

SELAGINELLACEAE (LYCOPSIDA)

SELAGINELLA IMBRICATA IN THE FLORA OF SOUTHERN AFRICA AREA

During August 1956 a specimen of *Selaginella imbricata* (Story 5841) was collected in the Kapupa Valley (12°34' E, 17°21' S) in the northwest of South West Africa. This species was not included in Prodr. Fl. S.W. Afr. The presence of *S. imbricata* in South West Africa is rather unexpected, as this species usually occurs in rather moist forest situations. The specimen was reported as occurring "along fissures in rocks in mountain gorge". Judging from the geographical situation, the area where the specimen was collected, must be extremely dry.

The find is of interest, firstly because it adds another species to the flora of South West Africa, and secondly, because it extends the known range of the species westwards by 1300 km. The nearest point from which it was previously known, is the Victoria Falls.

This is the first time the genus has been recorded from South West Africa, although a number of species occur in adjacent territories.

Two other specimens in the National Herbarium, also proved to be *S. imbricata* (Forsk.) Spring ex Decne. Apparently these two specimens, *Galpin* s.n. in PRE Cryptogamic Herbarium (Pteridophyta) 3532 from Devil's Hoek in the Royal National Park in 1928, and *Esterhuysen* 10823 from the "Turret" and "Amphlet" in the Cathkin Peak area in 1956, represent the only two collections from which this species is known in South Africa. This is about 1500 km south of the nearest known locality near Melsetter in Rhodesia.

Selaginella imbricata is widespread throughout the eastern part of Africa, from the escarpment between Mozambique and Rhodesia in the south to Arabia in the north. It occurs westwards along the Zambesi valley to at least as far as the Victoria Falls and, as already mentioned, is found in the extreme north-western part of South West Africa.

It would seem that the plant must be very rare in South Africa to have escaped more frequent collection, as it is quite a distinct and conspicuous species. It can easily be distinguished from other South African species because of the rhomboid outline of the branched stem system, which stands erect, as it is rather stiff, and is arranged in one plane like a fern frond, instead of being procumbent and closely adpressed to the substrate. It occurs in moist, shady forest situations against earth banks. Under dry conditions the plant rolls up into a series of ball- or clockspring-like structures, but unrolls again after rains.

While some species of *Selaginella* occur under moist conditions and cannot withstand drought, many species are xerophytes of the "resurrection" type. Such species are dry and inactive and more or less rolled up during the greater part of the year. As soon as they are moistened, however, the leafy branches unfold and the tiny leaves attain a green colour once again. *S. imbricata* is intermediate in this respect. Its habitat is generally not dry at all, but it is capable of surviving dry spells by going into quiescence.

P. VORSTER