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## SOME WESTERN SPECIES OF ARNICA.

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The names and descriptions subjoined are of species of *ARNICA*, apparently undescribed hitherto. Those placed first in the series, it will be seen, are from within the Canadian boundary, while others are from those parts of the Pacific United States which lie contiguous to Canada. It would not be remarkable if any of these should by and by be found also in some one part or another of the extensive and varied Province of British Columbia.

*A. SORORIA*. Stem solitary, a foot high or more, erect, slender, firm, scarcely leafy, the whole plant with a velvety appearance, but the close pubescence somewhat harsh rather than soft; even the basal leaves not forming a rosette, but opposite, or in threes, narrowly elliptic-lanceolate,  $2\frac{1}{2}$  to 3 inches long, including the petiole, this long or short, both faces somewhat plushy-pubescent, margins obscurely and remotely serrate-toothed; proper stem-leaves in 2 remote pairs and much reduced, entire, sessile; heads mostly 2 or 3 on peduncles 3 to 5 inches long; involucre broad-campanulate, of 16 to 20 linear-lanceolate glandular-hirsutulous bracts; ray-corollas deep-yellow, not short, abruptly 3-toothed at the rounded apex; disk-corollas with slender glandular-hirtellous tube twice as long as the somewhat clavellate throat; achenes remarkably short, strigose-hispid; pappus dull-white, scarcely barbellate.

Cascade, British Columbia, 30th June, 1902. J. M. Macoun, No. 64987 of Canad. Geol. Surv. Related to *A. lonchophylla*, Greene, which Mr. Macoun sent from the Athabasca River country, as collected by Mr. Spreadborough in 1898; but this present species has also certain points of seeming contact with *A. pedunculata*, Rydb. of Montana; but this last is a stout comparatively coarse plant, always monocephalous.

*A. RUBRICAULIS*. Base of stem and its foliage not seen, but plant large, the stem copiously leafy with an ample and thin spreading foliage, the internodes dark red-purple and slightly