SPECIAL ARTICLES

ON THE INCIDENCE OF INFECTION WITH INTESTINAL PROTOZOA

BECKER[1] in reporting on the result of fecal examinations of 103 patients in the New Jersey State Hospital at Trenton, using two smears from each stool, one in normal saline and the other in diluted Lugol's solution, obtained the following incidence of infection:

Endamoeba coli	38
Endolimax nana	2
Endamoeba histolytica	2
Iodamoeba williamsi	1
Girardia lamblia	2
Chilomastix mesnili	5
Trichomonas hominis	2

One additional case of *Trichomonas* was obtained by culture methods.

Having completed a similar but more extensive survey at the same institution, using smears fixed in hot Schaudinn's fluid and stained in hematoxylin, with an average of approximately six smears per patient, it is interesting to compare the results obtained by the two methods. The first 103 patients so examined gave the following incidence:

Endamoeba coli	6
Councilmania lafleuri	15
Endolimax nana	4
Endamoeba histolytica	4
Iodamoeba williamsi	2
Girardia lamblia	6
Chilomastix mesnili	6
Trichomonas hominis	2

By including those identified as *Councilmania lafleuri* with those recognized as *Endamoeba coli* the correspondence of results is good. It is evident that in the hands of a careful investigator the diagnosis from fresh smears is not greatly inferior to that obtained by the slower hematoxylin method.

The entire investigation of 681 patients gave an incidence of:

	Per cent.
Endamoeba coli	5.4
Councilmania lafleuri	10.7
Endolimax nana	3.7
Endamoeba histolytica	3.5
Iodamoeba williamsi	1.1
Girardia lamblia	3.5
Chilomastix mesnili	3.7
Trichomonas hominis	0.8

DAVID CAUSEY
UNIVERSITY OF ARKANSAS

[1] E. R. Becker, "Detection of Intestinal Protozoan Infections by the Cultivation Method," *Journ. Parasitol.*, 12: 4: 219–220.

CHEMICAL TREATMENT TO SHORTEN THE REST PERIOD OF SUGAR MAPLE TREES

IN September, 1928, a little-known fungus disease of the leaves of *Acer saccharum* was found in southern Connecticut by F. A. Bartlett and the senior author. A study of the micro-organism and its effects on the host plant was planned during the winter and spring. In early October about one hundred small trees, ten to twenty-four inches high, from the infested area were potted. Some of these were placed in a greenhouse, while others were kept outside. Transferring the potted trees from outside to the greenhouse did not bring about the desired production of new leaves.

Denny and Stanton's[1] ethylene chlorohydrin vapor treatment was then tried. In a tightly sealed ash can the maple trees were exposed to a concentration of ethylene chlorohydrin of 10 ml to each 121.5 l of air space. The first treatments, during December, were for a period of twenty-four hours, but of forty-five trees so treated only one leaved and that two months after the treatment. By lengthening the period of exposure to two, three, five and twelve days it was found that during January the five-day treatment at a concentration of 20 ml of the chemical to 121–5 l of air space was the best. Out of forty-seven trees exposed for five days to the vapors of ethylene chlorohydrin, twenty-six trees, or 55 per cent., had produced leaves by February 28. The twelve-day treatment at the increased concentration caused 43 per cent. of the trees so treated to leaf out. The one-, two- and three-day treatments at the rate of 10 ml chemical to 121.5 l of air space yielded 2, 3 and 20 per cent. positive results, respectively. In no case did untreated control trees produce leaves by March 15. Trees kept outside were forced more readily than those kept inside.

By March 15, between forty and fifty trees had leaves, many of them approaching mature size. The ethylene chlorohydrin method of forcing woody plants has made possible the complete study of the fungus and its effects on the host leaves this winter.

C. G. DEUBER
P. R. BOWEN
YALE UNIVERSITY

[1] F. E. Denny and E. N. Stanton, "Chemical Treatments for Shortening the Rest Period of Pot-grown Woody Plants," *Amer. Jour. Bot.*, 15: 327–336. 1928.