

## **FROM THE INDIAN FORESTER – ONE HUNDRED YEARS AGO**

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### **SPIKE DISEASE OF SANDAL.**

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I am afraid that some of the statements made by Mr. Lushington in the above article may convey the impression to readers of the Indian Forester that the undersigned has adopted an unjustifiable presumptuous attitude on this subject of the spoke disease. Take for instance the following : "This article controverts Mr. Hole's dictum that spike is caused by unbalanced circulation." In the paper which I read at the conference held in Bangalore in October last, which has been printed as an appendix on page no.p.17 of the Proceedings of the Conference, it was clearly stated that, based on observations in the forest and in the garden, the writer " now ventures to put forward a theory as detailed below, which appears to be in through accordance with the fact hitherto ascertained, to ask for a patient consideration of this theory and to request the co-operation of Forest Officers in the sandal areas in obtaining the experimental proof, or otherwise, of this theory." To propound a theory which appears to offer a reasonable explanation of existing facts and observations and to ask that it should be patiently considered and tested by experiments can scarcely be said to be unreasonable or to be a "dictum that spike is caused by unbalanced circulation." Experiments to test the precise effect of various factors on the healthy development of sandal, even they fail to clearly indicate the primary cause of the spike disease, are likely to be of considerable value in helping us to understand more clearly the treatment necessary for the healthy growth of the species and the extent to which it may be possible, at all events, moreover, appeared to be the general opinion of the Conference which decided that "experiments on the lines he (Mr. Hole) suggested should be carried out as they were likely to yield valuable information," also "that all other possible predisposing factors, such as fire and damage or removal of suitable host plants should be eliminated ." (Proceedings of the Conference, pp.7,14.)

The South Vellore experiments alluded to be Mr. Lushington have already been discussed in the Indian Forester for July 1918, pp.325-328, where it has been shown that these results do not disprove the theory of an unbalanced sap-circulation.

As regards the bearing of the isolation experiments in the general question of the parasitism of sandal and the need of host plants for healthy growth, there does not as yet appear to be any proof that at least some attachments have not been formed by roots which have passed below the isolation trenches.

So far as the writer's experience has gone at present, although water-culture and pot experiments at Dehra Dun have proved that sandal can exist without host plants, the growth appears to be very much better when haustorial attachments with suitable hosts have been formed. For this reason, it is advisable to compare the growth and increment of the isolated trees with those of similar control trees growing among suitable host plants, as has already been suggested.- (*Indian Forester*, July 1918, p. 327.)