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A NEW SPECIES OF HACKELIA (BORAGINACEAE) FROM OREGON

ROBERT L. CARR

Department of Biology, Eastern Washington State College,
Cheney 99004

During the preparation of a revision of some of the northwestern American taxa of *Hackelia*, specimens representing an undescribed species were encountered. The taxon is known only from the Three Forks region of the Owyhee River, southeastern Malheur County, Oregon. It was apparently first collected by Milton L. Dean, who did a floristic study of the area in 1957 and 1958 (Dean, 1960).

***Hackelia ophiobia* R. L. Carr, sp. nov.**

Planta perennis viridis, radice crassiuscula gradatim angustata, caudicibus fasciculatis ab petiolis persistentibus vestitis. Caules graciles sparsim strigosi. Folia rosulae longiuscule petiolata, ovata vel oblonga, 5-15 cm cum petiolo longa, 15-35 mm lata, apice obtusa mucronulata, basi nunc truncata nunc cordata, aequabiliter hirsutula. Folia caulium elliptica vix reducta, inferiora in petiolum attenuata, superiora sessilia, omnia hirsutula. Inflorescentia laxa ramosa, bracteis inferioribus usque 2 cm longis, superioribus gradatim parvioribus. Pedicelli recurvi 12-17 mm longi. Lobi calycis strigillosi lanceolati acuti 3-4 mm longi. Corolla limbo rotato 6-8 mm lato caeruleo, tubo albido vel flavo calyce aequilongo. Fornices corollae truncato-rotundati breviter papillati. Nuculae ovoideae, 2.3-3.3 mm longae 1.2-2.1 mm latae, dorsaliter parum glochidiatae, muriculatae, vix alatae, aculeis marginalibus principalibus 1.0-1.5 mm longis, ad basim distinctis, cum aculeis brevioribus interspersis. Cicatrix nuculae ad centrum, ovata. Figures 1 and 2.



FIG. 1. *Hackelia ophiobia*. A, habit; B, basal leaves; C, nutlets; D, leaf pubescence.

TYPE: Oregon, Malheur Co., Owyhee River canyon at Three Forks, 30 June 1968, *R. L. Carr* 433 (Holotype: OSC; isotypes: NY, WS, US, GH).

ADDITIONAL SPECIMENS EXAMINED: *Carr* 514 (NY, WS, US, GH, OSC), *Dean* 116 (A, OSC), *Dean* 246 (OSC), *Dean* 281 (OSC).

HABITAT: In mostly well-shaded, sandy talus in cracks and crevices of rocky basaltic bluffs and cliffs.

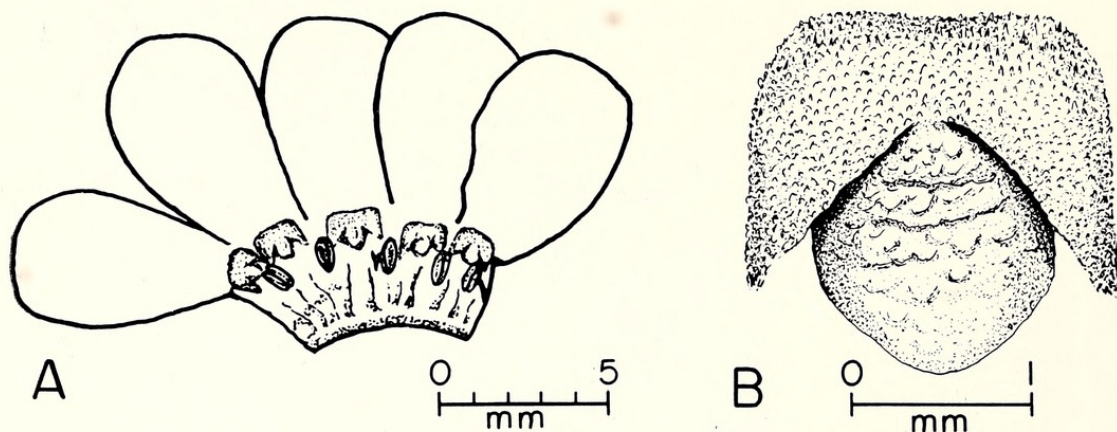


FIG. 2. *Hackelia ophiobia*. A, corolla; B, corolla appendage with protuberance.

The basal leaves of *Hackelia ophiobia* (fig. 1,B) are unique among species of *Hackelia* endemic to western North America in having a broad, short, truncate to cordate blade and a long slender petiole. The stems are very slender, the herbage is thin and bright green, and the inflorescence is very lax and sparsely flowered. Morphologically the flowers and nutlets of *H. ophiobia* approach those of *H. cusickii* (Piper) Brand. The nutlets (fig. 1,C) differ in being smaller and in commonly having fewer glochidia on the dorsal surface. The corolla is smaller and differs in having a short, deltoid protuberance on the very short-papillate fornicies (fig. 2,B). Fornices of *H. cusickii* are more distinctly papillate and have a longer, often pandurate protuberance.

The habitat of *Hackelia ophiobia* is sharply limited. The plants grow near the bases of cliffs or large outcroppings of basalt in areas where there is little if any competition from other vascular plants. As a diploid ($2n = 24$) it differs sharply from other known diploids such as *H. micrantha* (Eastwood) J. L. Gentry, *H. floribunda* (Lehm.) Johnst., *H. amethystina* J. T. Howell, *H. bella* (Macbr.) Johnst., and *H. californica* (Gray) Johnst., which are very robust plants. It is likely that these taxa represent a group of related diploids phylogenetically quite distinct from *H. ophiobia*.

Although presently known only from the Three Forks region, *H. ophiobia* quite probably will be found at other sites in the Owyhee River canyon. Its habitat appears to be well represented along the Owyhee River and in the Bruneau River canyon, which is the next watershed to the east. This region of remote and inaccessible deep canyons has been very poorly botanized and this quite probably accounts for the late discovery of this unique *Hackelia* species.

The Latin description was prepared with the assistance of Kenton L. Chambers.

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