

Tom Lovejoy offers Cary a wild solution to climate change

By Carola Lott

Dr. Tom Lovejoy, one of the leading figures in the environmental movement, gave the inaugural Ned Ames Honorary Lecture at the Cary Arboretum on the impact of climate change on the planet April 29.

Lovejoy, who coined the term “biological diversity” and made tropical forests a public issue, began his presentation by describing the effect climate change is already having on the natural world: melting sea ice and rising sea levels, retreating glaciers, and the increasing intensity of tropical storms.

“Nature is on the move anywhere one looks in the world,” he said, citing the two ecosystems most at risk as those on islands and at high altitudes. As sea levels rise, some islands will simply disappear, he said. On land, many species are already beginning to move further north or to higher altitudes—a survival tactic that will only last so long, until there is no higher for them to go.

Lovejoy, who has worked for the World Wildlife Fund, the Smithsonian Institution, and served in a number of capacities under the Reagan, Bush, and Clinton administrations before becoming President of the Heinz Center in 2002, expressed concern about the increasing number of dry days in the cloud and rain forests around the globe.

In the Amazon, where the system is breaking down because of deforestation, fire, and loss of moisture, Lovejoy said the dieback tipping point is 20% deforestation. We are already at 18%. In the oceans, an increase of carbon dioxide raises acidity, wreaking havoc on corals and all the microscopic creatures whose shells are made out of calcium carbonate and who are a key part of the food chain. Acceptable levels of carbon in the atmosphere cannot rise above 350, and we are currently at 390, raising “some interesting questions as to how we will manage,” he said.

There is hope, however.

Lovejoy said that 20% of human caused green house gasses are the result of the deforestation of tropical forests, especially in Brazil and Indonesia. Carbon in the atmosphere declined precipitously when trees and flowering plants first appeared on the planet, and



Tom Lovejoy speaks at the Cary Institute of Ecosystem Studies April 29. Inset: Jack Bowman, a 6th grade student at Dutchess Day School, stands next to his first prize science fair entry. Photos by Carola Lott.

today carbon levels drop during the spring and summer when plants are in leaf.

For this reason, Lovejoy advocated that we use natural resources to green the planet. We can replant rainforests, restore grasslands and change farming techniques to return carbon stocks to acceptable levels. Some of this work is already being done. For example, a program in Amazonas provides incentives and gives grants to people, mostly women, who farm responsibly and protect the rainforest.

A graduate of the Millbrook School, Lovejoy said that within three weeks of beginning school, Frank Trevor, a longtime biology teacher at the school and founder of the Trevor Zoo, “flipped my switch” and put him on a path to environmentalism he’s followed ever since.

Although his inspiration was of a different nature, Jack Bowman, a 6th grade student at Dutchess Day School who was prior to Lovejoy’s speech awarded first prize for his entry at the The Dutchess County Regional Science Fair the week before, also believes in environmentalism.

Bowman’s interest to study biofuels arose after reading an article in a magazine. He began by using the

components of a chemistry set to design a project aimed at discovering the best and least expensive source of ethanol. After distilling fruits and potatoes, cane sugar and cornstarch and calculating the price per gallon of ethanol each substance produced, he found that sugar was the cheapest source while corn was more suitable for colder climates.

Bowman said he enjoys science, and especially chemistry, because of its practical nature.

“I like how you have a question and then find out the answer from the environment around you,” he said. Whether you believe in climate change or not, no one can ignore the monstrous oil slick that is destroying the fragile ecosystems along the coasts of Louisiana and Mississippi. Michael Brune, Executive Director of the Sierra Club, recently issued a call for cleaner energy.

“The oil disaster plaguing the Gulf of Mexico and our coastal states puts our desperate need for a new clean energy economy in stark relief,” she said. “We need to move away from dirty, dangerous and deadly energy sources.”

Scientists like Lovejoy and students like Bowman may be the ones to help us make that move.