

## Supplementary Material

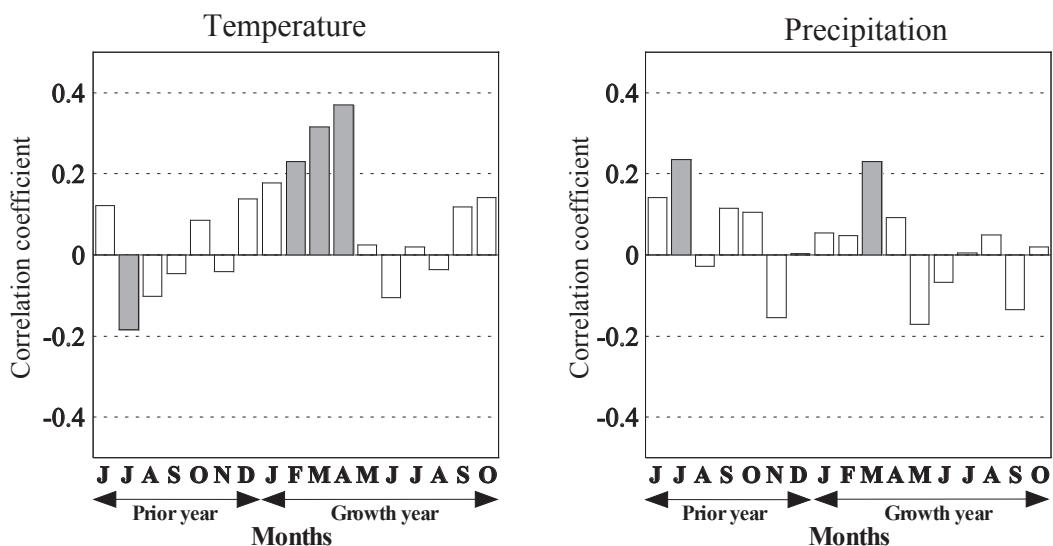
**Table S1: Statistics of NFI chronology**

No. of trees(radii)	Time span	Mean	SD	MS	$\bar{r}_{bt}$	AC(1)	EPS
37(74)	1784-1990	1.005	0.329	0.197	0.306	0.598	0.869

MS, Mean sensitivity; SD, standard deviation;  $\bar{r}_{bt}$ , mean correlation between trees;

AC(1), first-order autocorrelation; EPS, expressed population signal

All values are calculated for the common interval of 1784–1990 using the program ARSTAN (Cook 1985).



**Figure S1: Simple correlation coefficient between NFI chronology and climatic records**  
(monthly temperature and total precipitation at the Akita meteorological station, nearest to the forest site) Bars show correlation coefficients. Gray bars mean significant at 95% confidence level.

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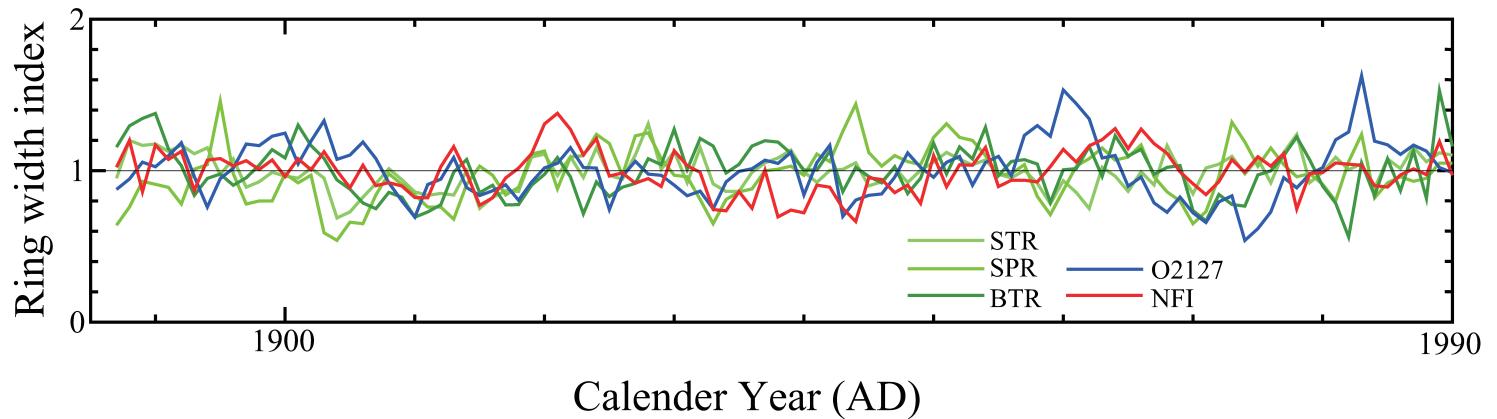


Figure S2: Comparison of five tree-ring chronologies used in this study over calibration period (1887-1990)