



Common Name: BARTRAM'S AIR-PLANT

Scientific Name: *Tillandsia bartramii* Elliott

Other Commonly Used Names:

Previously Used Scientific Names: *Tillandsia myriophylla* Small, *T. setacea* Swartz var. *tenuifolia* Chapman, *T. pinifolia* Leconte

Family: Bromeliaceae (air-plant)

Rarity Ranks: G4/S2

State Legal Status: Special Concern

Federal Legal Status: none

Federal Wetland Status: none

Description: Perennial, evergreen **herb** attached to tree trunks and branches, forming dense clusters of stiffly spreading, pointed leaves. **Leaves** 6 - 16 inches (15 - 40 cm) long and less than ¼ inch (0.5 cm) wide except for the widened, flat, triangular base; leaves are covered with pinkish-gray scales. **Flower stalk** 3 - 6 inches (8 - 15 cm) long, sometimes branched, covered by many red, pointed, overlapping bracts, with 5 - 20 flowers that emerge from beneath the bracts. **Flowers** 1 - 1¾ inches (3 - 4.5 cm) long, narrow and tubular, with 3 pale green sepals and 3 purple petals. **Fruit** a narrow, brown, tubular capsule about 1 inch (2.5 - 3 cm) long, opening into 3 parts to release plumed seeds.

Similar and Related Rare Species: Three other species of air-plants are of Special Concern. Needle-leaved air-plant (*Tillandsia setacea*) leaves resemble pine needles; it grows on evergreen hardwood trees in bluff forests in Glynn, Laurens, and Ben Hill Counties. Quill-leaf air-plant (*T. fasciculata*) has stiff, leathery leaves up to 1 inch (2.5 cm) wide at the base; it is known from one site in Camden County where it grows on live oaks in a maritime hammock. Ball-moss (*T. recurvata*) occurs in Camden and Glynn Counties where it forms dense “balls” of curved leaves on live oaks in maritime forests.

Habitat: Limbs of loblolly bay, live oak, red cedar, and other trees in bay swamps, tidal swamp forests, and moist maritime forests.

Life History: Bartram’s air-plant is a perennial herb that reproduces sexually as well as vegetatively. It is an epiphyte held on the limbs of trees by wiry roots which serve only to anchor the plant to its supporting limb and do not take up water or nutrients from the tree. Air-plants have evolved several strategies for surviving without water- and nutrient-absorbing roots. Their leaves are densely covered with scales that reduce water loss and also absorb moisture and nutrients from the air. They conduct photosynthesis by a special method known as CAM, which reduces moisture loss. The overlapping leaf bases form shallow cups that catch rain water as well as plant fragments and insects; as these materials decompose, the released nutrients are absorbed by the air-plant leaves. Individual air-plants flower only once, sending up a single stalk from the center of the plant. Most air-plant flowers are pollinated by hummingbirds although pollinators of Bartram’s air-plant are not reported. Pollinated flowers produce fruits that open to release plumed, wind-dispersed seeds. After flowering, a plant stops growing new leaves and eventually dies. Before dying, it usually produces plantlets (known as “pups” or “offsets”) around its base, often forming large clumps.

Survey Recommendations: Surveys are best conducted during flowering (spring–summer), but evergreen leaves and growth form are recognizable all year.

Range: Georgia, Florida, and South Carolina; Tamaulipas, Mexico.

Threats: Clearing, logging, draining, and development of maritime forests, coastal hammocks, and swamps.

Georgia Conservation Status: About 13 populations are known, 3 on state lands, one on a military base.

Conservation and Management Recommendations: Prevent logging, clearing, draining, and development of maritime forests, coastal hammocks, and swamps.

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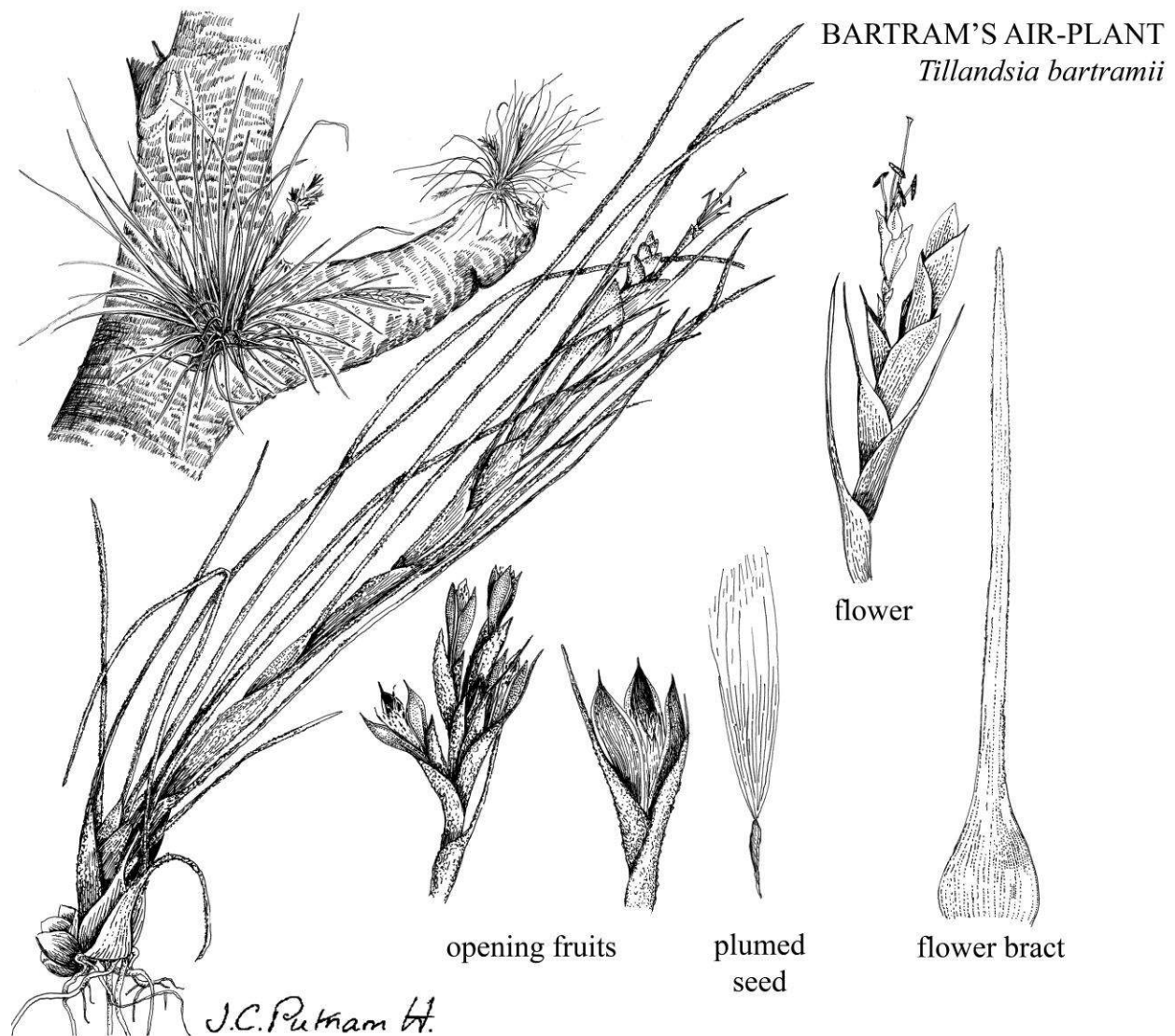
Author of Species Account: Linda G. Chafin

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L. Chafin, Jan. 2009: original account

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