



The Status of *Schwalbea americana* L. (Orobanchaceae) in Georgia

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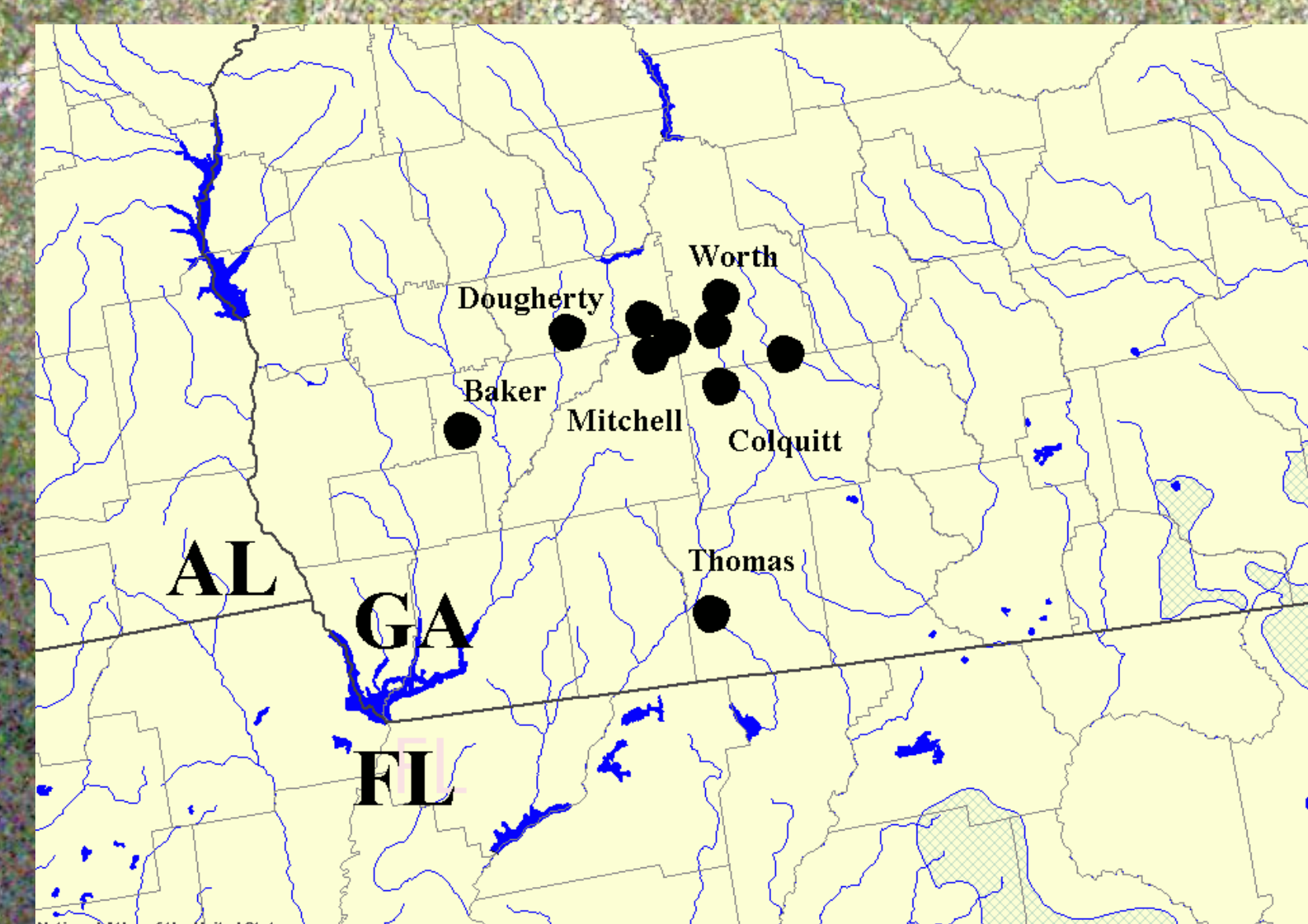
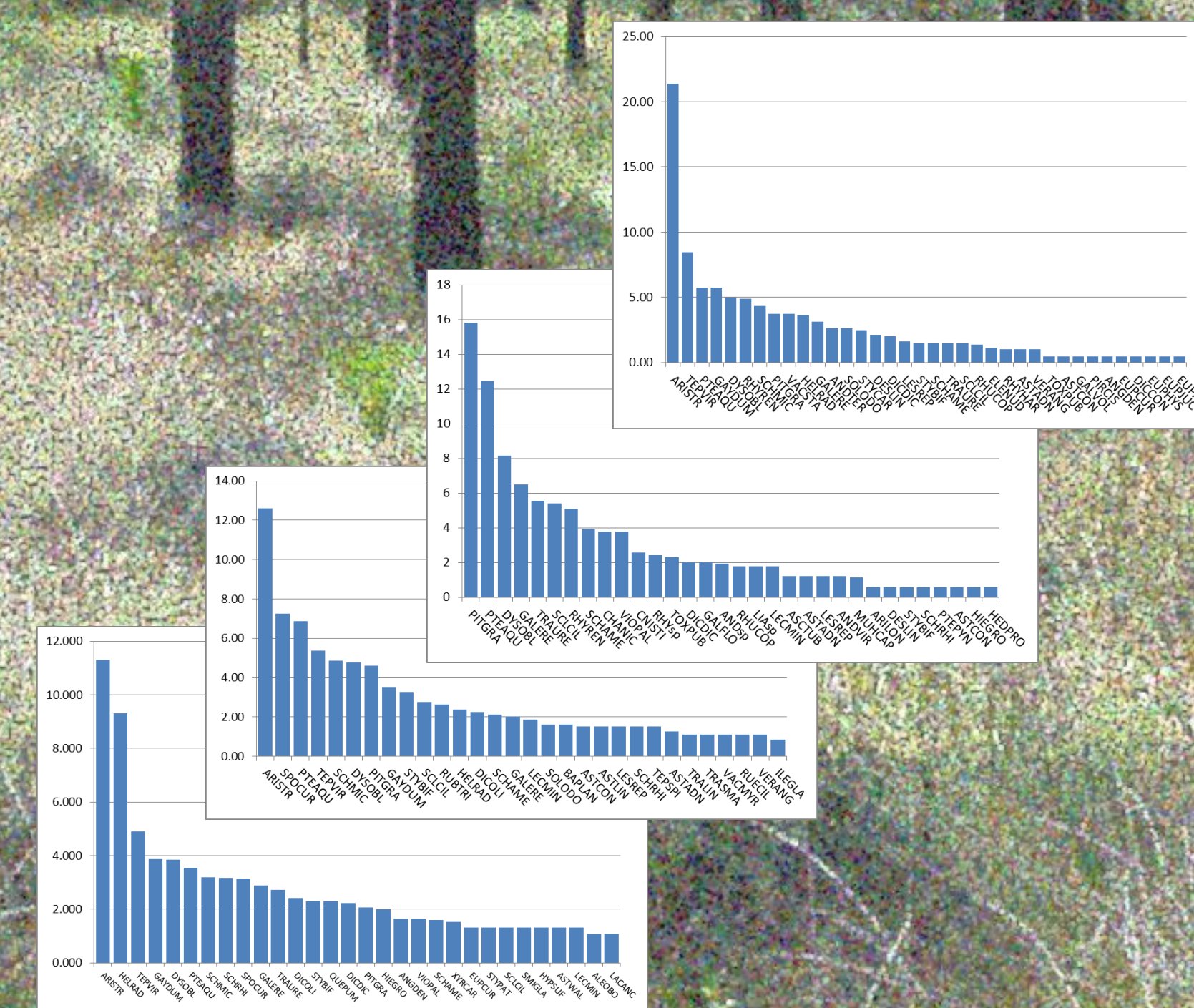
INTRODUCTION

Schwalbea americana L. (American chaffseed) is listed federally and by the state of Georgia as Endangered (USFWS 1992; Chafin 2007; NatureServe 2015). Its rarity resulting from habitat fragmentation and the exclusion of fire has been well documented (Musselman and Mann 1978, Kral 1983, USFWS 1995). Few plants are as closely adapted to fire as *S. americana* (USFWS 1995; Kirkman et al. 1998; Norden and Kirkman 2004a, b), and all extant sites in Georgia appear to be managed with prescribed fire and have a wiregrass component. Our purpose was to document historical populations and to explore additional sites especially in southwestern Georgia where fire has been re-introduced into longleaf pine-wiregrass habitats. By assessing and documenting known sites and populations and searching for new populations, we expect to obtain a better understanding of the conservation status of chaffseed in Georgia.



The Five Most Important Species in 1 m² Plots Ranked by Order of Relative Importance

	Arcadia 01	Arcadia 04	Jeffords 01	Quail Ridge 01	Cumulative Relative Importance
<i>Aristida stricta</i>		5	5	5	15
<i>Dyschoriste oblongifolia</i>	3	1		1	5
<i>Galactia erecta</i>	2				2
<i>Gaylussacia dumosa</i>		2		2	4
<i>Helianthus radula</i>				4	4
<i>Pityopsis graminifolia</i>	5				5
<i>Pteridium aquilinum</i>	4	3	3		10
<i>Mimosa quadrivalvis</i>			1		1
<i>Sporobolus curtisii</i>			4		4
<i>Tephrosia virginiana</i>		4	2	3	9
<i>Tragia urens</i>	1				1



Methods

To maximize the likelihood of discovery of new populations and observation of known populations, surveys were conducted in suitable habitat on recently burned sites. The optimal survey period was six to eight weeks after fire, up until the end of the growing season.

Numbers of individuals were counted, populations were mapped, assessed and ranked according to quality, habitat condition, viability, and defensibility. Associated species were documented, and plots were established to quantitatively describe associated plant communities.

Results

Comprising more than 4,000 individuals, nine metapopulations in six southwestern Georgia counties were described, mapped, and ranked. Community types corresponding with our observations in Georgia are (USNVC 2016):

- *Pinus palustris* / *Quercus laevis* – *Quercus margarettiae* / *Licania michauxii* / *Aristida beyrichiana* Woodland [CEGL004492]
- *Pinus palustris* / *Quercus incana* / *Aristida stricta* – *Sorghastrum nutans* – *Anthaenantia villosa* Woodland [CEGL003578]
- *Pinus palustris* – *Pinus elliotii* var. *elliotii* / *Ctenium aromaticum* – *Aristida beyrichiana* – (*Sporobolus floridanus*) Woodland [CEGL004790]

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Acknowledgments: Funding for this project was provided by Georgia Department of Natural Resources and the Faculty Development Fund of Valdosta State University.