PHACELIA DUBIA (L.) Trel. var. DUBIA Small-flowered Scorpion-weed

FAMILY: Hydrophyllaceae

HABIT: Herbaceous winter annual, 1-4 dm., flowering late April-May.

SIMILAR SPECIES: Most similar to *Phacelia ranunculacea*, but differing in the shape of the corolla and other floral characters. Also vaguely similar to *P. purshii* that is a larger plant with fringed petals; *P. dubia* has entire petals.

TOTAL RANGE: C. NY, c. PA and n. DE to GA and AL, w. to WV and TN.

STATE RANGE (as of 2008): One post-1980 record from Scioto County.

HABITAT: Over its total range, it grows in a variety of habitats in both full sun to full shade, on both dry barrens and in rich woods. In Ohio, it was known from thin, bare soil on top of the Black Hand Sandstone, in a community that supported other xerophytic plants (Griggs, 1911).

HAZARDS: Unknown.

RECOVERY POTENTIAL: This plant depends on seeds for yearly reproduction (see Comments). If a widely disjunct population were eliminated, it would remain extirpated unless seeds became available from a new source.

INVENTORY GUIDELINES: Mature flowering material needed for identification.

COMMENTS: This plant flowers and produces seeds in the spring. The seeds remain dormant during the heat of the summer and then germinate in the fall after a cool period. These plants remain vegetative until spring when they flower and produce a new crop of seeds. Some seeds of the previous year may not germinate and require another warm summer to break a secondary dormancy that was induced by winter. Seeds can remain ungerminated for up to seven years before they eventually germinate in the fall. This reproductive strategy serves to insure a bank of seeds for future years if a particular year is unfavorable to flowering or seed production.

This is a rather inconspicuous plant that would be easy to overlook. It should be searched for in southern Ohio.

SELECTED REFERENCES:

- Baskin, J.M. and C.C. Baskin. 1978. Temperature requirements for afterripening of seeds of a winter annual induced into secondary dormancy by low winter temperatures. Bull. Torr. Bot. Club. 105: 104-107.
- Constance, L. 1949. A revision of *Phacelia* subgenus *Cosmanthus* (Hydrophyllaceae). Contr. Gray Herb. 168: 1-48.

- Cooperrider, T.S. 1995. The Dicotyledoneae of Ohio. Part 2. Linaceae through Campanulaceae. Ohio State Univ. Press, Columbus, OH. 656 pp.
- Gillett, G.W. 1968. Systematic relationships in the *Cosmanthus* Phacelias (Hydrophyllaceae). Brittonia 20: 368-374.
- Gleason, H.A., and A. Cronquist. 1991. Manual of vascular plants of northeastern United States and adjacent Canada. New York Botanical Garden, Bronx, New York. 910 pp.
- Griggs, R.F. 1911. An Ohio station for *Phacelia dubia*. Ohio Nat. 11: 303-304.



Ohio Department of Natural Resources Division of Natural Areas and Preserves

Created: 1/1985 David Spooner