

eral narrowly linear elongated bractlets; rays 1 to 2 cm. long; pedicels 4 to 6 mm. long; fruit narrowly oblong, 3 to 5 mm. long, with short conical stylopodium, and narrow prominent almost winged ribs; oil tubes 3 to 5 in the intervals, 8 on the commissural side.

Type locality, "Ostrander's Meadows," Yosemite Valley, California; collected by *Bolander*, no. 6341, in 1866, altitude 2,400 meters; type in Herb. Gray, duplicate in U. S. Nat. Herb. Associated with the type in the original description is *Brewer* from Ebbetts Pass, Alpine County.

In the Sierra Nevada of California, from the Yosemite region to Siskiyou County.

*Specimens examined:*

CALIFORNIA: Type specimens as cited under type locality; Ebbetts Pass, Alpine County, altitude 2,550 meters, *Brewer* 2082, in 1863; Mount Stanford and Mount Shasta, *Hooker & Gray*, in 1877; Soda Springs, Nevada County, altitude 2,100 meters, *Jones* 2937, July 20, 1881.

16. *Ligusticum oregonum* C. & R., sp. nov.

Resembling *L. grayi*, but taller (reaching 6 dm.), and with larger leaves; leaf segments with sharper lobes; rays 2.5 to 5 cm. long; pedicels 4 to 8 mm. long; fruit with narrow wings and low thick stylopodium.

Type locality, Eagle Creek Mountains, Union County, Oreg.; collected by *Cusick*, no. 1058, August-September, 1884; type in U. S. Nat. Herb.

Only known from type locality.

17. *Ligusticum cusickii* C. & R., sp. nov.

Glabrous throughout; stems slender, 5 to 6 dm. high; leaves nearly all basal, once or twice ternate then pinnate; leaflets rather distant, ovate, obtuse, 1 to 2.5 cm. long, lacerate into linear or narrow divisions; umbel few-rayed, with involucl of a few linear-setaceous bractlets; rays about equal, 5 cm. long or more; pedicels 6 to 8 mm. long; fruit oblong, 4 mm. long, with narrow but wing-like ribs; stylopodium slender conical.

Type locality, higher mountains of eastern Oregon, altitude 1,800 to 2,400 meters; collected by *Cusick*, no. 1799, in 1897, and said to be very abundant; type in U. S. Nat. Herb.

From the mountains of northeastern California to those of eastern Oregon.

*Specimens examined:*

OREGON: Type specimens as cited under type locality; Warner Range, Lake County, altitude 1,800 meters, *Coville & Leiberg* 24, July 25, 1896.

CALIFORNIA: Sierra Valley, *Lemmon*, June, 1889.

18. *Ligusticum pringlei* C. & R., sp. nov.

Resembling *L. cusickii*, but stouter, somewhat taller and more branching, and with larger leaves; leaflets less distant, acute or obtuse,