

Checklist for Aquatic Bug Discovery Activities (and Biocontrol Lessons)

Courtesy of Jim Cuda – UF/IFAS Entomology Department

PLANT CAMP 2011

References:

- **How Scientists Obtain Approval to Release Organisms for Classical Biological Control of Invasive Weeds** (UF/IFAS Extension Publication # ENY-828 <http://edis.ifas.ufl.edu/IN607>)
- **Biting Aquatic Bugs** (a PowerPoint™ by Dr. Jim Cuda) Search: <http://plants.ifas.ufl.edu/education>
- **Biological Control of Weeds: It's a Natural!**
http://plants.ifas.ufl.edu/education/2008_TEACHER_NOTEBOOK_%203rd_Ed/PART_4/Part%204%20Biological%20Control/01_Biocontrol%20--%20IT%27S%20A%20NATURAL.pdf
- Center, T.D., F.A. Dray, G. Jubinsky and M.J.Grodowitz.2002. Insects and other arthropods that feed on aquatic and wetland plants. USDA, Agric. Res. Serv. Technical Bulletin. 1870. Fort Lauderdale, FL.200 pp.
- See our **Teacher Resource Notebook** (from PLANT CAMP) for more biocontrol articles or search our education website: <http://plants.ifas.ufl.edu/education>

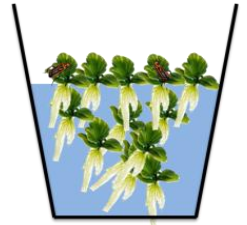
Materials:

- Handy-dandy **HOMEMADE** (DIY) bug sampling device:
 - 5-gallon bucket(s) – white
 - Round hardware cloth -- cut to fit inside the bucket
 - 6-8" piece of Styrofoam (works as a floating island for bugs to crawl on)
 - Weight (brick, rock, etc.)
- dip net(s) – with long handles
- rubber knee boots or waders
- garden rake
- porcelain or white plastic dish pans
- forceps
- gloves (rubber elbow length)
- scissors
- hand lenses
- insect collection bottles (pill bottles work fine)

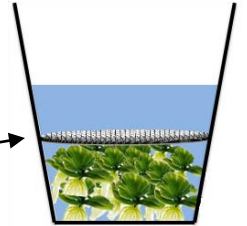


Bucket Insect Sampling Device:

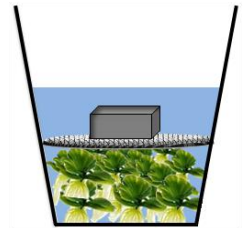
1. Half fill a white 5 gallon bucket with water and add plants to it



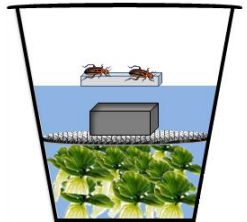
2. Cut a piece of round hardware cloth - to fit inside the bucket



3. Place a weight (brick, rock, etc.) on top of the hardware cloth to immerse all plants under water



4. Float piece(s) of styrofoam block (approx 3-4") on the water – produces substrate for the bugs to crawl on, in addition to sides of bucket and underside of the lid



5. Cover the bucket with a lid, keep undisturbed for 10 mins

6. Use an aspirator to suck insects out

