SPECIAL ARTICLES

PERIDERMIUM HARKNESSII AND CRONARTIUM QUERCUUM

INOCULATIONS of *Pinus radiata* with æciospores of *Peridermium harknessii* on *Pinus radiata* made in the spring of 1913 resulted in typical galls during the same year. In the spring of 1915 some of these galls bore æcia of *Peridermium harknessii*. The check plants remained sound.

The mycelium of *Cronartium quercuum* on the evergreen *Quercus agrifolia* overwinters in the old green leaves and in early spring produces sori of uredospores in a circle around the old *Cronartium* spots; the uredinial sori on the young leaves are the results of infection from the sori on the old leaves. If *Peridermium harknessii* connects with *Cronartium quercuum*, we have here a case of facultative heteroecism in both generations.

E. P. MEINECKE

OFFICE OF INVESTIGATIONS IN FOREST PATHOLOGY,
BUREAU OF PLANT INDUSTRY,
SAN FRANCISCO, CALIF.

A SIMPLE DEMONSTRATION OF THE REDUCED VAPOR PRESSURE OVER A SOLUTION

W AND *S* are two small glass crystallizing dishes. *W* is half filled with water and *S* with a strong solution of some salt. *P* is a piece of

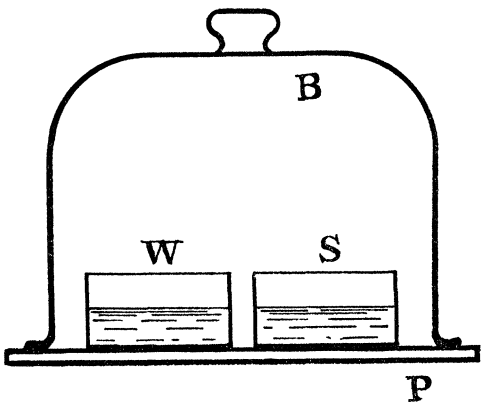

plate glass and *B* is a bell jar. For equilibrium the pressure of the vapor above *S* would have to be less than that above *W*. For this reason the water gradually distills from *W* into *S*.

This result is so obvious that the experiment has no doubt been carried out before. However in a recent brief examination of the literature of the reduction of vapor pressure by solution I have found no reference to it, although Moser[1] clearly indicates the possibility of such an experiment. In his work he used two U tubes, one for the water and one for the solution. One end of each tube was closed, and the open ends were joined—so that with a connection to an air pump these open ends formed a fork. Moser says:

> Das Lumen dieses Gabelrohrs ist eng, ein bis zwei Millimeter, um eine Ueberdestilliren des Dampfes vom Wasser zur Lösung zu erschweren.

In my experiment, which I carried out three years ago, the dishes *W* and *S* were about 5 cm. in diameter and *S* contained a solution of about 1 g. of sodium chloride to each 5 g. of water. Vacuum wax was run around *B* where it rested on *P*, but no attempt was made to reduce the air pressure in *B*. The apparatus stood in a room at ordinary laboratory temperature from January 26 to March 21. At first I set out to examine the rate at which the liquid surfaces changed their levels, but the sides of *B* were not smooth enough to admit of making through them any readings that were worth while. At the start the levels were about the same, and after somewhat less than two months the surface of the solution was 9.0 mm. higher than that of the water.

ARTHUR TABER JONES

SMITH COLLEGE,
January 23, 1915

THE AMERICAN MATHEMATICAL SOCIETY

THE twenty-second annual meeting of the society was held at Columbia University on Monday and Tuesday, December 27–28, 1915. Seventy-two members attended the four sessions. President E. W. Brown occupied the chair, being relieved by Professor Edward Kasner. The following new members were elected: Professor W. E. Edington, University of New Mexico; Professor J. L. Gibson, University of Utah; Dr. W. E. Milne, Bowdoin College; Professor L. J. Reed, University of Maine. Nine ap-

[1] *Wied. An.*, 14, p. 73, 1881.