NUTRITIVE SALTATION IN FUNGI

BY

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The phenomenon of true mutation is a very rare one in fungi, but change to new forms of fungi when grown in culture in the laboratory is almost an every-day occurrence. These sudden changes, appearing in the form of sectors in petridish cultures, have been known as saltations. These saltants have in many cases been described to grow true as new forms, but I have found that almost in all cases they may be said to grow as true new forms only in particular medium or in particular group of media. What I mean to say is that for all or most of those so-called saltants some medium or other could always be found by growing in which the saltant could always be reverted to its original form. In one of my papers published (Annals of Botany Oct., 1924), I described how a saltant, growing true in particular media, could be put back to its original form by growing in certain other media. Saltants are mostly due to artificial cultural processes. Lately, I have been working with a number of saltants of different fungi. They were very much different from the original forms and were growing true in particular media, but I could always make them revert to their original forms by cultivating them in other media or on their original hosts. In the last January meeting of the Botany section of the Indian Science Congress, I exhibited four such different case of saltations and their forced reversions. From my experience, I have found that fungi have a greater tendency to saltate when grown in synthetic solid media (e g , Richard's) and that in starch media very few saltations take place ; also that saltants formed in a synthetic medium could be made to revert to their original forms by either cultivating them in starch media for a few generations or by growing them on their original hosts. Like Dame Helen Gwynne-Vaughan's conception of nutritive heterothallism, regarding multiple sexes in fungi, I consider saltation in fungi to be purely a nutritive phenomenon, unless it be a rare case of true mutation.

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