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FLAVONOL 3-GLYCOSIDES IN *AMBLYOLEPIS SETIGERA**

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Key Word Index—*Amblyolepsis setigera*; Asteraceae; Helenieae; Gaillardiinae; flavonoids; isorhamnetin 3-*O*-galactoside; quercetin 3-*O*-galactoside; quercetin 3-*O*-digalactoside.

The only previous chemical work on *Amblyolepis setigera* DC. reported the isolation of coumarin [1]. Although 5 kilos of plant material were used in that study, no sesquiterpene lactones were isolated.

The present study reports the isolation and identification of the following flavonoids from dried leaf material: isorhamnetin 3-*O*-galactoside, quercetin 3-*O*-galactoside and quercetin 3-*O*-digalactoside. Two additional quercetin glycosides were detected but could not be fully characterized due to a lack of material.

Most workers have assumed a close relationship of *Amblyolepis* to *Helenium* and *Gaillardia* [2, 3] and at times *Amblyolepis* and *Helenium* have been combined [4]. It is significant that *Amblyolepis* exhibits flavonol glycosides, while *Helenium* [5–8] and *Gaillardia* [8–11] have been characterized as containing flavones. No flavonols have ever been reported from either *Helenium* or *Gallardia*. It may also be significant that no sesquiterpene lactones could be isolated from *Amblyolepis* [1]. *Helenium*, *Gaillardia* and other genera in the subtribe Gaillardiinae produce quite a variety of sesquiterpene lactones that have been rather easy to isolate [12]. In addition, *Amblyolepis* differs from *Helenium* and *Gaillardia* in the morphology of many characters including leaf shape, leaf surfaces, pubescence, involucral bracts, achenes, pappus scales and disc corollas. Therefore, both the chemical and morphological data strongly support the recognition of *Amblyolepis* as a distinct genus and suggest that it is not even particularly closely related to *Helenium* or *Gaillardia*.

EXPERIMENTAL

Plant sources. United States: Texas: Medina Co., 18 May 1975 (Bierner 51200); Karnes Co., 24 March 1976 (Bierner 51514); Live Oak Co., 24 March 1976 (Bierner 51520); Duval Co., 24 March 1976 (Bierner 51522). Mexico: Coahuila, 21 May 1975 (Bierner 51215). Vouchers are deposited at the University of Tennessee Herbarium, Knoxville (TENN).

Identification. Compounds were isolated and identified by standard procedures [13]; spectral chromatographic and hydrolytic data were compared to published data on authentic compounds. Sugar constituents were identified by GLC as described in Mabry *et al.* [13] using a 3 m × 6 mm column packed with acid washed silanized chromosorb W coated with 3% SE 52.

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