

Recently a primordial fungus with affinities in the Chytridiales has been found to be a frequent invader of the cells of the leaves, stalks and buds of sugarcane affected with chlorotic streak disease. It has been observed in several varieties of cane collected from several islands of the Territory of Hawaii. In apparently healthy cane it has been found only where latent infection presumably existed. For convenience this fungus is tentatively referred to as a chytrid.

The chytrid in its most conspicuous form may be seen in longitudinal sections of the nodal region of the stalk with a hand lens at a magnification of 10 as an assortment of black spheres of various sizes. Under the compound microscope these spheres were found to range in size from about 5 microns to 60 microns, the smaller spheres being of the color and density of the host cell protoplasm, slightly larger ones gray, and the larger units opaque and black even with high magnification and intense illumination. The naked thallus of the fungus was observed in the same cells with one or more of the spherical bodies. The thallus is often attenuated into scarcely discernible strands with enlargements, resembling those of *Physotherma zae maydis* Shaw, disposed at intervals on the inner surface of the host cell walls. Apparently the thallus may also assume the form of rounded or amoeboid bodies as well as attenuated masses of naked protoplasm elsewhere in the plant where it is more active, in the absence of the spherical bodies. Whenever observed the thallus was predominantly intracellular. It often contains black inclusions which serve to identify it where otherwise it would be undetected since the naked protoplasm of the invader is almost entirely lacking in contrast with the host cell protoplasm.

This chytrid apparently has heretofore escaped observation by sugar-cane pathologists, which may largely be attributed to the occurrence of the conspicuous phase of the fungus in tissues difficult to section, and to the longitudinal rather than radial distribution of the invading thallus.

A preliminary report concerning observations which indicate that the above-mentioned chytrid may be the causal agent of chlorotic streak disease, with photographs of the several stages of the fungus, was submitted February 19, 1940, for publication in *The Hawaiian Planters' Record*.

C. W. CARPENTER

EXPERIMENT STATION OF THE
HAWAIIAN SUGAR PLANTERS' ASSOCIATION

THE GENUS *LISTERELLA* PIRIE

I HAVE been informed that at the Third International Congress for Microbiologists, held in New York City, September 2-9, 1939, it was reported to the Committee on Nomenclature that the new name *Listerella* which I proposed for a genus of bacteria in 1927 had already

been given to a Mycetozoan by Jahn¹ in 1906 and to one of the Foraminifera by Cushman² in 1939.

My proposed name, therefore, becomes a homonym, but as the genus has acquired some importance in both human and veterinary pathology and references to "Listerellosis" are becoming fairly common in literature, I think that a name as near to my original proposal as possible is desirable. I therefore propose *Listeria*, as the name for the genus of bacteria as defined by me in Publication No. XX of the South African Institute for Medical Research.³ The type species of this genus is *Listeria monocytogenes* (Murray *et al.*) comb. nov. *Bacterium monocytogenes* Murray, Webb and Swann;⁴ *Listerella hepatolytica* Pirie.⁵

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SCIENTIFIC CONSCIENCE

IN two of the recent numbers of *SCIENCE*, Professor Ashley-Montagu has pointed out how two early writers (Leonardo da Vinci and Francesco Lanza Terzi), both pioneers, exhibited fear that inventions with which they were concerned might be used for the destruction of mankind, rather than its preservation.¹ In this light it is interesting to note what Benjamin Franklin had to say on the subject.

Franklin had been present at the balloon ascents of Montgolfier and Charles and had written from Paris detailed accounts of these ascents to Sir Joseph Banks, the president of the Royal Society. In a letter to his friend Jan Ingenhousz—the physician to Maria Theresa—dated January 16, 1784, he wrote:

It appears, as you observe, to be a discovery of great Importance, and what may possibly give a new turn to human Affairs. Convincing Sovereigns of the Folly of wars may perhaps be one Effect of it; since it will be impracticable for the most potent of them to guard his Dominions. Five thousand Balloons, capable of raising two Men each, could not cost more than Five Ships of the Line; and where is the Prince who can afford so to cover his Country with Troops for its Defence, as that Ten Thousand Men descending from the Clouds might not in many places do an infinite deal of mischief, before a Force could be brought together to repel them?²

Franklin's abhorrence of wars is well expressed in

¹ *Ber. d. deutsch. Bot. Ges.*, Vol. 23, p. 538.

² "Foraminifera, Their Classification and Economic Use," Sharon, Mass., p. 122, plate 12, fig. 13.

³ "The Plague Problem in South Africa," by J. A. Mitchell, J. H. Harvey Pirie and A. Ingram, (Whole Vol. III, 1927, p. 169.

⁴ *Jour. Path. and Bact.*, 29: 1926, 407.

⁵ *Publ. S. African Institute for Med. Res.*, 3: 1927, 163.

¹ *SCIENCE*, 90: 180, 1939; and 90: 592, 1939.

² "The Writings of Benjamin Franklin," edited by A. H. Smyth, New York, 1907. Vol. ix, Letter 1473, p. 155.