Of interest this week at Beal...

Mexican lippia
*Lippia dulcis*

Family: the Verbena family, the Verbenaceae
Also called: Aztec sweet herb

The low-growing ground cover, *Lippia dulcis*, is native to Mexico and Central America and the most well known of the more than 200 species of *Lippia* that are mostly from the tropics. Mexican lippia or Aztec sweet herb was used as a sweetener in the indigenous cultures of Central America. The first historical notation of this species was supplied by the Spanish physician Francisco Hernández who, between 1570 and 1576, penned a monograph entitled *Natural History of New Spain*.

When analyzed, the sweetness was attributed to a pair of sesquiterpenes that were named in honor of the chronicler Hernández; hernandulcin and 4β-hydroxyhernandulcin. With sweetness approaching 1500 times that of sugar, the plant was initially thought to be a candidate for sugar replacement in various applications. Many people have grown this plant to experiment whether it might be a food-plant replacement in the diet, along the lines of similar tests with *Stevia*.

While some who have tried lippia find it acceptably sweet, for many it also tastes bitter. The discovery that it also contains significant amounts of camphor within its leaves means that it should not be taken in raw form in any significant doses as camphor, taken internally, is a nervous system toxin.

In the world of folk medicine, *Lippia dulcis* has been used in the treatment of bronchitis, cough, indigestion, liver disorders, hypertension, and dysentery. In recent analyses, a host of sesquiterpenes, peroxylippidulcines, and flavonoids have been inventoried for this species.

In 2005, Pérez et al. in the *Journal of Ethnopharmacology*, found that ethanol extracts of *Lippia dulcis* were effective in reducing a variety of inflammatory reactions induced in experimental rats. Several publications have also found extracts of *Lippia dulcis* to be
effective antimicrobial agents. In a 2008 article in the Journal of Ethnopharmacology, Görnemann, et al. working with hogs, tested the antispasmodic action of Mexican lippia and found its extracts to be of sufficient efficacy to use to treat bronchospasm. In addition, Abe, et al. (2002, Biological Pharmacology Bulletin) found these Lippia extracts had significant antiproliferative effects on several lines of human cancer cultures.

This flower head of Lippia dulcis, Mexican lippia, measures 6 mm in diameter and is presenting some twenty plus individual open flowers, each of which is approximately 1.6 mm in diameter. Scale-like bracts above will reflex, revealing the next flowers.