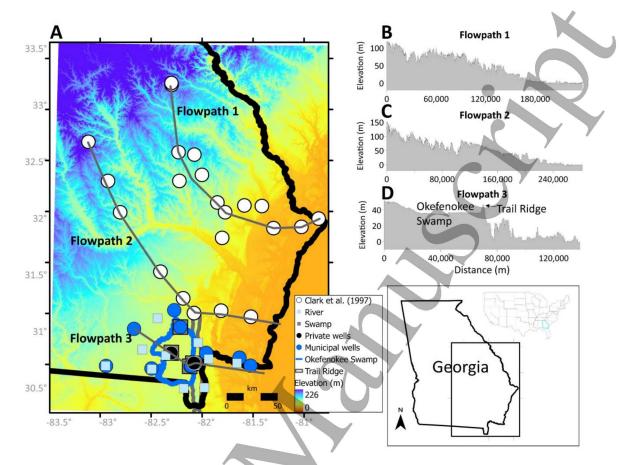
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**Figure 1. Study site. (A)** Map of a section of southeast Georgia, USA (see inset) showing the Okefenokee Swamp, Trail Ridge, well locations open to the UFA from Clark et al. (1997; n = 15) and this study (n = 16); also shown are locations of our river and swamp samples as are Flowpaths 1-3 as delineated by Plummer (1993). The polygon on the inset shows the spatial extent of the map shown in **(A)**. **(B-D)** Elevation cross-section profiles of respective flowpaths shown in **(A)**; Okefenokee Swamp and Trail Ridge are annotated in **(D)**.

## 2.2 Stable isotope sampling and analysis

We analyzed stable isotopes of hydrogen and oxygen ( $\delta^2H$  and  $\delta^{18}O$ ) in water samples from both surface waters and groundwater wells to evaluate water sources and mixing between the swamp and aquifer. We compiled isotope data from a 1997 study (Clark *et al* 1997) for baseline comparison (N=15) and collected new samples in the vicinity of the swamp in February 2025 (N=32). The Clark et al. (1997) dataset included  $\delta^2H$  and  $\delta^{18}O$  measurements from UFA wells following flowpaths 1 and 2 (**Figure 1A**), as delineated by Plummer (1993). Those samples were originally analyzed via isotope-ratio mass spectrometry; the reported analytical precision was on the order of ±0.1% for  $\delta^{18}O$  and ±1% for  $\delta^2H$ . For our 2025 sampling, we selected representative locations in and