Proceedings of the Iowa Academy of Science

Volume 46 | Annual Issue Article 23

1939

Histology of a Genetic Malformation in Corn

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deal with the possible reclassification of eight species of peritrichous phytopathogenic bacteria.

More than 50 species of bacterial plant pathogens have been described as belonging to the genus *Bacillus*. In only a comparatively few of these named species do the original citations include a description adequate for accurate identification and classification. A number of these have since been relegated to synonomy. Out of all these species, cultures of only eight could be obtained from various laboratories and culture collections.

Cultural and limited cross-inoculation studies on 75 isolates of these eight species of peritrichous plant pathogens have served as a basis for the determination of the relationships of the species. These studies indicate that these eight species constitute two separate and distinct groups of bacteria. One of these groups may be included in the genus *Erwinia* Com. S.A.B., 1917. The other group, involving the soft rot organisms, will probably constitute a separate new genus or be included in some other existing genus.

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HISTOLOGY OF A GENETIC MALFORMATION IN CORN

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"Knotted leaf" is a malformation of corn leaves, manifested as scattered, conical or irregular emergences on the dorsal surface of the leaf. These raised regions occur most commonly on the veins. A corresponding depression occurs on the ventral surface opposite each emergence. Sections show that an emergence is a thickened fold of the leaf blade. Thickening is associated with great enlargement of mesophyll and epidermal cells. There is little or no increase in the number of layers of cells comprising the thickness of the fold. The enlarged cells are uninucleate and the relatively small nuclei are diploid.

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