Centres of moss diversity in southern Africa

Nonkululo Phephu
PhD student, University of Witwatersrand, Johannesburg, South Africa

I am going to present one chapter of my PhD study, in which the geographical distribution dataset of most recent records was used to identify centres of moss diversity in southern Africa (South Africa, Namibia, Botswana, Lesotho and Swaziland). Five main, and five secondary centres of moss diversity are described, based on the number of moss species per ½ degree grid square in southern Africa. Although collecting bias is responsible for concentrations of species in many areas, moss diversity is strongly influenced by habitat heterogeneity and mean annual rainfall.

I am conducting a PhD study on the bryophyte flora of southern Africa, at the University of Witwatersrand, Johannesburg. The objectives of my project are to: identify centres of bryophyte (liverworts, mosses and hornworts) diversity and investigate colonization routes of taxa occurring in the north and south hemisphere, and to evaluate to which extent, patterns resulting from long-distance dispersal or from ancient vicariance respectively, are present in the southern African and Portuguese flora (including Macaronesia). Sampling will take place on both regions but the use of the herbarium collections from several institutions will also support the acquisition of suitable material for the project development.

I work for the South African National Biodiversity Institute (SANBI) as a bryophyte taxonomist at the National Herbarium, Pretoria.