

RELEASE

BOOK ON SERPENTINE GEOECOLOGY CALLS FOR GREATER RESEARCH ON SOILS

Editors Nishanta Rajakaruna and Robert Boyd publish essays from Bar Harbor conference

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BAR HARBOR, ME—The plants that grow in serpentine soils—those with a high content of heavy metals—are often quite unusual, even rare. Sometimes these plants can be used to actually remove, or phytoremediate, the contaminated soils of some superfund sites. In his just-released collection of essays on serpentine soils, Nishanta Rajakaruna, who will be rejoining the faculty of College of the Atlantic here, calls for increased attention to this corner of scientific research.

“Soil and Biota of Serpentine: A World View: Proceedings of the Sixth International Conference on Serpentine Ecology” is a 450-page collection edited by Rajakaruna and Robert S. Boyd of Alabama’s Auburn University, reflecting the presentations of the weeklong conference on serpentine ecology held at College of the Atlantic in June, 2008.

Ninety-three botanists, zoologists, ecologists, pedologists, geologists, geochemists, molecular biologists, microbiologists, evolutionary geneticists and conservation biologists from across the globe came to the college to discuss their research in this field.

Among the articles are an examination of plants that may hyperaccumulate, or absorb manganese, nickel and cobalt, and even limit the dispersion of asbestos fiber in an abandoned asbestos mine. And yet, says Rajakaruna, too little is known about the serpentine soils of the northeast.

A paper written by 2007 COA alumnus Tanner Harris, now a MS candidate at the University of Massachusetts, Amherst, and Rajakaruna, notes that serpentine soils tend to produce high rates of species that are specific to that very soil. Yet, because the soils of eastern North America are not well studied, species unique to this area’s serpentine soils are not well known.

Says Rajakaruna, “Serpentine outcrops are model habitats for geoecological studies. While much attention has been paid to serpentine outcrops worldwide, the literature on eastern North American serpentine and associated biota is scant. During my time at COA, my students and I revived an interest in serpentine geoecology by publishing a series of peer reviewed papers on bryophytes (mosses), lichens, and vascular plants of serpentine outcrops on Deer Isle, Maine.”

As part of this work, Rajakaruna and his students compiled the available literature on geoecological studies conducted on serpentine in eastern North America, from Newfoundland through Quebec and New England south to Alabama. These findings set stage for the international conference on serpentine ecology at COA.

Rajakaruna is a 1994 COA graduate. He holds a M.Sc. and Ph.D. from the University of British Columbia and was awarded a post-doctoral fellowship at Stanford University. He began teaching at COA in 2004. In 2008, he joined California’s San José State University to undertake research on California’s serpentine plants.

College of the Atlantic was founded in 1969 on the premise that education should go beyond understanding the world as it is, to enabling students to actively shape its future. A leader in environmental stewardship and experiential education, COA has pioneered a distinctive interdisciplinary approach to learning—human ecology—that develops the kinds of creative thinkers and doers who can lead all sectors of society to promote sustainable ecosystems while meeting compelling and growing human needs.

“Soil and Biota of Serpentine: A World View. Proceedings of the Sixth International Conference on Serpentine Ecology,” edited by Rajakaruna and Boyd, is a special issue of *Northeastern Naturalist*. The volume provides an engaging overview of the current state of serpentine research, with important implications for many natural history related disciplines. If postmarked before Dec. 31, the price is \$30; if before Jan. 31, it is \$35. After that, it is \$40. Postage within the United States is \$6; in Canada and Mexico it is \$12, and \$14 elsewhere. The collection is available at P.O. Box 9, Steuben, ME 04680-0009, 207-546-2821, or office@eaglehill.us.