AN ENDANGERED GRASS "FALLS" FOR A COMPLEX HYDROLOGIC REGIME IN EVERGLADES NATIONAL PARK

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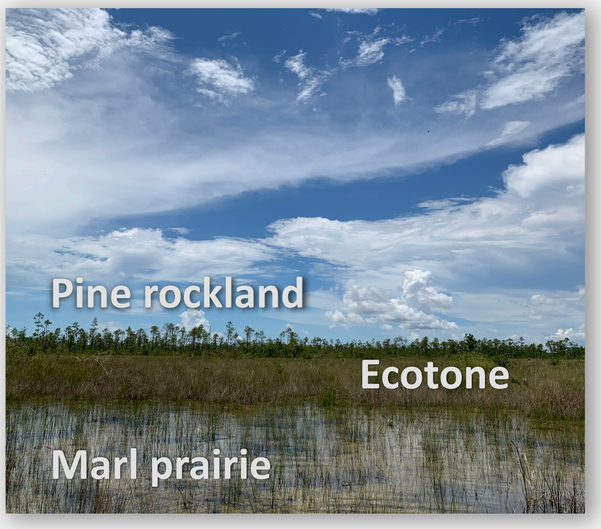
Digitaria pauciflora is a perennial grass that grows along ecotones

Grow in outcrops of weathered oolitic limestone, where solution holes are common.

Exist in isolated populations of 100 or more individuals.

Listed as federally threatened due to its limited distribution.

We asked how the seasonal flooding regime affects *Digitaria pauciflora* population size.



Digitaria pauciflora experience seasonal flooding

Seasonal flooding affects the demography of *Digitaria pauciflora*

Overall, plants are bigger where elevation is lower.

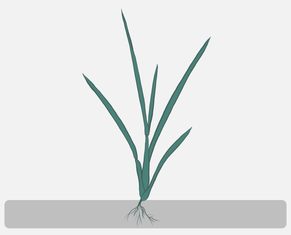
The largest plants with many stems were in solution holes.

An individual plant produces 60-6500 seeds each year, but seedlings are rare.

Plants mainly spread via plantlets that form below inflorescences.

Populations are sensitive to extended flooding.

Typical flooding duration (1-2 months)

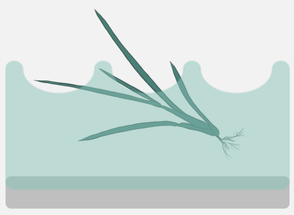


85% survival of adult plants

0.12 plantlets per adult establish

Population size increases

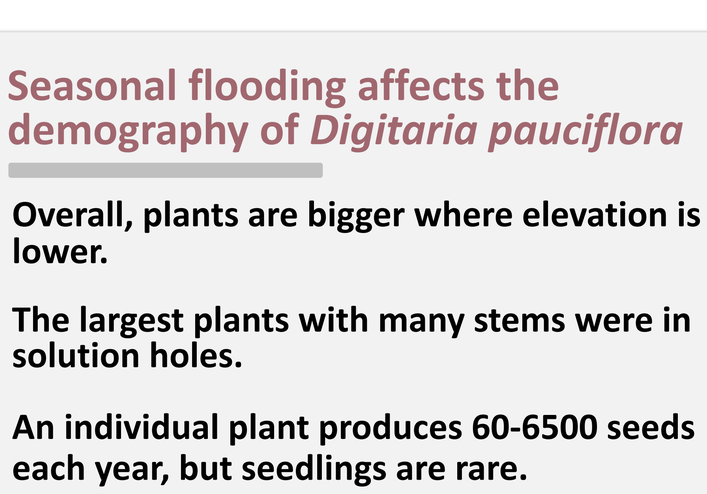
Extended flooding duration



62% survival of adult plants

0.05 plantlets per adult establish

Population size decreases

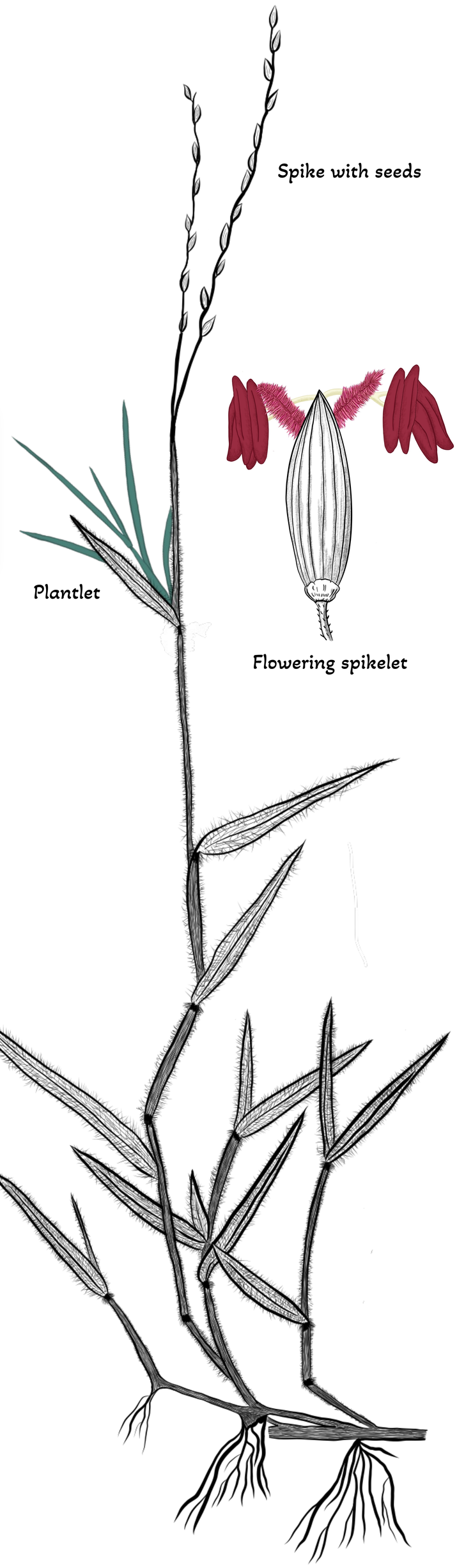


Conservation planning should consider asexual reproduction of *Digitaria pauciflora*

***Digitaria pauciflora* exhibits boom or bust demographics.**

Multiple, sequential years with extended flooding could decimate populations.

Burning and moving plantlets to new areas might bolster populations during bust years.



Digitaria pauciflora

Two-spike crabgrass
Everglades crabgrass

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