



Plant of the Week

April 16th, 2010

Platanthera praeclara (Sheviak & Bowles) Cronquist

COMMON NAMES:

Great Plains white fringed orchid;

Western white-fringed orchid

SYNONYMS:

Fimbriella praeclara (Sheviak & M.L. Bowles) Szlach. & Rutk.
Acta Botanica Fennica 169: 380. 2000. (Acta Bot. Fenn.)

Habenaria leucophaea var. *praeclara* (Sheviak & M.L. Bowles)
Cronquist Manual of the Vascular Plants of Northeastern
United States and Adjacent Canada (ed. 2) 864. 1991. (Man.
Vasc. Pl. N.E. U.S. (ed. 2))

ETYMOLOGY OF NAME:

The western white-fringed orchid was first documented by the Lewis and Clark expedition under the name *Habenaria leucophaea* (from Latin "habena" meaning "reins", referring to the strap-like lip divisions and "leuko" meaning "white, colorless" referring to the creamy white flowers). Today it is known as *Platanthera praeclara*.

Platanthera is Greek and means "broad or wide anther." So named by Louis Claude Richard in reference to the separation of the base of the pollinia in the type species of the genus (*Platanthera bifolia*, commonly known as the Lesser Butterfly-orchid). Although Richard felt that this characteristic distinguished the genus *Platanthera* from both the genus *Orchis* and the genus *Habenaria*, today the defining characteristics of the genus are generally accepted to be the absence of both stigmatic processes (typical in *Habenaria*) and ovoid root-tuberosities (characteristic of both *Habenaria* and *Orchis*).

Praeclara comes the Latin, and means "very bright, very clear" or "beautiful, striking", which this flower clearly is.

FAMILY: *Orchidaceae* (Orchid family)

ORDER: *Asparagales*

NATIVE STATUS: Native

DISTRIBUTION:

The original range roughly reflects the historic distribution of the tallgrass prairie in North America, from the Red River Valley of Manitoba, Minnesota and North Dakota, extending southeastward to Iowa and Missouri and westward to northeastern Oklahoma, eastern Kansas, central Nebraska and eastern South Dakota.

Today, populations exist in nine US states (IA, KS, MN, MO, ND, NE, OK, SD, WY), and in Manitoba province in Canada.



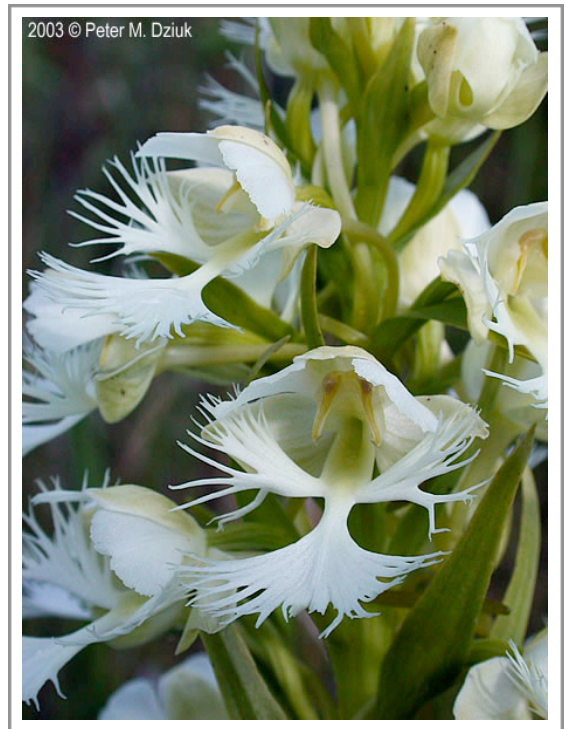
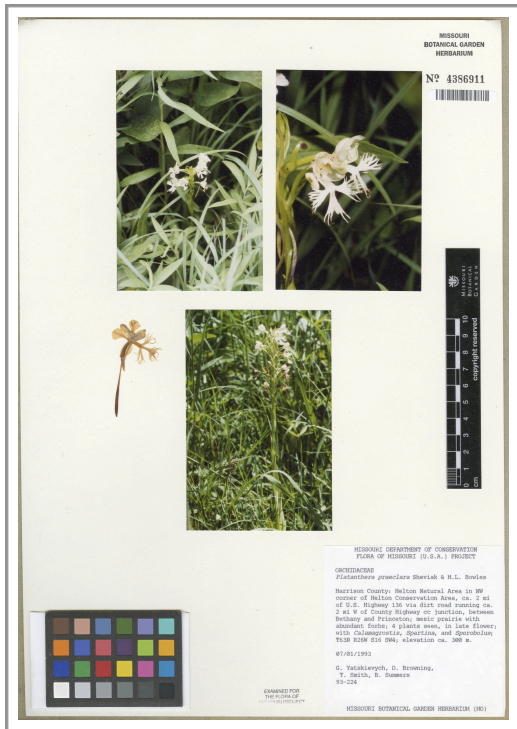
ECONOMIC/ETHNOBOTANICAL USES: NONE

(although according to the Lady Bird Johnson Wildflower Center, the benefit of this plant is "Conspicuous Flowers")

PHYLOGENY DISCUSSION:

Orchidaceae was previously classified in the order *Orchidales*.

Western Prairie Fringed Orchid sometimes goes by *Habenaria leucophaea* var. *praeclara*, but *Habenaria* is now widely considered restricted to tropical species and



PLANT DESCRIPTION:

Duration: Perennial

Habit: Forb/herb

Plant: 38–85 cm

Leaves: sheathing at base, alternate/spiral, imperceptibly reduced to bracts distally (26 × 5 cm)

Leaf Margin: Entire

Leaf Shape: Lanceolate to ovate-lanceolate

Leaf venation: Parallel

Inflorescence: Spike

Flowers:

- zygomorphic, resupinate, showy, creamy white;
- 3 sepals, petaloid, lateral sepals somewhat porrect (extended forward);
- 3 petals, flabellate (fan-like), truncate, sometimes emarginate, apically lacerate;
 - lip (the 3rd petal) descending, deeply 3-lobed, without basal thickening, 17–32 × 20–39 mm, distal margins of lobes deeply incised and fringed, lateral lobes flabellate, sometimes broadly and overlapping middle lobe, middle lobe flabellate, sometimes very broadly, emarginate;
- spur slenderly clavate, 36–55 mm;
- Stamens adenate to style and stigma forming a column (Stamens 2; Carpels 3)
 - rostellum lobes directed strongly forward, wide-spreading, angular;
 - pollinaria geniculate (bent like a knee);
 - pollinia directed forward (column appearing hooded), remaining enclosed in anther sacs;
- viscidia (a sticky pad which sticks the pollinia to the body of pollinators) orbiculate (which means circular, so why not use circular?);
- inferior ovary, slender, mostly 20–30 mm.

Fruit: Capsule

CONSERVATION STATUS:

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| United States | Threatened |
| Iowa | Threatened |
| Minnesota | Endangered |
| Missouri | Endangered |
| Nebraska | Threatened |
| Canada (Manitoba) | Endangered |



Sources

Tropicos | Name - *Platanthera praeclara* Sheviak & M.L. Bowles <<http://www.tropicos.org/Name/23517547>>

Platanthera praeclara in Flora of North America @ efloras.org <http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242101850>

PLANTS profile <<http://plants.usda.gov/java/profile?symbol=PLPR4>>

Gleason, H. and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States* (it includes IL). New York: Botanical Garden Press.

Judd, W. S., C. S. Campbell, E. A. Kellogg, P. F. Stevens, and M. J. Donoghue. 2008. *Plant systematics: a phylogenetic approach*, third edition. Sinauer Associates, Sunderland, Mass.