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Rediscovery of *Platanthera chapmanii* in Georgia

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Platanthera chapmanii (Small) Luer (Chapman's yellow fringed orchid) was initially described as *Blephariglottis chapmanii* Small based upon a type specimen collected by A.W. Chapman from Apalachicola, Florida (Small, 1903). Subsequently, Small (1933) suggested *B. chapmanii* was "perhaps a hybrid between *B. ciliaris* and *B. cristata*," and others formally treated it as a notho-taxon: *Habenaria* × *chapmanii* (Small) Ames, with parents *H. cristata* (Michx.) R. Br. and *H. blephariglottis* (Willd.) Hook. (Correll, 1950), or *Platanthera* × *chapmanii* (Small) Luer, with parents *P. cristata* (Michx.) Lindl. and *P. ciliaris* (L.) Lindl. (Luer, 1975).

Based upon extensive research in the field, laboratory, and herbarium, including an analysis of the pollination biology of *P. chapmanii*, *P. cristata* and *P. ciliaris*, Folsom (1984) concluded that *P. chapmanii* was indeed a distinct species – not a hybrid. Folsom's chromosomal studies showed no evidence of amphitetraploidy, and he found that populations of *P. chapmanii* are generally pure without the presence of either or both putative parents, and his studies of pollination biology provided evidence for morphological isolating mechanisms involving divergent floral morphologies, especially the form of the terminal portion of the column (rostellum) and the length of the spur (Folsom, 1984). Moreover, Folsom (1984) documented actual hybrids between *P. ciliaris* and *P. cristata*, which he described and named *Platanthera* × *channellii* Folsom. In contrast with *Platanthera chapmanii*, *P. ×channellii* is found in mixed populations with its parents *P. cristata* and *P. ciliaris*, and its rostellum lobes are straight and also intermediate between those of *P. cristata* and *P. ciliaris*, whereas the rostellum lobes of *P. chapmanii* are strongly down-curved (Folsom, 1984, 1995). Folsom's interpretation has recently been adopted by others (Sheviak, 2002; Brown, 2002). Excellent photographs of *P. chapmanii*, *P. cristata*, *P. ciliaris*, and *P. ×channellii* may be found in Brown (1995, 2002, 2004) and Chafin (2007).

Platanthera chapmanii is known from eastern Texas, northern Florida, and southeastern Georgia (Folsom 1984, 1995; Brown 2002, 2004; Sheviak 2002). There is only a single specimen of *P. chapmanii* from Georgia at the University of Georgia Herbarium (T. Patrick, pers. comm.): "U.S.A. Georgia. Camden County: growing in low sandy humus among scrub-palmetto and pines, (near) Kingsland, 1 August 1949, William J. Dress 869 (GA)." This specimen was annotated as *P. chapmanii* by James P. Folsom (T. Patrick, pers. comm.). According to Chafin (2007), Chapman's yellow fringed orchid is known from Charlton County, Georgia. In Georgia, *P. chapmanii* is listed among *Special*

Concern Plant Species with a Global Rank of G2 (imperiled globally because of rarity, 6-20 occurrences) and a State Rank of SH (of historical occurrence in the state, perhaps not verified in the past 20 years, but suspected to be still extant) (Anonymous 2008).

While conducting an intensive general floristic inventory of Camden County in southeastern Georgia, two populations were located that seemed consistent with Folsom's (1984, 1995) concept of *P. chapmanii* (Figures 1,2; page 7). Both populations were pure, i.e., without either *P. ciliaris* or *P. cristata* present. Because of the long history of disturbance from agriculture, degradation from modern "forestry" practices, fire suppression, and – more recently – rapidly advancing real estate development, for the most part, only small remnants of natural habitats were found in Camden County, and both populations of *P. chapmanii* were found in small relict strips along roadsides where periodic mowing is surrogate for fire. General voucher specimen data follow, with precise locations withheld and geographical coordinates truncated.

U.S.A. Georgia. Camden County: N of Kingsland, N30.9° W81.7°, infrequently mowed right-of-way, with *Acer rubrum*, *Aletris* sp., *Anthraenantia rufa*, *Erigeron vernus*, *Eupatorium rotundifolium*, *Hypericum* spp., *Ilex glabra*, *Lobelia glandulosa*, *Marshallia* sp., *Morella cerifera*, *Osmunda cinnamomea*, *Persea palustris*, *Pinus elliottii*, *P. palustris*, *P. serotina*, *P. taeda*, *Polygala lutea*, *Pteridium aquilinum*, *Quercus nigra*, *Q. pumila*, *Rhexia* spp., and *Sarracenia minor*, 21 Jul 2006, R. Carter 17083 and W.W. Baker (VSC); N of Kingsland, N30.9° W81.7°, seepy backslope along right-of-way through bayswamp, with *Arundinaria tecta*, *Eriocaulon decangulare*, *Gaylussacia frondosa*, *Gordonia lasianthus*, *Ilex coriacea*, *Lyonia lucida*, *Morella cerifera*, *Nyssa biflora*, *Persea palustris*, *Quercus nigra*, *Sphagnum* sp., and *Vaccinium corymbosum*, 11 Aug 2009, R. Carter 19357 and W.W. Baker (VSC).

Both Camden County populations of *Platanthera chapmanii* are small and highly vulnerable, one comprising only 19 flowering plants in 2009, and the other 28. They are potentially at great risk from the injudicious use of herbicides, road widening activities, and real estate development. Therefore, cooperative conservation efforts are currently underway with Matt Richards (Atlanta Botanical Garden) and Tom Patrick (Georgia Department of Natural Resources) to collect seeds from these populations and artificially propagate plants from them.

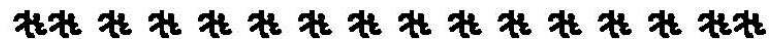
Acknowledgments

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Valdosta State University kindly provided assistance in obtaining copies of Folsom (1995) and Brown (1995). Financial support for field work was provided by the Georgia Botanical Society, the Foundation of Valdosta State University, and Georgia Department of Natural Resources.

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Figures to accompany 'Rediscovery of *Platanthera chapmanii* in Georgia' by Richard Carter (page 1). Images: Richard Carter.
Figures 1 and 2: *Platanthera chapmanii* in Camden County, Georgia.

