

## Isolation and Identification of a Genus, *Chromobacterium*, Not Previously Found on Processed Poultry

N. A. COX

United States Department of Agriculture, Agricultural Research Service, Richard B. Russell Agricultural Research Center, Athens, Georgia 30604

Received for publication 6 March 1975

An organism identified as *Chromobacterium lividum* was isolated from processed poultry in Georgia.

Many types of bacteria have been isolated from processed poultry by various investigators; a recent review lists 24 different genera (2). This report describes the isolation and identification of a previously unreported genus from poultry.

During the microbiological evaluation of eviscerated broiler carcasses obtained from a commercial processing plant in Georgia, violet-pigmented colonies comprised 2 to 5% of the colonies initially and throughout storage on all the standard methods agar (BBL) plates incubated 72 h at 20 C. The carcasses evaluated were fresh and individually stored in polyethylene bags at 2 C until spoilage. In many studies with processed poultry in our laboratory, such colonies had not been previously observed. Several colonies were transferred from the countable agar plates to brain heart infusion broth (Difco). Once the purity of the cultures was confirmed, the organism was subjected to a variety of tests for identification. The cultural, morphological, and biochemical characteristics observed for this organism were identical to those described in *Bergey's Manual of Determinative Bacteriology* (1) for *Chromobacterium lividum*. This organism is a large gram-negative rod (1.1 by 4.3  $\mu\text{m}$ ) and produces a very tough, rubbery, violet pellicle of growth at the surface of brain heart infusion broth. A very slimy texture was observed when colonies were picked from solid media. The purple pigment was soluble in ethanol but insoluble in water or chloroform. The organism grew well at 20 C and at 25 C after 24 h, slightly at 4 C after 7 days, but not at all at 37 C after 7 days. Some of the biochemical characteristics of *C. lividum* cultures examined are listed in Table 1. Flagella

TABLE 1. Some biochemical characteristics of *C. lividum*

Test or substrate	Result <sup>a</sup>
Arginine dihydrolase	-
Casein hydrolysis	-
Catalase	+
Citrate utilization	+
Esculin hydrolysis	+
Gelatinase	-
Acid production in Hugh and Leifson's medium from:	
Glucose	+
Maltose	+
Xylose	+
Indol	-
Motility	+
Oxidase (Kovacs' method)	+
Phenylalanine deaminase	-
Sodium malonate utilization	-
Urease	-

<sup>a</sup> +, Positive reaction; -, no reaction.

were arranged as a single polar tuft. The organisms comprising this genus are described in *Bergey's Manual* as being soil and water organisms, occasionally causing infections of mammals or food spoilage. However, their significance in processed poultry is unknown.

The technical assistance of Stan Bailey and R. L. Richardson is gratefully acknowledged.

### LITERATURE CITED

1. Buchanan, R. E., and N. E. Gibbons (ed.). 1974. *Bergey's manual of determinative bacteriology*, 8th ed. The Williams & Wilkins Co., Baltimore.
2. Kraft, A. A. 1971. Microbiology of poultry products. *J. Milk Food Technol.* **34**:23-29.