"Snook Creek" Discussed at Mote Workshop

Mote Marine Lab hosted a workshop this week about community engagement with science and scientists. A spirited brainstorming session included a broad spectrum of local participants including:

- Fishing guides
- Marine biologists
- Science and Environment Council
- Sarasota Bay Watch
- Teachers, students and interns
- Restaurateurs
- Agency staff
- Sarasota Bay Estuary Program

Alex Erb, Magdalena Coca, Katrin Rudge, Erin Kisielewski, and Libby Oskamp

Several people from the Phillippi Creek watershed shared their experiences, including Riverview High School and South Gate. Their experiences meshed well with a hypothetical scenario called "Snook Creek", a place with an important snook fishery was facing challenges with sedimentation, septic systems and watershed development. Educator Katrin Rudge was there with three student leaders from the Marine Science Club along with Libby Oskamp from South

Gate. The group brainstormed ideas about how to effectively engage community stakeholders in scientific matters like tidal creek and bay scallop restoration. For more information See Mote press release below

MOTE MARINE LABORATORY & AQUARIUM

Science and society combine their strengths in Southwest Florida workshop, global environmental study

Participants enjoy a reception following the workshop on science and society hosted Oct. 19 by Mote Marine Laboratory researchers from southwest Florida and their colleagues from Japan's Research Institute for Humanity and Nature. The workshop brought together environmental, business and community leaders, along with other key stakeholders who seek to preserve Southwest Florida's marine ecosystems and generate ideas to share with other communities around the world. (Credit Mote Marine Laboratory)

How can researchers and their communities join forces to tackle environmental issues?

That question sparked lively discussions during an Oct. 19 2015 workshop on science and society hosted by Mote Marine Laboratory researchers from southwest Florida and their colleagues from Japan. The workshop brought together environmental, business and community leaders, along with other key stakeholders who seek to preserve Southwest Florida's marine ecosystems and generate ideas to share with other communities around the world.

The workshop was co-led by Mote and Japan's Research Institute for Humanity and Nature (RIHN) and took place at Mote's Sarasota campus. It highlighted three of Mote's science-community partnerships to illustrate the concept of "integrated local environmental knowledge," or ILEK — the valuable, combined knowledge of scientists and other key societal groups. Workshop results, including surveys completed by participants, will be analyzed and integrated into a global ILEK project led by RIHN and including Mote.

"RIHN is studying Mote's work with the community – we are one of several select case study sites around the world because we are embedded in this community and have been for 60 years," said Dr. Michael P. Crosby, President and CEO of Mote. "In the terms of RIHN ILEK program, we are referred to as a 'residential research institution' because of our partnerships with the community, which are key to Mote's success."

"We are conducting this major initiative with Mote and others around the world to understand how all different kinds of knowledge can mobilize society in a more sustainable direction, as scientists and community members come together to solve local environmental problems," said Prof. Tetsu Sato, leader of RIHN's ILEK project.

Sato described the various groups of people that need to, but sometimes struggle to, work together on environmental concerns: researchers, grassroots environmental groups, government and non-government organizations, businesses, community members, commercial and recreational fishers and many others. He asked workshop participants what opportunities they see for uniting these groups around environmental challenges.

"We want you to discuss this with very open minds," Sato said. "The goal is not to arrive at a shared conclusion. The main goal is to review and deepen your own ideas about community-science interaction to solve local problems."

To fuel that discussion, Mote scientists shared some examples of science-and-society successes:

- **Scallop restoration:** To restore depleted scallop populations in Sarasota Bay, and study the best ways to do so, Mote is working with the Florida Fish and Wildlife Conservation Commission, Sarasota Bay Watch, Sarasota County, Bay Shellfish

Co., local business leaders, and most importantly, many volunteer citizen scientists. Partners are placing young scallops into the Bay, monitoring for recovery and working to improve environmental quality and expand community involvement. The science-and-society dynamic of this project is a major focus of RIHN's global study.

- **Fisheries enhancement:** Mote researchers have released thousands of hatchery-reared snook into Sarasota Bay to study fisheries enhancement methods for this important sport fish. They've involved the public in this research through a special catch, sample and release tournament called the Snook Shindig (taking place again on Nov. 13-14, 2015). "The results have led to changes in snook-release strategies that improved the survival of our released fish by as much as 200 percent," said Carole Neidig, staff scientist at Mote. "The bottom line is: We couldn't have afforded to do all of the sampling alone. We wouldn't have this information if it hadn't been for the community."

  In an upcoming project, Mote scientists, in partnership with Sarasota Bay Estuary Program and Sarasota County, will survey fish communities and associated habitat in the upstream portion of the Phillippi Creek drainage basin to understand which habitat features are prominent in shaping the community structure of fishes. This information may then be used to guide habitat enhancement efforts within the stormwater canals in Sarasota County, in partnership with communities that live along those canals.

- **Environmental monitoring with citizen scientists:** In the Florida Keys, Mote invites the public to report environmental changes through its C-OCEAN project (Community-Based Observations of Coastal Ecosystems and Assessment Network), based at Mote's campus on Summerland Key. "When you see evidence of an environmental change — a fish kill, a change in water quality, pollution — you might think 'Who you gonna call?' like they say in 'Ghostbusters,'" said Cory Walter staff biologist at Mote. "You can contact Mote's C-OCEAN. The public can call us to report any unusual ecological activity on the water in the Florida Keys. You call us, and we'll call the agencies that need to know."

  Walter said that there is a natural drive among Keys residents to share what they've

seen on the water to support science and management. “The Florida Keys is a big place, but a small community, where everyone works together to preserve their livelihood and natural assets.”

With these examples in mind, workshop participants launched into two small-group, discussion sessions. First they formed roundtable focus groups where participants could share their experiences, reflect and offer suggestions for bridging science and society. Next, groups of participants tackled two hypothetical scenarios based upon real environmental issues in Southwest Florida: restoration of scallops and a creek habitat.

The workshop wrapped up with a Q&A session and a chance to complete an ILEK questionnaire designed to bring Southwest Florida communities’ knowledge and perspectives into global ILEK study led by RIHN in Japan.

One thing was clear: Southwest Florida offers spectacular examples of scientists and community members who value each other’s knowledge and skill.

“I value the knowledge that watermen bring to any study that scientists are trying to do,” said Dr. Jay Leverone, staff scientist at Sarasota Bay Estuary Program. “We don’t have all the answers — that is the beauty of science, it’s always expanding.”

Capt. Van Hubbard, a longtime southwest Florida fishing guide, said that conservation-focused anglers want to share their knowledge when the outcomes will benefit the fishery. “We don’t mind telling someone how to catch a big snook if they are going to be responsible,” he said. “We want to pass on the information, but it has to be passed on in a way that people respect the fish and the resource and be good stewards.”

“These are the connections where you need to build trust and working relationships,” said Barbara Lausche, Director of Mote’s Marine Policy Institute.

“Trust, of course, must be mutual,” Sato said. “Both sides — scientists also have to trust non-scientist stakeholders as important providers of information and knowledge.”

Building trust takes communication and feedback, participants noted. RIHN and Mote scientists hope that all the participants in Monday’s workshop will ultimately benefit from

the feedback once their discussions and ideas are woven into RIHN's study.

Said Crosby: "We will be sure to report back and keep you all very, very engaged. Partnership with our community is a core value for Mote Marine Laboratory."

Founded in 1955, Mote Marine Laboratory & Aquarium is celebrating its 60th year as an independent, nonprofit 501(c)3 research organization. Mote's beginnings date back six decades to the passion of a single researcher, Dr. Eugenie Clark, her partnership with the community and philanthropic support, first of the Vanderbilt family and later of the William R. Mote family.
Today, Mote is based in Sarasota, Fla. with field stations in eastern Sarasota County and the Florida Keys and Mote scientists conduct research on the oceans surrounding all seven of the Earth's continents.
Mote's 25 research programs are dedicated to today's research for tomorrow's oceans, with an emphasis on world-class research relevant to the conservation and sustainability of our marine resources. Mote's vision also includes positively impacting public policy through science-based outreach and education. Showcasing this research is Mote Aquarium, open from 10 a.m. to 5 p.m. 365 days a year. Learn more at mote.org.

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