

SHORT NOTE

Survey of populations of Aloes in the Namib Region south of the Swakop River

by

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A geological survey of the area shown on Figure 1 was carried out between February and June 1973. The area comprises 560 square kilometres and was traversed on 43 lines each one kilometre apart. In the course of the traversing, counts of the aloe populations were made. The object of the study was to determine the number of species and their respective densities in different parts of the area. The area is bounded on the northwest by the Swakop River and the ground to the southeast is very largely rocky and culminates in the Horebisberge which reach an altitude of some 1 200 metres above sea level. The area, classified as Inner Namib by Logan (1960), has a considerable range of temperature and a rainfall of about 100 mm per annum.

There are three different environments in which the aloes occur:

- a) The generally rocky, hilly terrain rising from the Swakop River.
- b) The Horebisberge and their southwest extension.
- c) The sand and calcrete-covered flats southeast of the Horebisberge.

The three species of aloes recorded are *Aloe namibensis*, *A. dichotoma* and *A. hereroensis*. The former two are relatively common and counts were made so that population densities of each species could be evaluated. *Aloe hereroensis*, on the other hand, is extremely rare and only two specimens were recorded.

1 *Aloe namibensis*

The limits of occurrence of *Aloe namibensis* are shown in Figure 1 and the population density contours are derived from the numbers counted per line kilometre. It is estimated that these contours represent 2-5% of the actual population per square kilometre, as counts covered a strip extending some 30 m on either side of lines one kilometre apart. This aloe is most abundant on the undulating granitic terrain near the sandy flats east of the Horebisberge. An isolated population of *Aloe namibensis* was recorded in the mountains on the boundary between Rooikuseb 109 and Tsaobismund 85. *Aloe namibensis* was noted in flower on April 17th which was about one month after the start of the rains.

2 *Aloe dichotoma*

The distribution of *Aloe dichotoma* is shown in Figure 2 and the contours represent the numbers counted per line kilometer. These figures probably represent about half the true population per square kilometer as counts covered a strip extending about 300m on either side of lines one kilometer apart. There is a forest of about 100 *Aloe dichotoma* on a south-facing hill slope near the Tinkas River and it is noteworthy that in general these aloes grow preferentially on south facing hill slopes. The principal population is on the south-easterly faces of the Horebisberge where more than 15 per line kilometer were observed over an area of 8 × 4 kilometers.

These aloes were in flower in May and supported a large population of Dusky Sunbirds (*Nectarinia fuscae*) at that time.

3 *Aloe hereroensis*

Two *Aloe hereroensis* were seen near the fence between Rooikuisieb 109 and Wilsonfontein 110 (Figure 1) in the extreme east of the area. They were in flower in the month of May. This is on the western limit of this species' distribution.

The principal populations of *Aloe namibensis* and *A. dichotoma* are east of the Horebisberge, probably due to a more favourable rainfall and development of soil in that area.

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