

9. *Yerrachakkarakeli or Yerramokiri*.—Unripe fruit red, turning yellowish red when ripe; trunk tall (9 to 15 ft.) and bunches very late in the plains; grows well only in moist valleys rich in organic matter; veins of leaves, midribs and sheaths all markedly reddish in colour; inflorescence resembles that of Chakkarakeli; 5-7 hands on the hills under favourable conditions; 50-80 fruits; weight 20-30 lbs. per bunch; pulp yellowish and has a flavour of its own; usually sells at a fancy price of about half to one anna per fruit.

10. *Karpurakeli or Nallamokiri*.—A green sort from red plantain; the red colour is absent from the veins, midrib and sheaths as well as from the fruit; otherwise similar to red plantain.

11. *Vamanakeli or Mauritius plantain*.—A dwarf variety known as Paccha vazai in Madras; trunk only 3-5 ft. high; leaves broad and short but thick; bunches earlier than Chakkarakeli; but the bunch takes about 4 months to ripen off; inflorescence resembles that of Chakkarakeli; 6-9 hands; 90-150 fruits; weight 25-35 lbs.; fruit long and thicker than Kommurati; bunch closely packed; skin remains green even when ripe; pulp slightly yellowish and has a fairly good flavour; does not keep well and hence not popular.

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## PROBABLE ORIGIN OF THE SOILS OF CENTRAL FARM, COIMBATORE

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*Preliminary Considerations.*—It is known that soils are broadly classified as (i) sedentary or *in situ* soils and (ii) drift or transported soils. The sedentary soils are distinguished by (1) the absence of any clear contact between the underlying bed and the top soil and (2) the existence of the fragments of the parent weathered rock mingled with the soil itself, as can be detected by the naked eye. A third test may be found in the close resemblance of the sandy fraction of the soil with the mineral constituents of the subjacent weathered rock, when examined under a petrological microscope.

In the case of transported soils a clear distinct contact is seen between the soil and the subjacent geological formation. This contact by itself should in most cases be sufficient to decide the nature of the soil. It is needless to say that the other two conditions mentioned for sedentary soils are absent in this case. In addition all the circumstances which prove an *unconformity* between two geological sedimentary beds (e.g. change of fossils, denuded surface, change in the angle of dip) go to show the transported nature of the soil.

Transported soils are classified according to the agent of transport, viz. wind, glaciers, rivers and rain. The next question arises as to where we can expect to find sedentary soils and where to find transported soils; for instance Æolian or wind-transported soils are found in parts of Rajputana and the Punjab. Glacier deposits may be expected only in the sub-Himalayan zone as they are not common in India as in Europe and North

America. River-borne soils are very common in India, e.g. Indo-Gangetic plain and the deltaic plains of South India and river terraces. Where agents of transport cannot be shown to be any one of the above three, we have to infer that the agent is rain. The amount of angularity of the sand particles in the sandy fraction of the soil will also give some indications about the origin of the soil. The drift soils are to be found mostly in flat countries while sedentary soils are to be expected in hilly or undulating country or in plateaus as in the Nilgiris and Mysore.

Sedentary soils are usually shallow when formed from granites. Occasionally they are deep when formed from calcareous shales, or traps which decompose easily as in some parts of the Cuddapah district.

*The probable origin of the soils of the Central Farm, Coimbatore.*—As stated above, an examination of the contact between the soil and the subjacent bed is more often a decisive factor in attempting to find the origin of soil. All that is necessary for this kind of examination is to dig some trial pits to sufficient depth at various points in the area. Such opportunities presented themselves when trial pits were dug in field No. 62 for the building of the animal nutrition shed, in fields No. 4 and 2 of the Cotton Breeding Station at the instance of the Government Agricultural Chemist. Trenches dug for laying pipes round about the Forest College were also examined.

In all these cases there could be seen a distinct bed of *Kankar* underlying the soil at varying depths, the contact between the soil and the *Kankar* bed being very clear. In the case of the trial pits of the Cotton Breeding Station the sandy fractions of the soil samples did not show similarity with the constituents of the *Kankar* beds.

More recently the trenches excavated for the foundation for the Boy Scouts' building on the College estate were examined. There was a layer of black soil about 2 feet deep overlying with a clear contact a bed of *Kankar* gravel 9" deep: under this *Kankar* gravel bed was a red highly weathered formation. This clearly proves the transported nature of the soil. Further investigation of the samples taken from these layers is in progress.

All these point to the conclusion that the soils are transported. The flat nature of the country round about the Central Farm lends indirect support to this conclusion.

We may now discuss as to what might be the probable agent of transport. According to the geologists there is no evidence of any glacial action. The geographical and topographical position of the mountain ranges and the direction of the wind exclude the possibility of the agents being wind or rivers. The only other agent which might have been responsible is rain.

It may be argued that the rainfall on the area is too scanty to explain this. But it must be remembered that the formation of soil is a very slow process taking long geological periods. In the case of a hilly country, the rain water collects into small hill streams and rivulets while in the case of flat country it spreads out as a shallow sheet of water distributing the soil particles in its movement. It is thus possible to expect rain-transported soils in areas with a very gentle slope but not in hilly country.

It is seen from the above that only a fringe of the subject has been touched. It would be interesting to make a closer examination petrologically and chemically of the soils and the subjacent formations in the case of sedentary soils of our presidency. In the case of transported soils the subjacent bed is of no importance for this type of work, but a similar investigation of the soils and the geological formations of the basis from which the soil has been derived, might reveal some inter-relationship.

Incidentally, it may be mentioned that in the geographical classification of soils it appears to be more rational and scientific to classify the soils according to the river basins or valleys in which the soils occur than by districtwar classification. Thus the Madras Presidency can be classified as the valleys or basins or plains named after the big rivers and their tributaries and the soils classified accordingly.

### M. A. S. U. PARLIAMENT

*(Proceedings of a Meeting held on August 7, 1931.)*

*Motion before the house.*—‘That the destruction of Prickly-pear by the Cochineal insect is not conducive to the welfare of this province.’

*Mover.*—M. R. Ry. V. C. Vellingiri Gounder Avl.

*Opposer.*—Dr. T. V. Ramakrishna Ayyar, B.A., Ph.D., F.Z.S.

*Speaker.*—Rao Bahadur B. Viswa Nath, F.I.C.

Before commencing the meeting the Chairman referred to the sad and sudden demise of Dr. K. Kunhikannan, the Mysore Entomologist and requested Dr. Ramakrishna Ayyar to speak a few words in that connection.

Dr. T. V. Ramakrishna Ayyar said: It is my very painful duty to inform this audience of the sudden demise of an old friend and fellow worker, Dr. Kunhikannan of Mysore. He was an entomologist of capacity and fame. It is all the more painful to refer to his loss on this occasion, since he was one of the first to interest himself in the destruction of the prickly-pear by the cochineal. I feel it is but appropriate that I am given the privilege of speaking something on this occasion since apart from our friendship for over twenty years we had the honour of receiving our Doctors degree in the same American University (Stanford) and as such it is not only the loss of a personal friend but a brother *alumnus* of a famous university. Dr. Kannan was a very good speaker with broad views and shrewd common sense and took lively interest in so many public and social affairs. His unexpected death is a serious loss not only to Mysore but to the small group of Entomologists in India. I would therefore request you all just to stand up in silence for a minute as a token of our great regard for the departed soul.

After this speech the audience stood for a minute in silence as a tribute to the memory of the deceased.

The Speaker then called upon Mr. V. C. Vellingiri Gounder to move the proposition standing in his name.