

Pinguicula lutea Walt. f. *alba*, f. nov. (Lentibulariaceae),
a White-Flowered Form of the Yellow Butterwort

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ABSTRACT

A white-flowered form of *Pinguicula lutea* Walt. is described as f. *alba* Folkerts and Freeman. Thus far, the form is known only from the Apalachicola region, Liberty County, Florida.

INTRODUCTION

Most of the North American species of the genus *Pinguicula* L. possess flowers that are some shade of blue or purple. Variants occur in which the flower color is essentially white, but in the majority of cases whiteness merely represents the end of a spectrum of variants ranging from the typical color to white. Additive inheritance factors and environmental influences are the probable causes of this relatively continuous variation.

White-flowered forms have been given formal names in *Pinguicula pumila* Michx. (Moldenke 1973) and *P. caerulea* Walt. (Schnell 1980). Ernst (1961) noted the presence of white-flowered specimens in *P. villosa* L. of boreal North America. Godfrey and Stripling (1961) and Godfrey and Wooten (1981) mentioned white variants in four of the six southeastern species, leaving only *P. planifolia* Chapm. (with lavender flowers) and *P. lutea* Walt. (with yellow flowers) without such forms having been recognized either formally or informally.

The flower color of *Pinguicula lutea* has been thought to be relatively invariable. Wood and Godfrey (1967) stated that the flower color of *P. lutea* "is constant and conspicuous, the only variation being in the presence or absence of brown venation in the corolla tube." Casper (1966) mentioned no significant variation in flower color. Godfrey and Wooten (1981), following many years of field research, reported no white variants. However, Schnell (1980) noted the presence of pale "straw-colored" flowers in specimens from northern Florida. In March, 1981, a colony of *P. lutea* was discovered in Liberty County, Florida, in which a number of plants bore only pure white flowers. This new form is described below.

DIAGNOSIS

Pinguicula lutea Walt. forma *alba* Folkerts et Freeman, f. nov., a f. *luteo* floris *albidis* differt.

Holotype: Florida, Liberty County, vicinity of Camel Lake, approximately 8 mi N Wilma, March 12, 1981, G. W. Folkerts s. n. (AUA).

DISTRIBUTION: Known only from the type locality.

DISCUSSION

Plants of *Pinguicula lutea* forma *alba* are similar to the typical form in the size and shape of all vegetative and floral parts. Floral parts with the exception of the calyx, however, are white. Newly pressed specimens of the typical form retain the yellow corolla color when dried rapidly. In older specimens and in those dried more slowly, the corolla becomes dark brown. The corolla of the holotype, the only white-flowered specimen of *P. lutea* known to have been pressed, assumed a light tan color upon drying. Such changes make determination of white-flowered forms difficult or impossible on the basis of herbarium specimens alone.

The habitat in which the specimens of the white-flowered form were found lies in the Apalachicola flatwoods where the vegetation is dominated by longleaf pine (*Pinus palustris* Mill.) with a ground cover of saw palmetto (*Serenoa repens* (Bartr.) Small). The white-flowered plants were growing on the upper slope of a moist roadside depression along with numerous plants of the typical form. Six plants with white flowers were present in 1981. In subsequent seasons through 1986 from two to seven white-flowered plants have been observed in the area.

The Apalachicola region of Florida is notable for its endemic flowering plants. Among the narrowly-restricted species occurring in habitats similar to that of the white-flowered form are *Harpocallis flava* McDaniel (Liliaceae), *Pinguicula ionantha* Godfrey (Lentibulariaceae), and *Macbridea alba* Chapman (Lamiaceae) (Clewell 1977, Ward 1978). However, *Pinguicula lutea* forma *alba* cannot properly be considered to be an additional unique component or a relict type. This form undoubtedly originated from a mutation which merely happened to be discovered in the Apalachicola area. There is no reason that white-flowered forms should not be expected and searched for in other parts of the species range.

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Nomenclature and Distribution of *Eupatorium x truncatum*, with Comments on the Status of *E. resinosum* var. *kentuckiense* (Asteraceae)

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ABSTRACT

The synonymy of *Eupatorium x truncatum*, the hybrid of *E. perfoliatum* and *E. serotinum*, is discussed. *Eupatorium resinosum* var. *kentuckiense* is recognized as conspecific with *E. x truncatum*. A key is provided for *E. serotinum*, *E. perfoliatum*, *E. resinosum*, and *E. x truncatum*. A description and a summary of the distribution of *E. x truncatum* are provided.

INTRODUCTION

Eupatorium perfoliatum L. and *E. serotinum* Michx. show close karyological affinity to each other and to *E. resinosum* Torr. ex DC. with $2n=20$ (Grant 1953; Sullivan 1972, 1976). Thus, hybrids of the former two species have been frequently reported (Godfrey and Woolen 1981; Johnson 1974; Sullivan 1972; Utal and Mitchell 1969; Wunderlin 1972), and a hybrid of *E. perfoliatum* with *E. resinosum* is also recorded (Stone 1911).

Eupatorium resinosum (with historical and extant populations in Delaware, New Jersey, and North Carolina) is under review as a federally Endangered or Threatened species (Mowbray 1986). *Eupatorium resinosum* var. *kentuckiense* Ferr., if conspecific with *E. resinosum*, would represent a disjunct population in Kentucky. However, we recognize Fernald's taxon to be conspecific with *E. x truncatum*.

NOMENCLATURE

Eupatorium truncatum Muhl. ex Willd., Sp. pl. 3:1751. 1803 (lectotype: *Willdenow 15108*, B, IDC microfiche!).

Eupatorium perfoliatum L. var. δ Torr. & A. Gray, Fl. N. Amer. 2:38. 1841 (holotype: *Torrey and Gray s.n.*, GH!).

Eupatorium cuneatum Engelm. in Torr. & A. Gray, Fl. N. Amer. 2:38. 1841 (holotype: *Engelmann s.n.*, at GH!); *pro syn., non* DC., 1836.

Eupatorium perfoliatum L. var. *truncatum* (Willd.) A. Gray, Syn. Fl. N. Amer. 1:99. 1884.

Eupatorium perfoliatum L. var. *cuneatum* (Engelm.) Engelm. ex A. Gray, Syn. Fl. N. Amer. 1:100. 1884.

Uncaria cuneata (Engelm.) Greene, Leaf. Bot. Observ. Cilt. 1:13. 1903.
Eupatorium perfoliatum L. f. *truncatum* (Willd.) Fassett, Rhodora 27:55. 1925.

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