THE WATER-MOULD THRAUSTOTHECA FOUND IN FORMOSA.—

Although the Saprolegniaceae have been collected extensively, the genus *Thraustotheca*, comprising the single species *T. clavata*, (de B.) Humph. (= *Dictyuchus clavatus*, de B.), has been found but rarely. After being discovered by de Bary near Strasburg, Germany, in 1880, the fungus was reported from Hamburg by von Minden in 1911, and later was found in the United States in North Carolina in 1911 by Coker and Hyman, and in Massachusetts in 1914 by the writer. In a discussion of its history, the writer¹ listed these as the only recorded findings of *Thraustotheca*. Later, however, he encountered an article on 'Paddy Seedling Decay in Formosa' by Kaneyoshi Sawada, written in Japanese, but indicating by Latin references to *Dictyuchus clavatus* (*Thraustotheca*) and by figures of the unmistakable sporangia that the species had been found in Formosa also. This paper, a detailed report of eighty-four pages with ten excellent plates, appeared in 1912 as Special Bulletin 3 of the Agricultural Experiment Station of the Government of Formosa. Unfortunately, however, it remained unnoticed outside of Japan, because it was written entirely in Japanese with no summary or abstract in a more generally understood language. Mr. Sawada, however, has been kind enough to furnish the writer with a somewhat abridged English translation of his interesting article, and from this, supplemented by additional translations of critical points made by Japanese friends, the following information on *Thraustotheca* in Formosa is derived. During his detailed study of *Achlya prolifer*, (Nees) de Bary, as the cause of a serious decay of rice seedlings in Formosa, Mr. Sawada encountered other water-fungi, most of them growing as saprophytes on organic remains in the inundated seed-beds. Among these he found *Thraustotheca* growing on dead shrimp in the water of a seed-bed in the nursery at Daimokku. The material thus collected lacked oogonia or oospores, but showed the characteristic clavate to obovate, sympodially renewed sporangia which Sawada describes (p. 74) and figures (Plate X, Figs. 15-22). He over-emphasizes somewhat the delicacy of the sporangium wall as 'very thin compared to other species', and his statements, first that the 'sporangium is rounded at the tip, lacking an apical papilla', and later that 'sometimes the spores are protruded slowly from the apical opening of the sporangium as in *Saprolegnia* and *Achlya*', leave one in doubt as to whether he was quite clear on this important point. Nevertheless, from his statement that 'when ripe the spore mass is protruded at any place through the sporangium wall, separates gradually and scatters in the water' it is

¹ Ann. Bot., 1918, vol. xxxii, pp. 155-73, Pls. IV and V. The writer wishes to take the opportunity of correcting a most unfortunate error in this paper. On p. 170 the first sentence of the summary should read 'spore limitation' not 'spore liberation'. The uncorrected sentence is, of course, in direct contradiction to that of the next paragraph of the summary and to the description in the body of the paper.

obvious that he must have witnessed this interesting process, a method of sporangium dehiscence which is unique among the Saprolegniales, and which the writer, two years later, described in detail for the first time. Although Sawada's account of *Thraustotheca* is merely a one-page note incidental to his more intensive study of *Achlya proliferata*, it is none the less of great interest to mycologists as the first report of this rare fungus from the Orient, a region that will inevitably yield many remarkable water-moulds when more intensively studied.

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