resistant to the invasion of Endothia. This is obviously due to some substance or substances present in these regions, which either are not present in the stem tissues or are present in lesser amount. It is possible that these are tannin compounds or perhaps substances closely associated with the occurrence of tannin.

Work recently carried on by the Leather and Paper Laboratory of the Bureau of Chemistry, U. S. Department of Agriculture, shows more than twice as much tannin present in the bark of chestnut roots as in the bark of the trunk. It has been known for some years[1, 2, 3] that tannin or substances closely associated with it, although to some extent utilized by the fungus as food, yet when present in considerable amount, exert an inhibitory effect on its growth.

Whatever the nature of the resistant substance, it is clear that it exists. Ordinarily the fungus does invade the root tissue slowly and the basal shoots die, to be replaced by others as long as any living root collar tissue with adventitious buds remains. Cases are known to the writer where this succession of basal shoots has been going on for more than fifteen years. In the ordinary course of events all signs of life eventually disappear and the tree becomes entirely dead.

However, as sometimes happens in the case of a popular "hunch," the layman may have struck it right. There is surely a possibility that the chestnut may be able to "come back" *via* this route. For if the resistant substances, whatever they may be, should develop somewhat greater concentration, the invasion of the fungus might be successfully checked. In addition, there is always the alternative that the parasite may, in time, lose some of its virulence. Some years ago J. Franklin Collins[4] found a group of chestnut sprouts which, although in 1912 showing attack by the fungus, had apparently succeeded in throwing off the early invasion by 1919. We should be constantly on the lookout for similar cases, for stock of this sort is most valuable in view of the threatened extinction of the species.

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[2] Cook, M. T., and J. J. Taubenhaus, "The Relation of Parasitic Fungi to the Contents of the Cells of the Host Plants. I. The Toxicity of Tannin." Del. Coll. Agr. Exp. Sta. Bull., 91, 1911.

[3] Cook, M. T., and G. W. Wilson, "The Influence of the Tannin Content of the Host Plant on Endothia parasitica and Related Species," *Bot. Gaz.*, 60, 346–361, 1915.

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BACTERIAL LEAFSPOT ON HUBBARD SQUASH

IN August, 1925, leaves of Hubbard squash were received from New York which were thickly covered with angular spots, strongly suggesting the angular leafspot of cucumbers. Bacteria were found in abundance in the spots. Poured plates, however, did not yield anything at all resembling *Bact. lachrymans*. Instead, small yellow colonies predominated on all sets of plates.

Spray inoculations with single colony transfers of this yellow organism have given good infections on Hubbard squash leaves, reisolations have been made from these infections and single colony transfers again proved infectious on squash.

The organism is a gram-negative, polar flagellate rod, commonly with one flagellum. Colonies on thin-sown peptone beef agar, pH 7.0, are visible in three days and after seven days are four mm wide, convex, wax-yellow with internal concentric markings by oblique light. Gelatin is slowly liquefied, nitrates are not reduced; growth is absent or feeble in Cohn's solution and very moderate in Uschinsky's solution. In beef broth a heavy bright yellow rim is formed and often in undisturbed cultures a pellicle, both composed of coarse pseudozoogloeal masses. Litmus milk is peptonized, and a soft curd is formed, but there is no reddening or bluing of the litmus. Later the litmus is completely reduced. Growth on potato cylinders is very abundant, destroying the starch and filling the water with dense yellow slime.

The name *Bacterium cucurbitae* n. sp. is suggested for this organism. Further work is in progress.

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IODINE IN THYROID DEFICIENCY

THE value of iodine as a therapeutic agent for goitrous persons was shown by Dr. David Marine in his extensive experiments on the school children of Akron, Ohio. However, this was not the first use of iodine in this disease in America. J. Young ("Chloroform") Simpson in his treatise on homeopathy (1853) notes the universal employment of seaweed as a remedy for goiter, saying:

Those suffering from it in South America seem, from medical experience, to have discovered also the uses of matters containing Iodine in the same affection. The stems of a seaweed, and without doubt containing Iodine, have been long chewed by inhabitants of South America under the name of Palo-coto, or Goitre-stick, wherever goitre is prevalent. I am informed by Dr. Greville that Dr. Gillies found this drug carried over the Pampas of South America, many hundred miles inland, for this