Common Name: LARGE-LEAF GRASS-OF-PARNASSUS

Scientific Name: *Parnassia grandifolia* A.P. de Candolle

Other Commonly Used Names: bigleaf grass-of-parnassus, limeseep parnassia, undine

Previously Used Scientific Names: none

Family: Parnassiaceae (grass-of-parnassus) or Saxifragaceae (rockbreaker)

Rarity Ranks: G3/S1

State Legal Status: Special Concern

Federal Legal Status: none

Federal Wetland Status: OBL

Description: **Perennial** herb, forming clusters of slightly succulent, shiny leaves. **Leaf blades** 1 - 4 inches (3 - 10 cm) long, oval, usually longer than broad, with long **leaf stalks**; leaf bases are rounded but not deeply heart-shaped (in spite of the common name, the plant does not resemble grass in any way). **Flower** about 1½ inches (3 - 4 cm) across, solitary at the top of a long stalk that bears one leaf about halfway. **Petals** ⅜ - ¾ inch long, five in number, white, oval, with 5 - 9 green, brown, or yellow main veins, the lower veins with short side veins extending to the edge of the petal, tips of the veins dilated. **Ovary** green, sometimes white near the base.

Similar Species: Kidney-leaf grass-of-parnassus (*Parnassia asarifolia*) occurs in acidic mountain wetlands and along small streams. Its leaves are kidney-shaped, as wide as or wider than they are long; the leaf base is strongly heart-shaped with deeply rounded lobes. Its petals are blunt-tipped and nearly as wide as they are long with clawed bases (see drawing).

Related Rare Species: None in Georgia.

Habitat: Seepage wetlands (fens) with neutral or alkaline water developed over bedrock high in magnesium or calcium.

Life History: Grass-of-parnassus is a perennial herb that reproduces sexually. Its flowers must be cross-pollinated in order to set seed; the stamens shed pollen before the stigmas are receptive, thus preventing self-pollination. Stamens also ripen and shed pollen in succession, extending the period for pollen collection. Its flowers have 5 fertile stamens and 5 clusters of non-fertile stamens (staminodia). The staminodia have glistening tips which, along with the “runway marker” veins on the petals, attract bees and flies to the center of the flower. These insects transfer pollen from other flowers in the process of collecting the nectar that is secreted at the base of each staminode.

Survey Recommendations: Although grass-of-parnassus leaves are distinctive throughout the growing season, surveys are best conducted during flowering (September–October) when plants are most obvious.

Range: Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, South Carolina, North Carolina, Tennessee, Virginia, West Virginia, Kentucky, Missouri, Arkansas, and Oklahoma

Threats: Destruction of habitat by clearing or development. Changes in hydrology which divert or stop seepage flow. Trampling and grazing by cattle. Overbrowsing by deer. Invasion by exotic pest plants.

Georgia Conservation Status: Two populations of large-leaf grass-of-parnassus were discovered in the 1800s in Catoosa and Rabun (or possibly Habersham) Counties; neither of these sites has been re-located. One population was recently discovered in Towns County on state-owned land.

Conservation and Management Recommendations: Protect all mountain wetlands (seeps, springs, fens, bogs) from disturbance to hydrology. Exclude cattle from around springs and seeps. Control exotic pest plants. Remove encroaching woody plants by hand.

Selected References:

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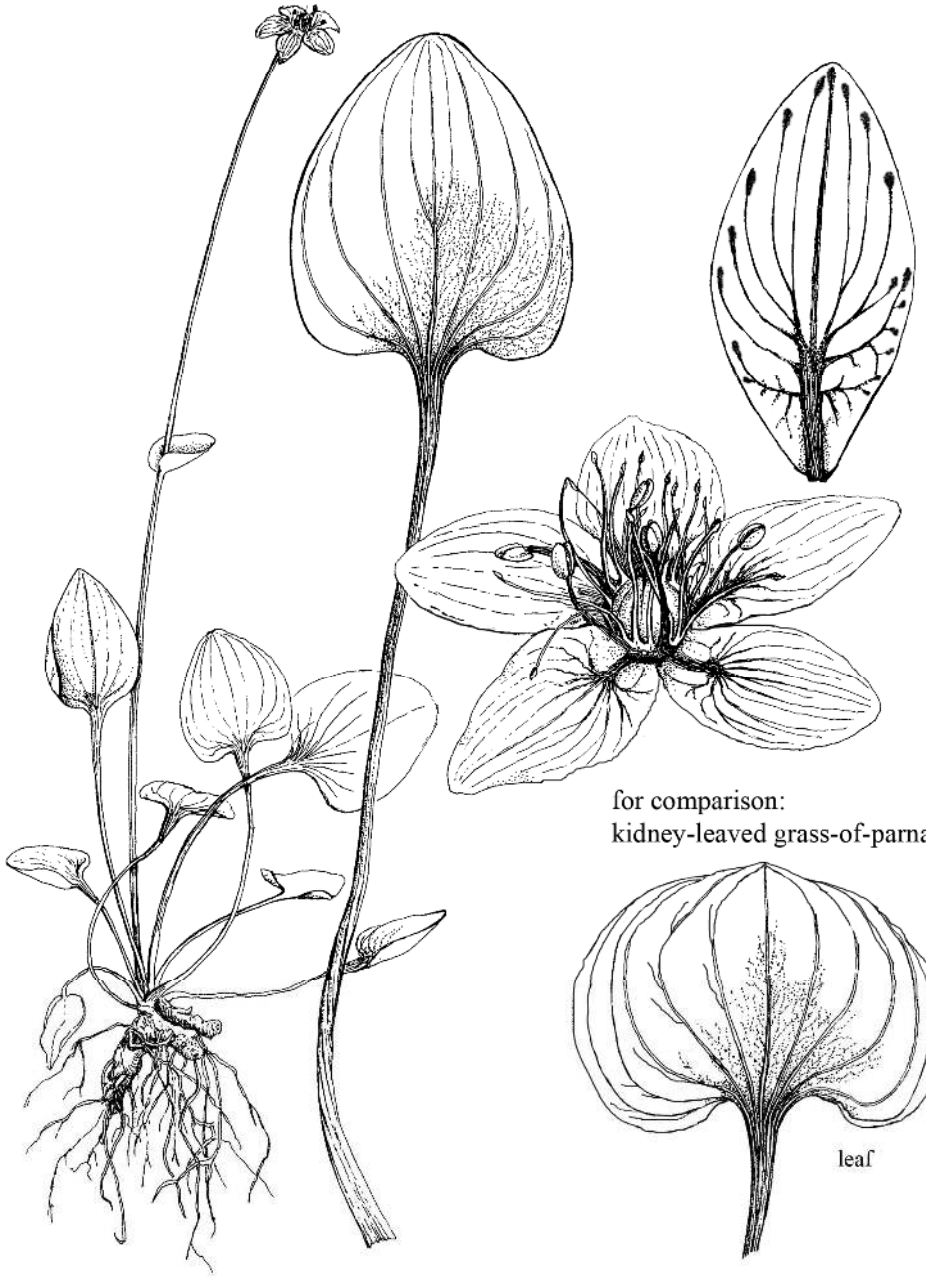
Author of Species Account: Linda G. Chafin

Date Compiled or Updated:
L. Chafin, July 2008: original account
K. Owers, Feb. 2010: added pictures

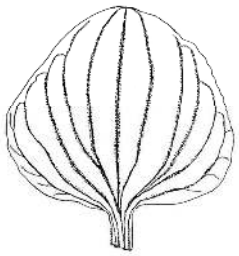
LARGE-LEAF GRASS-OF-PARNASSUS

Parnassis grandifolia



for comparison:
kidney-leaved grass-of-parnassus (*Parnassia asarifolia*)

leaf



clawed petal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