EVIDENCE OF MONTANE SPRUCE-FIR FOREST RECOVERY ON THE HIGH PEAKS AND RIDGES OF THE BLACK MOUNTAINS, NORTH CAROLINA: RECENT TRENDS, 1986-2003

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Decline in high elevation red spruce (*Picea rubens* Sarg.) and Fraser fir (*Abies fraseri* (Pursh) Poir.) forests throughout the southern Appalachians was shown following extensive surveys conducted during the 1980s. We resurveyed four permanent, 0.1 ha, spruce-fir forest plots installed in 1986 at 1,980 m in the Black Mountains of North Carolina; remeasured basal area, stem density, tree crown damage and noted insect and disease occurrences. A large significant ($p < 0.10$) increase in live fir stem density of 3,237 stems/ha was evident. Results also show large increases in basal area and stem density for live fir and spruce populations with a corresponding decrease in dead fir stems. Additionally, we observed crown condition improvements for fir on most sites. Data suggests rapid regeneration of dense, healthy fir at 1,980 m, especially where severe mortality and overstory collapse was previously observed. The progression toward a climax high-elevation fir forest is highly variable and very patchy. Balsam woolly adelgid (*Adelges piceae* Ratz.) was rarely encountered suggesting that adelgid populations are currently low, thus allowing for fir recovery. Long-term recovery is uncertain, as fir stems will soon reach adelgid-susceptible age and size classes.

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