pharmacists, manufacturers and users of herbal drugs, agriculturists, horticulturists, and any plant lovers of the region.

II. AREA OF STUDY

1. History of Tiruvannamalai

*Early period:* There is very little information available about the early history of the district. From the remote period of Stone Age, man must have been living in the district. Polished stone axes and other materials used by those men, excavated by the Archaeological Survey of India in the district are said to belong to Neolithic period and estimated as at least 4000 years old. This period was succeeded by Iron Age along with which agriculture and rearing of domesticated animals were also started (Rajagopalan, 1978).

*Medieval period:* From the historic period, this part of the country had been ruled by several dynasties which can be seen in the various epigraphs archived in the district. The district might have been under the sway of the Pallava Kings, who ruled from Kancheepuram before the 9th century A.D. The Chola Kings ruled over the country for more than four centuries from 850 A.D. to 1280 A.D. In the 14th century the Hoysala Kings had their capital at Tiruvannamalai. Afterwards the Kings of Vijayanagar and Nayak Kings of Thanjavur ruled over this part of the country. In the 17th century it came under the sway of the Nawabs of Carnatic.

*Modern period:* After 1753 A.D. Muraru Raya, Krishna Raya, Mrithis'Ali Khan, Burkat Ullakhan, French Soupries and Sambrinet, English Captain Stephen Smith besieged this
place and had their successes and defeats. In 1790 A.D., it was captured by Tippu Sultan. During the first half of the 19th century it came under the British rule (Rajagopalan, l.c.).

As on 31st July 1801, East India Company had completely acquired the erstwhile North Arcot district. From then onwards it had remained under the British control till 1947 when the country became independent. The district Tiruvannamalai, has formed on 30th September 1989 by bifurcation of the then North Arcot district.

2. Location, Boundaries and Administrative Units (Map 1 & 2)

The district lies in the northern part of Tamil Nadu between 12° 00’ & 12° 49’ N latitude and 78° 38’ & 79° 45’ E longitude. It is bounded on the north and northwest by Vellore district, on the southwest by Dharmapuri district, on the south and southeast by Villupuram district and on the east by Kancheepuram district. Tiruvannamalai is the administrative headquarter and Cheyyar and Tiruvannamalai are the two revenue divisions in the district. The district is divided into 6 taluks viz. Arni, Cheyyar, Chengam, Polur, Tiruvannamalai and Vandavasi. There are 18 Panchayat Unions/Blocks covering 875 Panchayat villages with 1,102 Revenue villages. The district has four Municipalities.

3. Area and Population

The district encompasses an area of 6,355.61 sq. km. There are about 4.5 lakh households in the district. As per the Census 2001, the total population of the district is 21,86,125 of which 4,00,761 are from urban and 17,85,364 are from rural areas. The density of population is 344 per sq. km. Males constitute 50.13 % of the total population while females contribute 49.87 %. A total of 12,97,151 (59.33 %) are literates out of them 2,82,221 are from urban and 10,14,930 are from rural areas. 59 % of the literates are
males where as 41 % are females. Scheduled Castes (incl. 52 sub-castes) in the district constitute 21.39 % (4,67,532 persons) whereas Scheduled Tribes (incl. Malayalis & Irulas) share 3.33 % (72,760 persons) of the total population.

4. Geology and Soil

The soil type predominantly seen throughout the district is reddish loam of varying depth and fertility derived basically from the decomposition and withering of underlying rocks, which are more or less ferruginous in composition and chiefly containing hornblende and feldspar. While most of the barren hillocks possess hard stony type of soil without any good vegetation, the plateaus and valleys contain disintegrated quartz crystals that support a reasonably good tree growth. Black series including clayey loam is found in tank and riverbed areas of Chengam, Vandavasi and Cheyyar taluks. Quartz is occasionally noticed in the plains. On the plateaus of Javvadhu hills, red loam or gravelly loam soil which is often greyish brown on surface due to admixture of humus are found. The soil is clayey and kankarous along the valleys near Pararnanandal, Chennasamudram and Mudanai reserved forests. The high iron content is always apparent in the most of the reserved forests of Tiruvannamalai and Sathanur Ranges, where the surface soil has been completely eroded leaving only the hardened subsoil devoid of any fertility owing to excessive grazing in these parts. Aluminium is rare and is met within narrow fringes along the banks of rivers like Cheyyar and Pennaiar. There is a deficiency of lime in the soils where sandalwood trees are present. The soil composition in the district differs even at a few metres and it is rare to have a block of 100 ha. with a single type of soil (Rajagopalan, 1978).
5. Climate and Temperature

The climate of the district is tropical and moderately hot and dry. Western part of the district is cooler than the eastern part. The Javvadhu and Kalrayan hills have a pleasant climate even in summer. The year can be divided into three seasons viz. summer during March-May, rainy during June-October and winter from November to February. It is very hot during April to June. The average maximum temperature in shade is 32° C and the average minimum is 19° C. Frost does not occur in the district except for a few occasional dewfalls. While the eastern and central part of the district experience extreme hot condition in summer the western part enjoys good breeze during southwest monsoon. The eastern part experiences strong gales whipping up dust and sand. Occasional hail storms occur during April or May.

6. Rainfall

The district receives maximum rainfall from the Southwest as well as Northeast monsoons. The amount of rainfall received decreases suddenly from west to east. The average annual rainfall in the district is 1,075 mm.

7. Agriculture and Irrigation

Agriculture is the major occupation of the people of this district. Over 90 per cent of the people are either agriculturist or agricultural labour. Paddy is the major foodgrain crop while groundnut and sugarcane are the main commercial crops. The total irrigated area is 1,27,273 ha. The net and gross sown areas are 2,72,930 ha and 3,37,963 ha respectively. The cropping intensity in the district is 124 per cent. Tanks and wells are the chief sources of irrigation and these have enough supplies in them when monsoons occur unfailingly. There are two major irrigation tanks namely Desur Mamandur and Vakkadai
Mukkur and about 2000 minor irrigation tanks in the district. Sathanur Dam built across Thenpennai river also serves the district.

There are only seasonal rivers and no perennial rivers flowing in the district. Cheyyar, Thenpennai, Kamandala nadhi, Thurinjalaru and Siganadhi are the important seasonal rivers. The Cheyyar river originates in Javvadhu hills, flows via Chengam, Polur, Arani, Vandavasi and Cheyyar taluks in a southwestern to northeastern direction and finally drains in Palar river near Walajapet in Kancheepuram district. The river Thenpennai irrigates southern parts of Chengam taluk and later enters into Villupuram district and join with the main course of Pennaiyar, which drains in the Bay of Bengal near Cuddalore. A small portion of Palar river flows in the extreme north of Cheyyar taluk before entering Kancheepuram district. The river Pennaiyar raises from the Chennakesava hills of Mysore district and the Palar river originates from the Nandi hills of Kolar district, Karnataka. There are several rivulets and streams that are small and remain dry most of the year.

8. Topography and Mountains (Map 3)

The western part of the district is elevated (300-1045 m ASL) with mountain systems whereas the eastern part is mostly flat (100-150 m ASL) and level. The central and southern parts of the district are distributed with numerous, generally barren hillocks of 250-400 m elevation.

Javvadhu hills, one of the principal mountains in the Eastern Ghats, is spread over in Tiruvannamalai and Vellore districts of Tamil Nadu. It lies between 12° 15’ to 12° 40’ N latitude and 78° 2’ to 79° 10’ E longitudes. The southwest-northeast oriented hill range
covers the northwestern portion of Chengam taluk and western part of Polur taluk. The hills rise steeply from the plains forming an undulating plateau on the top of about 800 m altitude and enclosing small valleys. Melpattu, on the Thenmalai hills with an altitude of 1045 m is the highest peak in the district. The southernmost part of Chengam taluk shares a meager portion of Kalrayan hills. The average height of the Javvadhu hills is c 500 m.

III. PREVIOUS EXPLORATIONS

In spite of its rich floristic diversity, Tiruvannamalai is one of the botanically poorly explored districts in Tamil Nadu. Before the Independence, only a few visits and scanty collections were made by the plant collectors in the district. Beddome (1874) was the first person to collect plants from this region. In 1871, he made Type collection of *Brachystelma brevitubulatum* from Amirthi (Amerdy) forests. Gamble visited the erstwhile North Arcot in 1874 and collected *Knoxia wightiana*. Barber explored Melpattu forest of the district in 1899, 1914, 1917 & 1918 and the specimens of his important collections viz., *Chionanthus malabarica*, *Justicia nilgherrense*, *Cordia evolutior* and *Indigofera barberi* are housed at MH, Coimbatore (Barber, 1907; Gamble & Fischer, 1915-1936). In 1926, Gravely & Mayuranathan (1931) visited Tiruvannamalai and recorded a wild population of *Carallurna diffusa*. Jacob (1940) made collection of few grasses from the district in 1932, 1937 & 1939.