in preventing apparent fusion in these organisms on exposure to air. This possibly results because the relatively large catalase molecule cannot reach the intracellular site of hydrogen peroxide formation.

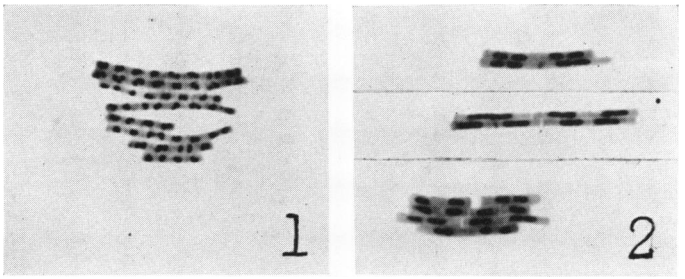

Figure 1. Bacillus cereus × 1,400. Growth 3¼ hours. Preparations stained as described in the text. No. 1. Cells not treated with hydrogen peroxide. No. 2. Cells from the same culture which have been exposed to 0.0009 per cent hydrogen peroxide for 10 minutes.

It is suggested that apparent fusion of the chromatinic bodies in species of *Clostridium*, on exposure to air, is a process induced by the formation of hydrogen peroxide.

A STUDY OF THE WIDE SPREAD DISTRIBUTION OF CHROMOBACTERIUM SPECIES IN SOIL BY A SIMPLE TECHNIQUE

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Purple pigmented bacteria tentatively identified as strains of *Chromobacterium* sp. were isolated from samples of soil by a simple technique.

Five gram samples of soil were placed in sterile petri dishes and soaked with sterile distilled water. Sterile polished or precooked rice grains were sprinkled over the surface of the soil and the plates incubated at room temperature (23 to 25 C) for 5 days. At the end of the incubation period, the rice grains were partially covered with a purple, membranous growth indicating the presence of *Chromobacterium* sp.

Sixty-eight out of 75 samples of soil collected in the vicinity of Bowling Green, Kentucky, central Michigan, northeastern Indiana, and northern Illinois showed the presence of *Chromobacterium* sp. by the described method.

Ordinary agar plating methods failed to reveal purple pigmented colonies, possibly because they are overgrown or inhibited by other soil microorganisms which occur in larger numbers.

An estimation of the numbers of *Chromobacterium* sp. in the soil samples was

TABLE 1

An estimation of the numbers of Chromobacterium sp. in soil and water by a dilution frequency technique

SOURCE OF SAMPLE	DILUTIONS*					
	1-1	1-10	1-100	1-1,000	1-10,000	1-100,000
Kentucky:						
1. Clay loam garden soil	+	+	+	+	+	−
2. Pasture soil under thick grass	+	+	+	+	−	−
3. Hillside under grass	+	+	+	+	−	−
4. River bank sparse vegetation	+	+	+	−	−	−
5. River water	−	−	−	−	−	−
6. Spring water	−	−	−	−	−	−
Indiana:						
1. Black loam from cultivated field	+	+	+	−	−	−
Michigan:						
1. Garden soil sandy loam	+	+	+	+	+	−

* Aliquots of each dilution were put into petri plates containing sterile rice grains in sterile distilled water. A plus sign indicates the appearance of purple growth on rice grains after five days of incubation at 23 to 25 C.

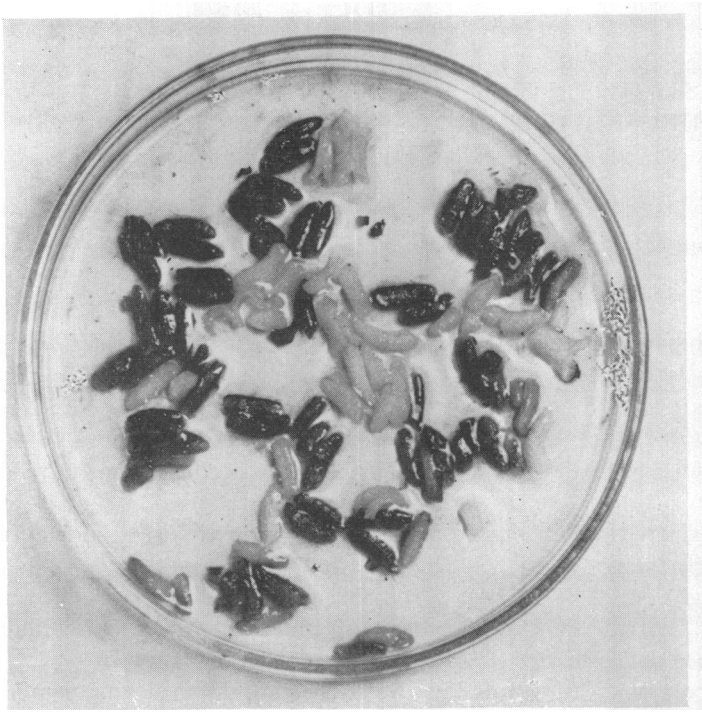

Figure 1. A *Chromobacterium* isolate growing on rice grains in distilled water. The dark grains bear chromobacteria. White grains were sprinkled into the culture just prior to photographing to provide a contrast.

done by a dilution technique using a medium of sterile rice grains in sterile distilled water.

The medium was prepared by placing 40 to 50 sterile rice grains in each sterile petri dish containing 25 ml of sterile distilled water. After hydration the rice grains became submerged beneath a thin layer of water, which discouraged the growth of molds.

Twenty samples of soil from various sources were tested by this method. The results of a few of these are shown in table 1. Samples of water from various rivers, creeks, and springs were tested for the presence of *Chromobacterium* sp., but none was found in any sample.

Figure 1 is a photograph of a plate culture of a strain of *Chromobacterium* sp. growing on rice grains, suspended in distilled water.

Eighteen strains have been isolated by streaking and restreaking on plain nutrient agar until purity of each culture was assured.

Some of the isolates were identified as *Chromobacterium violaceum* while others resembled *Chromobacterium amethystinum*. Identifications were made using the key to the genus in Bergey's Manual of Determinative Bacteriology (Breed *et al.*, 1948). The author hesitates to assign species names to the isolates until a more thorough study of them can be made. It is quite apparent that the present key to the genus is rather inadequate.

It would appear from these results that the natural habitat of some strains of *Chromobacterium* sp. is soil rather than water. The occurrence of *Chromobacterium* sp. in soil appears to be wide spread rather than local. The factors which control their numbers in soil have not been determined.

GLYCINE FERMENTATION BY NONGAS FORMING ANAEROBIC MICROCOCCI

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Anaerobic members of the genus *Micrococcus* which produce no visible gas during growth in peptone-yeast extract medium consist of two types: those which utilize glucose and those which do not (Foubert and Douglas: J. Bact., **56,** 25, 1948). This note deals with the fermentative metabolism of the latter group.

Two strains of *Micrococcus anaerobius* and four strains of *Micrococcus variabilis* were investigated. Cell suspensions from 15 to 20-hour cultures grown in medium containing 2 per cent proteose peptone no. 3, 1 per cent yeast extract, and 0.1 per cent sodium thioglycolate were tested manometrically in a nitrogen atmosphere for their ability to decompose 18 amino acids. All strains rapidly decomposed glycine as indicated by CO_2 and NH_3 formation, but failed to decompose any of the other amino acids tested.