A Systematic Study of the Herbaceous Plants and Shrubs in Christy Woods

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The purpose of this report was to show how an outdoor area, which is owned by a state educational institution, was used by a graduate student for scientific research. The research was to provide helpful biological information for science teachers and students who study in the area. Christy Woods, a part of Ball State Teachers College Campus was the area selected for this study. This is at Muncie, Delaware County, Indiana.

The problem was a taxonomic study involving the identification and the classification of the herbaceous plants and shrubs found growing in a given area in Christy Woods. This work was done to provide a check list of all species found growing in the woods during the period from June 26, 1945 to June 26, 1948. A list such as the one which has been compiled may be used in the identification of the species, and also in making the numerous individuals who visit Christy Woods aware of the fact that there is a vast storehouse of native woods plants at their disposal for observation, study, and enjoyment. Along with the taxonomic study of plants a number of plants were collected, preserved and reported in the publication prepared by the Indiana Academy of Science as new reports for Delaware County, Indiana. The newly reported species were mounted and added to the Ball State Teachers College Herbarium as reference material.

Christy Woods is an outdoor biological laboratory which presents scientific problems. It is a tract of land of approximately eighteen acres and it had been cut over numerous times and was used as a pasture prior to its acquisition by the college in 1918. Since that time the woods has been left to revert back to a natural state and the Oak-Hickory sub-climax is now the dominant vegetation. However, with the pre-dominant number of Beech-Maple seedlings present it was assumed that the woods is entering into the final stage in succession.

An eight acre heavily wooded area, which is typical of the woods found in Central Indiana, was used for the study. The eight acres lies directly west of the campus proper and is divided into twenty-four quadrats each being one hundred square feet in area.

For the survey and the collection of plants to be recorded a schedule was set up whereby a trip was made through Christy Woods each five to seven days during the season of blooming. A specimen of each species of plant was collected and a record was made at the time of the collection. The record included the date of collection, the relative abundance and the distribution of the species in the woods. The plants collected were then brought into the laboratory and identified. A record of the foregoing information, along with the scientific name,

the common name, the family name and range of distribution in Indiana was recorded in a card file. Deam's (1) Flora was used in the naming of the species. In case the author was not satisfied with her identification of the plant the specimen was sent to Dr. Ray Friesner, Professor of Botany, of Butler University, for verification or identification. The check list included the blooming dates of each of the species listed.

Two hundred twenty-six species of shrubs and herbaceous plants (exclusive of the grasses and sedges) were found growing in Christy Woods. These were grouped as follows:

1.	Cultivated Shrubs	4
2.	Native Shrubs	16
3.	Cultivated Herbaceous Plants	3
4.	Native Herbaceous Plants	203

The distribution maps in Deam's *Flora of Indiana* were checked and if it was found that any of the plants collected in Christy Woods had not as yet been reported from Delaware County, Indiana, the plant was sent to Dr. Friesner. There a record was made that the plant was a new report for the county. There were eighty-five new records for Delaware County from Christy Woods. Seventy-five of the reports have been published in the Proceedings of the Indiana Academy of Science and accredited to Ball State Teachers College. Each of the eighty-five specimens was mounted and added to the Ball State Teachers College Herbarium.

Additional Taxonomic Work

Additional taxonomic work which was done in conjunction with the foregoing study included eighty-six new reports from various counties and areas other than Christy Woods. They are as follows:

Adams County	6
Grant County	1
Jay County	1
Henry County	9
Wayne County	2
Wells County	2
Delaware County	65
Total	86

The total number of new reports from Ball State Teachers College since 1946 is one hundred seventy-one. The new reports of most interest are the following:

1. *Antennaria neodioica*—reported from nine other counties.
2. *Echium vulgàre*—reported from nine other counties.
3. *Arabis glabra*—reported from eight other counties.
4. *Alyssum alyssoides*—reported from seven other counties.
5. *Hesperis matronalis*—reported from six other counties.
6. *Sedum acre*—reported from three other counties.

7. *Myosotis macrosperma*—(Wells County), the only county in the northern part of the state. Had been reported from four counties in the southern part.
8. *Holosteum umbellatum*—recently reported from Montgomery, Porter, and Delaware counties.
9. *Descurainia sophia*—reported only from Marion and Delaware counties.
10. *Arabis hirsutus* var. *adpressipilis*—reported from Pulaski and Delaware counties.