

UTAH PLANT NOVELTIES IN *CYMOPTERUS* AND *PENSTEMON*

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ABSTRACT.— *Cymopterus higginsii* and *Penstemon atwoodii* are named and described from materials collected in the Kaiparowits Plateau vicinity of eastern Kane County, Utah. Habitat, distribution, and probable affinities are outlined.

Examination of specimens obtained from the Kaiparowits Plateau region of eastern Garfield and Kane counties in southern Utah has revealed the existence of two previously undescribed entities, one each in *Cymopterus* (Apiaceae) and *Penstemon* (Scrophulariaceae). Existence of these taxa is not surprising when one considers the historic remoteness of much of that great region. The discovery and the extent of the range of each taxon must be credited to the extensive fieldwork allowed under the baseline studies of the Navajo-Kaiparowits environmental project directed by personnel from Brigham Young University (Welsh, Murdock, and Wood 1975).

The *Cymopterus* species is known from saline soils of the Tropic Shale formation and associated pedimental gravels on fans and bajadas below the Straight Cliffs formation in that portion of Kane County from the Paria River eastward to the Last Chance Creek vicinity. Apparent relationships of *C. higginsii* seem to lie with *C. fendleri* from which it differs inter alia in the rose to purple flowers with evident pedicels and wider wings on the fruit. The pseudoscape is poorly developed.

The corollas in the *Penstemon* species are glandular hairy externally, and the taxon seems to belong with those species treated by Pennell (1920) as Section Cristati and by Keck (1938) illegitimately as Section Aurator. The nearest ally appears to be *P. jamesii* from which *P. atwoodii* differs as noted in the diagnosis. *P. atwoodii* is known only from middle elevations of the Kaiparowits region, where it grows on the Cretaceous formations in juniper-pinyon woodland.

Both species, the *Cymopterus* and the *Penstemon*, are plants of very restricted range. They are in areas which are now subject to commercial exploitation, and

both should be considered as threatened species.

Cymopterus higginsii Welsh sp. nov.

Plantae acaulescentes non caespitosae pseudoscapis non vel non nisi evolutis infermis, pubescentes parse pili complanti: folia ovata vel subelliptica in circumscriptem, laminis 1.8-7.7 cm longis 1.5-6.0 cm latis bi- vel tripinnatis viridibus foliolosis longior quam latis pinnatis ad bipinnata, lobi obtusi ad rotundatos vel acutos raro, petiolis 1.8-14 cm longis; pedunculi folia longior ad extremum 2-12 cm longi, purpurascens; involucrum vaginans margine scariosa; involucellum bracteolarum brevior quam floras, lobis aliquot dentatis acutis vel acuminatis; umbellae compactae, radiis 3-5, 1-10 mm longis, umbellula centrali sessili; pedicelli 1-6 mm longi; flores rosei ad purpurascens; fructus ovalis ad ellipticum 7-10 mm longus 5-8 mm latus, alis corpus subaequalis incrassatis spongiosis.

C. fendleri affinis sed floribus roseis ad purpurascens pedicellis evidentibus et alis corpus subaequalis.

HABITAT AND DISTRIBUTION.— Tropic shale and pedimental covering derived from Straight Cliffs and other formations, on saline soils, from East Clark Bench eastward to Last Chance Canyon, at least 30 miles east of Glen Canyon City, eastern Kane County, Utah.

Type: Utah: Kane Co., Shadscale dominated bajada, on gravelly pedimental fan, east of None Butte, ca 17 miles east of Glen Canyon City, S. L. Welsh 12740, 31 May 1975 (Holotype BRY; Isotypes to be distributed). Paratypes: Utah: Kane Co., Site 9, Navajo-Kaiparowits Project, base of Smoky Mt., 2 miles from Ahlstrom Point junction, Atriplex-Kochia-

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