

Key to *Juniperus occidentalis* Hook. and *J. o.* forma *corbetii*.**Robert P. Adams**Biology Department, Baylor University, Box 97388, Waco, TX
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ABSTRACT

Juniperus occidentalis forma *corbetii* R. P. Adams can be readily distinguished by its shrubby habit and compact foliage vs. typical *J. occidentalis* plants, that have a strong central axis and loose, open foliage (Fig. 2). A key is presented to aid in the identification of *J. o.* forma *corbetii*. Published on-line www.phytologia.org *Phytologia* 99(4): 238-240 (Dec. 18, 2017). ISSN 030319430.

KEY WORDS: *Juniperus occidentalis*, *Juniperus occidentalis* forma *corbetii* R. P. Adams, Key, identification, Cupressaceae.

Juniperus occidentalis, *J. grandis* (= *J. occidentalis* var. *australis*) and *J. osteosperma* are three very closely related junipers in the western United States (Adams, 2014, Vasek, 1966). Recently, a new taxon, *J. o.* forma *corbetii* R. P. Adams was described (Adams, 2012) based on its shrubby form and compact foliage (Fig. 1,3) vs. typical *J. occidentalis* plants, that have a strong central axis and loose, open foliage (Fig. 2).



Figure 1. Mark Corbet with an extremely shrubby habit of *J. occidentalis* forma *corbetii*, 32 km east of Bend, OR (cf. Adams 11949-11951) at the type locality.



Figure 2.(right). *Juniperus occidentalis* near Sage Hen, CA, with a strong central axis, and loose, open foliage.



Figure 3. Other plants of *J. o.* forma *corbetii* with less extreme shrubby habit.

In addition, Adams (2012) reported the volatile leaf oil of *J. occidentalis* is dominated by sabinene, p-cymene, citronellol and bornyl acetate, whereas f. *corbetii* shrubs, east of Bend, OR, have larger amounts of p-cymene (20.0) and bornyl acetate (24.5%).

Principal coordinates analysis using 42 terpenoids showed (Adams, 2012) the f. *corbetii* shrubs, east of Bend, were clearly separated (see Fig. 3, Adams, 2012).

Overall, Adams (2012) found the leaf essential oils of populations of *J. occidentalis* were rather uniform except for the populations at the extremity of the range, and for the shrubby forma *corbetii*, east of Bend, OR.

For identification of f. *corbetii* from specimens, it seems most efficient to utilize the foliage density and length of ultimate branchlets. This is illustrated in Fig. 4. Notice that the foliage of *J. occidentalis* is open and individual branchlets are clearly visible (Fig. 4, left). In contrast, the foliage of f. *corbetii* is compacted, with short sub-branching (Fig. 4, right).



Figure 4. Comparison of the foliage of *J. occidentalis* and f. *corbetii*.

Key to *J. occidentalis* and f. *corbetii* :

- 1. Foliage loose and open, sub-branchlets elongated, trees with strong central axis.....*J. occidentalis*
- 1. Foliage compact and dense, sub-branchlets shortened, shrubs.....*J. o.* forma *corbetii*

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