BAR HARBOR, ME—Each year, the Garden Club of America awards scholarships in field botany and medicinal plant research to college students. The scholarships are based on a competitive national application. This year, says Nishanta Rajakaruna, faculty member in botany at the college, four were given to students at College of the Atlantic.

Hazel Stark, a COA senior from Winterport, ME, and a 2007 graduate of the Hampden Academy received a scholarship for medicinal plant research, as did Joseph Layden a senior from Wautoma, WI. This award is given to encourage US students "to expand their knowledge of medicinal botany by pursuing summer study in various projects, courses, and/or internship with supervision and structure.”

Maggie Mansfield a senior from Worthington, MA, and Jillian E. Gall, a second-year student from Sewaren, NJ, each received field botany scholarships for ongoing field research. That award is given to "encourage young men and women who are interested in furthering their studies in field botany and offer an opportunity to gain knowledge and experience beyond the regular course of study." All four students will receive $2000 toward their research work. Gall also received a Garden Club of New Jersey Scholarship.

Both Stark and Layden, a 2007 graduate of Marquette Union High School, created guidebooks on uses of plants for their senior projects, at COA—an intensive term-long thesis or capstone project that is required of all COA students. Stark focused on mostly Maine plants, creating a book titled, “Plants and People of New England: Our Contemporary Reliance on Traditional Knowledge.” In addition to photos and botanical information, she interviewed a variety of New Englanders on how they currently use wild plants, whether for construction, food or medicine, so as to emphasize the ongoing relationship between humans and nature. Stark will be using the scholarship to prepare her guidebook for publication.

Layden's handbook, “Algonquian Ethnobotany: Medicinal, Edible, & Ritual Native Plant Use,” is a reflection on the Algonquian's use of various native edible, medicinal, and spiritual plants and fungi. In addition to serving as a guide to these plants, it includes traditional preparations as well as mythology incorporating the plants and fungi, “manifesting a complete and distinct connection between the nature of the plants and fungi and the Algonquian peoples,” says Layden.

Mansfield, who was homeschooled, is focused on the Callahan Mine, in Brooksville, ME, which was designated a Superfund Site because of the copper, zinc, and lead, at levels potentially dangerous to human health and to the environment. She is surveying the vascular plants growing at the site to look into the heavy metal accumulation in the plant tissue. Mansfield is examining the implications to other species in that environment.

The work for which Gall received a scholarship is titled, "Insect-Plant-Soil Relations on Serpentine and Granite on Deer Isles, Hancock County, ME." Gall, a 2009 graduate of Woodbridge High School, has been investigating areas with elevated levels of heavy metals, and low levels of phosphorous, potassium, and other nutrients essential for plant growth, what are known as serpentine sites. Despite the harsh, even toxic environment, plants do grow on these severe soils. What Gall has been focused on, however, are the herbivorous insects that live on plants growing on these sites. She hopes to learn about which insects have developed a tolerance to the heavy metals, and the implication this has higher up on the food chain.

Stark, Mansfield and Gall recently returned from the Northeast Natural History Conference in Albany, NY, with Rajakaruna. Stark gave an oral presentation of her work and Gall and Mansfield presented posters. To see more botany work at COA visit http://nrajakaruna.wordpress.com/research/

PHOTO: Hazel Stark with winterberry, a member of the holly family. She notes that it's a common plant on COA’s campus, and while the fruits are inedible, the leaves can be used in tea. (Yerba mate, she adds, is also a member of the holly family.)