

A NEW SPECIES OF IVESIA (ROSACEAE)
FROM SOUTHEASTERN OREGON

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The geology and relative isolation of southeastern Oregon make the area an excellent location for discovering new and unusual plant species. Leslie Gulch in Malheur County is one site in particular whose botanical treasures have only recently been discovered (Glad, 1975; Barkley, in press). Approximately ten percent of the species found there are rare or endangered (Packard, pers. comm.), and several are endemic to the barren ash and tuff slopes lining the canyons in the Succor Creek and Owyhee River drainage basin. In this paper we present a new species of *Ivesia* (Rosaceae: Potentilleae) from Leslie Gulch. This species was initially discovered by the senior author while a student at the College of Idaho, Caldwell.

Ivesia rhypara Ertter & Reveal, sp. nov. Species insignis stylo solitaria, petalis brevibus albis, ramis prostratis et inflorescentiis apertis cymis, a speciebus nobis notis bene distincta. Fig. 1.

Low spreading herbaceous perennial from a branched caudex atop an extensive, woody root system, this often clothed with old, reddish-pubescent leaf-bases; herbage grayish- or greenish-white, villous to canescent, eglandular; stems erect before anthesis, becoming prostrate and trailing as the inflorescence develops and lengthens, 5-15 cm long; leaves essentially basal, canescent, 3-8 cm long, with 5-15 pairs of closely overlapping leaflets; leaflets divided to near the base into 3-5 segment, these ovate to rounded, 1.8-3 (-4) mm long; inflorescence a more or less open cyme, 3-20 cm long; bracts leafy below and often appearing near the middle of the stem due to the reduction and loss of the first branch of the inflorescence, 3-7 mm long, 1.5-4 mm long above in the inflorescence, mostly ovate; hypanthium shallowly cupulate, 2-2.3 (-2.5) mm wide, yellowish to golden within, the receptacle densely covered with long, white, silky-villous hairs; bractlets ovate, about two-thirds the length and one-half the width of the sepals; sepals 5, triangular, 1.8-2.5 mm long; petals 5, white, 0.8-1.5 mm long, 0.2-0.5 mm wide, narrowly spatulate to oblanceolate, inconspicuous; stamens 5, inserted well away from the margin of the receptacle, the filaments linear, 1.5-1.8 mm long, glabrous, the anthers yellow except for the magenta-colored marginal sutures, 0.4-0.5 mm long; pistil solitary, 1-2 mm long, glabrous; achenes smooth, brown, 1-1.3 mm long. Flowering from May to October.

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FIG. 1. Illustration of *Ivesia rhypara*. A, habit (x 1/5); B, details of the leaves and inflorescence, the latter shown in an upright position for convenience; see A for actual location (x 1); C, detail of flower (x 6); D, mature achene (x 10).

TYPE: OREGON, Malheur Co., along the rim above Leslie Gulch E of Owyhee Reservoir, 0.2 km down Leslie Gulch road from the entrance to the canyon, on red to yellow volcanic ash in sparse vegetation, at ca 1430 m, sec. 9, T.26S., R.45E., 13 Jul 1975, *Reveal & Ertter 3894* (Holotype: US, isotypes: BRY, CAS, CIC, GH, ID, K, MARY, MO, NY, OSC, RM, RSA, TEX, UC, UTC, WTU, and elsewhere).

ADDITIONAL SPECIMENS EXAMINED: OREGON, Malheur Co., Leslie Gulch, 30 Sep 1973, *Packard 73-293* (CIC); Leslie Gulch, 26 May 1974, *Ertter 47/4* (CIC).

Ivesia rhypara is not likely to be confused with any other species of the genus. In Keck's (1938) revision, *I. rhypara* would key out to *I. shockleyi* S. Wats., an alpine plant of the Sierra Nevada of California and west-central Nevada. Our new species may be quickly distinguished from that species by the denser, non-glandular pubescence, the consistently solitary style, and the small, white petals. In southeastern Oregon, only *I. baileyi* S. Wats. is regularly encountered, and then only in the higher mountains. It differs from *I. rhypara* in having an erect, glandular-pubescent stem, larger leaflets, and three to seven pistils. The intermountain species of *Ivesia* which are found in the desert all have more than five stamens, while those species in the region with five stamens all occur at higher elevations in more mesic sites. In addition, all these other species are glandular, less densely pubescent, and typically with yellow petals.

The new species is apparently confined to an area of less than one mile square on either side of the road entrance to Leslie Gulch, and has not been found in any adjacent areas in the Succor Creek drainage (Packard, pers. comm.). It has been found on soils ranging from a reddish tuff to a loose, yellowish volcanic ash. Near the road on the north side of the canyon, it is associated with *Poa sandbergii*, *Agropyron spicatum*, *Eriogonum strictum*, *Physaria chambersii*, *Astragalus sterilis*, *Linum perenne*, *Penstemon acuminatus*, *Eriophyllum lanatum*, and an unusual form of *Monardella odoratissima*. On the south side of the canyon, it grows on the bare ground among *Juniperus osteosperma* and *Purshia tridentata*. It is very local and relatively infrequent in all known locations, and should be considered an endangered species. Leslie Gulch is now open to recreational traffic, and off-road vehicle activities in the area could easily destroy the fragile slopes to which the species is restricted.

The species epithet is based on the Greek "rhyparos" meaning "dirty" or "grimy", not only in reference to the dirty or dusty appearance of the species, but also here applied to honor James W. Grimes, a fellow student and collector with the senior author of the Leslie Gulch flora. Grimes is currently attending Utah State University and working on the flora of the Leslie Gulch area as part of his Master's program.

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LITERATURE CITED

- BARKLEY, T. M. In press. "Senecio." N. Amer. Fl.
 GLAD, J. B. 1975. Taxonomy of *Mentzelia mollis* and allied species. Madroño 23:283-292.
 KECK, D. D. 1938. Revision of *Horkelia* and *Ivesia*. Lloydia 1:75-142.

MISCELLANEOUS CHROMOSOME COUNTS OF WESTERN AMERICAN PLANTS—IV

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This series of papers, of which this is the fourth, reports chromosome counts of miscellaneous western American plants. Previous parts have dealt with plants collected of various floristic projects of the senior author (Reveal & Styer, 1973, 1974; Reveal & Spellenberg, 1976). The present contribution covers counts of plants collected in Baja California, Mexico, in February of 1973.

Flower buds were collected in developmental stages from plants growing in their native habitats, and were fixed in ethanol and glacial acetic acid (3:1). Anthers were squashed in acetocarmine and camera lucida drawings were prepared. The counts reported here were made by Reveal, but all of the species determinations except those of *Eriogonum*, or as indicated, were made by Moran. Voucher specimens are deposited at the San Diego Museum of Natural History (SD).

Chromosome numbers are reported for 31 taxa; for 26 of these we have seen no previous reports. Three counts represent first reports for the genus: *Chorizanthe* ($n = 20$), *Wislizenia* ($n = 20$), and *Errazurizia* ($n = 14$).

Garrya grisea Wiggins. $n = 11$. Voucher: M&R 20176 (Fig. 1), north slope of Cerro Azufre, ca 1600 m, B.Cfa.Sur (near 27°30'N, 112°36'W), 17 Feb 1973.

This first reported number for the species is common in the genus (Bolikhovskikh et al., 1969). The species has not been reported previously from south of Sierra San Pedro Mártir.