

Invasive Species: The Good, the Bad and the Prolific

A Three Day Professional Development Workshop for Educators and K-12 Teachers

Earn 22 Pennsylvania Act 48 Hours

June 28 – 30, 2005



Philadelphia Area Workshop Location:

Widener University Science Teaching Center, Chester, PA 19013

Afternoon Field Trips to Nearby Locations



More than 50,000 non-native species have invaded the United States and their ecological damage is estimated to cost more than \$137 billion per year. Join in this special opportunity to learn more about invasives in your backyard and activities to incorporate invasive species concepts into your curriculum.



Lab and field activities will provide a better understanding of invasive species impacts and issues.

Find out why the northern snakehead, zebra mussels, purple loosestrife, nutria, flathead catfish, knotweed & other species have become a nuisance.

Learn about invasive species biological control & integrated pest management.

Participants will receive many valuable instructional resources & implementation materials!!



The workshop cost is \$50.00 per person (scholarships available). Double occupancy lodging is available for out-of-town participants on a first-come first-served basis. Space is limited to 20 participants. Snacks and meals are included. For registration and information contact: **Ann Faulds, Pennsylvania Sea Grant Delaware Estuary Office** 215-806-0894, afaulds@psu.edu



Sponsored by: University of Delaware Sea Grant College of Marine Studies, University of Maryland Sea Grant, Penn State University Pennsylvania Sea Grant, Widener University Science Teaching Center, the Cobbs Creek Environmental Center and the Fairmount Park Commission. Workshop funding was provided by the National Sea Grant Program and NOAA

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Teacher and Environmental Educator Workshop Tentative Agenda
Classroom and Lab Activities - Widener University Science Teaching Center
Field Trips to Nearby Locations

Tuesday, June 28, 2004, 8:30 am – 4 pm

- 8:00 a.m. Registration, Refreshments
- 8:30 a.m. Program Overview and Pretest
- 8:45 a.m. Introductions and *The Vocabulary of Invasion Ecology*
- 9:00 a.m. *The Biology of Supertramps; an Introduction to Invasive Species Impacts and Traits* – Ann Faulds
- 9:30 a.m. *AIS Web Resource Review* - Adam Fredrick
- 10:00 a.m. BREAK
- 10:15 a.m. *A World of Invasives: an Overview of Terrestrial and Aquatic Invasive Species* – Bill Hall
- 11:30 p.m. *Snakehead, Flathead, Rusty Crayfish and Others Introduced to the Delaware Basin* –
- 12:30 p.m. LUNCH and Travel to Cobbs Creek Environmental Center
- 1:15 p.m. Hoola-hoop Field Activity: *Native, Exotic and Invasive Species*
- 1:45 p.m. BREAK
- 2:00 p.m. *Trolling for Exotic Fish* – Electro-fishing and Seining for Native and Exotic Fish
- 3:45 p.m. *Controlling Invasive Plants at a Model Restoration Site*

Thursday, June 30, 2004, 8:30 am – 7:30 pm

- 8:30 a.m. *Phragmites: Invasive and Native Strains* –
- 9:00 a.m. *From Fur to Mud: Control of Nutria in Maryland*
- 10:00 a.m. Break
- 10:15 a.m. *Invasion Ecology Phragmites Activity*
- 11:00 a.m. *Which Way Did They Go?* – Bill Hall & Adam Fredrick
- 11:45 a.m. *Aquatic Supertramp Roulette* – Ann Faulds
- 12:00 p.m. *Integrated Pest Management & Biological Control of Invasive Species*
- 12:30 p.m. LUNCH and Travel to Field Location
- 1:15 p.m. *Evaluating Beetle Control of Purple Loosestrife*
- 3:15 p.m. BREAK & Travel to Fort Mifflin
- 3:30 p.m. *The Coast Guard and Alien Introductions via Ballast Water and Shipping*
- 4:30 p.m. *Ballast Water Cruise Aboard the Army Corps of Engineers Survey Vessel Shuman* (tentative)
- 6:30 p.m. Dinner
- 7:00 p.m. Closing Remarks, Evaluation & Posttest

Wednesday, June 29, 2005, 8:30 am – 4 pm

- 8:30 a.m. *Introduced Asian Oysters, Fact or Folly* - Adam Fredrick
- 9:00 a.m. AIS Web Resources – Adam Fredrick
- 9:30 a.m. *Lessons Learned about Zebra Mussels in Pennsylvania*
- 10:15 a.m. BREAK
- 10:30 a.m. *Aquatic Invasive Weeds – the Problems & Some Solutions*
- 11:15 a.m. *Zebra Mussel Mania Traveling Trunk, ESCAPE and Other Curriculum Materials* - Ann Faulds
- 12:00 p.m. LUNCH
- 12:30 p.m. *Monitoring & Managing Invasive Species in Delaware*
- 1:15 p.m. BREAK and Travel to Invasive Species Removal Site
- 1:45 p.m. *Resident Canada Goose Control Demonstration Project*
- 2:15 p.m. *Invasive Species Removal Field Project; Fairmont Park Service Learning Projects*

Registration

*Please copy and fill out the information below:
mail with a \$50 registration check payable to:
Penn State University*

Name _____

School or E.E. Center _____

Grade & Subject(s) Taught _____

Home Address _____

City _____ State _____ Zip _____

Home Phone _____

Summer e-mail Address _____

Mail to:

Ann Faulds

PA Sea Grant

1450 Edgmont Avenue, Suite 150

Chester, PA 19013

*Registration confirmation and directions to the workshop sites will be mailed to you June 10th.
Questions? Call Ann @ 215-806-0894*