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## Additions to the Vascular Flora of South Central Iowa

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## Additions to the Vascular Flora of South Central Iowa

RELDON BECK<sup>1</sup>

*Abstract.* A field survey of Warren County made during the months of April, May, and June of 1962 identified over 200 collections of flowering plants. During the fall of 1962 a survey of the Red Rock Dam area identified over 50 collections of flowering plants. Simpson College Herbarium specimens of these areas were carefully checked and annotated. In these collections, 17 species were found that had not been previously published for these areas.

In a field survey made of the Red Rock Dam area in the fall of 1962, over 50 collections of flowering plants were identified. A field survey of Warren County made during the months of April, May and June of 1962 identified over 200 collections of flowering plants.

The purpose of collecting from the Red Rock Dam area was to increase the number of known species in this area. As soon as the Red Rock Dam is completed, many of the areas of collecting will be under water due to the conservation pool (1). When the lake is completely full, practically all of the collecting area will be covered by water.

The taxonomy classes of Simpson College have made a careful survey of the vascular flora of Warren County. Several hundred specimens have been collected from this county and recorded in the Simpson College Herbarium.

Simpson Herbarium specimens plus my own specimens were compared with those of Van Bruggen (2,3). Van Bruggen made an extensive survey of a nine-county area of South Central Iowa during the growing season 1955-1957. Included were Warren County as well as Marion County, in which Red Rock Dam is located.

### TOPOGRAPHY, GEOLOGY, AND DRAINAGE

The Red Rock area is in the Eastern part of Marion County, in the basin of the Des Moines River. The underlying bedrock is composed chiefly of sandstone, limestone, and shales. This was all covered at one time by the Kansan Glacier and, as a result, much of the bedrock is deeply covered with glacial till. The soil types are of the Clinton found on ridges and the Lindley found on slopes (1).

The valley floor of this area varies from 1 to 3 miles wide. The land above this is steep to rolling. The slope is generally gentle.

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In a few places there are sandstone outcrops which are nearly vertical cliffs. The major tributaries of the study area are the White Breast Creek and the South and Middle Rivers.

Warren County, at one time, was covered by the Kansan Glacier. Its bedrock is so deeply buried by subsequent deposits of drift and loess that it has no effect on the soils at the surface. The soil layer over the county is made up of 26 different soil types (4). The land is rolling, but is quite abrupt and steep along the main streams, which are the North, Middle, and South Rivers. The Des Moines River borders Warren County on the northeast corner.

Following is the list of species to be added to the vascular flora already reported from these two areas.

- Apocynum medium* Greene. R-24, T-76, Sec. 26-25. Dry ditch on either side of the road  $\frac{1}{4}$  mile S. of Indianola. Reldon Beck, June 20, 1962.
- Carex aggregata*. Mockenz. R-25, T-76, W $\frac{1}{2}$  Sec. 28. Wet roadside ditch 1 mile S. of Martensdale. Reldon Beck, June 5, 1962.
- Carex albulutescens*. Schw. Woods beside lake shore; Lake Ahquabi State Park. Reldon Beck, June 18, 1962.
- Circaea canadensis*. Hill. R-24, T-76, Sec. 3. Rich moist wooded hillside; 2 miles E. of Spring Hill. Reldon Beck, June 27, 1962.
- Cornus stolonifera* Michx. Woods beside lake shore; Lake Ahquabi State Park. Reldon Beck, June 20, 1962.
- Corydalis aurea* Willd. R-24, T-74, Sec. 22. Squaw Twp. Roadside ditch, dry gravel. Kent Acheson, May 2, 1962.
- Linum usitatissimum* L. R-23, T-26, SW $\frac{1}{4}$  Sec. 19. Dry railroad bed 3 block E. of Simpson College campus. Reldon Beck, June 18, 1962.
- Lycopus rubellus* Moench. R-20, T-76, NW $\frac{1}{4}$  Sec. 2. On road below Red Rock Cliff; sandy, moist soil. Reldon Beck, Sept. 15, 1962.
- Nasturtium officinale* R. Br. R-20, T-76, N $\frac{1}{2}$  Sec. 3. Red Rock Cliff. Moist rich woods and sandstone bluffs. J. L. Carter, May 17, 1960.
- Panicum oligosanthes* Schult. R-24, T-76, Sec. 25-26. Dry roadside ditch  $\frac{1}{2}$  mile S. of Indianola. Reldon Beck, June 18, 1962.
- Polygala incarnata* L. R-19, T-76, S $\frac{1}{2}$  Sec. 5. Shaded, moist woods; top of Elk Rock. Reldon Beck, October 12, 1962.
- Potamogeton zosteriformis* Fern. Aquatic plant; Lake Ahquabi State Park. Reldon Beck, June 20, 1962.
- Potentilla canadensis*. L. Dry soil. Indianola. Josephine Sawoel, May 6, 1906.
- Pyrus americana*. Gray. Indianola. Agnus Buxton, June 2, 1890. Woods and lawns. W. Yewicomb, May, 1890.
- Rhamnus cathartica* L. R-24, T-75, NW $\frac{1}{4}$  Sec. 22. Margin of dry woods; Camp Wesley Woods; 6 miles SW. of Indianola, Iowa. Reldon Beck, May 11, 1962.
- Vaccinium corymbosum* L. Swamps, Indianola, Iowa. G.H.B., May,—.
- Viola papilionacea* Pursch. R-24, T-76. Rich grazed pasture land between Sandyville and Ackworth. Roy Crabtree, April 26, 1960.

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