e-flora: a new interactive floristic and chorologic information system on the Internet

S. Castravejo
Real Jardín Botánico, CSIC, Madrid, Spain

A demonstration of two new informatic tools will be done. These programmes have been developed to both identify species and show information – mainly geographical – related with species. Both, together, have as characteristics:
– work over the Internet.
– can be augmented from traditional descriptions, even already published.
– for any one of the species it displays a dot map made on-the-fly, a picture, a plate, a description, the list of synonyms, an updated list of localities, etc.
– show geographic, cytological or graphical information taken from both sources: bibliography and herbarium specimens.
– avoid the problem caused by the synonyms.
– the information related with a single species can be found under more than a single name.
– through a routine developed to understand the nomenclature and synonymy.
– assist as well for specific identification without using dichotomical keys, but a interactive way of searching. In summary, we can show a system to provide taxonomic and floristic information not as a printed flora, but in a modern and interactive format through the Web.

doi:10.1016/j.sajb.2008.01.038

Difficulties encountered during the micropropagation of Boophone disticha (L.f.) Herb (Amaryllidaceae)

L. Cheesman, J.F. Finnie, J. Van Staden
Research Centre for Plant Growth and Development, School of Conservation and Biological Sciences, University of KwaZulu-Natal Pietermaritzburg, Private Bag X01, Scottsville 3209, South Africa

Boophone disticha (= Boophane disticha) is one of the most widely distributed bulbous species in southern Africa. It is known for its poisonous and medicinal properties. B. disticha has great potential as an ornamental due to its fan-shaped foliage and large umbel of bright pink to deep red flowers. Twin-scale explants, from dormant bulbs collected from March to May, were placed on solid Murashige and Skoog media supplemented with various concentrations of Naphthalene acetic acid (0, 2.69, 5.37, 10.74, 26.85 and 53.7 µM) and benzyladenine (0, 2.22, 4.44, 8.88, 22.2 and 44.4 µM). No response or differentiation was observed and all the explants turned brown. To overcome browning, the treatments were placed on 2 g/L charcoal with 150 mg/L ascorbic acid. Cultures were placed either in a 16 h light/8 h dark regime or kept in the dark.

A secondary aim is to identify the compounds responsible for the activity observed, using chromatography techniques.

doi:10.1016/j.sajb.2008.01.040

Endemism, phytogeographical considerations, and a preliminary flora of the Sneeuberg mountain complex in the Great Karoo, South Africa

V.R. Clark a, N.P. Barker b, L. Muscina c
aDepartment of Botany, Rhodes University, Grahamstown 6140, South Africa
bDepartment of Botany and Zoology, University of Stellenbosch, Private Bag XI, Matieland 7602, South Africa

cThe Sneeuberg, Eastern Cape, comprises one of the most prominent sections of the Great Escarpment in South Africa, yet remains one of the least known botanically. Most of the limited botanical work in the Sneeuberg was undertaken in the 1800s, and several species are only known from their types. Following extensive literature review and a detailed collecting programme, the Sneeuberg has a provisional flora of 1667 species. Twenty-nine (1.7%) endemic species occur, compared to 13% endemism in the Drakensberg Alpine Centre (DAC) and 1.5% in the Great Winterberg-Amatolos. Five near-endemic Sneeuberg species are shared with adjacent sections of the Great Escarpment. Five hitherto DAC endemic species and two possible others suggests that the Sneeuberg is the western limit of an extended DAC. This is supported by (1) Muscina and Rutherford’s (2006) extended DAC concept that includes the moister, high-altitude fragments of the Great Escarpment south-west of the DAC, (2) the presence of 84 DAC near-endemics in the Sneeuberg, and (3) comparative faunal distributions such as Chaetops auratus (orange-breasted Rockjumper) and invertebrates such as Pseudonympha trimeni ruthae. The presence of three Cape Floristic Region (CFR) species in the Sneeuberg suggests a historical link with the CFR. The thicket vegetation of the lower slopes and adjacent kopjies can be assigned to the Albany Centre given its geographical continuity with adjacent thicket types in that Centre.

doi:10.1016/j.sajb.2008.01.041

Conservation biology and population dynamics of Leucospermum gerrardii Stapf. (Proteaceae) in the Dr Hamilton Protea Reserve, Mpumalanga

K. Coetzee, E.T.F. Witkowski, B. Erasmus
University of the Witwatersrand, Private Bag 3, Wits 2050, Johannesburg, South Africa

Leucospermum gerrardii Stapf. (Proteaceae) is a vulnerable South African and Swaziland endemic. In South Africa it occurs in KwaZulu-Natal and Mpumalanga: the two KwaZulu-Natal subpopulations have sizes of less than 40 individuals; the Mpumalanga subpopulations had not been evaluated. The aim was to assess a large Mpumalanga subpopulation at Nelshoogte, within a grassland reserve patch surrounded by pine plantations. The location of each L. gerrardii was accurately logged using a differential GPS, and specific plant