

plates of beef extract agar and three plates of beef extract gelatin. In two days numerous colonies of *B. amylovorus* developed in their tracks. (See Fig. 39.)

EXPERIMENT 8.—July 4th. Obtained blighted twigs of apple trees, O. A. C. orchard, that were infested with aphids. Made cultures in beef agar and beef gelatin from the inner bark of the twigs and from the aphids. The heads of the aphids were macerated in a drop of sterile water and dilutions of this mixture were used in the plates. Pure cultures of *B. amylovorus* were obtained from the bark tissue, and mixed bacterial cultures obtained from the aphids. Many of these latter colonies were *B. amylovorus*.

EXPERIMENT 9.—July 6th. Obtained flies, *Musca domestica*, from surface of gummy exudate on diseased limb of pear tree on which the flies were feeding. Flies allowed to walk over beef agar plates. Numerous colonies of *B. amylovorus* developed in their tracks in two days.

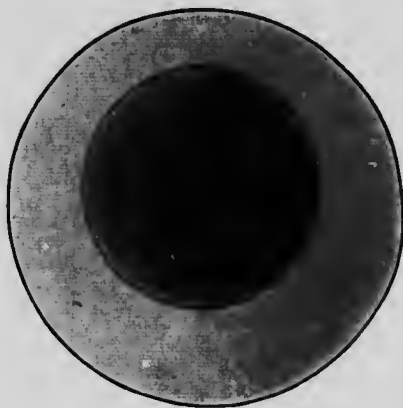


Fig. 56. Surface colony of *B. amylovorus* on gelatin. Incubated three weeks at 20° C. Magnified 50 dia.

EXPERIMENT 10.—July 10th. Brought six healthy young twigs of Flemish Beauty pear and six healthy young twigs of Yellow Transparent apple to the laboratory. Stood them with cut ends in flasks of tap water.

(a) Inoculated three of the apple twigs and three of the pear twigs with pure cultures of *B. amylovorus* grown on agar, by puncturing the bark at the tip of each twig with a sterile needle and transferring a little of the culture directly to puncture with the needle.

(b) Smeared on the outside of the bark of the other three apple twigs and pear twigs some of the culture.

Result.—In three days each of the three apple twigs in (a) showed signs of the disease. The terminal bud leaves were browned and the bark at the end of the twig also showed the organisms in numbers. The