I. INTRODUCTION
INTRODUCTION

The tropical forests are the most important areas of biodiversity with respect to the floristic richness (Vasantharaj and Chandrashekar, 2006) and they are famous for being the most species-rich ecosystem on the earth (Gentry, 1992). They harbour highest diversity and density of tree species, and most of these are locally rare (Clark et al., 1999). The diversity of trees is fundamental to total tropical forest biodiversity, because trees provide resources and habitats for almost all other forest species (Huston, 1994; Whitmore, 1998; Huang et al., 2003). Hence, Plant diversity inventories in tropical forests have mostly been concentrated on tree species than any other life-forms (Gentry, 1988a).

Some authors have stated that non-trees contribute little to the total species of tropical forests (Hartshorn, 1983; Whitmore, 1984). Gentry and Dodson (1987) suggested that some tropical forests might possess the most herb rich plant community on earth and these community may be used as an indicator of altered edaphic and environmental conditions, particularly relative to anthropogenic disturbance and natural hazards (Gilliam and Roberts, 2003). These statements remain to be substantiated as we lack adequate data (Whitmore, 1984; Annaselvam and Parthasarathy, 1999). Hence, investigations involving the whole plant diversity in tropical forests are essential; but such studies are fewer and the scales of such inventories also vary considerably (Whitmore et al., 1985; Kelly et al., 1994; Parthasarathy, 2001).

Tropical Asia has some of the highest levels of biological diversity and species endemism not found anywhere in the world (Mittermeier et al., 1998). This extreme biological richness evidently results from insular nature of the region, from its high
habitat diversity; complex geological history etc. (Sodhi et al., 2004; Corlett and Primack, 2006). The forests of tropical Asia are also among the most threatened on earth (Laurance, 2007) and the area has also suffered higher rates of industrial logging than the other major tropical regions (Whitmore, 1997). At present the tropical forest cover is decreasing at 12.5 million hectares every year (Kobayashi, 2007) and the human population density is strongly and negatively correlated with net forest cover, and positively correlated with current rates of forest loss (Laurance, 2007).

The invasive exotic plants are another growing threat to the maintenance of native species and to the ecosystem integrity of wild lands (Sala et al., 2000; Denslow, 2007). Invasive exotic plants are implicated in the decline of threatened and endangered species because they alter ecosystem processes, change community structure and displace native species (Brooks et al., 2002). Hence, the conservation of biological diversity has become a major concern for much of society and for many governments and government agencies at all levels (Kaya and Raynal, 2001). The importance of biodiversity will never be fully known, but the reasons for its conservation are numerous (Burton et al., 1992; Pourbabaei et al., 2005). Documenting basic patterns of biodiversity is fundamental for prioritizing areas for conservation and management action (Villaseñor et al., 2007).

The volcanic nature, the biological isolation, the endemism and their evolutionary history and, not least, with relatively less human population together all contribute to making the Andaman Islands as one of the important areas of Indo-Burma hottest hotspot of biodiversity (Myers et al., 2000). Despite the ecological uniqueness on one hand and the extensive destructions in recent past on the other, the quantitative study in Andaman and Nicobar forest vegetation has been neglected. Much of the current knowledge is still
based on qualitative studies conducted in the twentieth century, which mainly deals the floristic account of trees and shrubs. A few attempts have been made (Padalia et al., 2004; Tripathi et al., 2004) to study the tree diversity of Andaman group of islands. However, no quantitative inventory of plant diversity was carried out in Little Andaman Islands. Hence, the present investigation was undertaken in the undisturbed and disturbed evergreen, semi-evergreen, deciduous and littoral forests.

The main objectives of the present study include to assess tree and understory species diversity, population density and stand structure of undisturbed and disturbed evergreen, semi-evergreen, deciduous and littoral forests of Little Andaman Island and to compare the results of these sites with other tropical forests in India and elsewhere in the world.