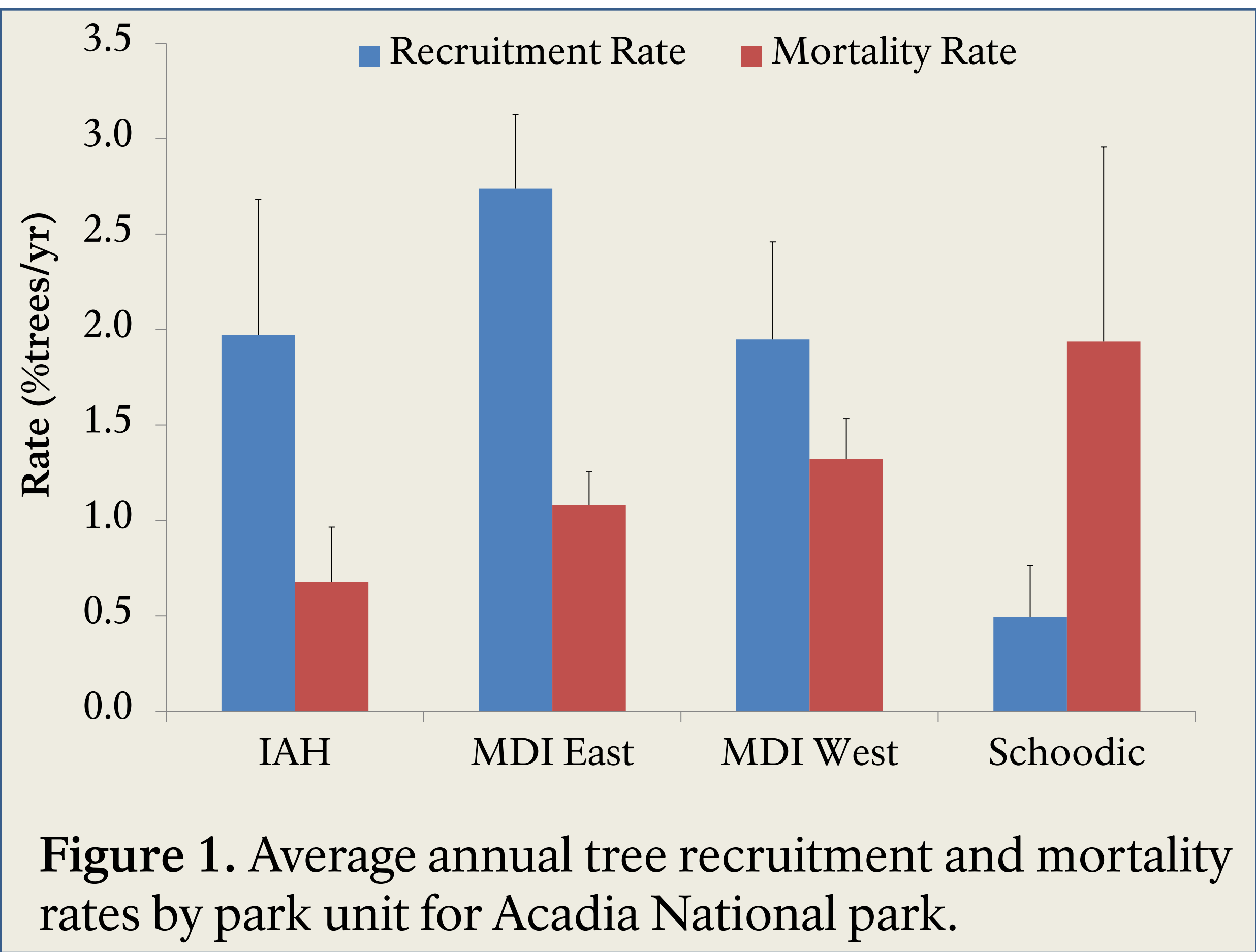


Trends in Forest Structure point toward changes in successional stages in Acadia National Park

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Tree Growth, Recruitment and Mortality

Acadia Overall

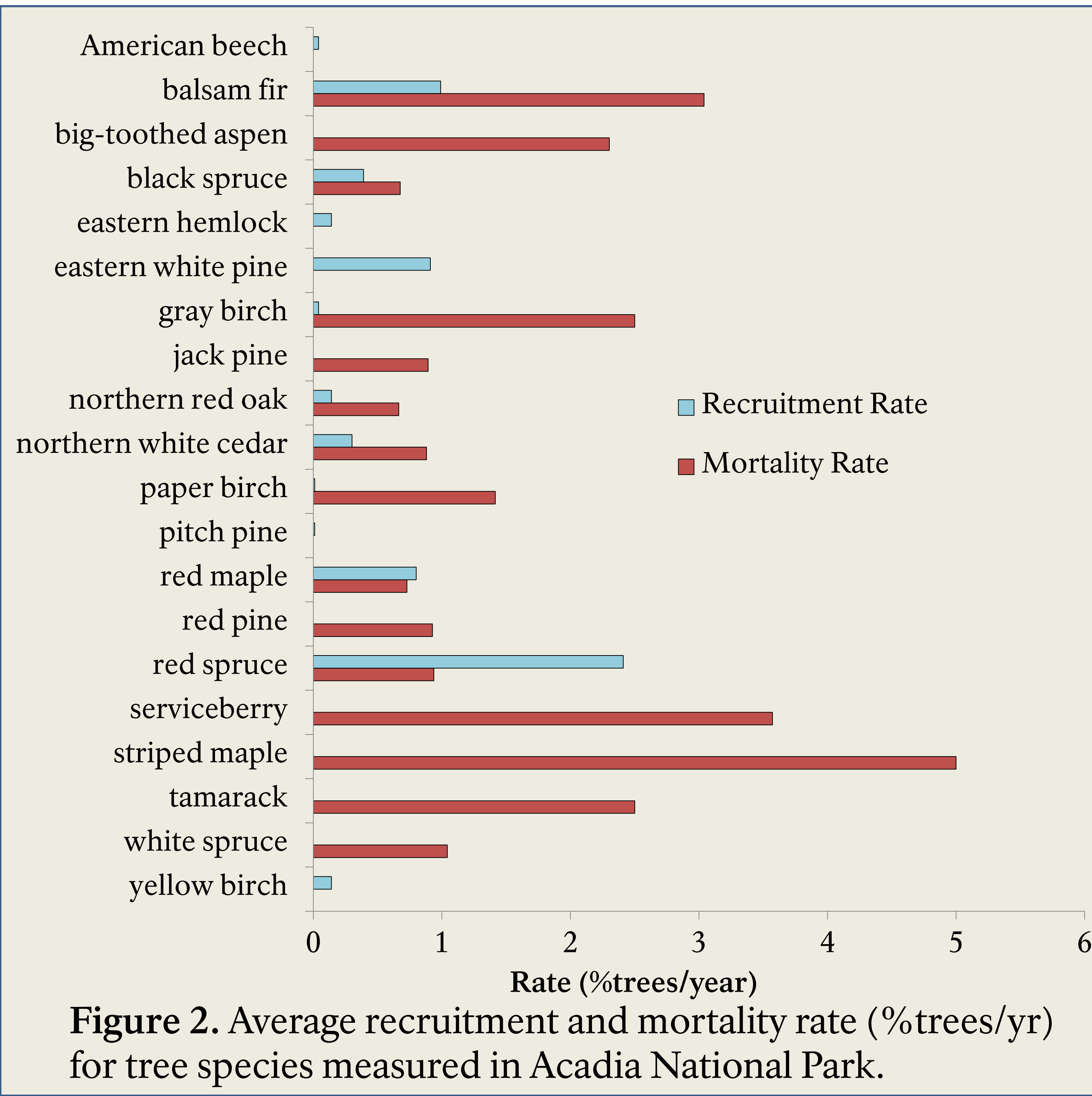
Tree recruitment rates (2.25% trees/yr) were higher than mortality rates (1.17% trees/yr) across most of Acadia (Fig. 1). The high recruitment rates observed was primarily driven by large numbers of red spruce (Fig. 2) growing into tree status since the previous cycle. There were several species throughout Acadia with elevated mortality, including shorter lived species that tend to drop out as forests mature, such as striped maple, paper birch, and big-toothed aspen.



An early successional forest on MDI-East characterized by birch species. Photo credit: Thomas Faust.



A mature stand of spruce-fir on MDI-West. Photo credit: Jesse Wheeler



Schoodic

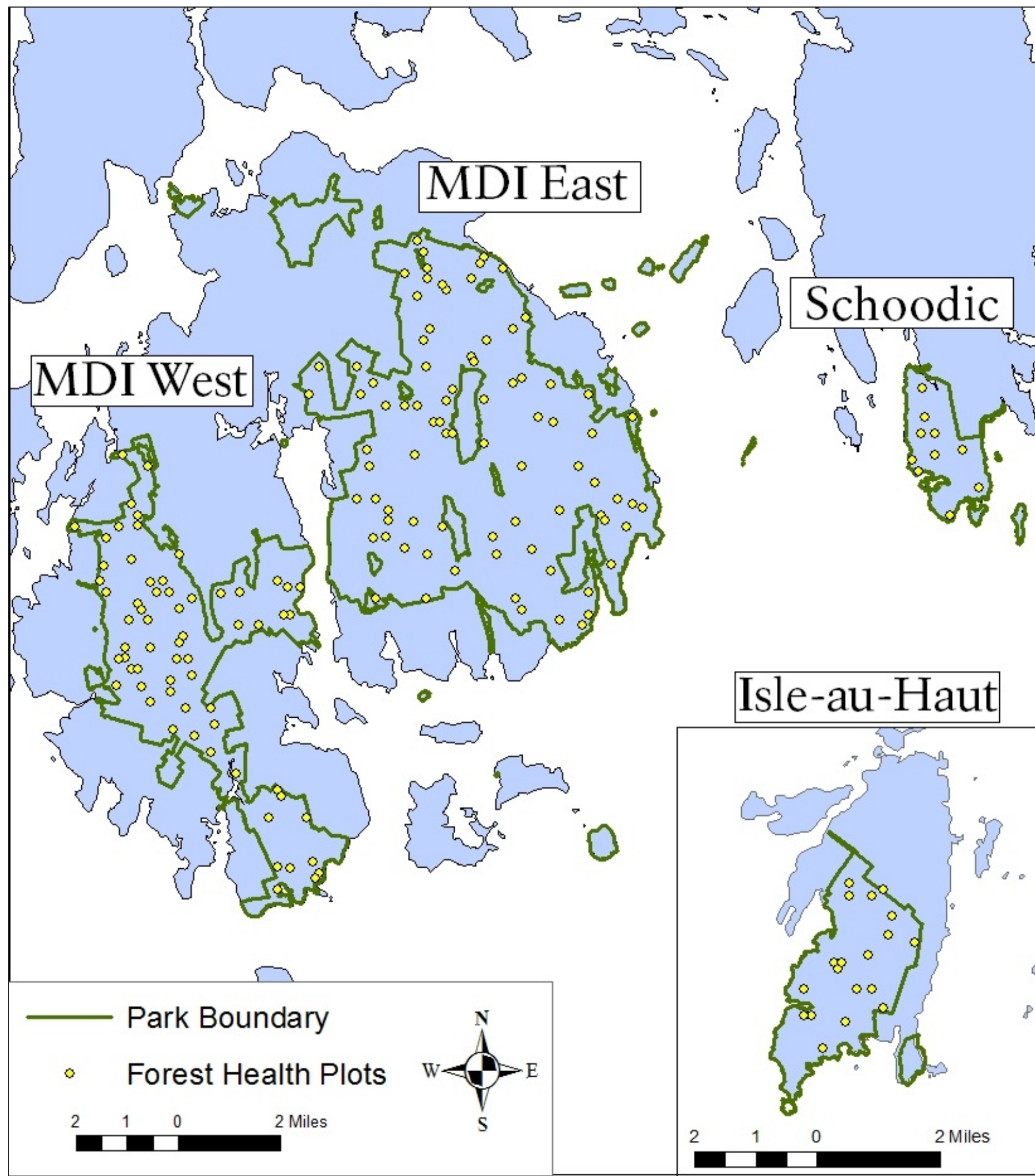
On Schoodic, tree growth and recruitment rates were low. Schoodic district had the highest mortality rate (1.94%-all plots & all trees) (Fig. 1), primarily driven by red spruce mortality.

MDI-East

Tree growth and recruitment rates were highest on eastern MDI, while stands of birch die-back are being observed following the 1947 fire. These results describe a transitional stage from early successional tree species to a more mixed spruce-hardwood phase.

MDI-West and Isle-au-Haut (IAH)

IAH and western MDI had similar recruitment, growth and mortality rates, suggesting that the spruce-fir forests in these subunits are at similar successional stages (i.e., mature to late-successional).



Forest Health Plot distribution among the four units of Acadia National Park.