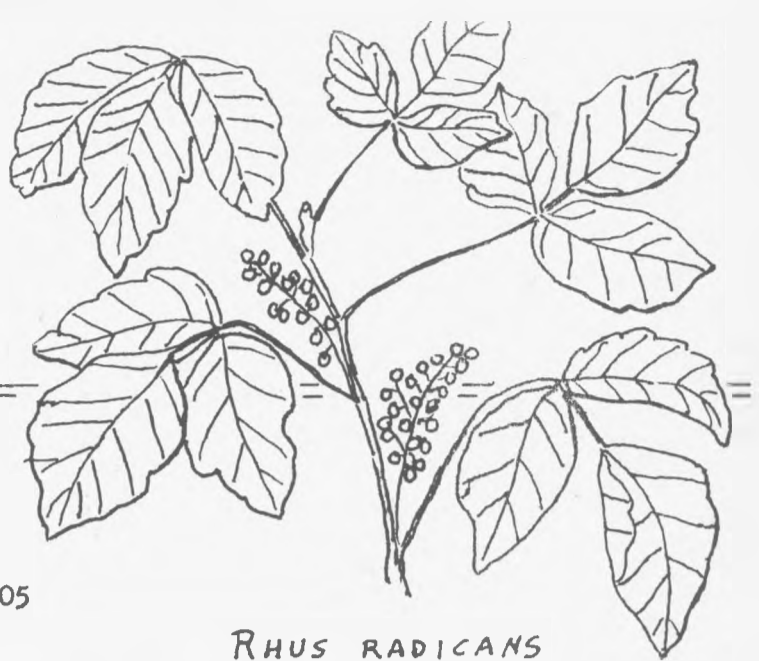


Wildflowers

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 m² 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)