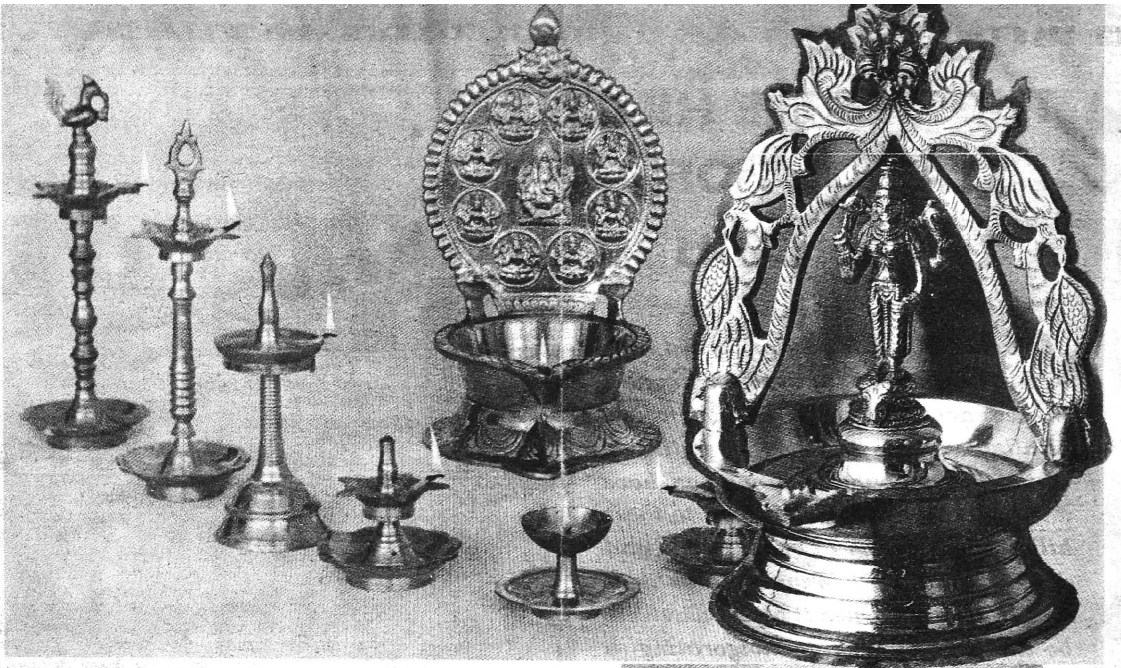


Tamil Arasu

APRIL 1996 Rs.3







Tamil Arasu

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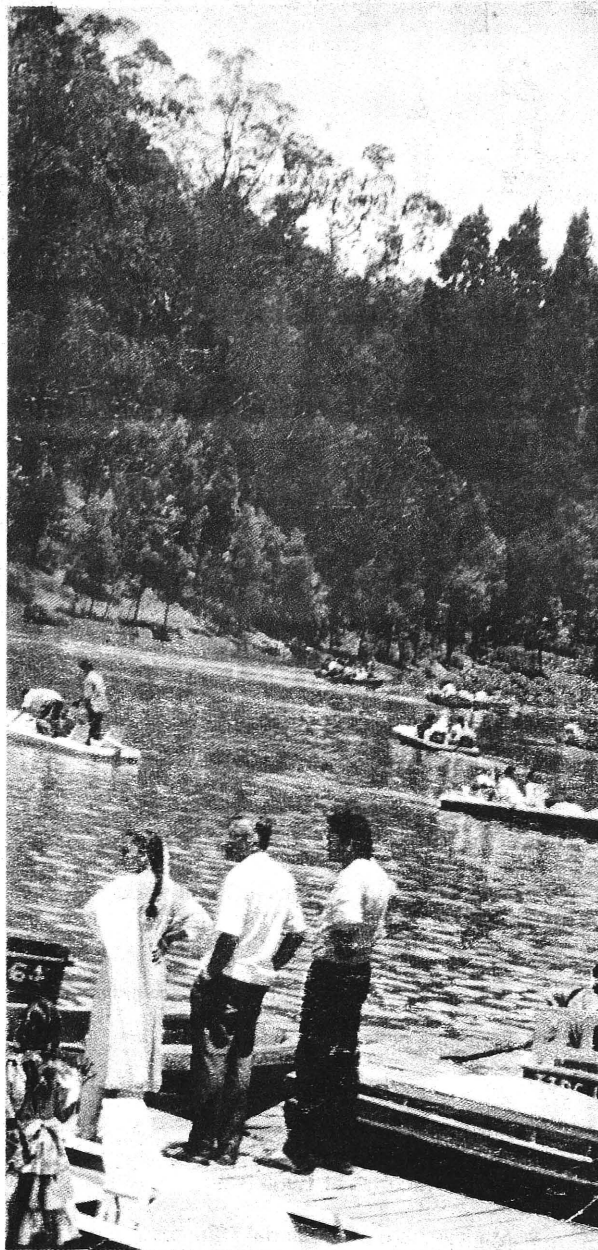


THE GENTLE HILL STATIONS OF TAMIL NADU

Tamil Nadu has gentle, wooded hills within her borders that are soothing all the year around. Flanked by thick forests on all sides, these stations offer multitude of the finest panoramas one can have anywhere on earth. Every road to these hill stations seems to bend, climb, and descend with a few breaks of a straight stretch. The air, when it blows, whatever be the time of year is invigorating- a healthy relief from the plains.

Tamil Nadu's Queen of hill stations is 'Snooty Ooty' now known as Udhagamandalam in the Nilgiris mountains. The Nilgiris also holds two more hill stations, Coonoor and Kotagiri. Kodaikanal, a short distance from Madurai is becoming the most popular hill station as it remains unspoilt by modernisation. Yercaud in Salem District is also quite popular. Yelagiri in North Arcct Ambedkar District is also gaining attention as a hill station.

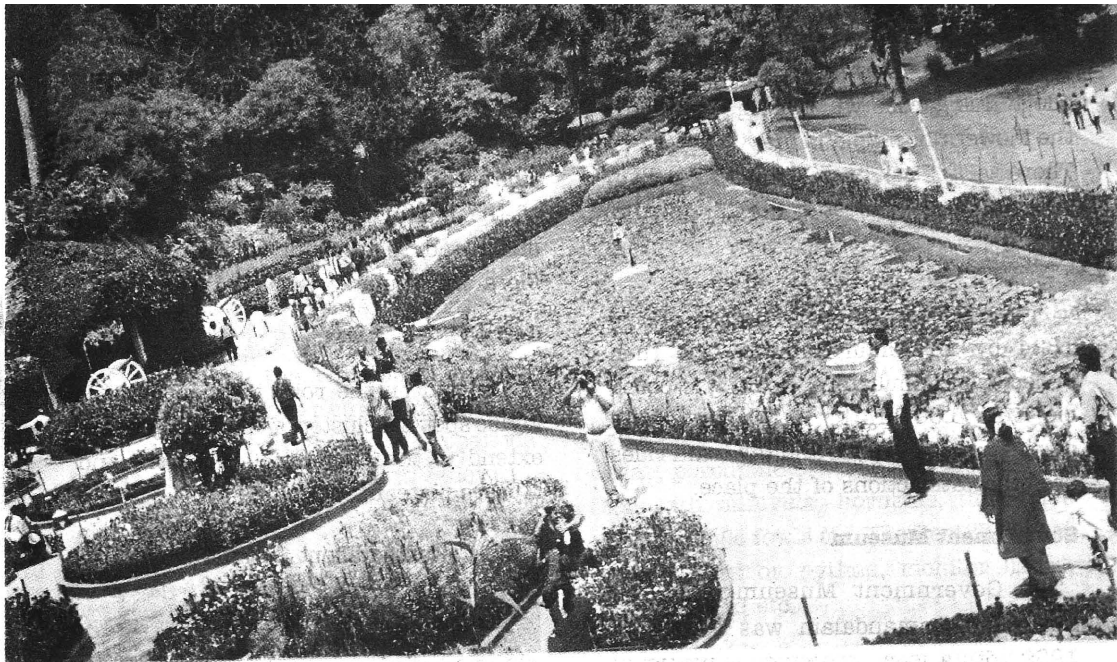
We present profiles of Udhagamandalam, Kodaikanal and Yercaud. We wish you a pleasant stay this summer in these fascinating hill stations.



THE NILGIRIS

The Nilgiri hills in Tamil Nadu are an integral part of the great plateau occupying the junction of the Eastern and Western ghats. It derives its name from 'Nilgiri' or the 'Blue Mountains' a name

given to the hills by the inhabitants more than 850 years ago because of the blue haze of the clouds which envelope the hill slopes. Udhagamandalam or Ooty as it is popularly called is an important hill station of these hills and is often called as the "Queen of Hill Stations". Not far from



Ooty are the smaller and quieter hill resorts - Kotagiri and Coonoor.

General Information

	Ooty	Coonoor	Kotagiri
Area	: 36 sq.km	13.2 sq.km.	26.39 sq.km
Altitude (in metres)	: 2,240	1,858	1,984
Temperature: max.		min.	
Summer	: 25° C		10° C
Winter	: 21° C		0° C
Rainfall	121 cms		
Season	: April to June and September to November.		
Clothing	: Heavy wollen in winter Light wollen in summer.		
Population (1991 censes)	: 81,763	48,003	38,121
Languages spoken	: Tamil, Kanarese, Malayalam and English		

Access

Air: The nearest airport is Coimbatore (100 km) which is connected to Madras, Bombay and Bangalore.

Rail: Udhagamandalam on the narrow gauge railway is connected to Mettupalayam which is directly connected to Coimbatore and Madras.

Road: Udhagamandalam is connected

by good motorable road. It is 535 km from Madras (via Mettupalayam, Salem), 89 km. from Coimbatore, 19 km from Coonoor, 29 km from Kotagiri, 187 km from Calicut (via Gudalur), 160 km from Mysore, 290 km from Bangalore, 281 km from Cochin (via Coimbatore, Pollachi), 498 km from Thiruvananthapuram (via Cochin), 302 km from Trichy (via Coimbatore, Karur) and 265 km from Kodai-kanal (via Coimbatore, Palani).

Bus Services: There are regular bus services connecting Udhagamandalam to Coimbatore, Trichy, Bangalore, Madurai, Kanniyakumari, Mysore, Palghat, Calicut, Tirupathi etc.

Restaurants: Blue Hills, Chandan Vihar, Tamilzhagam, Tandoor Mahal, Pankaj Bhojanalaya, Ooty Coffee House, Raghuram, Shinkos Chinese Restaurant, Hills Palace and all hotels have restaurant facilities.

Important places in Udhagamandalam (Ooty)

Botanical Garden: This garden was laid

out in 1847 by the Marquis of Tweeddale. A variety of exotic and ornamental plants adorn this garden which is the venue for the Flower Show held in May every year. There is a fossil tree trunk 20 million years old in the midst of the garden.

Lake

This artificial lake was constructed in 1824 by Mr. John Sullivan, the then Collector of Coimbatore. Boating is possible from 8.00 hrs to 18.00 hrs. on all days. The lake garden and toy train rides are other attractions of the place.

Government Museum

The Government Museum on Mysore Road, Udthagamandalam was set up in 1989 with a view to provide educational benefits of the Museum to the residing and visiting population of Nilgiris District. The Museum has items of Tribal objects, district's ecological details and representative sculptural arts and crafts of Tamil Nadu.

Admission is Free.

Timings: 10.00 am to 1.00 pm and 2.00 pm to 5.00 pm.

Holiday: Friday, Second Saturday and National Holidays.

EXCURSION

The Mukurthi Peak & Mukurthi National Park.

Mukurthi Peak is about 40 km from Ooty. The Mukurthi National Park is located on the South Eastern corner of the Nilgiris Plateau.

The area contains a viable population of Nilgiri Thar (*Hamitragus hilocrius*). The Kollaribetta and the Nilgiris Peak are other major peaks around. The area is

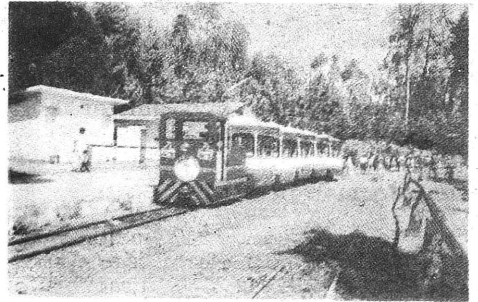
chained by innumerable beautiful and perennial little streams, which falls into Bhavani puzha. The Silent Valley in the Western Ghat is located on the Western side of these ranges. A fascinating feature of the Mukurthi Sanctuary is its endemism and relationship with Himalayan Flora and Fauna.

Ketty Valley View

Located on the road to Coonoor, this idyllic spot is a cluster of tiny villages that extend to the plains of Coimbatore and Mysore plateau.

Pykara

It is situated about 21 kms from Ooty



on the Ooty-Mysore Road.

Pykara has well protected fenced Sholas, Toda settlements, undistributed grassy meadows and also a good wildlife habitat. The Pykara Dam and the reservoir attracts many tourists. There is a forest Rest House at Pykara.

Glenmorgan

It is about 17 kms from Ooty and an ecologically rich forestry spot. There is an Electricity Board (E.B.) winch which carries staff from Glenmorgan view point to power house at Singara. All the four kms of the winch track passes through undisturbed sholas and wildlife habitat. Prior permission of E.B. authorities should be obtained to enter the view point zone. There are about ten Toda (tribal) settle-

ments. On the way of Glenmorgan one can see good Eucalyptus, Wattle Plantations and Sholas rich in Rhododendrons.

Upper Bhavani

It is about 10 kms from Korakundah and about 20 kms from Avalanchi. This is a Naturalist's Paradise. Some of the best sholas like the Thar Shola lies en-route. The area is a rich and undisturbed wildlife habitat. From Bangithappal via Sispara one can trek to Silent Valley.

Avalanchi

Located at a distance of 28 kms from Ooty a beautiful lake surrounded by very good forest cover. A thick shola where even sunlight cannot penetrate and abundant with a wild variety of avifauna is a Nature Lover's Paradise. The Road leading to Lakkidi and Upper Bhavani from Avalanchi is an ideal wildlife habitat and has vast stretches of undisturbed sholas.

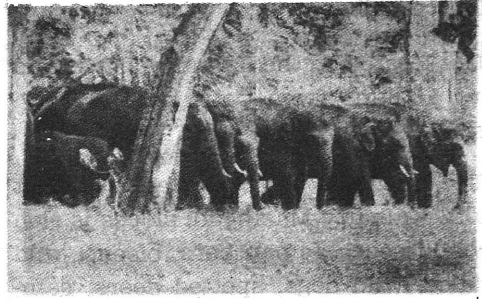
Western Catchment

It is about 20 kms from Parsons Valley. It consists of Rolling Grassy downs interspersed with temperature sholas occupying depression and valleys. The landscape is extremely picturesque and should be zealously protected and preserved to maintain beauty and grandeur of the tract.

Wildlife Sanctuary

Lying in the Nilgiris District abutting Kerala & Karnataka State, this is situated at an elevation of 1000 metres and extends over an area of 321 sq.kms.

A variety of habitats, ranging from tropical ever green forest, moist deciduous forest, moist teak forest, dry teak forest, secondary grass lands and



swamps are found. The Wildlife includes elephant, gaur, tiger, panther, sambar, spotted deer, barking deer, mouse, wild boar, porcupine etc. The avifauna is varied with minivets, hornbills, fairy blue birds, jungle fowls etc. The Reptillions are represented by python, monitor lizard, flying lizard etc.

It is approachable from Udhagamandalam by road via two different routes.

- a) Via-Kalhatty 36 kms from Ooty and
- b) Via-Gudalur which is 67 kms from Ooty. It can also be approached from Mysore (91 kms.)

Other picturesque scenic spots in the sanctuary include the Moyar Waterfalls, the Chief Minister's watch tower, Ombetta swamp, Theppakad elephant camp etc.

Elephant ride on payment, vehicle ride along visitor routes on payment are available. One can also stay at Sylven Lodge, Log House at Theppakad, Abhayaranyam at Kurgudi and dormitories.

Doddabetta

It is the highest (2623 metres) in the Nilgiris and is about 10 kms from Ooty.

It lies at the junction of Western and Eastern Ghats and other beautiful vistas of the Nilgiris Hill ranges, it is surrounded by dense sholas. There is T.T.D.C's telescope house which is an added attraction.

Kalhatty Falls

It is located on the Kalhatty slopes and about 13 kms from Ooty, on the Ooty-Mysore Kalhatty ghat road.

The height of the waterfalls is about 100 ft. Kalhatty-Masingudi slopes is rich in wildlife such as panthers, bisons, wild buffalos, wild dogs, spotted deers, sam-bars and different types of hill birds.

Wenlock Downs

A vast expanse of undulating landscape offering the Gymkana Club, the Government Sheep Farm and the Hindustan Photo Films Company besides pleasure of long stroll on quiet roads.

Elk Hills

It is an hour walk from Udhagamandalam. A wide and uninterrupted view of Udhagamandalam and the Lovedale Valley can be had from here.

Snowden Peak

Situated on the Kothagiri Road, it offers a picturesque view of Mysore.

COONOR

It is located on the way from Coimbatore to Ooty. Only 19 km from Ooty. It is the second largest hill station in the Nilgiris. It stands on a lower ridge of the plateau at an altitude of 1858 mts. (6100 ft.)

Coonor is a railway station on the Mettupalayam Udhagamandalam route. There are regular bus services from Ooty and Coimbatore to Coonor.

Dolphin's Nose

It is about 12 kms from Coonor bus stand, situated near Tiger Hills.

Enjoy the micro climate of the shola forest criss crossed by the winding road, you can also take a glimpse of the Catherine Falls from here. The area is also abundant with wildlife.

Lamb's Rock

It is about 8 kms from Coonor bus stand. The Lamsrock is a sheer precipice of several hundred metres and commands a good view of the Coimbatore plains.

Law's falls

It is situated in the Coonor forest range. It is about 7 kms from Coonor.

The height of the Falls is about 180 feet. There are vast stretches of undisturbed sholas and a paradise for Naturalists.

St. Catherine Falls

Located 8 kms. from Coonor bus stand, environ of the falls has beautiful scenery.

Sim's Park

This park cum botanical garden con-



tains many species of trees not found in Ooty. The annual fruit and vegetable show is held in May.

KOTAGIRI

It is 1983 mts. (6503 ft.) above the sea level and has a climatic advantage over Ooty as it is shielded by the Doddabetta ranges from the onslaught of the monsoon.

Kodanad View Point

It is about 20 kms from Kotagiri on the eastern edges of Nilgiris. On either side of the road one can see the panoramic view of the tea estates and the River Moyar, which divides Periyar and Nilgiris District, is breathtaking. Tamil Nadu and Karnataka State border are distinctly seen.

Places of worship

Temple: Murugan Temple, Elk Hill, Venkateshwara Perumal Temple, Sri Mariamman Temple, Subramania Temple, Vittaba Temple, Muniswarar Temple etc.

Church: St. Stephen's Church, Union Church, Holy Trinity Church, Sacred Heart Church, St. Mary's Church, St. Theresa's Church and Kandal shrine.

Mosque: available

Communications: Post/Telegraph/STD/ISD/Telex/Fax etc. courier service available.

Medical Facilities: Hospitals and Chemists are Available

OTHER INFORMATION

Trek routes: A number of Trek routes have been identified. For participation, the Tourist Officer, Udhagamandalam may

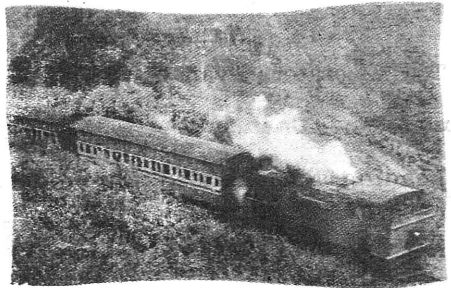
be contacted.

Angling

Good trout, Carp and mixed water fishing is possible in various streams and lakes in the Nilgiris. Fishing licence for a fee is issued by the Assistant Director of Fisheries, Fish Dale, Udhagamandalam near bus stand.

Fairs and Festivals

1. Thaiposam in Elk Hill Murugan Temple (February)
2. Bokkapuram Mariamman Annual Festival (February)
3. Ooty Mariamman Temple Festival (April)



4. Coonoor Mariamman Temple Car Festival (April-May)
5. Boat Races and Boat Pageantry in Ooty (May)
6. Summer Festival in Ooty (May)
7. Flower show in Ooty (May)
8. Fruit Show in Coonoor (May)

Probable Travel circuits

Ooty - Coonoor (17 kms) - Kotagiri (25 kms) - Ooty (44 kms) - Mudumalai (67 kms) - Ooty (67 kms) (2 days)

Recreation

Clubs, Indoor Games, Horse Riding and Golf: Available

Sports Activities: The District sports Officer, Udhagamandalam

Auditorium: Breeks School Open Air Stadium and Anna Stadium.

Tourist Information

Tourist Office, Government of Tamil Nadu, Supermarket Complex, Charing Cross, Udhagamandalam - 1

Travel Agents

M.B. Travels, Charing Cross, Udhagamandalam

Tour Operators Available

Bank/Money Changers

Leading Nationalised Banks have

branches. Exchange facilities are available with all banks transacting foreign exchange and Hotel Tamil Nadu.

Wildlife viewing

Wildlife viewing is possible at Mudumalai Wildlife Sanctuary and Mukurthi National Park.

Golf

Golf Course Club's 18 hole golf course is located at a height of 7400 ft with a par of 70 over 6207 yards. The Golf links are laid out over an area of 193 acres of the Ooty Wenlock Downs.

Water Sports

Every year during Summer Festival (May) Boat Race are conducted at Ooty lake.

Yoga is taught at Rajayoga Meditation Centre, 88, Victoria Hall, Ettin's Road, Ooty.

KODAIKKANAL - PRINCESS OF HILL STATIONS

Introduction

Kodaikkanal is located high in the Palani Hills. This serene hill station is one of the most beautiful tourist places in South India. Kodaikkanal is about 120 km from Madurai, 2133 mt above sea level. Kodaikkanal is rich in flora and fauna. It has a unique plant - the Kurinji, which blossoms once in 12 years, making the hill slopes a blaze of purple.

General Information

Area : 21.45 sq. kms
Population : 27,461 (1991 Census)
Altitude : 2,133 mts. above sea level.

Climate	max.	min.
Summer	19.8° C	11.3° C
Winter	17.3° C	8.3° C
Rainfall	: 165 cm (average) Heavy rain occurs during October/December	
Clothing	: Light woollens in the evening during summer and heavy woollens during winter	
Season	: April to June and September and October. But can be visited throughout the year. Languages spoken: Tamil and English	

WHERE TO STAY

Hotel Tamil Nadu offers a range of services, spacious, clean rooms, catering

to any palate, bars, restaurants, conference halls and indoor games.

WHAT TO SEE

The Lake: A magnificent man made lake, which spreads out in a star shape over sixty acres, surrounded by green wooded slopes. Boating facilities are available at the TTDC Boat Club.

Bryant Park: This park is situated on the eastern side of the lake. The horticultural show is held here in May.

Coaker's Walk: (1 km.) Coaker's Walk runs along a steep slope on the Southern side of Kodai. It provides an excellent view of the plains.

Kurinji Andavar Temple: (3.2 kms.) The presiding deity of the temple is Lord Murugan. From this point, one can get a beautiful view of the northern plains and Palani Hills.

Telescope Houses: There are two telescope houses in Kodai, one near the Kurinji Andavar Temple (open from April to June) and another at Coaker's Walk.

The Pillar Rocks: (7.4 kms) Three boulders stand shoulder to shoulder vertically measuring to a height of about 122 metres (400 ft.) providing a panoramic view.

EXCURSION

Silver Cascade: (8 kms.) This waterfall is located on the Ghat Road.

Shenbaganur Museum: (5.6 kms) The flora and fauna museum is maintained by the Sacred Heart College - a theological seminary founded in 1895. One of the best orchidariums in the country with more than 300 species of orchids is also found here.



Doumen's Circle: (22 kms) A pre historic site.

Dolphin's Nose: (8 kms) A projecting rock which provides a view of the yawning chasm below.

The Perumal Peak: (11.3 kms) This 2,400 metre high peak, offers an excellent opportunity for trekking. The climb begins from a point known as Neutral Saddle (Perumal Malai Village).

Palani: (64 kms) A famous pilgrim centre of the south and one of the six abodes of Lord Subramanya. The temple stands on a hill in the Palani range of the Western Ghats.

Kumbakkarai: (12 kms) Picturesque waterfalls and an ideal picnic spot.

Places of worship:

Temple: Kurinji Andavar temple,

Mariamman temple, Vinayagar temple and Murugan temple.

Church: Sacred Heart Church, Munjikal; Francis Xavier Church, Gorapur; St. Mary's Church, Lassaleffle; St. Joseph's Church; Luthern Mission Church, Lake end.

Mosque: In Ellis Villa and in Munjikal.

RECREATION

Clubs: The Kodaikkanal Club, The Indian Club, The Golf Club, and The Boat Club,

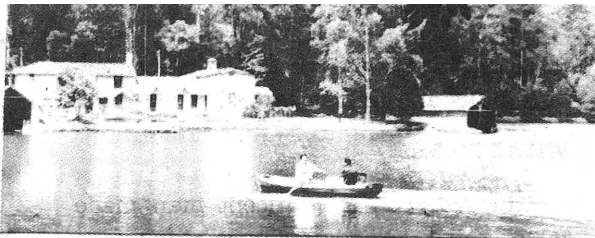
Cinema Houses: Available

FESTIVALS

Summer Festival celebrated in May every year. Boat race and flower show are also held on the occasion. It is a major tourist attraction.

TOURIST INFORMATION

Tourist Information Centres (Government of Tamil Nadu) at Township Bus Stand and Rest House Complex (Near bus stand, Kodaikkanal)



Tourist Office (Government of Tamil Nadu): at Madurai, West Veli Street (near Central Bus Stand),

Tour Operators: Unapproved car operators are available, approved car operators are available in Madurai.

Travel Agents: Approved Travel Agents are available in Madurai.

Banks

State Bank of India, M.D.D.C Bank, Canara Bank.

Indian Bank, Kodaikkanal Co-operative Urban Bank,

Union Bank.

Money Changers

State Bank of India and other nationalised and schedule banks transact foreign exchange. Hotel Tamil Nadu and other approved hotels also deal in foreign exchange.

YERCAUD

GENERAL INFORMATION

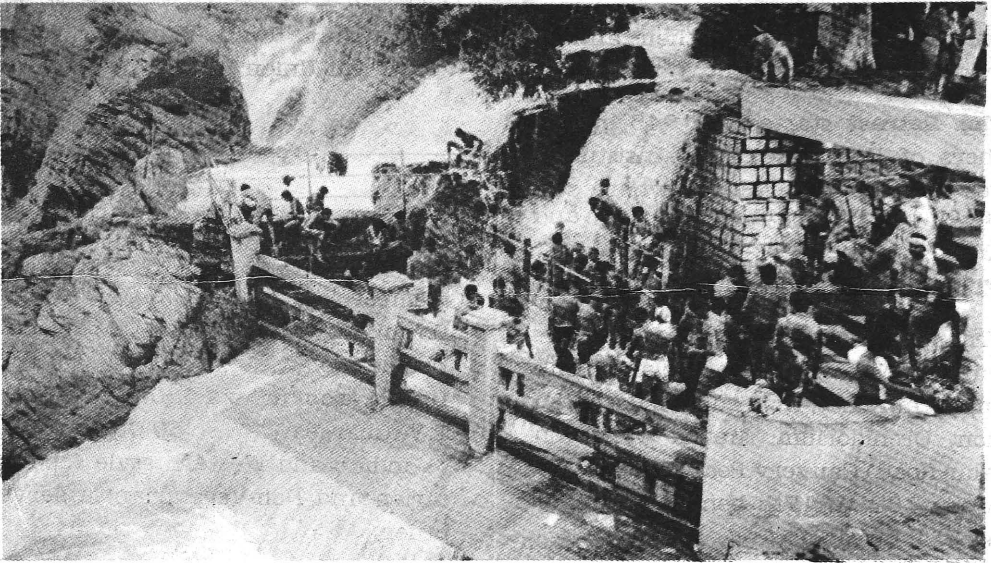
Area : 383 sq. kms.
Altitude : 1515 Metres
Climate : Winter 13° C
Summer 29° C (Average)
Rainfall : 167.6 cms. (68")
(Average)
Season : Throughout the year

Clothing : Winter, ordinary cotton with light wollen pull-over is enough.

Summer : Ordinary Cotton

Languages spoken : Tamil and English

Yercaud in the Servaroyan hills of the Servaroy range of Salem District is a quiet and restful station in Tamil Nadu. The Servaroyan Hills as a whole provide many beautiful vistas and panoramic views. Yercaud itself is a pretty hill sta-



tion with a pleasant, cool climate. Yercaud's temperature never rises above 29°C or falls below 13°C. This is one hill station where one does not feel the biting cold of winter. With such a salubrious climate, Yercaud can be visited the year round. It is an hour's drive from Salem and is the least expensive hill station in India.

PLACES OF INTEREST

Yercaud Lake

The first thing that attracts a visitor is the lake. It is a picturesque pool surrounded by gardens and well wooded trees. Boating in the cold waters of the lake is enchanting as well as refreshing.

The Anna Park

Near the Lake, it is a lovely garden.

Lady's seat

It overlooks the winding ghat road and provides a breath-taking view. This view is spectacular at night with the twinkling lights of Salem town in sight. The tourists can have a panoramic view of the plains

below, through the telescope mounted at the Lady's seat.

Pagoda Point

Another view point.

Killiyur Falls

This 300 feet high water falls is situated amidst picturesque surroundings.

The Grange

The castle like building built by the then Collector of Salem, Mr. M.D. Cockburn who first introduced coffee from Arabia and apples and other fruits from South Africa between 1820 A.D. and 1829 A.D. in Yercaud. He is said to have played an important role in the revolt of 1857 A.D.

Bear's Cave

It is situated near the Norton Bungalow on the way to Servaroyan temple. It is an important tourist spot.

The Servaroyan Temple

It is situated atop Servaroyan hills.

The tribals here celebrate their annual festival in May every year.

The Retreat started in 1945 by the brothers of Don Bosco, this Institution serves as a Novitiate House where students of the religious order stay and study.

OTHER PLACES OF INTEREST

Ornamental plants at green house, Orchard cum Nursery of rose plants, Silk Farm, Arthur Seat, Horticulture Research Station, Orchidorium, Mettur view (on Nagalur Road), Cauvery Peak, Salem view (between 16th & 17th bends) are other places of interest.

Yercaud and the entire Servaroyan Hills are known for thriving coffee plantations, plantains, pears, jack and orange fruits are also grown. Flowers of all varieties thrive here.

TRANSPORT

Air: The nearest airport at Tiruchirappalli is connected to Madras and Madurai etc.

Rail: Nearest rail-heads are Salem Junction (35 kms.) and Salem Town (32 kms.)

Bus: Bus Services operate from Salem Junction and Salem Municipal Bus Stand to Yercaud frequently. There is no town bus service in Yercaud, but certain buses coming from Salem ply through Yercaud and connect the important villages like Cauvery Peak, Valavanthi, Nagalur, Vellakkadai, Swinton Bridge with Yercaud.

Taxis: Private taxis are available.

ACCOMMODATION

Tamil Nadu Tourism Development Corporation's **Hotel Tamil Nadu**, Salem, Yercaud Ghat Road, Yercaud (behind Panchayat Union Office)

Season Off season
(April, May (July to & June) March)
Rs. Rs.
Deluxe Suit 500.00 350.00
For additional member 100.00 50.00
Dormitory 3 blocks 45.00 30.00
Double room 350.00 250.00
Double room deluxe 450.00 300.00
T.V. Charges 50.00 50.00

Indian and Western style food (Vegetarian and Non-Vegetarian is served on order)

Reservation: The Manager, TTDC's Hotel Tamil Nadu. (Yercaud)

RECREATION

Library, Indoor Games, at Yercaud Library and Sports Club

RECREATION

Boating and fishing in the lake.
Restaurants available.

Photo goods: Available at Salem

SHOPPING

The Salem Co-operative Super Market Branch and the Main Bazaar

PLACES OF WORSHIP

Temples: Servaroyan Temple.

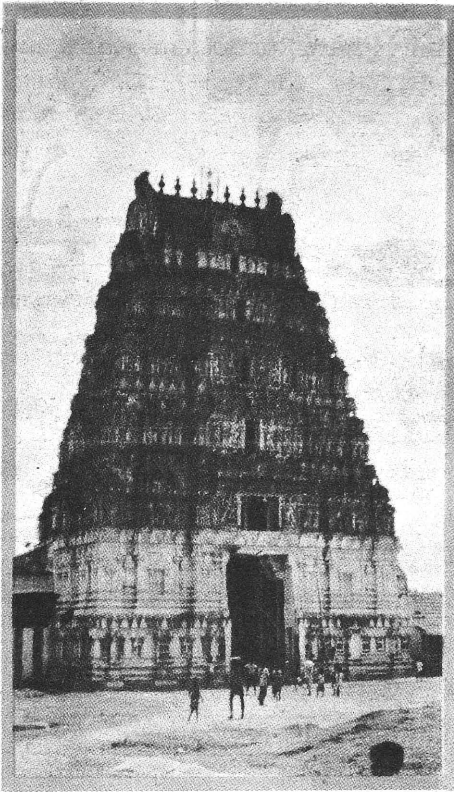
Churches: Sacred Heart Church, The Retreat Church, St. Joseph's Church, Holy Trinity Church, C.S.I. Church and Lutheran Church.

Mosque: Yercaud Mosque.

TOURIST INFORMATION

Tourist Office at Central Theatre Complex Salem-1. Tourist Information can

TAMILARASU 12



also be had at Hotel Tamil Nadu, Yercaud.

Post and Telegraph Office Situated on the Main Road, Yercaud.

Hospitals 1) Government Hospital, (1 km from Bus stand, 2) Providence Hospital 1 km from Bus stand (on the road from bus stand to Lady's seat) 3) Government Primary Health Centre, Vala vanthi (8 kms from bus stand)

Kolli Hills

This is the second hill station in the Salem District at an altitude of 1190 mts. Sri Arappaleeswarar Temple on the top of the hills called Chathuragiri is one of the oldest, the terrace type 70 hair pin bend road, the fruits cultivated here, honey, and the unchanged tribal culture are unique points. This place at a distance of 48 kms and 100 kms from Namakkal and Salem respectively can be reached by bus.

The wonderful Agasakangai Waterfall flowing from a height over 200 feet is a unique scene. Valvil Ori Festival and Tourism Festival are celebrated during August every year.

Hogenakkal

Hogenakkal waterfalls is just 46 kms from Dharmapuri, 114 kms from Salem and 133 kms from Bangalore. This picturesque holiday spot is an unexploited tourist wonder on the banks of the River Cauvery.

Hogenakkal means Smoking Rock, a name derived from the cloud of mist and spray that envelops the chasm. A sacred bathing place, Hogenakkal is famed for the curative power of its waters. Surrounded by mountains, Hogenakkal now offers a quiet holiday in comfort.

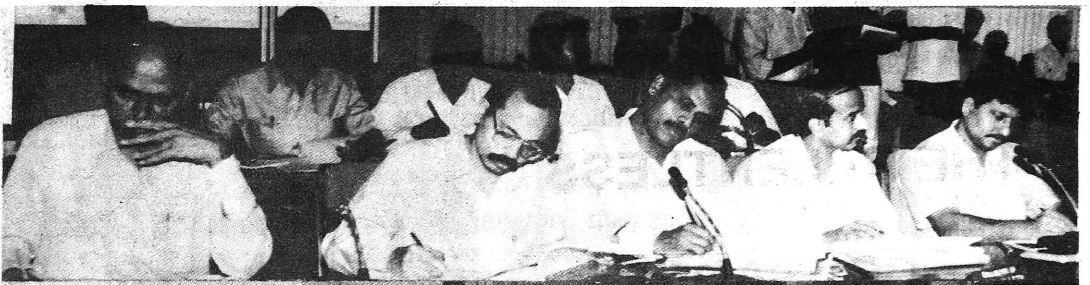
Around Hogenakkal

Dharmapuri has an ancient temple. Adamankottai fort is 8 kms. from Dharmapuri. This place is associated with Adiyaman who ruled from Thagadur. The Hosur is known for its cattle farm. It is about 90 kms from Dharmapuri and is now becoming an important industrial centre. Hanuman Theertham is a water spring on the bed of a river 10 kms from Uttangarai. Krishnagiri 45 kms from Dharmapuri has a dam and a fort and is an industrial centre. Theerthamalai has a temple and a spring atop a hillock - 16 kms from Harur. Thali known as little England for its climate is 25 kms from Hosur, six temples are located at Kundani in the valley of the Markandanathi (river) and there are forts at Denkanikotta and Royakkottai. The region is also noted for dolmens and hero stones.



1996 GENERAL ELECTIONS DISTRICT COLLECTORS MEETING

A meeting of District Collectors was held at the Secretariat on 25.3.96 to discuss the preparation to the holding of 1996 General Elections. The Chief Secretary Thiru N. Hari Bhaskar, the Chief Electoral Officer Thiru K. Chandrachoodan, District Collectors, Police Officers and High officials participated in the meeting.



PERIYAR - THE RELENTLESS CRUSADER

Dr. V.C. Kulandaiswamy

Periyar remained a fighter all through his life and fought his battles on many fronts. Though his formal education was modest, the opportunities he had, to listen to learned discourses with which his parents were associated, his own reading in later years and his travels abroad and within the country gave him breadth of knowledge and depth of insight.

He was not an intellectual, postulating and enunciating theories about the heaven and earth, but an active field worker who carried his message to the people, and delivered it in a language that was understood by the illiterate millions, and through methods that were appropriate to them. The apparent crudeness of some of his techniques in the eyes of the elite, is to be viewed against this background. To

prove to the masses that the idols of Gods were nothing more than the stone or bronze they are made of, he broke the idols of Ganesha, burnt pictures of Rama and denigrated the objects of worship. He exposed claims of superhuman powers, ridiculed the Puranic stories, and carried the torch of knowledge, enquiry and logic to the humblest of villages and the lowliest of citizens. Awakening the common man, encouraging and motivating him to think on his own, and removing the shackles and chains on his mind, continued to be his main mission till the very end.

Periyar believed that education enfranchises,



and that the key to human liberation from intellectual, economic, social and political bondage was to be found in education. Equalisation of opportunities for education continued to be the corner stone of his struggle from the beginning. The single most important issue on which he left the Congress was the principle of Communal Representation in education and employment. In his long public life, he might have made adjustments; shown accommodation and reconciled with differences in policies here and there for the sake of certain larger interests; but he never made any compromise on Communal Representation; never sup-

ported any party, never allied with any leader who did not subscribe to this principle. He was convinced that there was no such thing as liberation for the ignorant; to them, freedom from one bondage would only mean submission to another. The ignorant would only change their masters and not shed them. In the history of the resurgence of India in the twentieth century, Periyar would come to be acknowledged as the pioneer and architect of the broad measures for equalisation of opportunities in education and employment.

Periyar considered the caste system the cancer of the Indian society. To him, nothing was more important than putting an end to this abomination. He waged a relentless war against the caste system. Especially against the practice of untouchability, and all its manifestations in the society. Temple entry, abolition of caste based discrimination in hotels and restaurants, inter-caste marriage, priesthood on the basis of preparation and not by birth, and the use of the language of the people for worship instead of Sanskrit, were some of the positive measures for which he pleaded and

fought throughout his life.

Periyar was a humanist; he had no particular emotional attachment to any language or race, no faith in any religion, no preference for any caste, no unquestioning commitment to any political philosophy. He judged and evaluated everything on the basis of its usefulness, functional efficiency and equity. In a rational humanist like him, what appears to be consistent hostility towards the Brahmins might seem somewhat irreconcilable. Periyar was convinced somehow, beyond doubt, that casteism was identical with Hinduism and Hinduism to him meant Brahminism and supremacy of the Brahmins. Consequently, his fervour for a casteless society and his his crusade against the caste system and its pervasive influence, made him denounce Hinduism as the source of this evil and Brahmins as the early authors and subtle perpetrators of this cancerous stratification.

It may be said in general that he was the willing and self appointed champion of the causes of all those who were under privileged. His struggle for the cause of women has perhaps few

parallels in the history of women's liberation in India. Child marriage, widowhood, dowry, the male domination, the myths and Puranas that weave stories extolling servility in women as virtue, were ridiculed, condemned and exposed by him day in and day out, in public meetings, marriage ceremonies, political platforms and writings. He saw clearly that the continuous occupation of women in bearing and bringing up children was the main cause of their confinement to the home and their complete dependence on men. He saw contraception as the most effective tool of women's liberation and was the earliest to advocate family planning. He introduced the concept of 'self respect marriage', which stressed the equality of sexes, looked at family life as one of partnership and discarded all rituals that implied subordination of women to men. In the Self Respect Movement, women played a prominent role. In the resolutions adopted in the conferences organised by him, those concerning the rights and privileges of women were given pride of place. He advocated, with feeling and forcefulness, widow remarriage. When his own niece

became a widow in her youth, Periyar set an example by arranging for her remarriage, defying all his orthodox relatives. At the Self Respect Conferences in 1929 and 1930, women's right to divorce and to have property was emphasised. It is but appropriate that the title of Periyar, though in occasional use earlier, was officially conferred on him only at a women's conference held in Madras, in November 1938.

His interest in politics per se was really secondary. His main concern was social reform. Politics is the game of those who, among other things, aspire for power. Periyar was unwaveringly against fighting elections and capturing power. Since he resigned his Chairmanship of the Erode Municipality in 1919, till his death in 1973, he had stoutly refused to seek or accept power. In 1940, and in 1942, he was twice asked to take up the Chief Ministership of the Madras Presidency. He declined, saying that acceptance of office would be an impediment to his struggle for reform.

Periyar was a rationalist with a difference. He was all the time a field

worker. His audience ranged from intellectuals, to illiterate masses from the slums and remote villages. He took examples from their day to day practices, dealt with them in detail, explained himself in a language intelligible to them, and exposed the patent follies in their faiths, beliefs and practices. He was not interested in the philosophical niceties of the many Hindu concepts. These were merely of theoretical interest and were confined to academics, intellectuals, and a limited number of persons in the upper strata of society. His concern was in what is believed and observed by the people in their day to day

life. Religion in the Hindu society is one of rituals, ceremonies and observances. He wanted to bring about a change in them. His objective and ambition were essentially one of modernising the society and bringing it in tune with the ideals and values relevant to the times.

His approach to and analysis of any issue, can be summarised in the following questions;

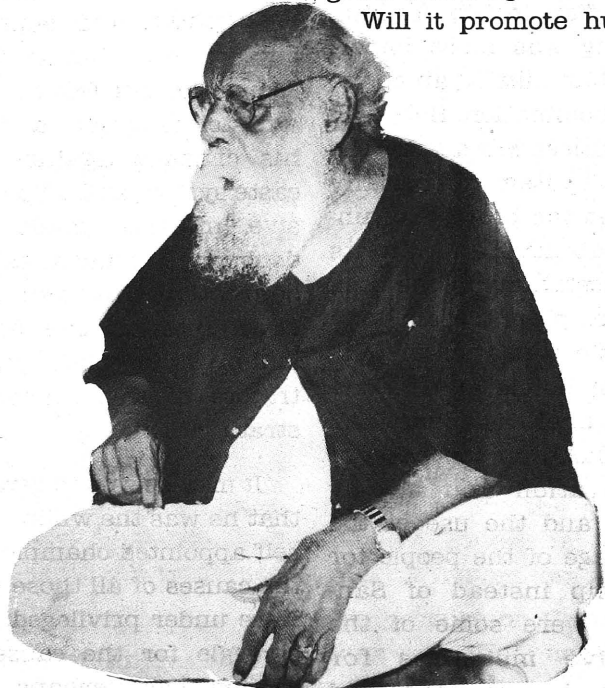
Is it fair and just to all concerned?

Does it stand to reason?

Is it in tune with natural inclinations of men and women?

If it is not, is it necessary to adopt it or follow it for human welfare and progress on a long term basis?

Will it promote human



endeavour?

Will it contribute to human progress?

When an issue failed his tests, he never once wavered in his grim determination to oppose it. He stood steadfastly by the following announcement he made through 'Kudi Arasu' in 1925.

"Feelings of self respect and brotherhood must blossom in the society: inequalities and thoughts of one being high and other low in birth must be eliminated. Caste feuds and conflicts must disappear. We shall strive hard to propagate these views. We shall fearlessly and without discriminating between friends and foes condemn everyone who might oppose and attack us in this regard".

In general, he took it on his shoulders to fight against every form of oppression, every form of exploitation, every practice that hurts human dignity, every belief that inhibits human effort and human endeavour. For one like him whose philosophy is broad humanism, and whose objectives are human welfare and human progress, the question of hating any community really does not arise. He opposed

the Brahmins when he felt that they have been oppressing the non Brahmin community. He opposed and condemned the male members of the Brahmin and Non Brahmin communities alike, when he saw the injustice they were doing to the women folk in general. He criticised bitterly the non Brahmin caste Hindus when he found them ill treating and humiliating the members of the scheduled caste. In general, he was always on the side of the weaker sections of the community. He pleaded and fought for their cause, without being approached or asked.

In his long public life, he opposed many leaders and political parties and supported many individuals and institutions. On a later date, he supported those that he once opposed and also opposed those that he once supported. His critics and detractors see inconsistency or opportunism in the stands taken by Periyar. He was never inconsistent; his goals were clear in his mind; he worked towards them with a single minded devotion. He welcomed support for his struggle from wherever it came; whenever he found that an individual leader or

a party would help his cause, he also lent support. For example, communal representation was dear to his heart and he never supported, nor ever spared any leader or party that went against the principle of communal representation. Similarly, he believed that a reform movement should not aspire for power and fight elections. On more than one occasion, the highest of the offices available at the time in the state was offered to him. He consistently turned down such offers and kept his followers away from fighting elections. Inconsistency, if any, was superficial. There was an underlying current of purposiveness in his strategy, a direction in his journey and they were in harmony with his objectives.

He had in him in full measure the essential traits of great men. He allowed no gap between what he preached and practised. It was not merely his writings and speeches that conveyed his message; his own life and work unmistakably radiated his convictions. One can never find even a trace of hypocrisy in him; duplicity in word and deed was with him an unknown phenomenon. His

was a life as transparent as crystal glass: there was nothing to hide, nothing to withhold.

The cornerstone of his virtue was his simple living. His ambitions were high; but his wants were modest; he kept them to the barest minimum. He was free from addiction of any kind. He dressed in the simplest piece of cotton material; ate whatever was served; slept anywhere when he needed rest. Perhaps no saint, no ascetic would have reduced his needs of comfort to such an irreducible minimum as Periyar did. While he had

no great admiration for a life of asceticism, and never supported renunciation, his was a life of asceticism and renunciation, excepting that he did not choose to starve or sleep on a bed of thorns.

Periyar identified himself indistinguishably with the masses. His time, effort and thought were totally devoted to the task of bringing about an awakening among them, to set them thinking. In the 93rd year of his life, he travelled for 183 days and delivered 249 speeches; in the 94th year, he toured for 177

days and delivered 229 speeches. A life so active physically and mentally in so advanced an age is truly rare in human history.

After 50 years of tireless striving, hard struggle and massive educational efforts through speeches, writings and demonstrations, he left behind him a society vastly different from the one he inherited—more alert, more questioning, less gullible, better educated, more modern and in general closer to the take off point for a state of living that would be richer in all respects.

**"I want all People to be Indian First,
Indian Last and Nothing else but Indian."**

**"The Emancipation of the Mind and the
Soul is a necessary preliminary for the
Political Expansion of the People."**

**"Discrimination is another menace
which must be guarded against if fun-
damental rights are to be real rights."**

**"The soul of democracy is the
doctrine of one man, one value."**

**"We have to be determined to defend
our independence with the last drop of our
blood".**

-Dr.B.R. Ambedkar.



NINTH CENTURY MURUGA IMAGE FOUND IN MADRAS



The Department of Archaeology has located an exquisite Muruga image in Parasuramalingeswara temple at Ayyanavaram, a suburb of Madras city.

Standing on a rectangular pedestal in Samabhanga pose, the right upper hand is holding Akashamala while the left upper hand is bearing Kamandalu, a rare sight to find in Muruga (Subrahmanya) figures of later periods. Usually Muruga figure is depicted holding Vajram in its right upper hand and Sakthi in its left upper hand. His lower right hand would

be in Abaya Mutra while the left in Varada.

In this figure, he is depicted with the unusual weapons like Akshamala and Kamandalu in right and left upper hands. The lower right hand is in Abaya pose and the lower left hand is in the style of Uruhastham. The Channavira is prominent on the chest and the Kannimalai worn above the forehead is comparatively thick. The Patra Kundalas worn in the sara are also bigger in size.

Examining the style of the dress and the ornaments found on the hip and the forehands respectively, Thiru Natana Kasinathan, Director of Archaeology is of the opinion that this image is of Pallava origin usually found in Tondaimandalam, such as one at Tiruvottiyur, another at Mamallapuram etc. The face of this image appears to have been re-cut in later period. Barring this, all the other aspects of the image clearly depict that it could have been worshipped as a nitch image in either the temple of Pallava period or of the temple of transitional period from Pallava to

Chola. In Madras there are few sculptures of Pallava origin such as the stone image of Jeshta lying on the western shore of the temple tank of Kapaleeswara temple, a few stone images at Thiruvottiyur temple and a bronze Vishnu image in a small Vishnu temple at Velachery. Hence, the image of Muruga assumes importance.

A small inscription was also copied from this temple where this image is under worship. The inscription reads "Ammudu aduvan Suraikudaiyan Nayinan" stating that the cook who prepared the feed for offering to the God was "Surai-kudaiyan Nayinan". This inscription is engraved on the door jam of the Garbhagraha. On the basis of the paleography, this inscription is assignable to 14 - 15th Century A.D. This temple seems to have been in existence from 14 - 15th Century A.D. But as this image is datable to 9th Century A.D. there could have been an older temple belonging to Pallava period. However, this image is an excellent piece of the Pallava workmanship.



EMERGING NEW APPLICATIONS IN SOFTWARE

P. OMPRAKASH
TATA Consultancy Services

It is becoming increasingly difficult to perceive an unifying emphasis in the emerging trends of software and related fields. But the orientation becomes very clear when one articulates them in the following manner.

The Prime effort of major leaders in Software, Communication and electronics like Siemens, AT&T, IBM, GE, Fujitsu, Motorola, Microsoft, Intel, Sun, HP etc., is towards integrating the strengths of all these sectors and ultimately "enticing" the end user. The magnitude of this continuing effort can be gauged by the likely investment of these majors being in the region of Hundreds of Billions of Dollars. This effort spans Manufacturing, Mining, Entertainment, Tourism, Agro, Pharmaceuticals, Military, Power and Transport. So, in effect, this effort is going to touch and change, at times inconceivably, all lives in this world. The Focal points of this effort are and would be:

A. Developing enterprise wide business applications encompassing multimedia features networked to a whole host of

players, immensely impacting productivity.

B. Arming Individual users with tremendous Computing power and access to information in a Globally interactive environment, rapidly displacing age old work norms.

C. Letting Loose creative energies through stimulating tools, expanding the realm of our perception.

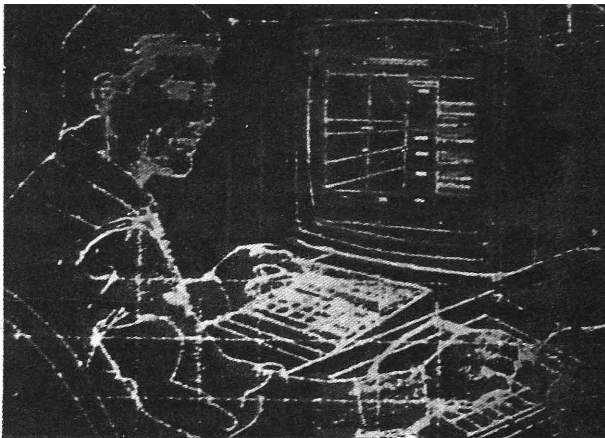
D. Harmonising Ecological, Social and Economic goals in a fashion which is most assured of success than those attempted in the ages of Industrialisation and standardisation.

A. To illustrate this further, we need to look at Modern process industries:- Through a cycle of integrated events, organised on the principles of sharing of information and productivity gains. A whole new paradigm has set in. Analysing and adjusting processes and product features with the most customer sensitive (even customer interactive) systems, Flexible enterprises will rule the world tomorrow. They will ofcourse continuously

demand exciting, enterprise wide software solutions and communication channels. Hence ERP products like MRP-III, SAP(R2, R3), TRITON MARSHALL etc which include resource planning and Management solutions with networking features, will flood the market. What this will also do is, reflect more truly and immediately and Enterprise's performance, on its value in the financial market, and expose it more to its shareholders. Stakes will increase for all players, i.e. Employers, Employees, and Customers.

B. There has never been such a boom in the individual user market as is occurring today. All the majors seem to be pampering him with a host of cost effective features. Armed with his PC and other paraphernalia, he has begun ruling vast fields of processed data with either masterful strokes, or convincing clicks. CD-ROM Technology is going to take us into a paperless world, what with one CD capable of accommodating data equivalent to 250,000 pages of text. More importantly, owing to cross indexing, interactive referencing can be done at an unimaginable pace and pleasure. INTERNET is slowly removing the remaining vestiges of a bygone era, by propagating the "getting hooked" syndrome.

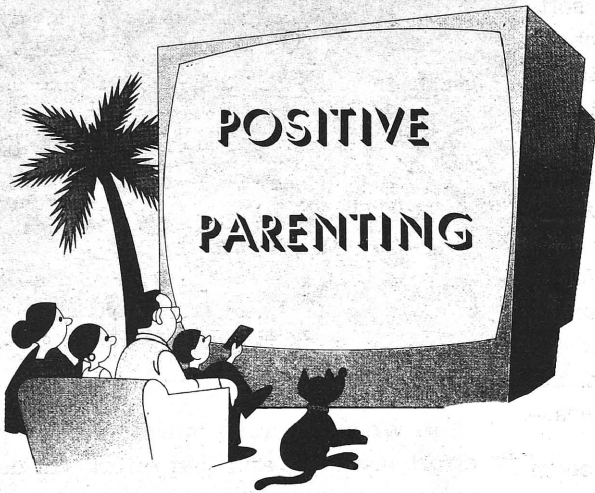
c. Put together Digital Scanning, Digital Editing, Digital Transmitting, Chips with tremendous processing and memory capacities, and people with boundless imagination, and we will be stormed into a world of stunning realisations. For a more convincing illustration take a look at the audiovisual effects of today's Hollywood movies, just amazing! It would be appropriate to state here that we have currently harnessed only 10% of this potential. What a challenge to Human



Imagination.

d. When a person moves, there is an effort involved, and that effort will necessarily cause a disturbance in the ecological balance. But the movement cannot be curbed, when stillness is construed as death in this world today. Hence to move with sensitivity and sensibility should be the global order. Information technology and its attendant developments give us the best possible chance to do so. Being at the forefront of technology it is easy to get carried away, but not to, is a measure of our global responsibility for the coming generations. The environment perspective of IT is very simple. As stated earlier, a single CD-ROM can save 100 trees. And it can be recycled. Recording technology is going to make it reusable, like floppies, and hence remove the argument that it is bio-non degradable. Though paper is recyclable, the need is growing and hence more trees need to be cut and processed. It also releases the hitherto arrested energies of the people at key positions to plan and implement environment friendly strategies and social programmes.

To conclude, for an individual like you and me, the bottom line is, if we fail to seize and use possibilities, by leveraging our skills and expertise, the world would have swept past us.



Parenting has suffered a setback because of the fact both the parents are away from home on employment, these days. Both the parents being employed may be inevitable but the stress they undergo invariably gets transferred to their children during the short time they may manage to spend with them, leading to the strain in the relationship within the family and thereon to a host of complex problems. So much so, even chemical dependency (more commonly called drug addiction) has been researched and proved to be one of the results of strained relationship especially between parents and children.

'Positive Parenting' that can build healthy family relationship means the concepts of sharing, open

communication, honest expression of feelings, tolerance for others faults, warmth, understanding and active participation in each others interests. The amplified guidelines are:

★ Parents should make the child feel that his participation in the family activities is valuable. For example, when the child

helps in cleaning the house, watering the plants or buying provisions, vegetables, parents should express their satisfaction and appreciate the contribution made.

★ Parents should learn to recognise the child's strength and encourage him to work to the best of his ability.

★ Parents should regularly allot time, to spend with their children. Parents should express sincere interest in their child's activities, studies, games, other interest etc.,

★ Parents should get interested in their child's friends and establish a work and cordial relationship with them.

★ Effective communication begins with the parents

Give me a few men and women who are pure and selfless and I shall shake the world.

Never say, 'No'; never say 'I Cannot' for you are infinite. Even time and space are as nothing compared with your nature. You can do anything and everything, you are almighty.

— Swami Vivekananda.

commitment to listening. Listening involves attending to whatever the child has to share regarding his experiences at school, problems with other children, joyful moments, ambitions etc.

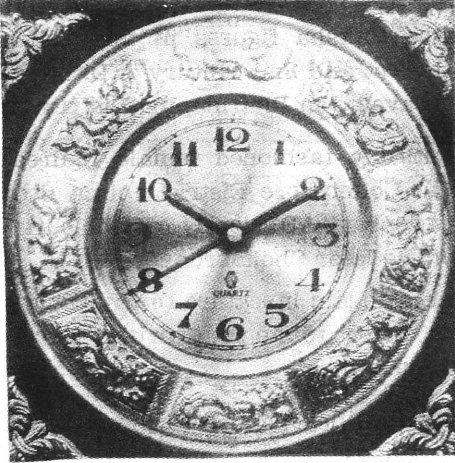
★ Parents should make eye contact with the child while listening. By listening parents make the

child realise that they do appreciate the child's point of view.

★ Parents should learn to respect the feelings of their children. Often feelings are expressed less directly but with enough cues so that a sensitive receiver can pick them up. The child should be given a feed back that he

is being listened to.

★ Since children tend to adopt the behaviour and values of the parents, it is very important that parents always do what they expect their children to do. The chances of children taking to drugs are more, if the parents themselves drink alcohol or smoke heavily.



Thanjavur Art Plate

Thanjavur Art Plates are made from copper and silver sheet, reliefs are encrusted on the base brass of Art Plates. This process gives a three dimensional effect and looks superb as an ornamental piece.

The art of making Thanjavur Plates is extremely intricate and calls for a perfect team of experts in hard and soft metal jewellery and diamond settings.

Thanjavur Art Plate work is used throughout the world for doorway panels, sports trophies, mirror frames, chandan bowls, rose water sprinkles, powder boxes, pencil boxes, cigar boxes, napkin rings and flower pots. This art is practiced in Thanjavur.

Other objects cast in copper, brass, bronze and bell metal are puja items, different types of lamps, chembus, bowls and bells, special utensils, paperweights, ash-trays, etc.

From Thanjavur, the ancient capital of the Chola dynasty come some of the finest examples of embossed work, the beautiful Thanjavur Plates, bowls, napkin rings, powder boxes, etc made of copper and brass with motifs drawn from Hindu mythology and encrusted in silver against a finely engraved background, exemplify both superlative skill and mastery of material. The Thanjavur Art Plates are the skillful handiwork of the traditional craftsmen. Thanjavur Art plates are famous throughout the world.



THE TERRACOTTAS OF TAMIL NADU

A Tamil village is unique in its harmonious juxtaposition of the traditional and the modern. This synthesis of constancy and change makes the village the repository of Tamil culture.

Alongside mechanised farming, electrification, the cinema and TV in every village in Tamil Nadu there is a village potter plying his art on a traditional wheel.

He produces intricate and beautiful terracotta pieces with a skill born of centuries of experience; he uses the same tools and local materials that his ancestors used before him.

The potter plays a pivotal role in the daily life of the Tamil village - he is an integral part of its socio-economic culture.

He makes earthen ware pots, bowls and lamps for everyday use; and special vessels for ritual use at weddings and other ceremonies.

He makes the bricks and tiles with which village homes are built.

He also sculpts the terracotta animals and figures donated in fulfilment of vows

to the village Ayyanar (presiding spirit) and to Mariamman (the mother goddess).

From the dawn of history the potter's art has had strong religious significance in Tamil Nadu.

Seated Yaksha figures in terracotta from the 1st and 2nd century A.D. have been excavated in Dharmapuri District.

Beautifully fashioned female figures found in Coimbatore District (circa 6th and 7th century AD) closely resemble the style of the later Chola bronzes.

Tamil Sangam literature (early Christian era) refers to the potter with respect as "Manneettalar".

A beautiful legend about the origin of pottery underlines the deep emotional and religious significance of the art.



At Lord Shiva's marriage, a ceremonial vessel (the kumbha) was missing and no one knew where to get one in a hurry. One of the priests, Kulalak, offered to try to fashion a kumbha out of earth.

Lord Vishnu lent him his Sudarshan Chakra to use as his wheel. Kulalak used the peak of the Mandarhillock as his stone pivot.

Lord Shiva gave him his pestle to turn the wheel, his water jar to collect water and his sacred thread to cut the pot off the wheel.

Brahma offered the services of Adikurma (the tortoise) to smooth the curves of the pot.

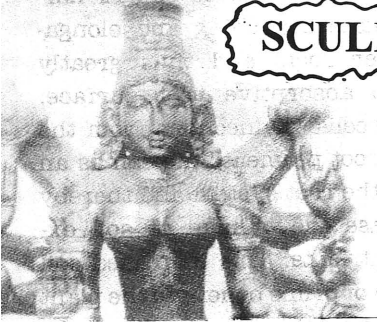
Thus blessed by all the Gods, the first

potter Kulalak plied his art and made the kumbha for the marriage of Lord Shiva to Parvati, daughter of the Himalayas.

Some of the most sophisticated contemporary Indian terracottas come from Tamil Nadu. From District to District styles change. Figural representation is refined in some Districts, more elementary in others. In some Districts, there is closer attention to detail in others rich ornamentation.

In Tamil Nadu, terracotta is not standardised or shaped in moulds. Each piece is painstakingly handcrafted. Variations in shape and detail give each piece a distinct character and individuality of its own. When you acquire a terracotta from Tamil Nadu, you possess an original work of art.

SCULPTURES



The Stone Sculpture is an ancient art which has particularly flourished in Tamil Nadu at the time of Pallavas.

From the cave temples of the Mahendra Pallavas period upto the gorgeous temple towers of the Vijayanagar period, the Sculpture and stone architecture in Tamil Nadu has grown to magnificent proportions.

The Sculpture of Tamil Nadu has generated a great fascination for art lovers. Over centuries the Sthapathis of Tamil Nadu have prepared stone temples and Sculptures and have developed intricate

workmanship in their creations and have contributed to the classical tradition in Stone Sculpture.

The Thanjavur temple is a monument for the lofty ideas and the excellent skills in contributing to the architecture excellence in temples. The Darasuram temple is a monument for intricate stone carving and excellent Sculptures. The beautiful pillars of Krishnapuram temple, the long and wide corridor of the Rameswaram temple have no parallel in the Temple art and architecture till date.

Poompuhar takes pride in its endeavour to contribute to the development and achievement in this field. The large Nandi exported to Hawaii, U.S.A., the 13' Idumban Statue erected on hill at Palani, the various Sculptures exported on made to order basis and the presently progressing second Corridor work at Rameswaram are some of the highlights of Poompuhar's (A Government of Tamil Nadu undertaking) achievement in stone art and architecture.

MANAGEMENT OF INDUSTRIAL EFFLUENTS

Dr.N. Raman

(Recipient of the UNESCO Young Scientist Award)

The disposal of industrial effluents on land has become a common practice in many countries. It is now well recognised that industrial activity over a long period of time has led to an enhancement of the levels of heavy metals and toxic elements in the soil causing genetical, physiological and ecological problems. One of the serious problems of tanneries in India is the disposal of large quantities of wastes. The waste materials are mobile and persist in the environment, accumulate through food chains and result in adverse human and ecological effects upon exposure.

Eventhough substantial mining activity is in progress in India, little attention has been focused on the reclamation of mine spoils. Establishment of vegetation on mine spoils is difficult due to the extreme physio-chemical conditions of the substrate. Mine spoil dumps created due to heaping and pilling of mine spoil in open cast mines are devoid of nutritive and supportive capacity to anchor the plants due to destruction of original soil ecosystem, structure, horizonation, organic matter and microbial activity. The re-establishment of nutrient cycling, organic matter and microbial activity in spoil dumps may take 30 to 300 years. Initially vegetation may establish on mere spoil reclaimed with chemical fertilizers but poor soil ecosystem development results in deterioration of the vegetative cover before it can begin to ameliorate the soil. The rehabilitation process must start from a new root growth medium, from the artificial introduction of new plant com-

munities with suitable mycorrhizal fungi.

Mycorrhizae means fungus root and involves the intimate association of plant roots with specialized soil fungi. The thread-like growth of the fungal mycelium rapidly colonizes host feeder roots forming often a colourful sheath or mantle around the small rootlets. The fungus also grows between root cortical cells to form an interlocking network of mycelium called, "Hartig net" which provides extensive mycelium root cell contact zone for exchange of materials. Fungal hormones stimulate branching and elongation of feeder roots and thus greatly increase the absorptive root surface. Abundant mycelial connections from the mycorrhizal root permeate the soil as an extension of the root system and thereby vastly increase the volume of soil explored for nutrients. This increased soil exploration is of prime benefit to the plant because it ultimately receives the nutrients actively absorbed from the soil by the fungi. Mainly there are two types of mycorrhizae; Ectomycorrhizae and Endomycorrhizae. In endomycorrhizae, the vesicular arbuscular mycorrhiza is the predominant group.

Mycorrhizal fungi are particularly adapted in taking up immobile nutrients such as phosphorus and zinc. Other direct mycorrhizal benefits include improved water uptake, tolerance to drought and high temperature resistance to toxic soil substances.

The most common examples of toxic

elements are cadmium, mercury, thallium, tin, lead and arsenic. Concern is now being expressed over the toxicity of aluminium and chromium. The mycorrhizal fungi bind some of the toxic metals and retain them in the root itself, thereby the translocation of the toxic metals to the foliage portion of the plant is prevented. The mycelium of the mycorrhizal fungi provides the major binding site of heavy metals and most of the heavy metals are bound to different binding sites in the cell walls.

Since the mycorrhizal fungi are potential biological tools for wasteland reclamation more information on them in mine

spoils and effluent polluted soils and their beneficial role in survival and growth of plant species in degraded soil sites will be very useful because of the effective deployment in the revegetation programmes. The success of rehabilitation projects to re-establish and maintain the minimum resource input conditions approximately those present before disturbance may well depend on our ability to manipulate the mycorrhizal fungi. Extensive research on mycorrhizal fungi for reclamation of mine spoils and industrial effluent polluted soils is already on at University of Madras.

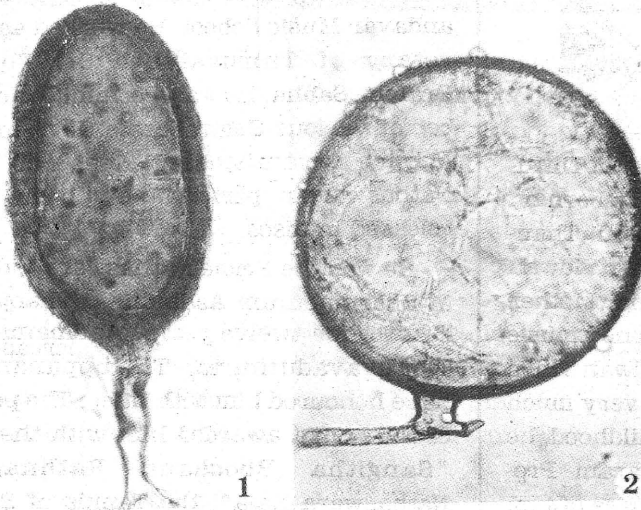


Fig. 1 & 2 - Spores of vesicular arbuscular mycorrhizal fungi.

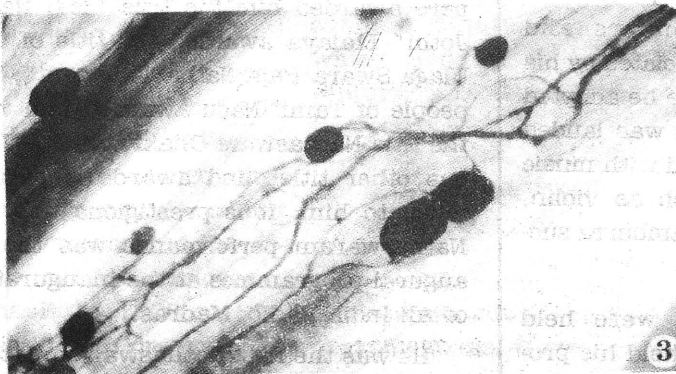
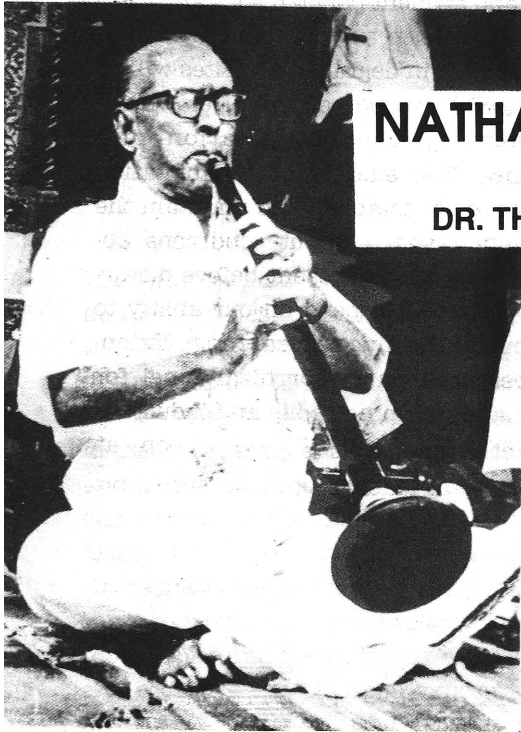


Fig. 3 - Thread-like mycelia with globular vesicles of vesicular arbuscular mycorrhizal fungi in plant root.



NATHASWARA CHAKRAVARTHI

DR. THIRUVENGADU SUBRAMANIYA PILLAI

Nathaswara Chakravarthi Dr. Thiruvengadu Subramaniya Pillai was born on 26th April 1906 at Thiruvengadu, Thanjavur District. His father was Vidwan Thiru Paramanatha Pillai and Mother Tmt. Sundarathammal. He learned music from his uncle Nathaswara Vidwan Thiru Samidurai Pillai. Since he was very much interested in Music from his childhood, he started performing Nathaswaram Programmes independently at the age of ten.

He received many honours and awards. He was widely appreciated by his contemporary vidwans. Since he adopted new techniques in music he was lauded by his fans. He experimented with music by playing instruments such as violin, Miruthangam along with Thamburra successfully.

His music programmes were held throughout Tamil Nadu. He held his pro-

grammes in most of the important cities in India. He toured countries like Malaya, Singapore, Sri Lanka to perform music programmes.

He worked hard for starting Nathaswaram and Thavil Classes at Tamil Nadu Music College. He was an honorary Principal of Thiruvaiyaru Government Music College and Palani Arulmigu Palaniandavar Music School. He worked as Secretary of Thiruvaiyaru Sri Thiaga Brahma Sabha. He was a committee member of various Central-State Government Music Committees. Most of his Nathaswaram performances have been released in discs.

He was the Prime Nathaswara Vidwan in Dharmapuram Aadinam at Thanjavur District for twelve years. Aadinams like Thiruvavaduthurai, Thiruppananthal have honoured him with titles. The people of Sri Lanka awarded him with the title "Sangitha Booshana Rathnagara Nathaswara Raja", the Tamils of Singapore awarded him the title "Isai Natha Jothi" Malaya awarded the title of "Isai Ulaga Swara Raja Natha Thilagam"; The people of Tamil Nadu awarded him with the title Nathaswara Chakravarthi. Various other titles and awards were also given to him. It is prestigious that his Nathaswaram performance was the inaugural programmes at the inauguration of All India Radio, Madras.

He was the first Nathaswaram Artiste

to receive the Tamil Nadu Sangith Nataka Sangam's (Tamil Nadu Iyal Isai Nataka Mandram) award and titles in the year 1965. He was also the first Nathaswaram artist to receive the "fellowship" given by Sangitha Nataka Academy, Delhi in the year 1978.

In the year 1984, the Tamil University of Thanjavur felicitated him with a Honorary Doctorate. He was the first

Nathaswara Vidwan to receive a Doctorate.

At the age of 60, Dr. Thiruvengadu Subramaniya Pillai passed away on 16.2.86 at his native place Thiruvengadu.

Dr. Thiruvengadu Subramaniya Pillai Trust is celebrating his 90th birth anniversary during the ensuing month of May at Madras. Music stalwarts and eminent Vidwans will enrich the celebrations.

- K. Mallika

3000 YEARS OLD ROCK PAINTINGS DISCOVERED

The Tamil Nadu State Department of Archaeology has discovered an important rock painting of Pre-Historic period and an inscription written in archaic Tamil character on the rock of Kudumiyanmalai in Pudukkottai District. The hill of Kudumiyanmalai is better known among the Archaeologists for the musical inscription of 7th century A.D. On the western side of this hill, there is a natural cavern with five carved rock beds believed to have been occupied by Jain Monks in ancient times. Above the entrance of this cavern, pre-historic paintings which have so far escaped the attention of Archaeologists, assignable to 1000 to 500 B.C. is found drawn in a

larger area. These paintings drawn in black pigments, appear to depict two warriors holding shields in their hands. It needs a closer study for understanding the details of the other paintings. This painting is significant since it is drawn in black pigment which is rarely found in the rock paintings of Tamil Nadu.

The other significant find is the inscription written in archaic Tamil character which is dated to 1st-2nd century A.D. This inscription reads as:

“NAZHAL KO(R)TI
TANTA PALIY”

meaning-the gift of the Palli (bed) by Nazhal Kottri prob-

ably a lady Jain devotee, to a Jain Monk. With the discovery of this inscription the antiquity of this place goes back to 1st-2nd century A.D. The name Nazhal Kottri may be the corruption of Gnazhal Kottri.

Both the paintings and the inscription are very important for the study of the cultural history of Kudumiyanmalai and its surroundings. These have been discovered by Thiru S. Rajagopal and Thiru V. Vedachalam, Epigraphists of this Department.

Thiru I. Mahadevan, a reputed scholar on Harappan and Tamil Brahmi scripts assisted in deciphering this inscription.

THE FINE ART OF ENGLISH LANGUAGE

We present here the varied richness of English language with dictionary meanings as well as interesting examples.

Palindrome: *a word, verse, or sentence that reads alike backward and forward.* A Palindrome is a word, sentence or longer statement that is spelled the same when its letters are read in reverse order. No matter in which way you read, a radar is always a radar. The longest palindromic word in English may be **redivider**, a nine letter word!

Isogram: *a line drawn on a map or diagram showing all points which have an equal numerical value with respect to a given climatic or other variable.* An isogram in English language is a word in which no letter of the alphabet appears more than once. The nomenclature of the science of fingerprints. **Dermatoglyphics** is one of the longest English isograms. Some words consist entirely of pairs of letters, each pair occurring once. One good example is **teammate** (eight letters, four pairs).

Snowball: *a ball made of snow pressed hard together.* Snowball words gain bulk as they roll along, one letter at a time. Example **d am age**. This one is a three layer snowball word. If you try you can find fourlayer and even five layer snowball words too.

Pyramid: *a solid figure on a triangular, square, or polygonal base, with triangular sides meeting in a point.* Words that contain one use of one letter, two uses of a second letter, three uses of a third letter and so on are called pyramid words. Example **sleeveless** one **v**, two **ls**, three **ss** and **es**.

Take a fine, unabridged dictionary and find out the hardest working word in English. The word is **set**, because it has almost two hundred meanings.

There is no another word like **ushers** because it contains five personal pronouns in regular order **us, she, he, her, hers**.

Some words contain the five vowels in order and some other words in reverse order. **Facetious** is the word for all vowels in order and **uncomplimentary** is the word that carries the vowels in reverse order.

Beheadment & Curtailment :

Beheadment : *n of Behead - to cut off the head of.*

Curtailment : *n of curtail - to cut short, to cut off a part of: to abridge*

The removal of the first letter from a word to make another, is called beheadment. **Chair** can be beheaded to make **hair**. **Hair** can be beheaded to make **air**. Likewise to cut off the last letter of a word to leave a different word is called curtailment. If you curtail **fate** it becomes **fat**. The word **sheathed** can be beheaded and curtailed to make a series of shorter words. **Sheathed - Sheathe - heath - heat - eat - at - a**.

In this interesting English - Latin pairing you read forward in English and backward in Latin. It retains the same meaning in both the languages and in both the directions.

Anger? 't is safe never. Bear it! Use love!
Evolves ut in a breve nefas sit; regna.

Tongue Twisters

- ★ She sells sea shells on the sea shore
and the sea shells she sells are good
- ★ The sixth sick sheik's sixth sheep is sick.

Indar - Vith



◆
PURE
silk

PURE
zari
◆

◆
Royal purples...
daring reds...
bright yellows...
exquisite silks
in almost every
imaginable hue.
From Co-optex.



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