## Table S1. Number of samples collected at each site per measurement that were used in the analyses\*

|  |  |  |
| --- | --- | --- |
| Measurement | Site | Sample size |
| Elevation | Gorham Cliffs | 15 |
|  | South Cadillac | 15 |
|  | St. Sauveur | 15 |
|  | Wonderland | 15 |
| Slope | Gorham Cliffs | 15 |
|  | South Cadillac | 15 |
|  | St. Sauveur | 15 |
|  | Wonderland | 15 |
| Aspect | Gorham Cliffs | 15 |
|  | South Cadillac | 15 |
|  | St. Sauveur | 15 |
|  | Wonderland | 15 |
| Soil C | Gorham Cliffs | 8 |
|  | South Cadillac | 8 |
|  | St. Sauveur | 7 |
|  | Wonderland | 8 |
| Soil N | Gorham Cliffs | 8 |
|  | South Cadillac | 8 |
|  | St. Sauveur | 4 |
|  | Wonderland | 6 |
| Soil C/N | Gorham Cliffs | 8 |
|  | South Cadillac | 8 |
|  | St. Sauveur | 4 |
|  | Wonderland | 6 |
| Soil water retention (SWR) | Gorham Cliffs | 10 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 10 |
|  | Wonderland | 10 |
| Soil Ca2+ | Gorham Cliffs | 8 |
|  | South Cadillac | 8 |
|  | St. Sauveur | 7 |
|  | Wonderland | 8 |
| Soil P | Gorham Cliffs | 8 |
|  | South Cadillac | 8 |
|  | St. Sauveur | 7 |
|  | Wonderland | 8 |
| Soil K | Gorham Cliffs | 8 |
|  | South Cadillac | 8 |
|  | St. Sauveur | 7 |
|  | Wonderland | 8 |
| Soil Mg2+ | Gorham Cliffs | 8 |
|  | South Cadillac | 8 |
|  | St. Sauveur | 7 |
|  | Wonderland | 8 |
| Soil Al+ | Gorham Cliffs | 8 |
|  | South Cadillac | 8 |
|  | St. Sauveur | 7 |
|  | Wonderland | 8 |
| Soil Zn | Gorham Cliffs | 8 |
|  | South Cadillac | 8 |
|  | St. Sauveur | 7 |
|  | Wonderland | 8 |
| Foliar C | Gorham Cliffs | 20 |
|  | South Cadillac | 20 |
|  | St. Sauveur | 20 |
|  | Wonderland | 20 |
| Foliar N | Gorham Cliffs | 19 |
|  | South Cadillac | 19 |
|  | St. Sauveur | 19 |
|  | Wonderland | 19 |
| Foliar C/N | Gorham Cliffs | 19 |
|  | South Cadillac | 19 |
|  | St. Sauveur | 19 |
|  | Wonderland | 19 |
| Foliar δ13C | Gorham Cliffs | 15 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 15 |
|  | Wonderland | 15 |
| Foliar δ15N | Gorham Cliffs | 15 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 15 |
|  | Wonderland | 15 |
| Foliar Ca2+ | Gorham Cliffs | 10 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 10 |
|  | Wonderland | 10 |
| Foliar P | Gorham Cliffs | 10 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 10 |
|  | Wonderland | 10 |
| Foliar K | Gorham Cliffs | 10 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 10 |
|  | Wonderland | 10 |
| Foliar Mg2+ | Gorham Cliffs | 10 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 10 |
|  | Wonderland | 10 |
| Foliar Al+ | Gorham Cliffs | 10 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 10 |
|  | Wonderland | 10 |
| Foliar Zn | Gorham Cliffs | 10 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 10 |
|  | Wonderland | 10 |
| Height | Gorham Cliffs | 10 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 10 |
|  | Wonderland | 10 |
| Diameter at breast height (DBH) | Gorham Cliffs | 10 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 10 |
|  | Wonderland | 10 |
| Canopy spread | Gorham Cliffs | 10 |
|  | South Cadillac | 10 |
|  | St. Sauveur | 10 |
|  | Wonderland | 10 |
| Neighbor distance | Gorham Cliffs | 15 |
|  | South Cadillac | 15 |
|  | St. Sauveur | 15 |
|  | Wonderland | 15 |

## Figure S1. Pictures of representative individuals present within each of the four studied pitch pine population on Mt. Desert Island.

Graphical user interface, application

Description automatically generated

**Figure S2.** Circular plots indicating the aspect of individual trees at each site. Color of points indicates the fire history with red and blue indicating exposure and no exposure to the 1947 fire, respectively. For consistency with other plots, the shapes represent different sites. Circles, triangles, diamonds, and squares correspond to measurements at Gorham Cliffs, South Cadillac, St. Sauveur, and Wonderland, respectively (Table 1). Group letters were assigned using site-to-site Watson test comparisons, with different letters indicating significantly different aspects (Table 2).

Chart, radar chart

Description automatically generated