



Press Release on the STAC SAV workshop held on March 6 and 7, 2007

## SAV Workshop gets Scientists on Same Page

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It's a maxim that captures the essential problem facing those attempting to restore underwater grasses to the Chesapeake Bay:

*"10,000 things can happen to seeds, and only one of them is good."*

Uttered by Dr. Stephen Ailstock, a professor of biology at Anne Arundel Community College in Arnold, Maryland, these words highlight the inherent frustrations in encouraging submerged aquatic grasses, also known as SAV, to spread across the shallow portions of the Chesapeake Bay. Ailstock used the adage as he talked about methods for propagating SAV species at a two-day conference in March that explored current understanding of the plants' reproductive ecology.

He's not alone with his concerns. The plant scientists who gathered at the conference understand only too well that decoding the basic biology and ecology of these plants is critical in determining how best to encourage their establishment and proliferation. While Ailstock focused on plant spread through seeds, other scientists addressed different modes of reproduction and natural dispersal for several SAV species.

Filling in the knowledge gaps on the basic biology and ecology of the underwater plant species inhabiting the Chesapeake Bay was a common theme that played throughout the discussions. This information goes beyond mere academic interest. Even now, scientists who work daily with SAV have trouble attaching specific ranges for a species' optimal growing conditions and key stressors.

Despite the public outcry for fewer studies and more action, scientists and managers must first identify the gaps in SAV information and then fill in these holes with accurate experimental data. Much of this basic information may prove critical in ultimately revising current restoration methods. Without a complete understanding of the life histories and reproduction strategies of each species, restoration efforts are like "shots in the dark."

Recognizing where the gaps lie is as important as knowing where the information remains solid. To illuminate the current status of SAV knowledge, the scientists developed a detailed listing of the critical biological facts for the most common SAV species in the Bay.

While factors such as salinity, growing season, and presence of seeds are generally well known, many other aspects of the plant species are not well documented. Optimal growing temperature, average burial depth, longevity of the seeds, and optimal water temperature for germination — in addition to other key factors — must all be more precisely specified to compile a comprehensive set of conditions that can guide management decisions.

To this end, the conference participants identified each species' biological characteristics. With this basic skeleton in place, and gaps identified, many of the scientists “adopted” one or more species. These scientists will survey the scientific literature and recent studies on the adopted species to fill in the gaps. They expect to have a completed *Reproductive Ecology* summary that fully illustrates what is known and where holes remain by the end of 2007.

Like many of the issues that confront the Bay's restoration effort, tying management goals in with basic science may prove to be the key link in achieving success for SAV and other bay plants and animals over time. Using this fundamental information on the biology and reproductive capabilities of the plants will help scientists and managers restore SAV beds to areas where they once thrived, as well as preserve those beds that still remain.

It's a long and often frustrating process — one that seems to yield results in some years and reverses during others. Understanding both the natural variability of these plant populations, which we can do very little about, as well as the environmental conditions over which we do hold some control should help refine the restoration strategy for these important underwater plants.

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