

Acacia characterizes the vegetation. The pasture animals here are ostrich, sheep, (merinos) and goats. Beautiful desert country and usually rocky at the surface.

September 13.

Cradock. A very attractive city situated in a valley in a karoo-like desert. In the valley Acacia horrida forms a light fringe about 1/4 to 1/2 mile wide, and it again becomes prominent near the slopes at the side of the valley. Another Acacia much less thorny occurs in this location. A low shrub-like Mesembrianthemum with the habits and appearance of an Euphorbia occurs on the low sandy land. On the upland the soil is very shallow and rocky and the vegetation consists of a very small spiny plant with succulent, almost scale-like leaves; also the karoo bush, Pentzia, (a sage-like composite), reminding one very much of the bud sage of the Nevada and Wyoming deserts. There is also a grass with a habit somewhat like buffalo grass. It may be Schmidtia. On the whole this desert looks exactly like such areas in our western desert. There are also occasionally mat plants, and bulb plants seem abundant. Also large bushes which look somewhat like Greyia. There are also many small-stemmed upright Euphorbias, and a white lime-like rock occurs just below the surface of the soil.

In the city market meat and vegetables are being sold between 6 and 8 a./m. The market is filled chiefly with vegetables (a very poor type of cabbage, but good carrots, turnips and white-fleshed sweet potatoes, a red-tipped lettuce, oranges and a very rough-skinned lemon-like



fruit with the color of an orange). Barley is sold in small sheaves, cut green. The wood sold is that of the Acacia.

The draught animals are oxen or burros, of which 6-10 constitute an ordinary team. Goats, sheep and cattle are the principal animals on the range.

Ford cars are very abundant in the city. Here as elsewhere the two-wheeled Cape buggy is one of the chief passenger vehicles.

The streets are lined with paper trees, cedar and Casuarina.

No farms at or near the town.

We arrived here at 12:30 a.m. and left at 9:35 a.m. This was near the end of one of the worst drought periods that South Africa has ever suffered, and the newspapers were full from day to day with accounts of the pasture conditions, especially unfavorable for grazing animals. A number of photographs were taken in the early morning.





N 11. A single plant of Acacia horrida. Karoo bush in the background. Vegetation closely grazed by cattle, sheep and goats. Grass has the habit similar to that of buffalo grass.



N 12. A detail of thorns of Acacia horrida.





O 1. Shows typical vegetation of the Karoo type. Low spiny shrub, herb. 147; Karoo bush herb. 148, which has the habit of the bud sage; and a grass similar to buffalo grass, herb. 151; an annual grass herb. 158: also taller Greyia-like shrub.

Most of the ground is bare and rocky and seems to be lacking in lime, although large white lime rocks lie near the surface in places.





O 2. Similar to O 1. Shows the mountains in the background. This is typical of the overgrazed Karoo.



O 3. Gradock in the background. Elevation 2855 ft. Vegetation in the fore consists of an upright plant, Euphorbia, herb. 146, and a mat plant herb. 145.



The whole country looks very hot and dry, and the only plants in bloom were the Euphorbia herb. 146, and the mat plant herb. 146. Acacia horrida forms a most attractive tree when not in leaf. The thorns are 2-4 inches long, pure white, and the whole plant appears white. It should form a good ornamental, especially in the hotter and more arid portions of the country.

North of Cradock an occasional farm was seen and Apuntia is quite common.

Kapstein. Typical desert shrub with small amount of grass. The grass may be more prominent after it rains.

Baroda. Elevation 3061 feet. Irrigation and windmills. The chief trees are pepper and peach, the last-named being in bloom at the depot. Grain is grown here under irrigation.

Fish River. Irrigated farms here, but apparently neither a fish nor a river. The ranges here are given over almost entirely to ostriches.

Conway. Elevation 3549 feet. Two photographs were taken, showing the karoo with goats pasturing in background, H 8 and H 9, below. H 8 shows a roadway and small flood dam. Most of the country has been uniform, ostriches grazing on karoo bush with a very small amount of grass. Desert-shrub--desert desert-grass is a good desination for this type of country. Here we passed in places flocks of fat-tail sheep.





H 8



H 9.



Rosmead Junction. Elevation 4043 feet. The type does not change, but there are irrigated ranches at this point, the ranches irrigated by gravity and flood water. Rye and Lucerne are the principal crops. Practically no corn. The country is becoming decidedly grassy from here on and should be designated as desert-shrub--desert-grass.

Shosborne. Elevation 4589 feet. Peach orchards and many century plants. Basin irrigation is practiced here and flood-water are being constructed. The surface soil is gray from 6-12 inches and white and lime-like below. The hills are covered with a vegetation of the desert-shrub and desert-grass type, and remind one of Arizona near Holbrook, but with this difference, that the shrubs are here edible and are are grazed down by animals.



H 11. A broad valley with brush and grass and a few irrigated farms in the distance.





H 12. Same valley, but straight across.

Carlton. Elevation 5187 feet. Karoo bush and grass.

At the top of the divide there are a few Euphorbias.

Naauwpoort Junction. Elevation 4884 feet.

Waldfontein. A desert-shrub, very low but with a considerable amount of grass between.

There has been no essential change for many miles. There are now a few termite hills and great broad stretches of karoo.

Dwaal. Here are many sheep and some irrigated land. The farms are fenced with stone walls.

Practically no change in vegetation for many miles. The greatest changes are the following: From thorn bush to desert-shrub at Bushman's River; from desert-shrub and desert-grass at Cypress Grove or Rosmead Junction.

De Aar. Arrived at 8 p.m.