ABSTRACT

Dendrochronological potential of some gymnosperms was determined by dividing study site into 9 stands. 76 samples of *Abies pindrow* with maximum age of 698 years having 58.8 inches diameter, 23 samples of *Taxus baccata* with maximum age of 479 years having 54 inches diameter, 4 samples of *Pinus roxburghii* with maximum age of 218 years having 19.2 inches diameter and 2 samples of *Cedrus deodara*. Kalam Forest was densly covered with *Abies pindrow* as huge number of this species was observed while *Cedrus deodara* was observed as minimal due to some anthropogenic disturbances. All species were crossdated successfully by Skeleton Plot Method. Among them, mean growth of *Apies pindrow* was 0.02-0.11 inches per year while in *Taxus baccata* it was 0.06-0.24 inches per year. Anomalous growth (false ring formation) was also observed in some trees due to drought stress, air pollution, flooding and summer frosts. Moreover, regression was drawn between age and dbh was ($y=0.0847x+4.0756$), ($R^2=0.921$) in 3rd stand and ($y=11.108x-41.174$), ($R^2=0.8424$ in 2nd stand of *Apies pindrow* and *Taxus baccata* respectively. The maximum value observed was in 3rd stand in case of *Taxus baccata* species which showed better correlation as compared to rest of stands. It was also observed strong between tree ring width and difference of early and latewood cell mass. The maximum value was observed in 5th stand of study site ($y=1.1397x+0.1873$), $R^2 = 0.9972$).

Keywords: Tree Ring, Dendrochronology, age, skeleton plot, regression