

Explosive *Brachyotums*!

By Carmen Ulloa Ulloa

A road construction worker was signing not to go further and when I smelled the gun powder I knew there was going to be an explosion. In panic I ran towards a depression along the dirt road hoping the vibrations would not take the whole hillside down, me included. After the first explosion came a second one which left me temporarily deaf and a bit shaken! A tractor crew widening the dirt road (this is done with artisanal explosions) from Sigsig to the Páramo de Matanga took us by surprise while we were collecting. Fortunately nobody was hurt. This was one of the adventures we had during our field trip to the páramos of southern Ecuador on the quest for *Brachyotum*. Páramos are cool regions above the treeline dominated by bunch grasses, cushion plants, and patches of shrubs and paper tree (*Polylepis*) forests. In January 2008 I traveled for three weeks with MBG Seema Sheth, Iván Jiménez, Trish Consiglio, Ecuadorian colleagues Diana Fernández (Quito), Danilo Minga (Cuenca), and local students on a project funded by the National Geographic Society. We were based in the city of Cuenca and we are grateful for the logistic support from our colleagues at Universidad del Azuay. The purpose of this trip was to conduct surveys in one square kilometer cells to ground-truth distribution models for *Brachyotum*, a genus of shrubs endemic to the high elevations of the tropical Andes. Based on preliminary distribution models from existing herbarium collections and the programs Maxent and Domain we had a working grid map of the area with cells chosen at random for sampling. Once in the random cell, we surveyed transects of 200 meters, doing as many we could reach/search within a cell and looking for that genus taking notes and collecting on the way. Some cells were in what seemed “flat” areas of páramo but it is something else to walk a somewhat straight line in the tall and wet bunch grass. Good stretching of the calves! Because of the topography of the Andes mountains and randomness of the cell location, some turned out to be in the middle of deep inaccessible river gorges, on steep rocky slopes, in lakes, truncated by cliffs, or had sadly been converted into cattle fields or monocultures of Monterrey pine. One memorable afternoon we had a heavy hail storm and the whole paramo of Cajas was blanketed by white icy pellets. One of the most striking places we visited is an old track from the tiny village of Sevilla de Oro to the Amazon. This is a plant type locality that was visited in the 1940's by a Cinchona expedition and resulted in the description of several new species. The mule track described on the labels is still there and fortunately little has changed because the modern road is far below leaving an immense high Andean forest extending as far as the eye can see. It is probably one of the few remaining large pieces of mountain forest in the area. Azuay province is paradise for *Brachyotum* and we found some dozen species besides many other neat melastomes. All team members quickly learned how to recognize the genus and by the end of the trip could they proudly recognize most species!

Photos: I. Jiménez, T. Consiglio, S. Sheth, D. Fernández



Tres Lagunas (3 lakes) cell.



About to start a transect at the heavily altered Quimsacocha páramo



At Tres Cruces (3 crosses) in Cajas National Park



Studies in *Polylepis* forest (notice the papery red bark of the trees).



Brachyotum confertum likes disturbed cattle pastures.



"Tirar piedras" (Falling rocks) at the Sigsig-Matanga road



Pristine mountain forest on the mule track to Méndez



On the footsteps of the 1940's Cinchona explorers, a track that unknowingly led them to a brief but scary close encounter with páramo bulls.



Collecting a tree melastome (*Miconia*)



"Operation cardboard" in the village of Sigsig; later to be converted into plant press corrugates.



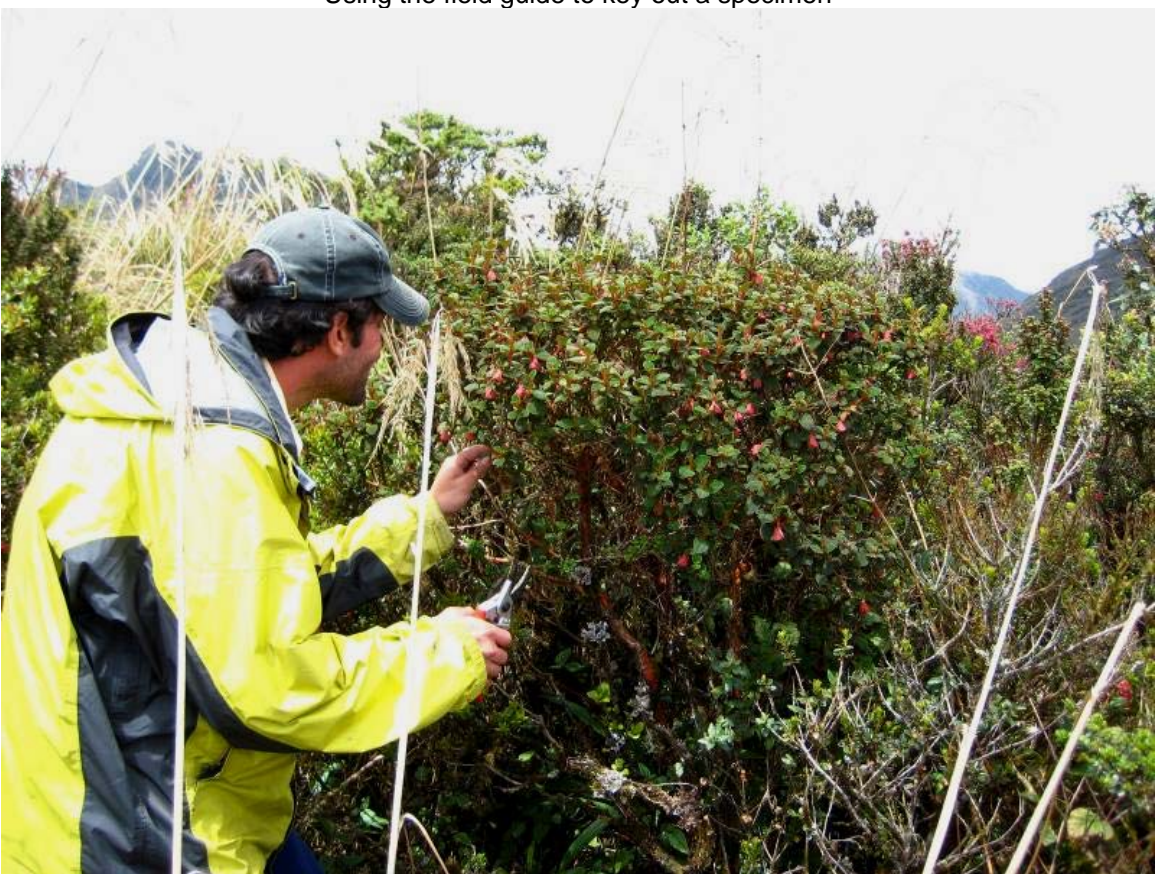
Large shrubs of *Brachyotum rostratum* and *B. campii* growing side by side (background)



Pack of lamas after a hail storm in Cajas National Park



Using the field guide to key out a specimen



Huge flowers (2-3 cm) of *Brachyotum campii*



Swampy páramo at Soldados.



Brachytoum 'potpourri'