INTRODUCTION

The understorey shrubs of tropical rain forests live under constraints of low light levels and have to compete with the trees for nutrients and pollen and seed vectors. Although the growth rates (Evans, 1972; Hunt, 1978), pollination (Appanah, 1981; Frankie & Haber, 1983; Frankie et al, 1983; Paton & Ford, 1983), breeding systems (Bawa, 1974; Bawa & Opler, 1977; Bawa et al, 1985; Hamrick & Murwaski, 1990; Murwaski & Hamrick, 1991) and seed dispersal ecology (Foster, 1982; Garwood, 1982; Howe & Ritcher, 1982; Sinha & Davidar, 1992) of tree species in the wet forests have been studied, little is known of the ecology of the shrubs. The works of Augspurger (1979) on *Hybanthus prunifolius* carried out at BCI, Opler et al. (1980) on evergreen treelet and shrub community in neotropics of America, and Young (1990) on understorey aeroid in neotropics, provide some insights into the understorey dynamics. This study was conducted from April 1991 to December 1992 on patterns of growth, survivorship, reproduction and general ecology of shrub species commonly found in the understorey of a mid elevation evergreen forest in the Agasthyamalai range of the Southern Western Ghats in India.

In this study, a shrub is defined as plant with single or multiple, woody or herbaceous stems, less than or equal to 5m in height. It also includes plants with tubers, or rhizomes and erect plants greater than 1m height, with a woody base.

The first chapter deals with the species richness and family level patterns of understorey shrubs in tropical forests around the world.

The second chapter examines the spatial dispersion of each species and patterns of growth and mortality within species and in the shrub community.

The third chapter examines the vegetative and reproductive phenology of the shrubs to detect community level patterns with relation to temperature and rainfall, and looks at phenological patterns of individual species.

The fourth chapter examines the breeding systems, patterns of pollination and fruiting with reference to phenological patterns and pollinators.
The last chapter synthesises general ecological patterns and attempts to understand the factors which might contribute to these patterns.

The study site is described under Section 1.

The appendices include the following (section 2):
1. Diagrams of the species studied
2. The table of contributions of the variables for the Correspondence analysis