

A. Laboratory Cultural Studies of  
*Endothia parasitica*

a. Nutritional Studies

Utilization of Hamamelitannin by  
*Endothiaparasitica*

ELKINS, John R., GRAHAM, Patricia, and  
PATE, Wesley  
Division of Natural Sciences  
Concord College  
Athens, West Virginia 24712

*Endothia parasitica* utilized hamamelitannin, a diester of gallic acid and hamamelose (2-C-hydroxymethyl-ribose), from the aqueous extracts from the bark of American chestnut and from a minimal medium amended with either a purified tannin fraction from American chestnut bark or purified hamamelitannin as the only carbon source. The rate of utilization of purified hamamelitannin by each of four strains of *Endothia parasitica*, including a native hypovirulent strain, was similar as monitored by high pressure liquid chromatography; so all four rates were averaged together. Rapid utilization of hamamelitannin, and consequent build-up of gallic acid, began 1 day after inoculation and was essentially complete 4 days after inoculation. Such a rapid rate of utilization of hamamelitannin could be instrumental in the colonization of the American chestnut since Bazzigher has reported that inoculations of the susceptible European chestnuts made 3 days after wounding do not result in growth of the fungus.