Fish Vision

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“You’ve got two animals that are competing for the same food. How do they do it? Stripers use color to see and feed during the day. Weakfish use contrast sensitivity to see at night.”

“What these fishes have done is divvy up the visual world,” says Brill.

For the most part, study of stomach contents by VIMS researchers confirms what Horodysky’s vision research predicts. Work by Dr. Rob Latour shows that the stomachs of weakfish are largely empty during the day, and then quickly begin to fill with small fishes and shrimp as evening falls. Work by graduate student Kathleen McNamee shows that striped bass have full stomachs during the day. Weakfish use contrast sensitivity to see at night.”

“Nothing in the wild is ever catch more fish,” responds Horodysky. “But they will be able to make more informed choices.”

Horodysky, himself a fly-tier and avid angler, notes that his color research does confirm at least one common saying that Bay anglers use when selecting a lure for striped bass: “If it ain’t chartreuse, it ain’t no use.”

For Virginia’s anglers, the most important question for Horodysky might be how a better understanding of fish vision can give them better luck on the water. “I can’t guarantee that anyone who uses these data is going to catch more fish,” Brill notes. “But it will help them make more informed choices.”

“Nothing in the wild is ever chartreuse,” says Horodysky, “but the color is right smack dab in the middle of a striped bass’s visual range. They can see it really well.”

VIMS graduate student Andrij Horodysky monitors the progress of a vision experiment using an Atlantic croaker (Micropogonias undulatus).

Wetlands Workshop Promotes Informed Resource Management

Scientists from VIMS’ Center for Coastal Resources Management (CCRM) discussed shoreline and wetland issues with members of local wetland boards and other resource managers during a recent Tidal Wetlands Workshop on the William and Mary campus.

The one-day conference, “Avoid-Minimize-Compensate Through Integrated Shoreline Management,” provided up-to-date information on shoreline protection, management, and policy issues—the three core areas of the CCRM Wetlands Advisory Program.

The workshop focused on promoting an integrated, cross-jurisdictional approach to shoreline management along with a discussion of living-shoreline treatments.

“Participants in our outreach programs develop an increased awareness of the ecological functions of riparian buffers, marshes, intertidal flats, and the adjacent shallow-water environment,” says program director David O’Brien. “They also learn to recognize that the impacts of shoreline protection projects can’t always be easily mitigated.”

The conference included a compu- terized audience response system that allowed the 116 participants to cast votes from their seats on relevant wetlands and shoreline-related questions. Evaluation comments show that participants enjoyed the apparatus: “I liked the system because it helped me gauge how much I was retaining and understanding,” said one participant. “I enjoyed seeing what the other wetlands boards think,” noted another.

The Wetlands Advisory Program at VIMS has been providing wetlands and shoreline information to the public since the late 1960s. “In supporting the Commonwealth’s no-net-loss wetland policy, technical information applied at the local level leads to more informed and ecologically favorable resource management decisions,” says O’Brien.

To view workshop presentations and photos, go to ccrm.vims.edu/semi-nar2006.htm