

A MICROORGANISM FOUND IN THE LATEX OF *EUPHORBIA MARGINATA* PURSH. (EUPHORBIACEAE)

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ABSTRACT.—A bacillus resembling *Bacillus megaterium* DeBary was isolated from the latex of *Euphorbia marginata* Pursh. It was found in twenty-nine of 161 plants examined for the presence of microbes.

During a search for endophytic protozoa of laticiferous plants bacteria were found in latex samples of *Euphorbia marginata* Pursh. (Euphorbiaceae). Twenty-nine of 161 plants examined yielded the microorganisms. The bacteria, isolated from the latex by the streak plate technique, were grown on nutrient agar, Gram-stained, stained for flagella, spores, and capsules and examined microscopically. The size of the vegetative rods and of spores was determined with an ocular micrometer using the oil-immersion objective. The colonial appearance on nutrient agar and the nature of the growth on nutrient agar, glucose nitrate agar slants, glucose agar slants, and nutrient broth was observed. The organism was also examined for the production of acid and gas from glucose, sucrose, lactose, arabinose, and xylose. Hydrolysis of casein, starch, and gelatin; reduction of nitrate to nitrite; utilization of citrate; production of acetylmethyl carbinol; production of catalase; the ability to grow on nutrient agar at pH 6; and the ability to grow anaerobically were determined according to the methods prescribed by Bradshaw (1963).

All bacterial colonies were of similar morphology. A comparison of the characteristics described in Bergey's manual of determinative bacteriology (Breed et al., 1957) indicates that only one species of bacteria is present and that the bacterium isolated from the latex is a member of the family Bacillaceae, genus *Bacillus* and resembles *B. megaterium* DeBary most closely.

Bacteria were reported previously from laticiferous plants. A bacteriological study of the latex of the rubber tree, *Hevea brasiliensis*, Muell. Arg. in Annam was carried out by Dernier and Vernet (1917). These authors isolated 27 different species of bacteria. Picado (1921), while searching for flagellates of euphorbias near Costa Rica, observed numerous bacteria in the latex of *Pedilanthus tithymaloides* Poit. He also found bacteria in the latex of *Jatropha* and *Manihot* (Euphorbiaceae), *Ficus* (Urticaceae), and *Carica* (Caricaceae). No descriptions were given. Spirochaetes have been reported as occurring in latex plants by Laveran and Franchini (1921). Franchini (1922, 1923) found bacteria (cocci and short rods) in the latex of *Lactuca sativa* L. (Compositae). He also reports some rather large spirochaetes in the latex of *Euphorbia pepus*. Corbet (1930) isolated from *Hevea* latex, a bacterium, which he described and named *Bacillus pandora*.

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