact and the possible necessity for future statewide surveys.
- The pests will be categorized according to the following (some pests may fall into several of these criteria):
 - Exotic
 - Invasive
 - Regulatory (Species subject to State Quarantine)
 - Limited Distribution (with potential significant economic impact)
- Remember; please submit your pest lists to me by June 20th, 2006 so that I can incorporate them into our FY 2007 budget.

NAPIS Data Entry from January 1, 2005 through June 30, 2006 for the state of Indiana.

Target Pest	Counties	Sites* Plants	Traps	Positives	Negatives
SUDDEN OAK DEATH;	22	830		0	830
RAMORUM BLGT		350		ŭ	000
VISUAL					
PHYTOPHTHORA RAMORUM					
P RAMORUM NATIONAL NUI	RSERY SUR	VEY			
SUDDEN OAK DEATH; RAMORUM BLGT	1	2		1	1
ERADICATION					
PHYTOPHTHORA RAMORUM	[
DECLARATION OF PEST ERA	DICATION				
EUROPEAN RED MITE	92	92		92	0
CONSENSUS					
PANONYCHUS ULMI					
SCIENTIFIC CONSENSUS/GEN	NERAL AGR	EEMENT			
EMERALD ASH BORER	5	21		21	0
VISUAL					
AGRILUS PLANIPENNIS					
EMERALD ASH BORER SURV	'EY				
CEREAL LEAF BEETLE (CLB)	92	92		92	0
CONSENSUS					
OULEMA MELANOPUS					
SCIENTIFIC CONSENSUS/GEN	NERAL AGR	EEMENT			
PLUM CURCULIO	92	92		92	0
CONSENSUS					
CONOTRACHELUS NENUPHA	AR				
SCIENTIFIC CONSENSUS/GEN	NERAL AGR	EEMENT			
ALFALFA WEEVIL	92	92		92	0
CONSENSUS					
HYPERA POSTICA					
SCIENTIFIC CONSENSUS/GEN	NERAL AGR	EEMENT			
JAPANESE BEETLE (JB)	92	92		92	0
CONSENSUS					

POPILLIA JAPONICA				
SCIENTIFIC CONSENSUS/GEN	ERAL AGR	EEMENT		
SMALLER EUR. ELM BARK BEETLE	92	92	92	0
CONSENSUS				
SCOLYTUS MULTISTRIATUS				