

December 27, 1919. Spent the morning at the office of M. de Neuter, director of agriculture. Here they have a well-equipped station, but are now short of almost all supplies. Most of the instruments are not running because of lack of recording paper. They have here the following instruments and it is surprising to find so well-equipped a station at so remote a point:

Wind record, both rate and direction.

Evaporation by R. Fuess apparatus

Wet and dry bulb determination

Hygrometer 70-100 percent. Temperature varied from 16.08 to 24 for last 24 hours.

Continuous thermograph records. Humidity by stationary wet bulb.

Barometer shows practically no difference from day to day.

Sun records by heliograph of the bulb type.

A series of thermometer readings of the soil.

A number of experiments have been carried on with trees on which the following notes were taken:

Olive. Trees look good and are doing well, but have have not fruited.

These trees are irrigated during the dry season.

Cupressus macrocarpa does the best.

Cupressus elegans, good.

Cupressus lansianiana, very poor.

Cupressus pyramidalis, not as good.

Cupressus sempervirens, very poor

Cupressus goveniana, not much good.

Cupressus calcorata, dead at the top as from drought.

Eucalyptus rostrata in a plantation. It is the most resistant to termites but is slowly dying out.

Eucalyptus glabularis. Does well until the ants start work on it.

Eucalyptus citriodora. Base already girdled by ants.



Eucalyptus paniculata. Does very poorly.

Tangerine trees look very well.

Jacaranda mimosaefolia. Does very well and has not been destroyed by termites.

Pinus halepensis is not growing at all.

One of the Ficus varieties called Milumba does very well.

Syringa does not grow as well as does Jacaranda.

The South African mulberry does very well.

There is a Solanum, a vine which is a wonderfully beautiful thing.

Seeds of this Solanum may be secured from Starke Brothers.

Phytolacca is a specially good tree for this section.

The following plants were secured and packed for mailing:

S.P.I. 49874, a Gloriosa lily which may have as many as 7-8 flowers, are fine deep red in color, but vary considerably in tone. This is one of the most prominent lilies in this section at this time of the year.

S.P.I. 49875, an Oxalis. A small pink-flowered form which produces attractive tufts and flowers at the beginning of the rainy season.

Shantz No. 362, a large zingiberaceous plant with foliage like alpina, but the flower occurring on separate stems as it does in Phaeomeria. The flower is attractive and the foliage unusually attractive. The fruit, which I have not seen, is said to be prized as a source of moisture.

Holcus sorghum, S.P.I. 49968, a white Kaffir corn grown by the natives and one of the chief food plants.

Oriza sativa, S.P.I. 49969, a late variety of dryland rice, grown by the natives at Stanleyville known as Kinyeki. These grains break rather easily.

Shantz No. 367, Oryza sativa, early variety of dryland rice called



Mutselir, grown at Stanleyville. Is three weeks earlier than S.P.I. 49969.

Coffea laurentii, S. P. I. 49963. One of the best types of coffee for the Belgian Congo.

Coffea excelsa, S.P.I. 49962, one of the better types of coffee for the Belgian Congo.

Shantz No. 370, Syringa. A tree with blue flowers and yellow fruit. An excellent street tree.

Shantz No. 371, S. P. I. 49972, Solanum sp. Beautiful deep-lamendar flowers 1-1/2 inches across, with deep-orange-colored fruit 1-1/2 inches in diameter. Has no local use so far as I can see.

Shantz No. 372, seed from large Brachystegia.

Shantz No. 373. Large red bean.

Shantz No. 374, S.P.I. 49957. Asparagus seed collected at Victoria Falls, December 17, 1919.

Shantz No. 375, S.P.I. 49958. Berlinia. A large leguminous tree, Victoria Falls.

S.P.I. 49975. A tree with a very peculiar fruit, the fruit having two long wings.

S. P. I. 49960. Brachystegia. A large Brachystegia from Victoria Falls.

S.P.I. 49959, Videns vilosa, Elizabethville, December 28, 1919. This is a weed, but has a considerable food value and is regarded as almost good feed as lucerne.

S.P.I. 49956, Albizzia labek, one of the best ornamental trees.

S.P.I. 49961, Cassia didymobotrya. A beautiful shrub planted abundantly in the parks in Elizabethville.

S.P.I. 49973. Tristachya biseriata. Seed of a tall aristida-like



grass, a plant having the habit of an Andropogon.

S.P.I. 49965, Cyphomandra betacea. The Brazilian tomato tree. It produces a good crop of egg-shaped fruits and is regarded locally as a promising plant.

S.P.I. 49964. Combretum. One of the prominent trees at Elizabethville.

S.P.I. 49955. Adenanthera pavonina. Ornamental leguminous tree with bright red beans.

S.P.I. 49971. Plectronia sp. Low shrub with white flowers and attractive black berries.

S.P.I. 50067, Zea mays. Corn of the type sold to the natives at Elizabethville and probably produced by them.

S.P.I. 50017. Holcus sorghum. White Kaffir corn.

S.P.I. 50060. Eleusine coracana. One of the principal corns used in making native beer.

S.P.I. 50065, Phaseolus vulgaris. Beans grown by the natives.

General notes.-- I here secured a copy of the Mission Emile Laurent de Wildeman, Etat Independant du Congo, published 1905-06, from which some of the following notes are taken:

Zinnia elegans grows well here. Have noticed it chiefly in gardens.

Bidens pilosa is very prominent plant, extending from Transvaal into the Congo.

The tall rank Andropogons or Symbopogons do not constitute a uniform part of grass cover but often spring up where a more than unusual amount of water is available, as along stream beds or in slight depressions.

Paspulum is one of the common grasses.

Panicum, especially the large hydrophytic types, is especially



abundant along anthills and cliffs.

Tricholaena rosea abundant in the Transvaal. Has been noted from the train in the Congo but have not secured seed from it at Sekania or Elizabeth.

Pennisetum. This is the off season for both Pennisetum and Sorghum.

Oryza sativa. De.Wildman recognizes two varieties cultivated in the Congo.

Sporobolus. 3 species are named.

Cynodon dactylon. is abundant, as is also Phragmites communis.

Eragrostis is represented by many species.

Gardenia. Apparently there are one or two species of this at Kafue. The flowers are very sweet and waxy, turning yellow with age. Prostrate shrub 3-6 inches high.

Coffea. Apparently there are several species indigenous to the Congo. C. liberica, see Liberia, is West African form. Find no record of C. robusta, but C. excelsa is recorded. He also lists C. arnoldiana, De Wildman, C. aruwimiensis De Wild., C. royanxii De Wild., C. laurentii de Wildman (the latter may include C. robusta). For a good account of C. robusta see page 28-29 of this report. It is regarded by some as a variable and by some as a hybrid. Also said to be superior to Costa Rica coffee and by others to be very inferior.

Coffea camphora P. & F. has a great many varieties.

C. congoensis F. has a great many varieties. C. liberica B. & H., C. stenophylla, C. spathicalyx, K. Schum and Engler, C. subcordata Hern.

Chevalier describes C. excelsa, but it is not listed as a species by De Wildman. This should be looked up.

Urginea altissima is probably the large bulb with a tall white flower stalk so abundant at Victoria Falls.



Borassus is a palm with a palmate leaf, tall stalk and persistent petioles.

Raphia is like a slender date palm with exceedingly longer leaves.

Gloriosa virescens is the only Gloriosa lily listed from Elizabethville.

Lissochilus. 3 species are listed.

Clematis grandiflora found at Marumbe. This plant seemed to be abundant at Sekania but have not seen it since.

Copaifera disperma \_\_\_\_\_ Is the only one listed from the Congo.

Phaseolus. 2 species.

Vigna. 6 species.

Physalis pubescens and P. minima are listed.

A few notes taken in connection with De Wildeman's Annales de Musée du Congo Botanique, Series 4, Bruxelles.

Andropogon sorghum var. Halepensis, listed at Lukofu.

Setania aurea is the only Setania listed.

Lissochilus arenarius found at Lukofu. L. katagensis at Katanga. This may be the one that I secured. Also L. purpurata listed at Katanga.

Cycnium. May be the very red showy flower collected at Kafue and sent in as my number 335, Herb. 482.

Bulbostylis is a beautiful sage-like plant very abundant here at Kafue.

Carpodinus turbinata may possibly be the tree with small white fragrant flowers very abundant here.

Pseuderanthemum ludovicianum. A delicate tufted white plant found abundant at Kafue.

Voacanga is very much like the sweetscented shrub so abundant at Kafue.

Strychnos pungens, collected at Yoko-Punda and the lower Congo. Strychnos