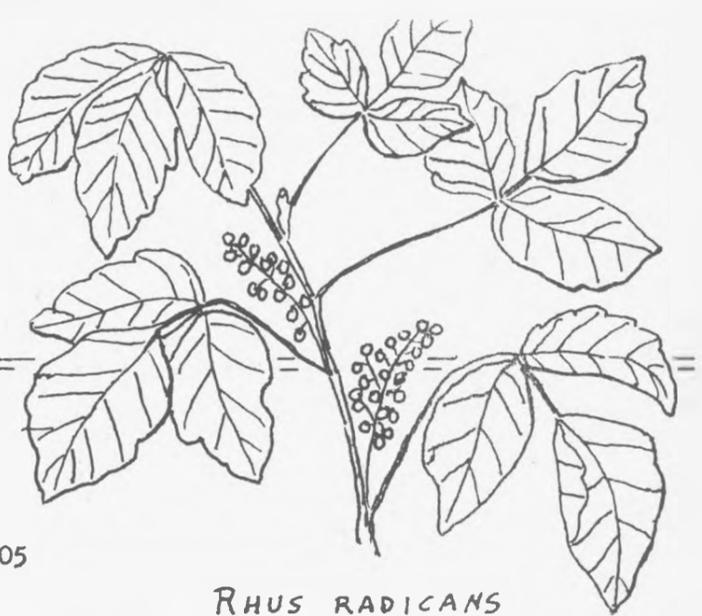


# Wildflowers

## THE BULLETIN OF THE BOTANICAL SOCIETY OF W. PA.



*RHUS RADICANS*  
POISON IVY

### JANUARY MEETING

Monday evening, January 11, 1982 at 7 P.M.  
in the Potting Shed of Phipps Conservatory in  
Schenley Park!

Our speaker will be Dr. Harold J. Rose, on  
"Poisonous and Irritating Plants in Western  
Pennsylvania."

Of the several thousand species  
of native and introduced plants  
(including houseplants) encountered  
locally, many are more or less  
poisonous or irritating to humans  
or domestic animals. An average  
garden catalog may include some  
50 plants which are definitely  
poisonous, but without mentioning  
that fact.



Dr. Rose will show color slides on the more  
important species, with comments on the nature  
of poisons, irritants and allergens involved.

### BOTANICAL SOCIETY OFFICERS

Officers elected for this year are:

- President - Tim Manka
- Vice-President - Virginia Craig
- Treasurer - Howard McIlvried
- Recording Secretary - Virginia Phelps
- Corresponding Secretary - Bob Bahl

### 1982 PROGRAM

Our chairperson will be Mary Lou Brown.

### MEMBERSHIP FORM

This form has a threefold purpose:

1. It is your invoice for 1982 dues — \$5 for individuals, \$8 for family membership. Our two big expenses are postage and the taxes on Titus Bog.
2. We are making up a new membership directory. Please print your name exactly as you want it to appear in the directory and on the mailing list.
3. We hope to set up a telephone chain, so we'll be able to notify you in case an emergency necessitates a change in our schedule.

Send this form, along with your check, to our treasurer, Howard McIlvried, 8723 Highland Road, Pittsburgh, Pa., 15237. Even better, save postage by bringing it with you to the January meeting.

Name(s) \_\_\_\_\_

Address \_\_\_\_\_

Individual  
Membership - \$5

Family  
Membership - \$8

Wife's First Name \_\_\_\_\_

Husband's \_\_\_\_\_



JANUARY, 1982

Robert F. Bahl, Sec.  
401 Clearview Ave.  
Pittsburgh, Pa., 15205  
(412) 921-1797

### RHUS RADICANS

This month's sketch of the all too familiar  
poison ivy is contributed by Dr. Harold J. Rose.

### AUREOLARIA VIRGINICA

Last spring, our Botanical Society sponsored  
the Helen Blair award in the Buhl Planetarium  
Science Fair. The winner of the award was  
Forrest L. Piehl of Keyser High School (W. Va.)  
for his project on Aureolaria virginica, false  
foxglove.

We now have the privilege of publishing his  
abstract in "Wildflowers," but there is no way  
that we can do it in a single issue. We shall  
just print as much as space permits and then  
continue it in future issues.

### ABSTRACT ECOLOGICAL AND ANATOMICAL STUDIES OF A PLANT BUCCANEER

Living organisms are commonly divided into  
autotrophs (making their own food) and hetero-  
trophs (food consuming), with both categories  
having some advantages. Green, angiospermous  
plants are, of course, prime examples of auto-  
trophs. But is it possible among plants to  
combine the best of two worlds? Theoretically  
such a plant would be an intriguing organism.

For a plant group that the literature  
indicates has a potential for such a compromised  
"life style", little information seemed to be  
available, so I decided to investigate on the  
chance that I might possibly contribute some-  
thing to such areas as botany, ecology, food  
production and our knowledge of the growth of  
foreign cells in close contact.

Purpose: To determine if Aureolaria virginica,  
false foxglove, which does not appear to be  
unusual among green plants, departs from custom-  
ary autotrophic nutrition via overlooked root  
connections (haustoria); what its hosts are;  
the morphology, frequency, and distribution of  
root connections; also, if the plant is struc-  
turally modified otherwise, as in the leaves  
and roots; the detailed anatomy of the haustoria  
and cell-to-cell vascular connections of the  
contact zone, and if data could be obtained on  
seed germination, the seedlings and whether  
they exhibit parasitism, and the events leading  
to initiation of haustoria.

Procedures: Locate Aureolaria locally; establish  
0.5 m<sup>2</sup> study plots and identify neighboring species;  
excavate (pick required in frozen soil) and wash out  
root systems with extreme care to keep fine roots  
intact; determine frequency and size of haustoria,  
map their vertical and horizontal distribution, and  
collect them in fixative solutions; prepare material  
for hand sectioning, cleaning, scanning electron  
microscopy, and microtome sectioning with a multi-  
stepped paraffin method for histological study;  
make tissues into microscope slides, stain and  
mount them; interpret the slides, make drawings,  
use standard photography, photomicrography, and a  
new direct printing method, doing my own processing  
and printing. Host roots were identified and root  
volumes for each species of root present was deter-  
mined by water displacement.

(To be continued)