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**For the Love of Peat
Ramapo College Professor Discovers Genetically Identical Peat Moss**

(MAHWAH, NJ) - Eric Karlin, a professor of Plant Ecology at Ramapo College of New Jersey, made a startling discovery in his research of the peat moss *Sphagnum subnitens*. Across a 4,115 kilometer stretch of northwestern North America, every sampled plant of this species was found to be genetically identical. His results were published online in the journal *Molecular Ecology*.

"It can be argued that this is the most genetically uniform widespread group of plants known," said the professor. "It is very surprising to find that a plant with no genetic diversity can grow in a variety of climates."

What the finding means, explained Karlin, is that every specimen across this swath of landscape can be traced to a single parent. It appears that this species of peat moss has been present in northwestern North America for a relatively short period, perhaps less than 300 years.

Karlin, along with colleagues from Binghamton University in New York and Duke University in North Carolina where the genetic analyses were made, found similar results in New Zealand, where two parents of the same species produced all the plants growing in the country. The researchers found different results in Europe, where the populations have long been present and there is genetic variation among *Sphagnum subnitens* plants. Prior to Karlin's findings, there had been no analysis to assess the genetic relationships of the plants in these three highly separated regions.

This species of peat moss has an unusual method of sexual reproduction. A single parent can produce genetically identical egg and sperm. It produces offspring plants that contain two copies of identical DNA. "That means the offspring are genetically the same as their parent," said Karlin, "although technically they are not clones." Other plants capable of this method of sexual reproduction include some mosses and ferns.

Karlin, who didn't set out to study widespread genetically uniform plants, was initially studying the global distribution of the peat moss.

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Undergraduate students choose to concentrate their studies in one of five schools with more than 700 course offerings and 40 academic programs. Ramapo College boasts an average student/faculty ratio of 18:1 and average class size of 23, affording students the opportunity to develop close ties to the College's exceptional faculty.