Prof. Charles W. Davis, of Jackson, Tenn., and Prof. George R. Mayfield, of Nashville, Tenn.

The Knoxville Scientific Club entertained the members of the academy at noon on Friday at the Andrew Johnson Hotel. At the dinner on Friday evening, President J. D. Hoskins, of the University of Tennessee, welcomed the members of the academy and Dr. H. A. Morgan of The Tennessee Valley Authority, made an address.

On Saturday afternoon there was an excursion to Norris and the Norris Dam. Sunday morning there were field trips to Mount LeConte and to the bird sanctuary near Knoxville. The Indiana Academy of Science was represented at the meeting by Dr. Stanley A. Cain, professor of botany in the University of Indiana, and the Virginia Academy of Science by Dr. Arthur Bevan, state geologist of Virginia. Dr. Cain read a paper on "Beech-Maple Forests"; Dr. Bevan, a paper on "Recent Work on the Stratigraphy of the Appalachian Valley of Virginia."

JOHN T. MCGILL,
Secretary

SCIENTIFIC APPARATUS AND LABORATORY METHODS

FISHING COLONIES FROM A GELATIN FILM CULTURE

CERTAIN kinds of soil bacteria form in agar or gelatin plate culture very minute punctiform surface colonies which can hardly be discerned by the naked eye. Such colonies can easily be picked out under the microscope from a gelatin film culture, which can be prepared as follows: Test tubes containing about 1.5 cc of melted gelatin are inoculated and, after mixing contents, are once or twice rotated in an oblique position under the cold water tap so that only a thin layer of gelatin coats about two thirds of the inner surface of the test tube, while the rest of the gelatin is allowed to solidify into a slope. After twenty-four to forty-eight hours of incubation at room temperature the colonies can be examined and picked off under the microscope.

To prevent melting of the gelatin a simple cooling apparatus can be made in the following manner: Rubber tubing of about one-inch diameter is filled with cold water, closed on both ends with rubber stoppers, bent in U-shape, bound with two rubber bands and fixed on the microscope stage by means of two other rubber bands; between the arms of the tubing is placed the test tube containing the gelatin film culture. The tubing holds the test tube so firmly that the left hand is left free during the fishing and transplanting of the colonies.

PROCEDURE

Select by means of the microscope a colony of the gelatin film. Take out the cotton plug and put it into a sterile Petri dish. Flame the neck of the test tube. Put into it a sterile platinum wire, the end of which is bent into a small hook. Take care not to touch the wall of the test tube. Push the wire in until its end shades the optical field of the objective. Approach the wire carefully, while looking further through the microscope to the selected colony. After touching it remove the wire carefully and leave its end inside the neck of the test tube, about 2 cm from the top. Take with the left hand a test tube containing a medium to be inoculated; approach it to the right hand, which holds the wire; take off the plug with the little and next finger taking care that during that operation the end of the wire in the neck of the test tube does not touch its wall. Take off the wire and put its end immediately into the test tube and inoculate the medium while approaching the test tube to the flame. Sterilize the neck of the test tube and plug it. Select another colony and transfer it in the same way.

If solid medium is used for inoculation of the picked-out colonies, several of them may be transferred into the same test tube or into a Petri dish.

In this way one can transfer safely hundreds of colonies without any danger of contamination.

Finally take the cotton plug from the Petri dish, flame it and plug the test tube with the original culture and save it if necessary.

The above described gelatin film culture is a modification of Esmarch's "Roll culture" method[1] which has become obsolete in modern bacteriological technique chiefly on account of the low melting point of gelatin, notwithstanding that it is a much cleaner technique than a plate culture.

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"USE OF SODIUM DIETHYLDITHIOCARBAMATE IN THE DETERMINATION OF MINUTE AMOUNTS OF COPPER"

FOLLOWING the suggestion of Callan and Henderson[1] that the "carbamate reagent" (sodium diethyldithiocarbamate) could be successfully used in the determination of minute amounts of copper colorimetrically, they and other workers have been considerably troubled in certain instances by turbidities developing in the solution after the addition of the reagent. This

[1] *Ztschr. f. Hygiene*, I: 293, 1886.
[1] Callan and Henderson, *Analyst*, 54: 650, 1929.