

November 30, 1919. The elevation at one-fourth mile west of camp was 7,010 feet (uncorrected). Triangulations were taken from point of rock shown in panoram A²-2 to A²-5 at an elevation (uncorrected) of 7,280 feet. The cliff shows Combretum, acacia, and Cymbopogon. At the left the river grasses and islands. Livingstone's Crossing of the Kafue is shown in this photograph. Panoram A²-2 to A²-5. Shows cliff at the left with the grasses along the edge of the river. The panoram shows the cliffs and the grassy river bank at the left with an island on which there are small native plantations of corn and other crops. The trees come to near the edge of the river bank on the north side. It is lined on this side by a row of Arundinaria. At the right are seen trees on the cliff.

Shot a large baboon for the museum.

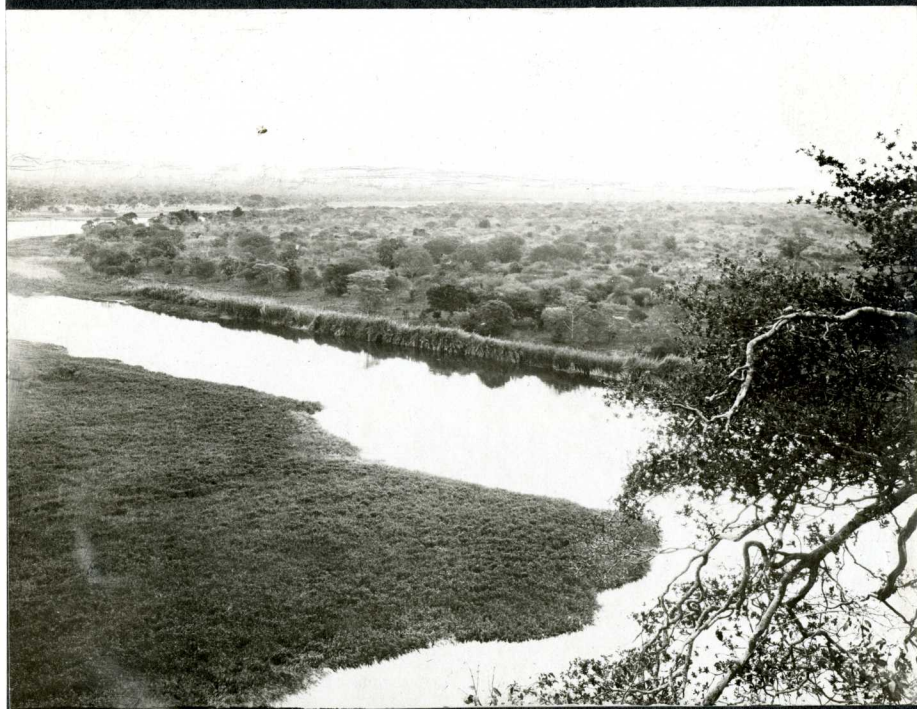
December 1, 1919. During the morning it rained, but at 3 in the afternoon, with the sun shining, the temperature was 82-83° F, but threatening thunder storms.

The trees on the top of the cliff consist largely of the following: A few large trees of Brachystegia that stand out alone at the edge; the top is rock and about half trees and half grass; a small tree with very thin downy leaf. Brown herry is abundant, one with 5 calyx-like attachments around the seed which occurs in the center (Herb.454), Momates africanus. This often has a peculiar black leaf with the upper surface diseased, and is sometimes almost the dominant tree. A fine-leaved *baboon?* acacia tree with tough bark called Batondwaa. This is an important tree in this section, occurs abundantly below the hill. This tree is probably Brachystegia (S.P.I. 49459).

Panoram A²-6 to A²-10 was taken from the top of the cliff further up, and gives an excellent detail of the country below. The Combretum at the edge of the cliff is shown and also the paper-bark tree, and the tree with a leaf

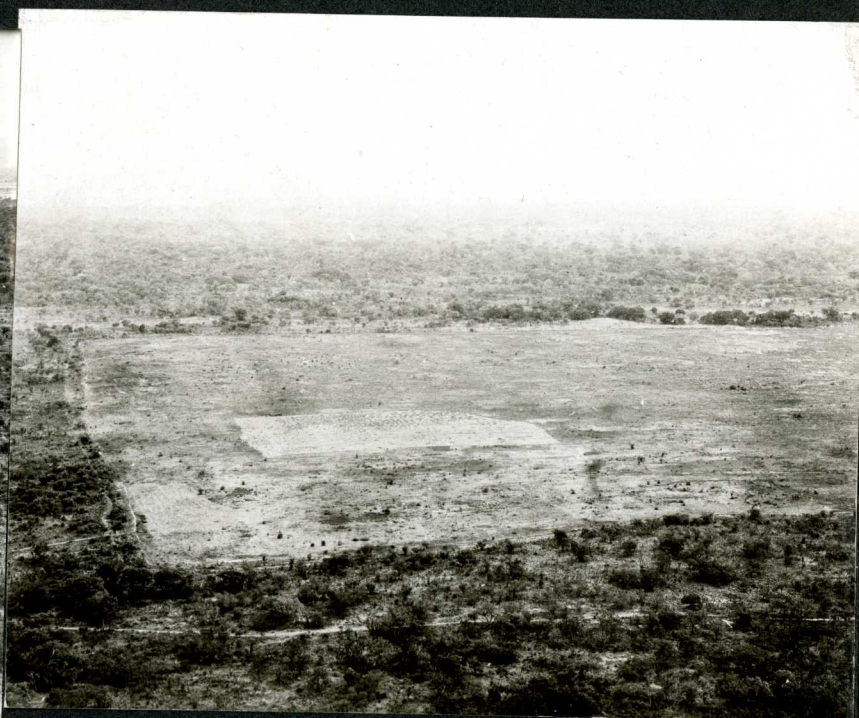
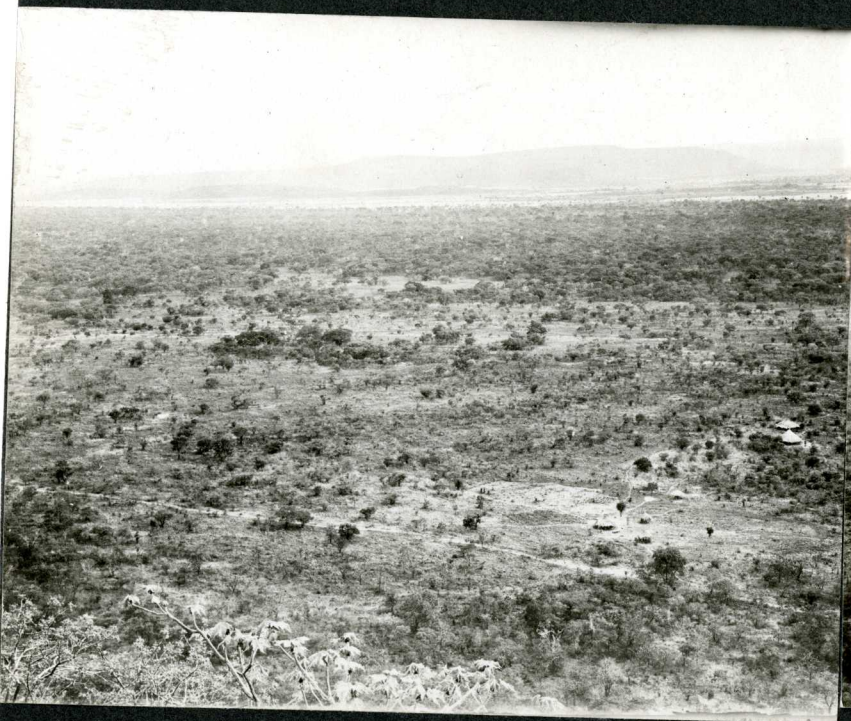
352





552







cotton, which is known as mpuvunguma tree, and a myrtle-like tree, and many others. The river islands are shown at the extreme left. Our camp was at the right of the picture. The open forest is well shown in the back, with mopane flat at the back. The rather cleared space was once planted to corn, but after several trials was abandoned because of the destruction of baboons. There are at present two small native fields, shown in the photograph, one near the right and one near the left. These are largely sorghum which has been allowed to reproduce itself from the old roots, a few more plants being put in each year. The huts of natives are shown both at the right and the left center of the picture. This is typical of native dwellings in this section. About the vicinity of these huts can be discovered small patches of native land, although by far the greater amount of their gardens is stuck away in small patches on the islands of the river, or in little alluvial patches of the forests in the background. The farm is owned by Mr. Hotchkiss. At the left of the farm is shown revegetation or succession about 3 years old. In the center this is somewhat older. The trees enter rapidly.

A²-11. Detail of the vegetation on the top of the cliff, *Brachystegia* in the foreground.



December 2, 1919. Took a long trip down the river and out over the mountains. The most of this region is forested with *Brachystegia*, *Acacia*, *figus*, *Combretum*, *Pterocarpus*, *Cantheum lancifolium*, *Kigelia*, and an occasional *Euphorbia*. *Acacias* along the river have short, recurved spines on the main stem. *Acacia rigida* is very abundant on good alluvial land at the base of the hills. *Brachystegia* occurs at the base of the hills where it is rocky but the soil new, not black and rich. *Protea* and *Cantheum* occur most common on heavy or impervious soil. Just south of camp there is a large hill about one mile long. See sketch.

The vegetation at V and V-1 consists of a luxuriant growth, but does not change much in character as one passes the hills and mountains. Fruit trees occur everywhere, except that I have not found the munkononga anywhere except on the flats, where when young it produces a very tall cylindrical tree, the whole crown being about two feet thick and fifteen feet high.



A²-12. Was taken at V. in the above sketch. That is, about 4 or 5 miles down the river, and shows the path made through the bamboo and arundenaria by hippos when they come out of the river to graze on the upland. The tree at the right is a Kigelia and the vine at the left asparagus.



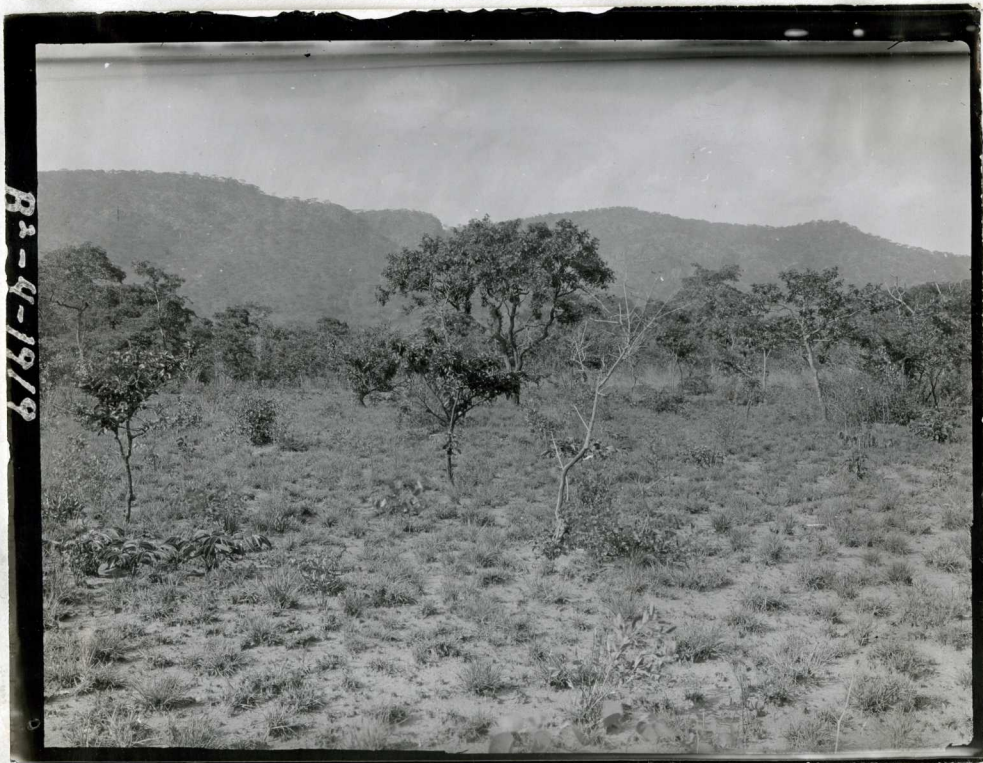
B²-1. 8-1/5 sec. This shows Joseph, and Chogofola Moshenti, the old man of our party, at the left, making a fire under a large Kigola tree. Two sticks are used and one is turned rapidly between the palms of the hands, maintaining a relatively high pressure on the lower twig.



B²- Shows an open grassy glade near the river with acacias in the background. These acacia groves near the river are very similar to *Acacia robusta*, but have very thin pods. This grassland is grazed over by hippos, especially during the night when they feed on the shores.

neg

B²-3. 128 -1/2 sec. S.P.I. 49608, Cantheum lanciflorum, common name maululu, known among the whites as a plum or fruit tree. This tree is very abundant on the shallow or more impervious soils. It has a large fruit and has a very rich spicy flavor. Chogofola shown in the photograph.



B²-4. An open space with Odina, Cantheum, Protea abyssinica, Ochna, Combretum. Wooded hills in the distance are north of the Kafue river.



B²-5. 128 -3 sec. Ochna, S.P.I. 49596, one of the most beautiful low shrubs of this section. The leaves are silvery, while the sepals and receptacle are a deep rich red and the carpels perfectly black and polished. The whole plant is about 15 inches high. One of the most attractive shrubs of the region. The foliage is almost absent from the upper part of the shrub, so that the whole presents the appearance of a silvered outer part and a deep vermillion and black fruiting portion standing out in the center of the shrub. See also B²-1, Herb. 465. One of the most brilliant ornamental shrubs seen during the whole trip.