PTERIDOPHYTA

NEW PTERIDOPHYTE RECORDS FOR THE FLORA OF SWAZILAND

The most recent enumeration of the pteridophytes of Swaziland is that of Roux (2003a), nomenclatural aspects of which have been updated (Roux 2009). The 2003 checklist reflected new discoveries based on intense field work conducted during May 2002, and was complemented by a country-focused treatment (Roux 2003b) that provided distribution maps for each taxon. The new records were included in the Swaziland flora checklist produced shortly thereafter by Braun *et al*. (2004). We report on three subsequent pteridophyte discoveries made in Swaziland, which increase the total documented number of fern taxa occurring there to

115. Protologue citations and synonymy for these new records—*Asplenium cordatum* (Thunb.) Sw., *Cheilanthes inaequalis* (Kunze) Mett. var. *buchananii* (Baker) Schelpe and *Ophioglossum costatum* R.Br.—are provided by Roux (2009).

Asplenium cordatum

It is somewhat surprising that no ceterachoid asplenium have been found earlier in Swaziland, given the extent of suitable xeric habitat and close proximity to South African localities of the two regional species [for map see information under *Ceterach cordatum sensu* Burrows (1990)]. Plants of *Asplenium cordatum* [Aspleniaceae, syn. *Ceterach cordatum* (Thunb.) Desv.] were found in typical habitat near Mbabane (Figure 7), as chasmophytic saxicoles (Jacobsen 1983) on granite boulders amongst clumps of *Strelitzia caudata*. The vegetation at the site forms part of the KaNgwane Montane Grassland (Gm 16) (Mucina *et al*. 2006).

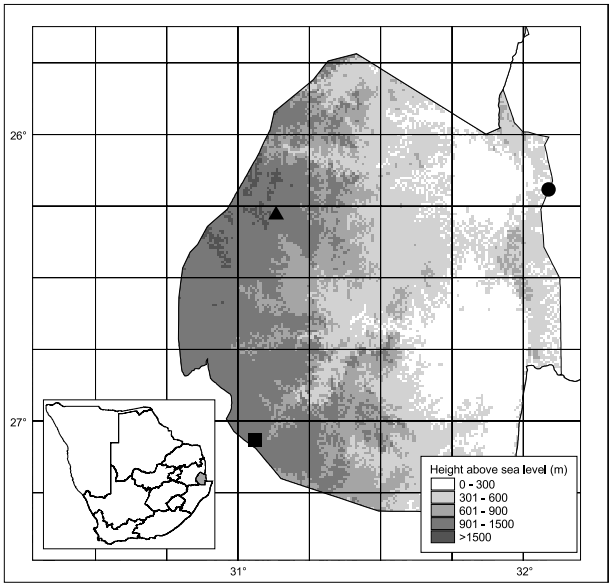

FIGURE 7.—Distribution of *Asplenium cordatum*, ▲; *Cheilanthes inaequalis* var. *buchananii*, ■; and *Ophioglossum costatum*, ●, in Swaziland.

Specimen examined

SWAZILAND.—2631 (Mbabane): on ledge of granite boulders, northeastern aspect, towards top of kopje on Van der Meers Farm, Mbabane, 1 346 m, (–AC), 29-12-2009, *L. Loffler 1179* (BNRH, PRE).

Cheilanthes inaequalis var. buchananii

Within its distribution range, *Cheilanthes inaequalis* var. *buchananii* (Sinopteridaceae) is usually associated with a quartz substrate, growing on moist soil in the shade of rocks. The current finding of this taxon at Mahamba Gorge (Figure 7) in the lee of quartzitic rocks in mid-altitude grassland is fully consistent with its known ecological requirements. Plants were uncommon and localized on a northern aspect. The Swaziland plants link disjunct subpopulations near Graskop in Mpumalanga with those in central KwaZulu-Natal (Burrows 1990), in much the same way that plants of *Pellaea pectiniformis* Baker (Sinopteridaceae) from the Mahamba Gorge site do for that species (Roux 2003a). *Cheilanthes inaequalis* var. *buchananii* may be superficially confused with *C. eckloniana* (Kunze) Mett., the lamina underside of which is similarly covered with a felt-like layer of hairs. However, the former taxon may be distinguished readily by the absence of broad, shiny, cream-coloured scales along the abaxial surface of the costae and costules (Burrows 1990). The typical variety of *C. inaequalis* has not yet been collected in Swaziland; this taxon has a tomentose rather than pilose dorsal lamina indumentum. The fronds are less dissected and narrowly ovate to lanceolate in outline rather than broadly ovate as with *C. inaequalis* var. *buchananii*. The hairs of the typical variety are also shorter and matted, whereas those of var. *buchananii* are longer and straighter (Anthony 1984; Burrows 1990). The vegetation at Mahamba Gorge corresponds to Ithala Quartzite Sourveld (Gs2) (Mucina *et al*. 2006).

Specimen examined

SWAZILAND.—2731 (Louwsburg): Mahamba Gorge, ± 7 m from water tank supplying rest camp, on north-facing aspect in soil between vertical quartzitic rocks, growing together with *Pellaea pectiniformis*, 984 m, (–AA), 22-11-2009, *N. Crouch 1259* (NH).

Ophioglossum costatum

Ophioglossum costatum (Ophioglossaceae) is widespread in the Old World tropics, stretching from northern Australia through Indonesia, India to Africa and Madagascar. In Africa it occurs widely in tropical and subtropical deciduous woodland and open savanna, always confined to seasonally wet habitats such as stream banks, next to springs, and in seasonally wet seepage areas over sheetrock. Although widespread in tropical Africa, *O. costatum* is somewhat more rare in the *Flora of southern Africa* region and, up until now, had not been recorded further south than 25º S, in the Witbank and Nelspruit Districts of Mpumalanga Province (Burrows 1992).

This latest collection was made in the Umbeluzi Gorge which cuts through the Lubombo Mountains that form the border between Swaziland and Mozambique. It was found growing among short grasses in a wet area next to a small stream near the Umbeluzi River, just before it flows out into Mozambique (Figure 7). The vegetation at the site forms part of the Southern Lebombo Bushveld (SVl 16) (Rutherford *et al*. 2006). This collection therefore represents the first record of the species from Swaziland, as well as a range extension southwards for the species in Africa.

Specimen examined

SWAZILAND.—2632 (Bela Vista): Umbeluzi Gorge, Mlawula Game Reserve, 100 m, (–AA), 3-12-2006, *J.E. Burrows & S.M. Burrows 9654* (BNRH).

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