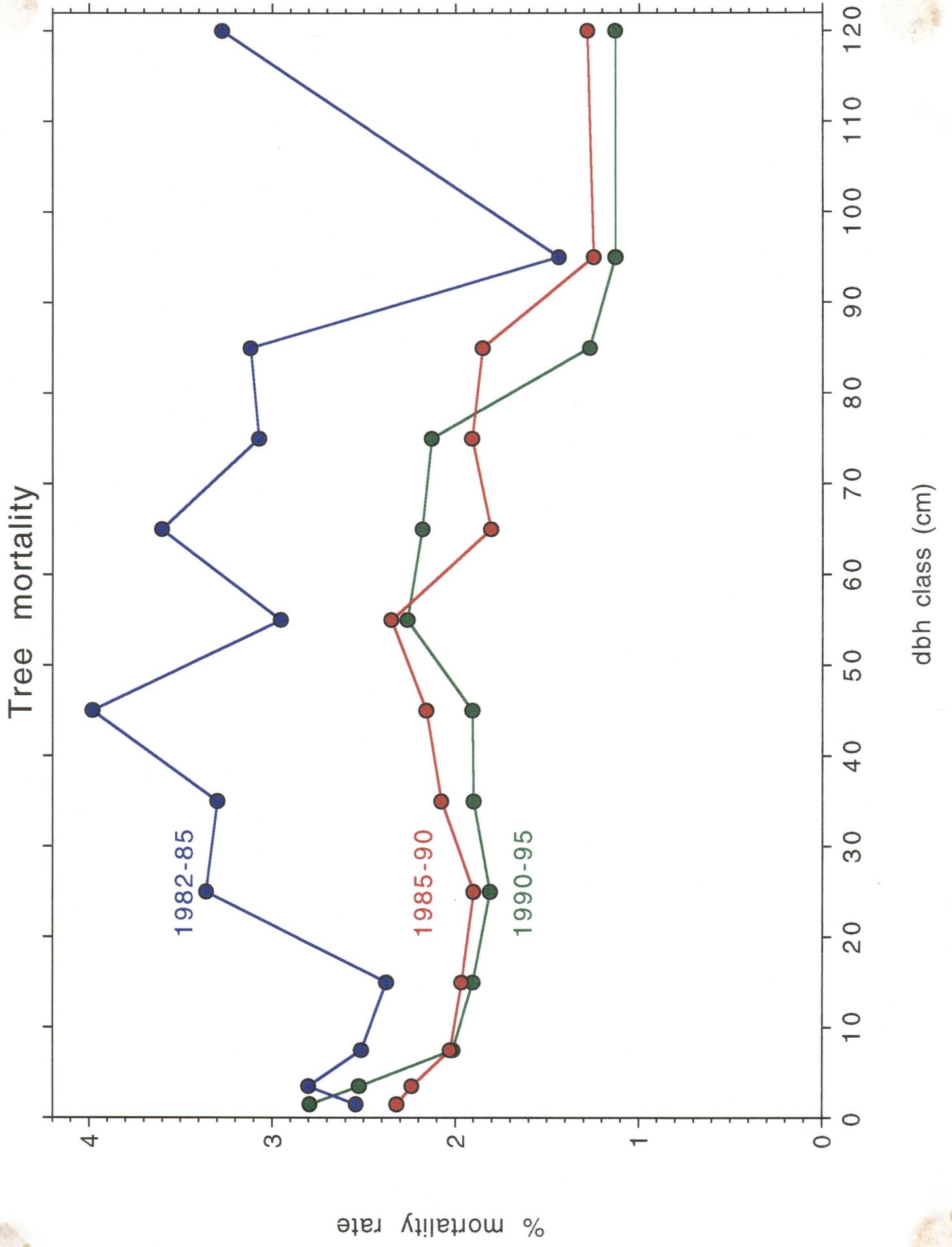


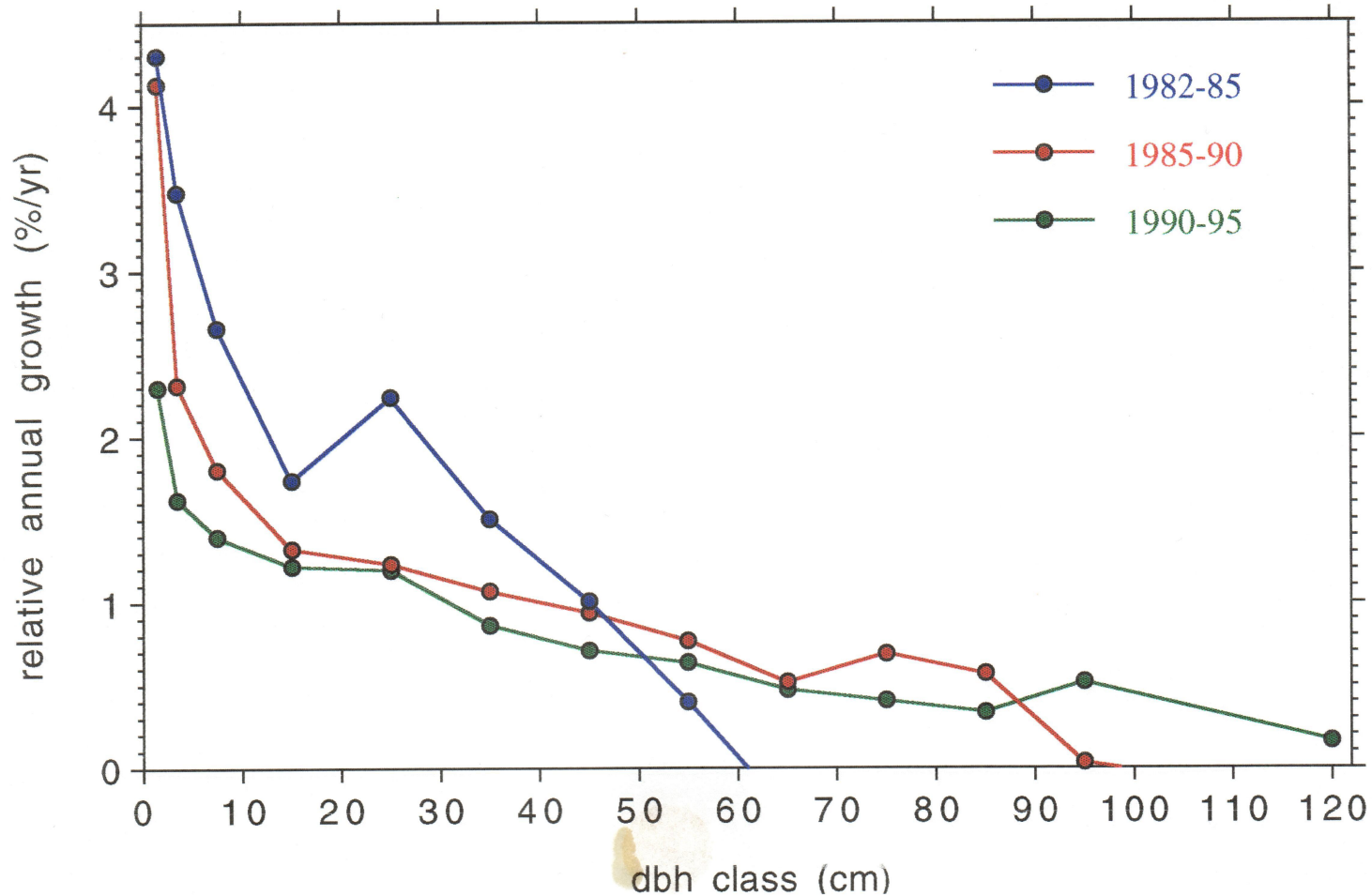
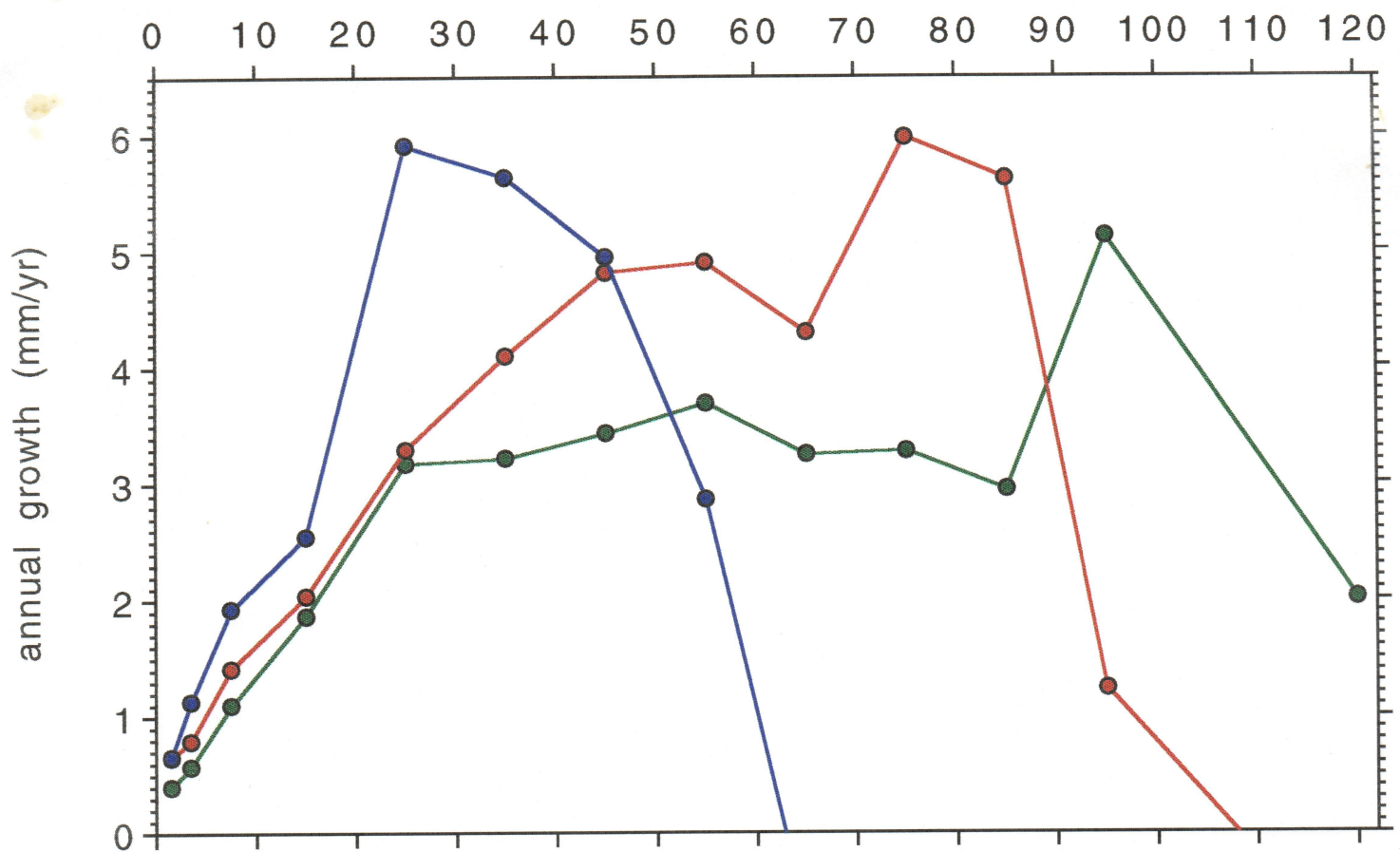
R. CONDIT, S.P. HUBBELL & R.B. FOSTER

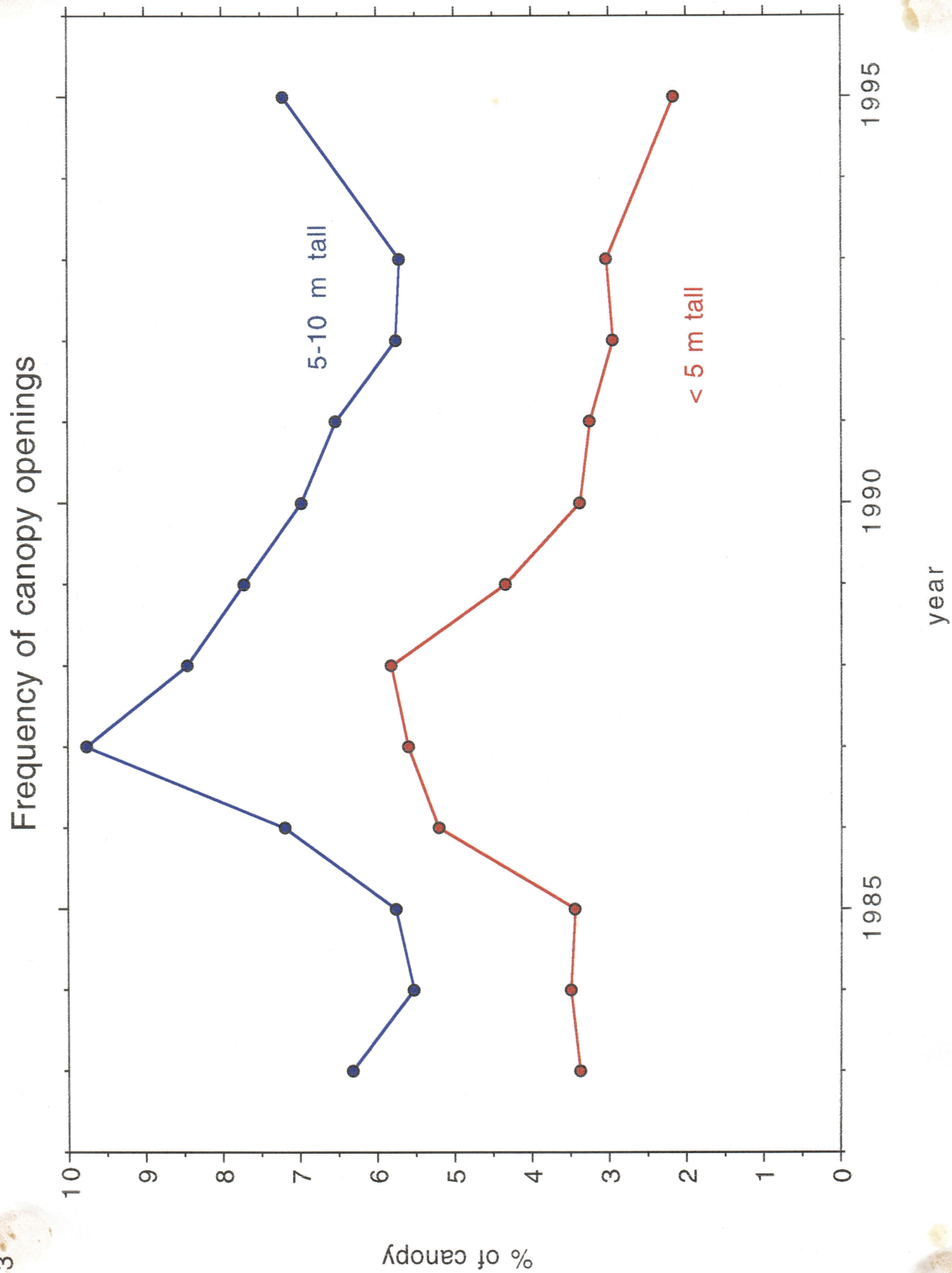
The fourth census of the Barro Colorado 50 ha plot: fluctuations in tree mortality, recruitment, and species composition.

A 50 ha plot of forest on Barro Colorado Island was completely censused for the fourth time in 1995, providing 3 census intervals for evaluating forest dynamics. Records now exist for a total of 324,000 individual plants of 314 species. Plot-wide mortality during 1990-1995 was almost identical to that from 1985-1990, suggesting that the elevated mortality caused by the 1983 drought was finished by 1985. Forest-wide recruitment, on the other hand, was much lower during 1990-1995 than during 1985-1990, and for the first time, we observed a decline of the total population of stems ≥ 1 cm dbh. Populations of larger trees have been increasing slightly since 1982, though. We also continue to observe substantial declines in the moisture-demanding species of the plot, presumably associated not just with the 1983 drought, but also due to a long-term reduction in precipitation in the area.

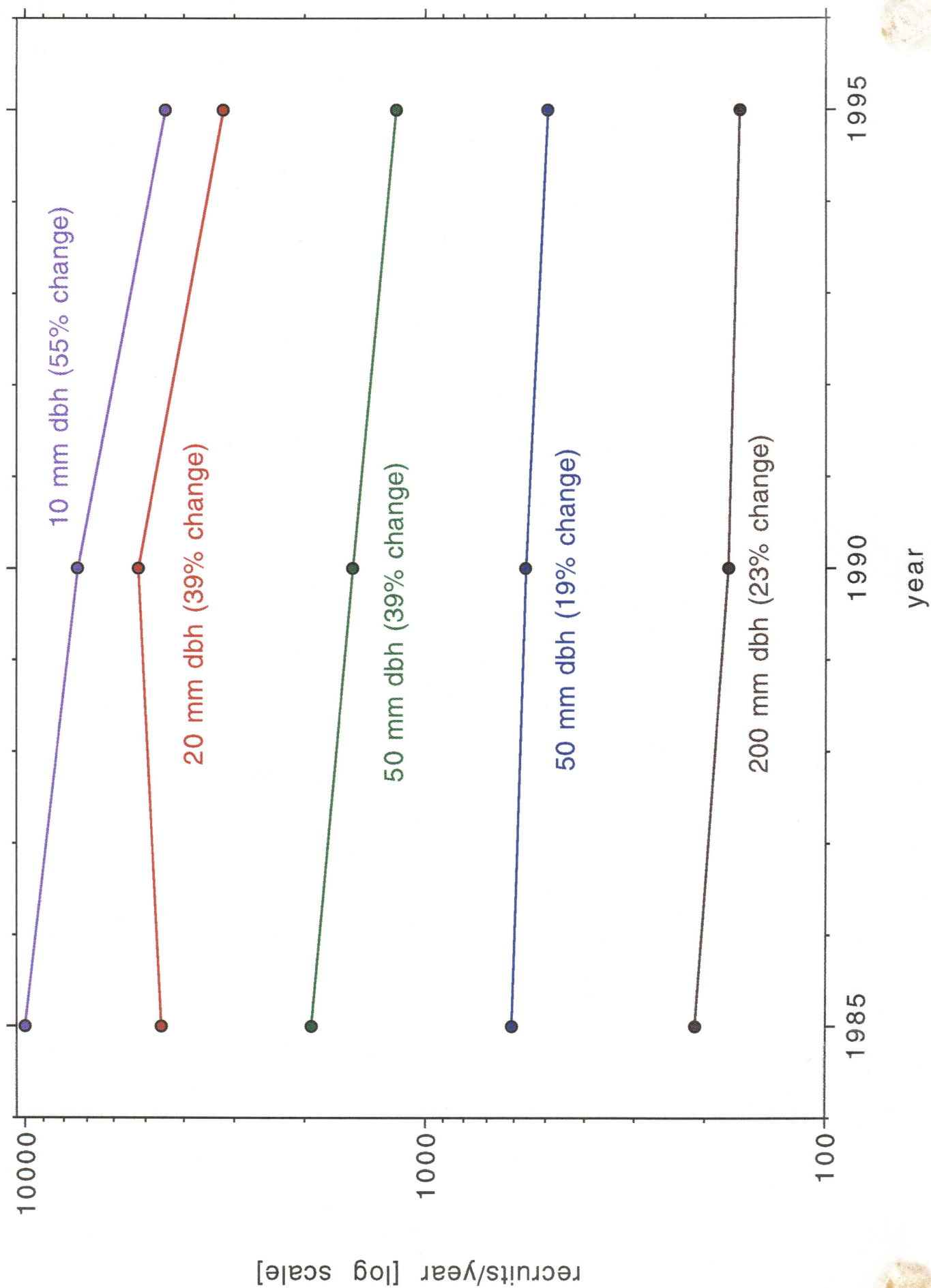


Growth rates





Recruitment in different size classes



Stem density in different size classes

