Journal of
Tropical Ecology

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The *Journal of Tropical Ecology* publishes papers in the general field of the ecology of tropical regions, devoted either to the results of original research, experimental or descriptive, or forming significant reviews. Short communications are also welcome in the expectation that these will encourage discussion between readers. The **Journal** aims not only to act as a valued means of communication between established ecologists, but also, by the breadth and quality of papers, its format and price, to stimulate the research activities of young ecologists in tropical nations.

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The dynamics of tree populations in tropical forest

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NOTE ON THE CALCULATION OF MORTALITY RATES

The mortality rates used in this volume describe the progressive loss of trees from an initial population. The simplest way in which this can happen is that a constant proportion of the surviving population dies in each time interval, which gives rise to an exponential (logarithmic) decline in numbers with time. Log model annual mortality rates (m) are calculated by

$$m = 100(\log_e n_0 - \log_e n_1)/t$$

where n_0 is the number of trees at the first enumeration; n_1 is the number surviving at the second enumeration, t years later.

The arithmetically simpler version $m = 100 \, (n_0 - n_1)/t n_0$ implies that the

proportion of survivors dying in each time interval is not constant, but increasing, and is unsuitable because the calculated rate is not independent of the interval, t, between enumerations.

The log model is used to calculate mortality rates throughout this volume, including the calculation of population 'half-life' ($t_{0.5}$) – the number of years for the initial population to fall to 50%:

$$t_{0.5} = \log_e 0.5/0.01m$$

Abbreviations used in this issue: dbh – diameter at breast height (breast height = 1.3 m); gbh – girth at breast height.

Climatic diagrams follow the conventions of Walter (1973, p. 20).

Copies of this special issue may be purchased separately at £13.00 ($27.50), until December 1988.