

(a) Distribution of net productivity (total dry weight of organic matter produced per year, except that lost by respiration or eaten away by herbivores) shows a trend of increasing concentration of growth in woody tissue with increasing size of plant.

(b) Net yearly productivity is highest in *Ougeinia oojeinensis* and *Garuga pinnata* followed by that in *Terminalia crenulata*, *Tectona grandis* and *Dalbergia latifolia*.

#### INTRODUCTION

THE PT (Productivity of Terrestrial Communities) Section of the International Biological Programme (IBP) includes primary productivity through green plants and secondary through animals feeding on plants or on each other. The seven sections of IBP were formulated in July, 1964. The first three years (Phase I, *i.e.*, 1964-67) are devoted to design and feasibility studies. The operational phase of the programme (Phase II) starts in July, 1967, and will run for 5 years.

In India, the only study in Phase I of the programme is on productivity of grasslands (PT), being conducted at the Botany Department of Banaras Hindu University, Varanasi. On productivity of forest communities, the present exploratory study claims to be the first in the country.

Measurement of productivity of forests is a difficult and painstaking study. In other countries, it has been variously worked out by a number of authors (Ovington, 1956, 1957, 1962; Ovington, Heitkamp and Lawrence, 1963; Odum, 1957; Golley, Odum and Wilson, 1962; Bray and Dudkiewicz, 1963; Bayer, 1962; Satoo and Senda, 1958; Tadaki and Shidei, 1960; Whittaker, 1962, 1963, 1965; and Whittaker, Cohen and Olson, 1963—to quote some of them). Results from an exploratory application of methods (mainly based on Misra *et al.*, 1966 and Whittaker, 1962, 1963) are presented in this paper. Trees of five important species of Dangs Forests in Gujarat State were studied (for detailed description and classification of the forest communities of Dangs refer to Kuruville, 1967; and Pandeya and Kuruville, 1967). Following species, arranged in decreasing order of their importance in the forests, were studied:

*Tectona grandis* Linn., *Terminalia crenulata* Roth., *Garuga pinnata* Roxb., *Dalbergia latifolia* Roxb. and *Ougeinia oojeinensis* (Roxb.) Hochr.

The trees were felled in clear felling operation at Raiwad coupe in Waghai range of Dangs in the month of December, 1966.