

## **Abstract:**

Seventy-three forest patches were assessed to determine the effects of human and natural impact on native forests along the Lower Tana River flood plains in Kenya between January and March 2001. Seventeen of these forests were within the Tana River Primate National Reserve (TRPNR) while 56 were outside the protected area. Cultivation and dyke construction had the most devastating human impact, which involved partial or complete forest clearing resulting in further fragmentation of forest patches [Suleman MA, Wahungu GM, Mouria PK, Karere GM, Oguge N, Moinde NN (2001) Tana River primate census and forest evaluation. A report to Kenya Wildlife Services]. Natural impacts were either die back or flooding, which appeared to cause progressive degradation of forest structure and biodiversity. Overall, forest area in the Lower Tana significantly reduced by 34.5% ( $P < 0.001$ ) over a 21-year period. Forest loss was greater outside the reserve (38%) than inside (29.2%) reiterating the significant role played by this protected area in habitat and species conservation. Continued forest loss increases extinction risks for the endemic primate species the Tana River Red Colobus (*Procolobus rufomitratu*s) and the Crested Mangabey sub-species (*Cercocebus galeritu*s *galeritu*s). Initiation of community conservation programmes outside the reserve and introduction of sustainable micro-economic projects were recommended to enhance sustainable livelihoods and the environment.