

SPOILAGE OF MACKERELS PRESERVED IN OIL

WHILE studying the preservation of mackerels in oil, we came across a type of spoilage similar to "sulfide stinker". Evolution of a stream of bubbles was noticed in less than 48 hours and within a week the fish disintegrated into a pulpy mass. Bacterial counts on sulfite agar were of the order of 10^6 . Twenty-one colonies were isolated and restreaked on Brewer's agar in Fildes jar and the pure colonies examined.

Morphological features showed that all of them were small motile rods, clavate, with terminal spores typical clostridia. The rods were single and in pairs with rounded ends. They all produced gas from cooked meat medium and Holman's medium and blackened the meat with partial digestion. Putrid smell was also noted but indole was not detected. Milk was coagulated but without 'stormy fermentation'. The bacteria belong to the genus *clostridium*, which is known to be the agent for the spoilage of canned foods.^{1,2} The source is suspected to be the guts of mackerels and further investigation on this is continuing.

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1. Tanner, F. W., *Microbiology of Foods*, 2nd Ed., 1944, Garrard Press, Champaign, Illinois. 2. Jarvis, N. D., *Principles and Methods in the Canning of Fishery Products, Research Report No. 7*, Fish and Wildlife Service, Washington, D. C., 1943.
