

Nichol Visits VIMS



New William and Mary President Gene R. Nichol (L) visited the VIMS campus on July 12. President Nichol toured the Boat Basin and Chesapeake Bay Hall with Dean and Director John Wells (R) before addressing the campus community.

ICCAT Adopts Ban on “Shark Finning”

The International Commission for the Conservation of Atlantic Tunas (ICCAT) adopted the first international ban on shark finning during their most recent annual meeting. The U.S. ICCAT Advisory Committee is chaired by VIMS fisheries scientist Dr. John Graves.

Finning occurs when commercial anglers remove a shark’s fin (a delicacy in Asian markets) and throw the rest of the carcass overboard.

The U.S. ICCAT delegation introduced the shark proposal early in the meeting. The delegation is led by Dr. Bill Hogarth, Assistant Administrator of the National Marine Fisheries Service, and coordinated by Graves, who has chaired the U.S. ICCAT Advisory Committee for the past nine years.

“The ban on shark finning was a major move by ICCAT,” says Graves. “It increased the scope of the convention, moving it from just managing the target species to managing bycatch. ICCAT is the only regional fishery management with competence throughout the Atlantic, so it makes sense that they should be responsible for managing all pelagic resources.”

In addition to the U.S., the resolution was co-sponsored by the European Community, Canada, Japan, Mexico, Panama, South Africa, Trinidad &

Tobago, and Venezuela. It requires other shark-fishing nations to adopt procedures already followed by U.S. fishermen and resource managers. The U.S. banned shark finning by anyone under its jurisdiction in 2000.

The ban includes provisions that will allow enforcement. “It is now the responsibility of each member nation to implement the ban with domestic measures,” says Graves.

The ICCAT ban is based on a recent stock assessment suggesting that some pelagic sharks, particularly shortfin makos, are in danger of being overfished— both as a targeted species and as bycatch in the longline fishery for swordfish and tuna.

“The stock-assessment results didn’t demonstrate an immediate need for management measures,” says Graves, “but we felt it was important to establish the Commission’s competence for them, so we went forward with the ban on finning.”

VIMS’ shark expert Dr. Jack Musick hails the ICCAT resolution. “Sharks are particularly susceptible to overfishing because of their slow growth and low reproductive rates,” says Musick. “An international ban on finning will certainly help in efforts to restore shark populations to a sustainable level.”

Scott Wins Student Prize

Recent Gloucester High graduate Jennifer Scott recently won first place in the Environmental Science category at the Virginia Junior Academy of Science, securing a \$5,000 Henry Mackenzie Scholarship. The award recognizes Scott’s presentation of the research she completed this spring at VIMS under the mentorship of Dr. Mike Newman and his lab manager Alanna MacIntyre, through the Chesapeake Bay Governor’s School. Scott’s experiments challenged conventional methods for measuring toxicity (see sidebar below

photo). “The experience was great,” said Scott. “I loved giving the presentation, the whole process of being able to show that a problem exists followed by possible solutions.” Scott will attend Old Dominion University this fall.



Governor’s School Student Jennifer Scott, lab manager Alanna MacIntyre, and Professor Mike Newman.

Time for a Change?

Methods for measuring chemical toxicity haven’t changed in decades. In fact, until recently, the standard methods introduced in the late 1920s had not even been questioned. VIMS Professor of Marine Science Dr. Mike Newman says it’s time for a change.

Toxicity is currently measured in terms of LC50—the concentration of a chemical in water that kills 50% of test animals in a given period.

The theory currently used to interpret LC50 data says that each exposed animal has an innate tolerance that, if exceeded during a test, results in death. Surprisingly, this theory has not been rigorously tested. An alternative explanation is that the death of a specific animal is simply a matter of chance. If correct, the alternative theory would change how researchers use LC50 data to determine acceptable chemical toxicant concentrations in the environment.

Newman has designed several experiments to investigate the alternative hypothesis, including a mentorship project for Chesapeake Bay Governor School student Jennifer Scott. Ms. Scott’s assays with mosquitofish showed overwhelmingly that acute toxicity is much more random than previously assumed, evidence that the traditional interpretation of LC50 data was unreliable in the common situation where subsequent exposures are likely to occur.

Many shark stocks, particularly in the Atlantic, are overfished. Rebuilding these stocks and maintaining healthy shark populations is required under the Magnuson-Stevens Fishery Conservation and Management Act.

The Inter-American Tropical Tuna Commission (IATTC), ICCAT’s eastern Pacific counterpart, just adopted a measure identical to the one adopted by ICCAT. “It’s nice to see that type of progress,” says Graves.

Other notable actions at the New Orleans meeting, the first ICCAT annual meeting held in the U.S., include the extension until 2006 of management measures for bluefin tuna, swordfish, blue marlin, and white marlin that were set to expire this year. The Commission also adopted a four-year agreement for bigeye tuna. These management measures include sharing arrangements and stock allocations designed to provide equitable access to tuna populations for all tuna-fishing nations.

ICCAT is an international treaty organization made up of 39 members representing 63 countries. Member nations manage the tuna and tuna-like (swordfish, marlin, sailfish) fisheries in the Atlantic, Mediterranean, and Gulf of Mexico, using scientific evidence to develop recommendations and resolutions aimed at maintaining populations at sustainable levels.