SHORT COMMUNICATION

A Note on the Production of Simulacra of Certain Genera of Actinomycetales by *Streptomyces* Grown on Different Culture Media

By L. O. WHITE

Department of Bacteriology, University of Birmingham

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Until 1957 there existed only two recognized genera of non-sporangial, saprophytic mould-like bacteria: *Streptomyces*, bearing spores in chains, and *Micromonospora*, bearing them singly on short branches (*Bergey's Manual*, 1957). Since that time, several further genera have been described on the basis of spore arrangement; *Waksmania* (Lechevalier & Lechevalier, 1957) or *Microbispora* (Nonomura & Ohara, 1957), with paired spores; *Micropolyspora* (Lechevalier, Solotorovsky & McDurmott, 1961; Kalakutskii, 1964; Kosmachev, 1964) with short, branched chains of spores; *Microtetraspora* (Thiemann, Pagani & Beretta, 1968) with spores in chains of four.

Fig. 1

Fig. 2

Fig. 1. *Streptomyces erythraeus*, 2-weeks growth on peptone-yeast-extract-iron agar, morphologically simulating *Micropolyspora*. Drawn by direct observation. $\times 3000$ (approx.)

Fig. 2. *Streptomyces venezuelae*, 2-weeks growth on starch agar, morphologically simulating *Waksmania*. Drawn by direct observation. $\times 3000$ (approx.)

It is common experience that Actinomycetales, especially *Streptomyces*, can vary in the morphology of their sporogenous hyphae under different conditions of culture (Bisset, 1959), and all these descriptions of new genera record the necessity of standardizing the culture medium in order to obtain the typical morphology. At least one new genus, *Chainia* (Thirumalachar, 1955), has since proved to be a variant *Streptomyces* (Gattani, 1957), and other variants are capable of producing a wide variety of different sporulation appearances in the same culture (Bisset, 1957).

In the course of examination of ten newly-isolated strains of *Streptomyces* from soil, using the range of media recommended for characterization by Shirling &

Gottlieb (1966), I observed repeatedly that exact simulacra of two of the recent genera were produced by growth of certain strains upon appropriate media. For example, three strains classifiable as *Streptomyces erythraeus*, growing with long, branched chains on glycerol-asparagine agar, exactly resembled *Micropolyspora* on peptone-yeast-extract-iron agar (Fig. 1); one, classifiable as *S. venezuelae* on the former medium, resembled *Waksmania* when grown on starch agar with inorganic salts (Fig. 2).

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