The tidal freshwater marshes of Jug Bay are located in the upper reaches of the Patuxent River and constitute one of the largest systems of their kind on the U.S. East Coast. This unique ecosystem is characterized by a diverse community of plants that provide food, habitat, and protection to a wide range of organisms. Purple loosestrife (PL), an invasive species, has been recorded in Jug Bay for over 30 years. An expansion within the marshes, however, has been observed during the past 8 to 10 yrs. In response to this threat, the Maryland Chesapeake Bay National Estuarine Research Reserve (CBNERR-MD) initiated efforts in 2007 for the monitoring and mechanical removal of this species. As part of this effort, in 2008 CBNERR-MD partnered with the National Aquarium in Baltimore to provide a restoration field-experience opportunity to undergraduate students. During a three-day period students participating through the Aquarium’s Minority Student Summer Conservation Work-Study Program removed purple loosestrife from the marshes of Jug Bay while contributing to the conservation of this important ecosystem.

**Objectives of Removing Purple Loosestrife**
- Eradicate or control the expansion of purple loosestrife in Jug Bay.
- Monitor the success of removal.
- Provide an educational experience to volunteers in the mechanical control of invasive species.
- Create an awareness of the potential impacts of invasive species in natural systems.

**Mechanical Removal: Worth the Effort!**

<table>
<thead>
<tr>
<th>Total Number of Plants Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove Site</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>Site A (Mataponi Creek)</td>
</tr>
<tr>
<td>Site B (Western Branch)</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

**Next Steps**
- Continue with the removal of purple loosestrife by engaging volunteers.
- Determine the success of the 2008 removal by revisiting established monitoring plots.

We Can Make a Difference!!
Maryland is at the advancing edge of purple loosestrife infestation:
- Take action, control this invader while we still can.
- Do nothing, allow purple loosestrife to continue to spread, with detrimental effects to Maryland’s natural communities.

**Mapping Stands of Common Reed (Phragmites australis) at Otter Point Creek**

The Otter Point Creek (OPC) component of CBNERR-MD is located within the Bush River watershed and includes freshwater tidal marshes, riparian forest, upland hardwood forests and shallow, open estuarine waters. The tidal freshwater marshes at OPC if formed by a wide range of species such as spatter dock, arrow head, arrow arum, and cattail among many others. Common reed or Phragmites, an invasive species, is also found in some areas within the marsh. These stands of Phragmites have been present for several years, but there is a concern that they are expanding. In an effort to determine if existing areas are growing, CBNERR-MD in collaboration with the National Aquarium in Baltimore (Minority Student Summer Conservation Work-Study Program) set the task of mapping most of the major Phragmites stands. Baseline information collected on their location and size will be of great value for future comparative surveys. The sole knowledge of knowing if Phragmites populations are/or not expanding could prompt efforts to control this invasive species in OPC.

**Objectives of Mapping Common Reed**
- Determine location of stands.
- Estimate the current area covered by common reed.
- Create baseline to determine if stands are expanding.
- Provide an educational experience to volunteers in simple mapping techniques using GPS.
- Create an awareness of the potential impacts of invasive species in natural systems.

**In the Field!**

**What We Found…**
An estimated total of 3,000 m² or 0.7 acre of Phragmites.

**Next Step**
- Continue to monitor all stands of common reed to determine if they are expanding.