



### None Spared

**T**HE elm disease now being fought in the region around New York City is very different from the equally terrible plague that succeeded in wiping out another one of America's finest hardwood species, the chestnut!

Chestnut blight was quite selective in its action. It attacked only the American species of chestnut tree. Chestnuts from Europe and Asia are quite resistant; indeed, new kinds of chestnut to replace our vanished native trees were sought by the U. S. Department of Agriculture in Japan and China.

The elm disease, on the other hand, appears to attack practically every species of elm—the American or white elm, slippery elm, cork elm and the European elm which has been planted extensively as an ornamental. As a matter of fact, it seems to have been even more virulent against the European elm than against our native species; it was in shipments of European elm logs for American veneer factories that the fatal fungus slipped into this country.

One elm type only seems to be more or less resistant to it—the elms of eastern Asia. Even these are not immune, but only tolerant of the fungus: they can harbor it and still live. For this reason it is conjectured that the elm disease originated in Asia.

Wherever it came from, there is no doubt that its commonly accepted name, Dutch elm disease, is an injustice to the Netherlands. The disease was first recognized in that country, to be sure, but it did not exist there prior to the World War, so far as is known. However, by 1919 it had spread over a great part of Europe, necessitating the destruction of many fine street and park plantings of elms.

The elm disease is unlike the chestnut blight also in the thoroughness of its effects. Once an elm has died of it, it is totally and permanently dead. But killed chestnuts died only down to their roots, and young sprouts have continued to come up. Some of these are now beginning to bear a few nuts. These young coppice-trees are being watched very carefully by tree-growers. Will they supply us with the long-sought blight-immune chestnuts, or will the blight strike them down presently? Nobody knows as yet.

Another dissimilarity exists in the manner of spreading of the two disease fungi. The blight fungus went directly from tree to tree, but the elm disease fungus cannot do that. It must be carried by a bark-boring beetle. But there are plenty of the beetles, so this critical link in the life cycle of the elm fungus is not really a weak link. The only known way of driving the elm disease off this continent again is the total destruction of every tree found harboring it.

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PSYCHIATRY-PSYCHOLOGY

## "Unconscious" Emotion Is Revealed By New Technique

### Psychogalvanometer Betrays Excitement of Subjects Who Were Not Aware of Feeling Any Apprehension

**A** NEW technique for detecting emotion through measurement of electric resistance of the skin was reported to the American Psychological Association. Possible use of this new test in exploring the unconscious minds of the mentally ill was suggested by the results of experiments reported by Dr. T. W. Forbes, of the New York State Psychiatric Institute and Hospital.

Sometimes known as the "lie detector," the psychogalvanometer—used to record the physical changes that occur when a person is questioned about his guilt or when his emotions are aroused in any other way—has previously been incorrectly used, Dr. Forbes indicated. The electrodes have customarily been applied to two separate skin areas. By reading potentials from just a single skin area, Dr. Forbes found not one but two waves which were confused or masked in the readings from two areas.

One wave is negative and the other positive, and both occur with great regularity in most individuals. The "a," or negative, wave showed little variation in amplitude and occurred whether the subject was excited or not.

#### Positive Wave Varies

The positive "b" wave, on the other hand, occurred with increased magnitude whenever the subject was excited. This was true whether the "exciting" situation involved electric shock, the startle of a revolver shot, or words designed to be embarrassing.

The "lie detector" technique would not be equally effective on all individuals for the purpose of detecting their emotional responses, Dr. Forbes' experiments indicated. Some individuals, he reported, failed to show any change of the "b" wave except with very intense startle.

#### May Aid Psychiatrist

The possibility that this technique may prove of value in investigating unconscious responses in the mentally ill was suggested by the finding that the "b" wave sometimes occurred when the subject was completely unaware of any feeling of embarrassment, but when the situation contained the possibility of that effect. It also occurred when the subject knew that he might receive an electric shock, even though he was not conscious of feeling any apprehension.

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