INTRODUCTION

Pteridophytes are the seedless vascular cryptogams which occupy a position between the lower non-seed bearing and higher seed bearing plants from generally much neglected group of plants. About 250 millions years ago, they constituted the dominant vegetation on earth surface. However, they are now replaced by seed bearing plants in the modern day flora. Pteridophytes grow luxuriantly in moist tropical and temperate forest and their occurrence in different eco-geographically threatened regions from sea level to the highest mountain are of much interest. About 12,000 species of Pteridophytes occur in the world flora of which about more than 1,000 species into 70 families and 191 genera likely to occur in India (Dixit, 1984). Recent studies shows that roughly 270 fern species found in South India, about 10 percent of the region. Fern flora occupies the forest floor, on tree trunks and branches, in the niche of rock.

The ferns had an important role in folklore medicine. These plants have been successfully used in the different systems of medicine like Ayurvedic, Unani, Homeopathic and other systems of medicines. Kirtikar et al. (1935) have described 27 species of ferns having varied medicinal uses. Chopra et al. (1956) have included 44 species and Nadkami (1954) recorded 11 species of Pteridophytes having medicinal importance. Nayar (1959) recorded 29 medicinal ferns. May (1978) published a detailed review of the various uses of ferns and listed 105 medicinal ferns. In a recent compilation, Singh (1999) reported 160 species of useful Pteridophytes in India on the basis of phytochemical, pharmacological and ethnobotanical studies.

A systematic survey of the antibiotic activity of Pteridophytes, however has been scarcely undertaken. The antimicrobial potential of some ferns has been studied (Kumar and Kaushik, 1999; Parihar and Bohra, 2002a & b, 2003). With this background experiments were done to assess the antibacterial activities of certain ferns.

Out of 1,000 species of Pteridophytes occurring in India, 170 species have been found to be used as food, flavor, dye, medicine, bio-fertilizers, oil, fiber and bio-gas production (Manickam and Irudayaraj, 1992). The medicinal value of Pteridophytes against bacteria, fungi, virus, cancer, rheumatism, diabetes, inflammation, consultant, fertility, diuretic, pesticides, heaptoprotecive, and sedative had been reported. Besides sugar, starch, proteins and amino acids, ferns contain a variety of alkaloids, glycosides, flavonoids, terpenoids, sterols, phenols sesquiterpenes etc. as potential components used in various industries (Kulandairaj and John de Britto, 2000).

In comparison to higher plants they have found little applications in medicine. The tribal communities, ethic groups and folklore throughout the world are utilizing their plant parts like rhizome, stem, fronds, pinnae and spore in various way for the treatment of various ailments since ancient time.

The number of contributors about the taxonomy, ecology and distribution of Pteridophytes have been published from time to time but enough attention has not been paid towards their useful aspects. An attempt has been made to explore indigenous and ethnomedicinally important Pteridophytes and properly document their useful aspects.
Young leaves of the ferns Diplazium esculentum (Retz.) Sw., Helminthostachys zeylanica (L.) Hook, Nephrolepis cordifolia (L.) Presl and Stenochlaena palustris (Burm.) Bedd. are cooked as vegetables by the tribals in Indian mountains. Azolla pinnata R.Br. is used as rice fertilizer and chicken feed. In the case of water fern Marsilea drummondii the starchy paste of the sporocarps is made in to cakes called and is eaten by the natives of Australia.

Only few Pteridophytic plants are used as medicine eg. Paste of tubers of Nephrolepis auriculata (Linn.) Trimen is used to lower down the brain fever and headache by applying locally. The vegetable of the Croziers of different species of Diplazium Sw. is known to be of laxative nature and often used to treat colitis and constipation. Selaginella bryopteris Linn. Bak is considered as highly useful in unconsciousness, the decoxion aerial leafy sporophyte is used to.

MATERIALS AND METHODS

In the present study an intensive survey was made field survey in various places namely, Five falls to Kambiparai in Courtallum hills.

During the course of survey ferns and ferns allies were collected and the herbarium was made. All the specimens were compared and identified with the standard herbarium available in St. Xaviers College, Palayamkottai- Tirunelveli.

RESULTS AND DISCUSSION

This survey observed nearly 10 species of Pteridophytes from the area are enumerated with botanical name, family, popular name, parts used and medicinal uses in Table-1.

Bracken Fern
Family: Dennstaedtiaceae
Genus: Pteridium
Species: aquilinum (L.) Kuhn.

Rhizome long creeping, subterranean, densely covered by about 5mm long, pale brown, multicellular. Stipes scattered, dark brown to black and hairy at the base, pale brown to stramineous and glabrous above, abaxially rounded, adaxially grooved. Lamina deltoid-ovate, acute, broadly cuneate, tripinnateخلاف الجملة في النص.

Mayor Shikha
Family: Adiantaceae
Genus: Adiantum
Species: caudatum L.,

Rhizome erect, cylindrical and apex densely covered by dark brown hairs. Stipular at the base, abaxially rounded, adaxially flattened, bearing whitish linear streaks all over, glabrous. Lamina deltoid, bipinnate, pinnae up to 16 pairs, sub opposite with about 3cm long stalk, oblong-lanceolate, margin serrate in the distal part of the pinnae, costa slightly raised and rounded above and below, veins distinct and slightly raised above and below. Pinnae dark green, glabrous expect the occurrence of few small, pale brown, soft, textures herbaceous. Sori sub marginal, ellipsoid, sporangia up to six pairs in two rows, compact. Free spores trilete, up to 20m in diameter, pale green, exine sparsely granulose (Plate).

Sajivani
Family: Selaginellaceae
Genus: Selaginella
Species: tenera (Hook & Grev.)

Stem erect, rooting at the base only, green to pink colour when fresh, and stramineous to pink colour when dry. Leaves dimorphic throughout, continuous on main stem and on axis of primary branches, lateral leaves 31.5mm,
oblong-ovate, obtuse or sub acute, denticulate on the acroscopic, margin, lateral Sporophylls bear mega sporangia; others with micro sporangia, microspores brick red mass, 20m in diameter with thick warty lea sure; megaspore 150m (Plate).

Table 1: Medicinally important ferns and fern allies.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Name of the species</th>
<th>Popular Name</th>
<th>Parts used</th>
<th>Medicinal uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Actiniopterys radiate</td>
<td>Morparkhi</td>
<td>Plants</td>
<td>Astringent, antihelmintic and styptic</td>
</tr>
<tr>
<td>2</td>
<td>Adiantum capillus-veneris</td>
<td>Maiden-hair Fern</td>
<td>Plants</td>
<td>Diuretic and astringent</td>
</tr>
<tr>
<td>3</td>
<td>Adiantum caudatum</td>
<td>Mayor Shikha</td>
<td>Plants</td>
<td>Cough and fever. Antihelmintic</td>
</tr>
<tr>
<td>4</td>
<td>Angiopteris evecta</td>
<td>Ghora top</td>
<td>Rhizomes</td>
<td>Asthma, women's sterility. Antihelmintic</td>
</tr>
<tr>
<td>5</td>
<td>Dicranopteris linearis</td>
<td>Thicket Fern</td>
<td>Fronds</td>
<td>Hectic fever, dyspepsia, Cough and antihelmintic. Astringent Swellings</td>
</tr>
<tr>
<td>6</td>
<td>Drynaria quercifolia</td>
<td>Ashvakatri</td>
<td>Plants</td>
<td>Cough and bronchitis</td>
</tr>
<tr>
<td>7</td>
<td>Marsilea minuta</td>
<td>Water Clover</td>
<td>Leaves</td>
<td>Antihelmintic and astringent. Chronic disorders</td>
</tr>
<tr>
<td>8</td>
<td>Pteridium aquilinum</td>
<td>Bracken Fern</td>
<td>Rhizomes</td>
<td>Antihelmintic and astringent. Chronic disorders</td>
</tr>
<tr>
<td>9</td>
<td>Selaginella tenera</td>
<td>Sajivani</td>
<td>Dried plants</td>
<td>Diuretic gonorrhoea and hallucination</td>
</tr>
<tr>
<td>10</td>
<td>Dryopteris cochleata</td>
<td>Kakolisag</td>
<td>Rhizomes</td>
<td>Leprosy, antifungal, Swellings, ulcers and pains</td>
</tr>
</tbody>
</table>

**DISCUSSION**

Pteridophytes (Ferns and Fern allies) by virtue of their possessing great variety and fascinating foliage have drawn the attention and admiration of horticulturists and plant lovers for several centuries. They are represented by about 305 genera comprising more than 10,000 species all over the world. About 191 genera and more than 1000 species are reported from India (Dixit, 1984; Bir 1992). The Pteridophytes are known to man for more than 2000 years for their medicinal values (Kirtikar et al., 1935; Nayar 1959; Nadkarni 1954; May 1978). Chopra (1933) mentioned various Pteridophytic plants to be antimicrobial in nature.

Quite a number of ferns and ferns allies are of great medicinal value, among them mention may be made of *Equisetum arvense* Linn. This is used in nasal polyps and kidney infections, ashes useful in acidity. *E. debile* Roxb, is diuretic and given in gonorrhoea. *Lycopodium clavatum* Linn., in the form of decoction used in rheumatism and diseases of lungs and kidneys. The paste of the leaves of *Ophioglossum reticulatum* Linn., is used in headache. *Botrychium virginianum* Sw. is used in dysentery. *Helminthostachys zeylanica* (Linn.) Hook. is used for vitality and brain tonic. *Lycopodium flexuosum* (Linn.) Sw. is, an expectoret and used in ulcers, cut wounds and sprains. The fronds of the gleicheniaceous fern *Dicranopteris linearis* (Burm.) under wood are used for asthma and in woman sterility. The plants of the royal fern *Osmunda regalis* Linn. are styptic and tonic. The rhizomes of *Angiopteris evecta* (Forst.) Hoffm. are used for scabies (Vasudev, 1999).

**REFERENCES**
