

IRIDOID GLUCOSIDES OF WHITE-FLOWERED *PENSTEMON WHIPPLEANUS*¹

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A recent study reported (1) the isolation of the iridoid glucosides 10-cinnamoylaucubin, eurostoside, and mussaenoside along with picein (4-O-acetophenone- β -D-glucoside) from leaves of *Penstemon whippleanus* A. Gray. These were the "medium to stronger polarity" components. We had earlier (2) reported on alkaloids of *P. whippleanus* and had also accomplished an iridoid analysis, which we here describe.

Above-ground parts (stems, leaves, and inflorescences) were examined. The three major iridoids were identified as aucubin, catalpol, and globularin (10-cinnamoylcatalpol). Minor iridoids were bartsioside, plantarenaloside, and mussaenosidic acid (6-deoxyshanzhiside).

Because our identified iridoids were quite different from those previously reported (1), we obtained a voucher sample of *P. whippleanus* from P. Junior. This was clearly the correct species but was the wine-purple to black-purple flowered form, while our data were obtained on a white-flowered form. Comparative tlc data on the two varieties indeed showed differences in iridoid content. Tlc of the Junior plant showed a considerable amount of aucubin and/or catalpol as well as the reported iridoids (1), but this more polar fraction had not been examined².

In general, botanists (3,4) do not distinguish the two color forms as separate taxa, though they are usually (but not always) found separately. It has been pointed out (4) that intermediates are not known to occur in the mixed population, and it has been suggested that one or a few linked genes may be responsible for the different color forms. This would have to account for iridoid differences as well.

Full details of the isolation and identification of the compounds are available from the senior author.

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