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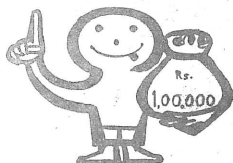
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Tamil Arasu

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Cover Page :

A memorable celebration in memory of Gandhiji is depicted

TAMIL ARASU

extends a hearty Welcome to the
Delegates to the

XIV Meeting of the All-India Tourist Development Council

at Madurai, 18th to 21st October 1970



THOSE TWENTY DAYS

M. KARUNANIDHI

6. IN THE TIVOLI GARDENS

The Republic Square in Rome turns into a colourful place of energetic enthusiasm towards the evening. People come there in their hundreds and among them you find many a family in entirety, children and all. Our hearts were captivated by the joyous scene—of people relaxing at tables on the pavements by the roadside where light refreshments are served, of tiny tots filling the air with their lisped syllables and merry chatter, of the water-fountain at play from the elaborate morif of the sculpture

in the centre of the square and of the very small shops and marts fringing the area.

The children were ruddy of complexion, like the tomato fruit and it was so enrapturing to watch their tottering gait as they essayed to walk and run. I fondled and played with the little ones and they too were completely at ease, with not a trace of diffidence or fear, at sight of an unfamiliar face.

An Instant Friend :

It was then that I observed a very young man, on one side of the pavement, who was easting quick and sweeping glances at the

buildings in the square and proceeding to record something on the inside of a metal he held, in the shape of a vessel. My curiosity was kindled further when I observed one or two youths and girls, walking up to him to watch him a while at his odd occupation, exchanging a few lines of conversation with him and then going their way. I was extremely eager to find out what exactly he was up to and when I approached him, I could see that the young man was a specialised painter who had the uncanny gift of being able to record his works on tiny strips of glass, on pieces of cardboard no broader than the palm of one's hand and on metal bits of the size of a finger-nail.

Among the objects he had delineated were the fountain in front of him and the exquisite buildings around. I found it almost impossible to grasp how the towering mansions, touching the very skies, could have been captured in paint and that too through strokes of such rapidity and without losing an iota of their natural grace, architectural elegance and splendour of colour. The youthful artist was indeed pleased at the eager interest I evinced in his work and he sought to ascertain my identity, from the Italian friends accompanying me. On being introduced he greeted me in a most heart-warming manner and I purchased a painting done by him. When friends explained to me that he had made it his calling to go from street to street, transform into sparkling sketches the scenes



this time he was accompanied by an acquaintance of his who could speak both Italian and English. The Italian speech of the artist was translated into English by this gentleman and thus we had an interesting conversation for a while.

Impelled by affection transcending spoken words, the artist produced my photograph he had obtained earlier and he requested me to autograph it. When hearts sensitive to Art understand and develop mutual respect for each other, could there be any limit to the surge of emotion!

Michelangelo :

The impromptu artist whom I met in the Square did not fail to recall to my mind an immortal and world-renowned painter who lived in Rome 500 years ago—Michelangelo of course. Born in a poor family of Caprese, Michelangelo who blossomed into a sculptor turned into a painter and evolved into an architect of international standing, was one of the unparalleled heroes of the Renaissance movement of Rome. As he himself has recorded in an autobiographical lore, "I drew the chisel under the mallet with which I carve statues in together with my nurse's milk".

Early in his artist-life, a strange desire arose in Michelangelo's heart. That was—to portray on sculpture the human feelings and movements in total fidelity. For the purpose, he wanted to have a direct view of the structure of the muscles and nerves motivating and conveying the feelings and movements in the human body.

A very odd ambition no doubt but legend has it that he did succeed in enlisting the aid of a caretaker of a church, for his macabre mission.

With a flickering candle held in his trembling hand, Michelangelo entered the mortuary during the small hours ; placing the unshaded lamp on a table, he proceeded to open a coffin prior to embarking on a post-mortem study of its contents, using the knife he had brought with him. In the dim light of the candle, Michel then probed the heart embedded in the region of the chest and he made a rapid study of the thoracic bones, tendons, nerves and blood-vessels.

He worked under terrific pressure, for he had to complete his surgery before the candle dwindled to its last drops of tallow and gave up its life, and before some-one entered the grim-looking chamber on suspicion and caught him red-handed. Michelangelo's heart was beating fast throughout the gruesome session, since he was fully aware of the magnitude of his transgression in having tampered with a coffin deposited in the vaults of the church, when the mere cutting-up of a corpse was held to be against the law.

Michelangelo was hardly sixteen when he successfully embarked on such a hazardous task. But then, is it not a fact that work in the realm of Art is far from easy? Art has to be nurtured only through trials and tribulation and the task is verily like plucking the rose from amidst

of beauty unfolded before his eyes and sell his works then and there, I realised that the youths of the Western Countries were determined to a large extent, to find avenues of work somehow and secure the fruits of such labour. The young Italian artist was an eloquent example of this.

I had purchased only one painting from him but he was good enough to present another work of his to me, by way of memento. Then he asked my Secretary whether he could have a photograph of the Chief Minister. My Secretary obliged him with a photograph printed on the back cover of a book we had brought with us and after this exchange of gifts we took leave of the artist and went to a wayside restaurant nearby.

Within a few minutes, the young man sought me out and

thorns ; like holding one's breath and diving into the deep sea to fetch the pearl ; and like shielding the naked flame of an oil-lamp from buffeting winds!

Michelangelo lived at a time when his country was being swirled and churned about in a political tornado. He was indeed an Artist supreme who brought a single-minded devotion to his service in the cause of Art, undisturbed and undeflected by the unrest around him arising out of political hostilities, and by the strifes and struggles for which the *casus belli* was the frequent change of Popes.

Prohibition discussed

I was lost in reveries about the Artist Michelangelo of undying renown and the youthful painter of the present times whom I had met in the Square, when friends reminded me of my next engagement. Friends of the Indian Embassy were hosting a party that night, and the guests included many Italians, industrialists as well as Government officials. At the function we had a general discussion on the economy of Italy and India. The development plans of Tamil Nadu formed part of the subject. I was particularly pleased to learn that Thiru Vaidyanathan who works in the Indian Embassy there, not only belongs to Tamil Nadu but in addition, hails from the Thanjavur District. Naive and innocent of temperament, Thiru Vaidyanathan is outspoken ; and although he seeks to emphasise a point, he is most keen to get things done at the appropriate moment. Notwithstanding the

fact that he is steeped in the habits and practices of Italy, he evinced unalloyed pleasure in receiving me, as would a Tamilian family, for the reason that I came from Tamil Nadu.

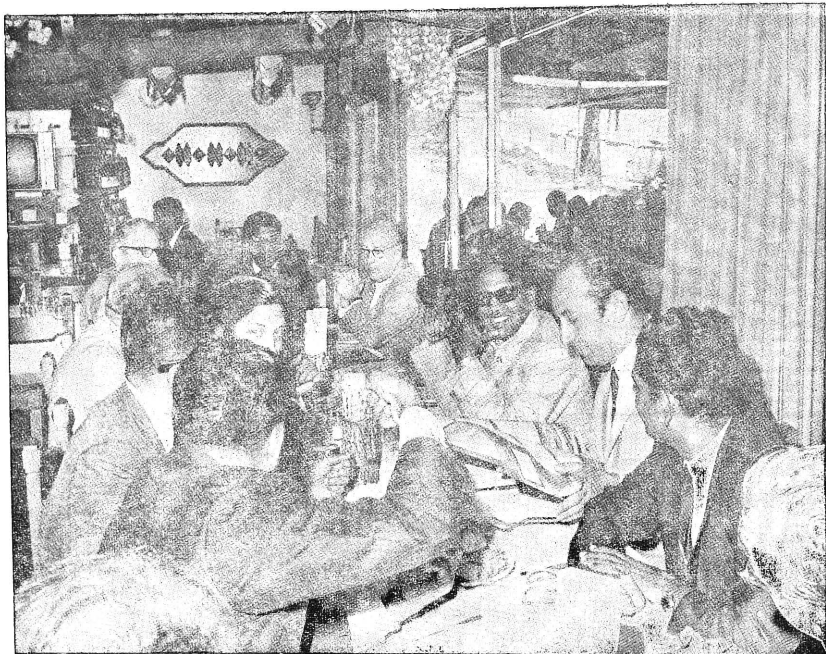
The manner in which Prohibition is being implemented in India came up for mention at the party and I need hardly explain the reason for the topic being brought to the fore. Liquor was served to the Italian guests and they were surprised not a little to notice our group keeping apart. As a direct result of our abstention, quite a few of them were content with fruit-juices, just like us, and it was in this context that the discussion got going on the subject of Prohibition. The Italian guests desired to know whether Prohibition was in force throughout India and my answer to them was, "To-day, Prohibition is a firm policy only in Gujarat State where Mahatma Gandhi was born and in Tamil Nadu, the State of Rajaji where he enforced the Prohibition Law first. In other States, Prohibition has been either done away with altogether, or the Dry Law is being liberalised. Tamil Nadu is losing substantial revenue on this account and at the same time it does not have sufficient financial resources for fulfilling many a development plan for the welfare of the people ; and yet the State continues to implement Prohibition. But doubts have been raised as to how long this could be maintained and views are also being continually voiced by people belonging to several parties, to the effect that

Prohibition should be scrapped". I gathered the impression that those present were not quite satisfied with the explanation, for, whether it be work or excursion or drinking, they have evolved a regiment for themselves. That was what they sought to impress on me, in the course of the discussion.

Privilege of life-time

Among the places of interest that need to be visited in the environs of Rome is the Tivoli Garden. The bulk of tourists coming to see the spot happen to be Americans. We started from Rome at 4 p.m. and a visit to a factory had been arranged en route to the Tivoli Garden. After fulfilling that engagement, we proceeded towards Tivoli along a road bordered on either side by beautiful hills, groves and streams.

It was after we reached Tivoli that our friend of the Indian Embassy reminded us that we had to be present at an Embassy dinner at 8 p.m. The Tivoli Garden could be viewed only after that hour and it was an impossible task to return to Rome and later journey once again to the Garden. The question was whether to see and go round the Tivoli Garden or whether to attend the dinner at Rome. It was quick work for me to arrive at an answer and that was to plump for staying at Tivoli. We felt that feast for the palate could be had some other day even, but would it be possible to come by another occasion to secure such a banquet for the eyes and thought !



Widespread and of luxuriant charms, the Garden sported the stamp of history all over. A long queue had formed to enter the Garden but, thank Goodness, we did not have to take our place in the line.

Before passing into the Garden, one has to make one's way through many ancient buildings and also view hundreds of pictures in sequence. Every building has a tale to relate.

Light from the myriad lamps in the Garden, the grace and

beauty of the plants and creepers swaying in that light, the superb paintings adding to and adorning that beauty as it were, and the many water-fountains sounding steadily in merry tinkle like anklet-bells—all these made us gaze in sheer wonderment.

We keep walking, with no thought of the distance covered. A massive and magnificent waterfall and around it hundreds of people—young lovers and families in throngs, complete with children, lisping and chattering. One could keep looking at the

waterfall right through the night. How grand, the lamps arranged to light up the cascade !

From a high rock, water keeps pouring, on to a large stone, circular in shape. Between the Zone of impact of the falling water and the rock is a pathway. How exciting and exultant it is, to watch from outside, the scene of people walking along that path. We too strolled along the path, literally inside the waterfall. After sometime, we saw some film-technicians arriving at the place, accompanied by artistes, for out-door shooting

in the vicinity of the waterfall. We watched the shooting for a while and then proceeded to other areas of the Tivoli Garden.

Some of those who take a trip to Rome from Tamil Nadu might have missed the Tivoli Garden. If they happen to visit Rome next, they should make it a point to repair the omission, for it is without doubt a rare privilege of a lifetime, to see Tivoli. As we were returning from the Garden, our eyes were drawn by the mini-shops located all around the place. Our feet followed the direction of the eyes and we purchased a few low-priced toys and also some specimens of Italian sculpture.

An advertisement caught our attention, as we were moving away from the shopping area. It was about an apparatus that would operate a photographic camera on its own. A booth is there on the roadside and all you have to do is



The Chief Minister of Tamil Nadu and Thiru Atal, Indian Ambassador in Italy.

to get into it and insert a coin of a particular denomination in the slot intended for the purpose; the

camera thereupon clicks and photographs us. We then come outside and wait for about five minutes when the apparatus ejects our photograph much in the manner of the weighing machine yielding a card with our weight recorded on it. I got myself photographed by the automatic camera and my wife too followed suit.

Chief Minister Thiru M. Karunanidhi with Dr. Poduval,
a Senior Officer at the F.A.O.



In Tamil Nadu, would I be able to enjoy the liberty of getting myself photographed at a wayside booth? Wafted on the waves of such feelings and the unfamiliar joy flowing therefrom, we examined with interest the photograph yielded by the automatic camera, as we prepared to return to Rome.

(To be continued)

HOW TO BE A SUCCESSFUL INDUSTRIALIST

"Failure of management is one of the important and frequent causes of the failure of industrial projects" says Thiru C. D. Khanna, Chairman, Industrial Finance Corporation of India.

In the financing of 500 industrial undertakings, in 22 years, the Industrial Finance Corporation has accumulated some rich and valuable experience. His reflections on the subject are of immense interest to entrepreneurs :

The Industrial Finance Corporation has had first-hand opportunity of appraising many of the problems involved in establishing new projects and expansion of existing undertakings. I may pause to make a few observations based on our experience about the problems involved in the financing of industrial projects.

It has been the experience of the Corporation that the importance of adequate management for any industrial undertaking is frequently not fully realised. It has been observed that failure of management is one of the important and frequent causes of the failure of the project. Success in modern industry calls not only for complicated technical skills, efficient plant and equipment and up-to-date technology, but also executive management capable of dealing with complex problems of financial planning and control, marketing, taxation, labour,

public relations, sound organisational structure and adequate supervision and training of personnel. In modern business, financial management has become as important as technical management. The lack of sound financial management is reflected in the building up of fixed assets out of short-term liabilities and frequently at the cost of working capital. Internal cash flows are utilised on capital expenditure at the cost of sound liquidity. The importance of a sound capital structure both for new enterprises and for expansion is underestimated. Frequently a balanced and sound capital structure is sacrificed for an undue proportion of debt in order to improve future value of the equity. Optimism of the promoters in estimating the total financial requirements of a project is common. Over-runs in capital costs are a frequent phenomenon ; under inflationary conditions over-runs tend to increase. Another common error is the failure to provide for sufficient permanent working capital and for initial cash losses which usually occur before the project starts generating funds. Completion of projects is rarely achieved on schedule, resulting in over-runs. Obligations with

short-maturities become due before the projects start generating cash to meet such obligations and the period of such obligation is too short to be serviced out of the profits of the concern. Credits extended by suppliers of equipment often fall in this category. These observations emphasise the need for effective executive and financial management in addition to sound technical management for the success of an industrial project.

THE POET



The World Poetry Society Intercontinental honoured Thiru M. Karunanidhi with an award

for "meritorious service" to world poetry.

The Citation said, " Like a true poet laureate of Tamil Nadu, you have breathed into your magical poems all the splendour and glories of the Tamil language and 60 millions Tamils in six continents look up to you as the invincible contemporary leader of their 6,000-year old culture ".

The World Poetry Society Intercontinental has been constituted by the world poets of six continents representing over 100 countries.

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MONEY METHODS MODELS

All in One Roof to Help Unemployed Technicians Start their Own Industries

From 25-10-'70 onwards, the Employment Exchanges in Tamil Nadu will be registering, unemployed technicians, engineers and entrepreneurs to give them a practical demonstration of ancillary industries they can usefully start.

The registering technicians will be taken round an exhibition of actual materials required by major industrial projects like Madras Refineries, Madras Fertilisers, Hindustan Teleprinters, etc.

This Exhibition which is coming up at the Guindy Industrial Estate from the 2nd week of November, 1970, will provide useful technical information on the range, quality and type of raw materials, semi-finished components and parts, ancillaries, etc., that our major industrial projects need.

This Exhibition will show our technicians, what is needed by industries so that they can match their talents to the needs.

The Tamil Nadu Small Industries Development Corporation is interested in the promotion of many such industries and the following are details of the Corporation's activities.

The Tamil Nadu Small Industries Development Corporation Limited (SIDCO) has been set up by the Government of Tamil Nadu to assist the growth and development of Small Scale Industries in the State. SIDCO will help from planning to production and marketing stage for small scale industrialists.

SIDCO is primarily a service organisation, helping the small

industrialist to find resources and to locate and construct his factory providing him with technical and marketing know-how and putting him in touch with agencies and organisations that can help his enterprise.

Raw materials

SIDCO has set up a raw materials division and taken over the raw material depots at Madras Madurai and Podanur from the Directorate of Industries. Under SIDCO's Raw Materials Division, these depots will now become the centres from where small scale industrialists can draw a wide range of raw materials essential for their industries. SIDCO proposes to procure and distribute a wide range of raw materials. This will include the items that are now being handled by the Directorate of Industries and also materials that are in short supply. In this regard, SIDCO will be working in close collaboration with the State Trading Corporation, Minerals and Metals Trading Corporation, National Small Industries Corporation and other agencies. SIDCO's distribution system is being streamlined to ensure that stocks are cleared without delay.

To assist the small scale industrialists in importing the materials required by them: By clubbing together the licences granted to

a number of small units, SIDCO intends to import their requirements in bulk and then distribute as necessary. This will help the small industrialist to import his requirements at competitive rates.

Indigenous machinery required by small industries will be purchased by SIDCO and then made available to the small entrepreneur on a hire purchase basis.

SIDCO will consider participation in the share capital of small scale units. It will also grant loans to small industries for acquisition of fixed assets.

With SIDCO's help, the small entrepreneur can now put up industrial sheds required to house his industry at a site that is most convenient to him.

What is a Small Scale Unit ?

A Small Scale Unit is defined as one in which the investment on machinery and equipment does not exceed Rs. 7.5 lakhs. The value of land and building and working capital is not taken into consideration for the purpose of this definition. In the case of Ancillary Units, i.e., those enterprises which supply parts, components or sub-assemblies to a Large Scale Unit, the limit of investment on machinery and equipment is raised to Rs. 10 lakhs.

The small industries programme does not include those industries which come under the purview of other organisations connected with development of Handlooms and Powerlooms, Khadi and Village Industries, Handicrafts, Coir, Silk, etc.

The SIDCO Office is at Kammam Buildings, 122, Mount Road, Madras-6.

THE OPHTHALMIC HOSPITAL

SECOND OLDEST IN WORLD



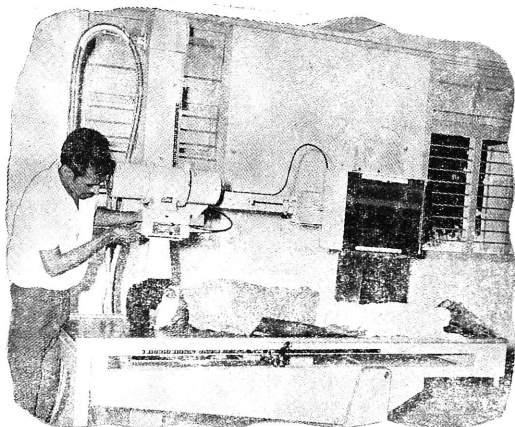
The red brick building, veiled by a brownish green frieze of casuarina on the Marshalls Road, Egmore, which houses the Government Ophthalmic Hospital is a familiar land mark in Madras. It is the second oldest eye hospital in the world. It was established by the East India Company. The hospital had its humble beginning in 1819 at Royapettah as the 'Madras Eye Infirmary'. In the past 150 years the modest Eye Infirmary has grown into one of the biggest Eye Hospitals in the world.

Its Names .

In 1858, the name 'Madras Eye Infirmary' was changed into 'Government Eye Infirmary'. In 1886, the Eye Infirmary was shifted to Marshalls Road, Egmore and in 1888 the name was changed to Government Ophthalmic Hospital. In 1820, the Elliot School of Ophthalmology was opened for the teaching of Ophthalmology.

The School for Ophthalmology was equipped and popularised by Lt. Col. R. E. Wright who was Superintendent for 18 years from 1920-38. He was an eminent Ophthalmic Pathologist. The

Museum that he had set up in the hospital, ably assisted by Dr. K. Koman Nayar has earned a name as one of the best in the world. Many Ophthalmic research problems were taken up by him.



Eye X-ray apparatus

With the idea of decentralisation, Ophthalmic Departments were started in Royapettah and Royapuram. But this did not diminish the hospital attendance. The out-patient and in-patient attendance outstripped the sanctioned number of beds which remained at 170 for a long time.

In 1953, the New Block was opened which increased the bed strength to 282 and mitigate the congestion in the wards to a certain extent.

Special Branches

The last four years were crowded with activity. The growing demand for the special branches in the Ophthalmology were to some extent satisfied by the opening of Glaucoma clinic and Orthoptic Clinic in 1967. The year 1968 saw the addition of the 3rd operation theatre and all the three theatres began to function for six days in a week instead of two theatres functioning on alternate days. This supplied a long felt desideratum as every Surgeon could now have the use of a theatre to himself instead of sharing it with others to cope with the increase in the number of operation.

1969 witnessed the completion of the construction of a New Out-patient Block, a two storied building at a cost of Rs. 18.75 lakhs to accommodate the Out-patient Department, Casualty Theatre, Auditorium and Bacteriological, Pathological and Bio-Chemical laboratories, etc.

Improvements

It was felt that the provision of Air-conditioned accommodation for a premier eye hospital

sanctioned bed strength of 326. Sanction has been accorded for the construction of second floor over the new out-patient block at a cost of Rs. 8.25 lakhs to accommodate 100 general ward beds and 100 special ward beds and two Air-conditioned theatres, to mitigate the overcrowding in the wards.

Teaching

The Government Ophthalmic Hospital has been for a long time a training centre for post graduates from all over India and from outside the country and was the first in India to institute a Diploma course in Ophthalmology.



Squent-eye being trained into proper formation

in the State is quite necessary. Two rooms hitherto used as Medical Officers' Duty room have been converted into two Air-conditioned wards.

The daily average number of in-patients treated in this hospital has been steadily mounting year by year and in 1969 it reached 712, more than double the

Licentiate in ophthalmology (L.O.) was started in 1926. Diploma in ophthalmology (D.O.) was started in 1942 and Master of Surgery (M.S.) in Ophthalmology in 1948. Four candidates are taken for the M.S. once a year. Six candidates are selected for the D.O. twice a year.

The Fourth-year M.B.B.S. student of the Madras Medical College, Stanley Medical College, Kilpauk Medical College and Chingleput Medical College are posted to this hospital for clinical instructions in Ophthalmology. ☺



WE CAN GROW MORE BANANA

MORE FOOD IN LESS LAND

The banana which for long remained as a 'poor man's favourite fruit' has today attained more importance not only from the point of meeting the demand of the local market but also of competing in the international market to earn the much needed foreign exchange.

Apart from the food value of the banana on a close examination it is also one of the few crops which yield higher profit to the farmers.

The importance of banana is high-lighted when one examines the yield of food secured through banana cultivation. As against the maximum of 4,000 kg. of paddy per acre in a year from the best of lands, banana is capable of yielding over 20,000 kg. of fruit from the same extent of land. Again the importance of banana is heightend when one considers its food value. A person needs

140,000 calories of food per year. To meet this requirement in terms of wheat would mean 1.45 acres per head, but in terms of banana the land utilisation would mean only 0.09 acre.

The Government of Tamil Nadu has, therefore, drawn up several schemes for increasing the area under banana and also to improve the yield.

Banana Research

In 1949, a General Banana Research Station was established at Aduthurai in Thanjavur district for improvement of the bananas grown perennially in the 'Padugai' lands. Later in 1963, another banana research station for tackling problems associated with wet land cultivation of banana was started near Tiruchi. The year 1964 found yet another research station established at Mangalam Combu (Lower Palani hills) in Madurai district for working on the perennial hill

bananas. It was also realised at that time that for a speedy and effective development of this crop, the improved cultural and manurial practices found out by research, should be actually demonstrated in cultivators' fields. Towards that end, a special-scheme for organising demonstration trial plots of improved varieties and practices in North Arcot, Thanjavur, Tiruchi and Madurai districts was implemented in 1965. Thus, in all possible ways, the Government of Tamil Nadu with the financial assistance of the I.C.A.R. have been liberally supporting the research programme for improvement of banana which constitute the major Commercial fruit of this State. Due to this, the following important achievements were made under banana research.

(i) Out of the many hybrids a tetraploid hybrid between

Neyvannan and the wild species *Musa Balibisiana* was found to be of promise.

(ii) Among the many mutants, the semi-tall, mutant of Dwarf Cavendish 'Robusta' was established as a superior clone.

(iii) Under wetland conditions 'Robusta' and 'Lacatan' (another Cavendish clone) performed well yielding bunches weighing about 33 kg. as against 25 kg. recorded by the Dwarf Cavendish.

(iv) The Culinary variety 'Kanch Kela' introduced from West Bengal was promising under wetland condition producing bunches weighing over 39 kg. which is double the weight of the local Monthan variety.

(v) In the scheme for organising demonstration plots, it was found that in North Arcot districts, the 'Robusta' variety yielded an additional production of about 7,500 kg. per hectare over Dwarf Cavendish with an additional income of Rs. 5,000 per hectare. Robusta bunches were found to satisfy 96 per cent of the export standards in respect of fruit length against only 63 per cent in Dwarf Cavendish. These demonstration plots have proved useful for rapid spread of the cultivation of Robusta variety in the Palar basin of North Arcot district.

Banana Package Scheme.

With the general rise in the prices of Agricultural commodities the cost of banana has also registered an upward trend. In order to arrest the price trend

and to increase the production, the Government of Tamil Nadu have initiated the package scheme for Banana. This scheme was introduced for the first time in the year 1964-65 in 2,000 acres in North Arcot District. During 1965-66, the scheme was extended to 2,000 acres in Tiruchirappalli, 4,000 acres in Madurai district and 4,000 acres in Coimbatore district. During the intervening annual plans, this scheme was extended to cover more acres in Chingleput and Tirunelveli Districts. At the beginning of Fourth Five-Year Plan (1969-70) the area under Banana Package Scheme was 22,000 acres being nearly 28 per cent of the total area under the crop. At present, there are fine package units for banana in Tamil Nadu. Each unit extends over 4,000 acres and in-charge of a Special District Agricultural Officer. The Tamil Nadu Government has thus the unique distinction of running a package programme on an extensive scale in respect of a commercial export crop like banana.

Surplus Planned

The object of the scheme is to take vigorous steps to intensify the cultivation of banana particularly 'Mauritius' variety in North Arcot, Madurai and Tirunelveli districts and 'Poovan' variety in Tiruchirappalli and Coimbatore districts. Through this programme, it is aimed to produce marketable surplus of about 50,000 tonnes of banana per year at the end of the Fourth Five-Year Plan to make it available for export.

Banana yields in package area have registered increases ranging from 40 quintals to 62 quintals per hectare. The yield of the exportable variety Dwarf Cavendish ranged from 39.82 tonnes per hectare in North Arcot District to 45.3 tonnes in Erode Taluk in Coimbatore District.

Rich Dividend

The number hands per bunch increased from 7 to 9 in this variety and the number of fruits per hand from less than 12 to as many as 16 to 18 fruits.

The average weight per bunch of banana prior to the introduction of the package scheme was only 10 kg. in North Arcot district. From the crop cutting studies conducted during the year 1968-69, it is found that the average weight of bunch has increased to 16.5 kg. resulting in an average production of about 16 tonnes per acre.

The Banana Package Scheme has also kindled considerable enthusiasm in cultivators' efforts in many new areas of Tamil Nadu such as Tirunelveli (Tuticorin), Chingleput and Thanjavur districts. The banana growers are more inclined towards scientific cultivation to-day.

Some novel practices like double planting has already started paying dividends to the progressive growers. Because of the double planting methods some fields have yielded high yields of 3,600 bunches per acre where hardly 1,200 bunches were harvested.

(Contd. on Page 18)

H.P.F. TO MAKE COLOUR FILMS

YEAR OF RECORD IMPORT SUBSTITUTION



Hindustan Photo Films Factory

The Hindustan Photo Films Ooty, during the year 1969-70 recorded a total output of 2.25 million sq. m., photo film nearly double that of the previous year. Manufacture of new products like Roll Films, 35 mm., Negative film and cine film (sound) commenced during the year. The commencement of manufacture of cine film is a matter of special pride since in respect of this product, only the technological operation documentation was supplied by the collaborators and the company had to start the production on its own with indigenous raw materials.

Although the production of bromide paper was to have been taken up only during 1970-71 the programme was advanced to 1969-70. But, this being a process involving various technical problems, production could not be stepped up and therefore there

has been a shortfall during the year. Steps have been taken to solve these problems and increased output of bromide paper has been planned. It is therefore expected that in the next year, total production will exceed that of the current year. The output during the year 1970-71 is expected to be of the order of 3.6 million sq. metres and according to present calculations the company should attain the break-even point in 1971-72.

The nature of this industry is such that a long gestation period is unavoidable, and the build up of technology has of necessity to be slow. Along with the build-up of technology the company also had to face a number of problems quite a few of which were due to its eagerness to commence production of some products earlier than scheduled and the efforts in the direction of

rapid import substitution of raw materials. However, it is good that the challenge of these problems were faced in the initial years since it has given its men training and confidence in tackling them instead of being confronted by them at a later stage.

If today leading photographic manufacturers in the world have shown eagerness to collaborate with Hindustan Photos in its expansion plans, it is in no small measure due to the significant progress made by it in producing on its own materials conforming to international standards, thus providing that given the opportunity and training our technicians are second to none in the world in grasping the most sophisticated of technologies.

The turnover of the Company is steadily on the increase. In the current year it was Rs. 3.72

crores against Rs. 2-29 crores in the previous year. During the next year (1970-71) it is expected to be more than Rs. 6 crores. The Company continues to get a steady stream of orders from abroad.

Technology of photographic manufacture is continuously making rapid strides the world over, and the gap between its present techniques and those prevalent abroad is getting wider every day. Along with the implementation of the Project to manufacture colour films the company is also striving to effect modernisation of the present equipment and processes with a view to attain higher levels of efficiency even

in the existing range of products. The expansion schemes are therefore being drawn up in such a way as to include modernisation of the present equipment also. With programmes for expansion and modernisation, it will be well advised to take advantage of the latest available knowledge in technological development. To this end, the company is looking for collaboration arrangements on continuous and permanent basis. This will then enable it to have access to information on developments taking place abroad. The Company is on the lookout for collaboration both on permanent and partnership basis.

Banana—Continued

Among the search for newer varieties, the semi-tall mutant of Dwarf Cavendish called 'Robusta' has impressed the growers in many respects. Heavy bunch weight, compact placement of hands and longer figures are its commendable qualities. These qualities have placed it more suitable for export purposes than even the Dwarf Cavendish.



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MADURAI

THE TEMPLE CITY

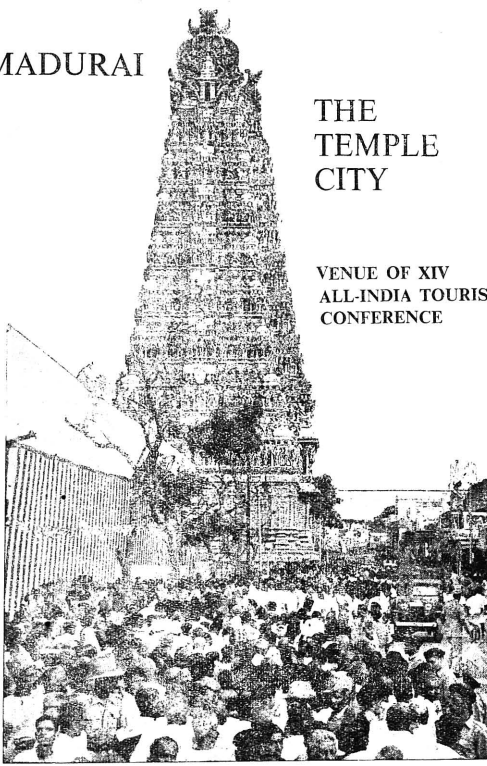
VENUE OF XIV
ALL-INDIA TOURISM
CONFERENCE

formations, the Yanai Malai (Elephant Hill) and Naga Malai (Snake Hill). Two miles long, the Yanai Malai of grey and pink granite looked at from Madurai does resemble an elephant lying down.

Madurai is the famous and ancient home of Tamil culture. As capital of the Pandyas it has been the centre of Tamil learning for centuries. The Tamil Sangam (Academy) flourished here nearly two thousand years ago. The Academy set the standards of poetic excellence and literary criticism. Great scholars and poets used to gather here and hold discourses and discussions. Recognition by the Academy was considered by the men of letters as the hall-mark of distinction. And Madurai continues to occupy even today a pre-eminent place in the Tamil literary tradition.

It was in Madurai that justice in all its unrelenting rectitude was rendered to the widowed Kannagi when she questioned the Pandya King in his Court about his impropriety in punishing her innocent husband Kovalan, without sufficient enquiry. It is said that Madurai suffered the consequences of her fury.

The city had seen the rise and fall of several dynasties but it has lost none of its form or culture. It has had a series of rulers with an eye for art and a mind for culture, thanks to whom, magnificent and imposing structures like the Thirumala Nayak Palace, Puthu Mandapam and Sri Meenakshi Sundareswarar



Madurai, is one of the ancient cities of India which has a continuous tradition extending well over 2,500 years. It seems as though culturally it had remained an open city throughout the ages. Otherwise it could not have survived so many vicissitudes—both social and political—with such charming serenity and undiminished vigour.

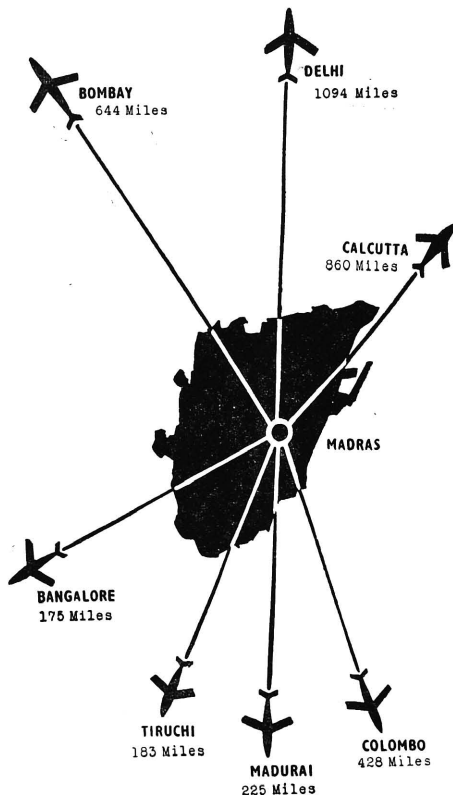
The invasion of Malik Kafur in 1310 A.D. is the only occasion when the outer structures of the Meenakshi Temple were almost razed to the ground. Even at this time the main temple was not touched by the Moslem invaders.

If one were to take a bird's eye-view Madurai appears to be shielded by two striking rock

Temple itself came to be built. A Thirumala Nayak Palace or a Mangammal Chatram or even the unfinished Rayagopuram would be a proud adornment to any other town, but to this city they are

so much parts of it that they are taken for granted. For that matter, Thirumala Nayak and Rani Mangammal despite the great deeds they have accomplished, are parts of the city's history and belong to it quite as naturally. It is only in the fitness of things that time has not subdued its rich tradition, nor the markings left on it by the vagaries of history affected its moorings. Its mythology, history and its recent industrial transformation with their respective markings left on it so exquisitely have given the impression of a metamorphosis that is at once graceful in growth and positive in character.

Madras to other cities by Air



The Origin

The earliest historical account found in the Tamil literature attributes the founding of the temple and town to a Pandya King named Kulasekara. Historians believe Kulasekara must have ruled in about the sixth century before Christ. The temple and the towers as they now stand were however rebuilt about five hundred years ago and the Thousand Pillars Hall is only four hundred years old.

The Southern districts of Tamil Nadu had been ruled from the beginning by the Pandya one of the three ancient dynasties of Thamizhagam. In the third century B.C. Megasthenes knew a Pandya King. Pliny mentions the Pandya King and "the Emporium of Modoura", in the first century A.D. Madurai was thriving when Augustus took the

throne to Rome. There are evidences, such as the Roman coins of the time of Augustus found here, to show that the Pandyan Kingdom had extensive trade relations with the Roman Empire. Ptolemy (140 A.D.) also mentions "Modoura the Kingdom of the Pandian".

This was perhaps the brightest period of ancient history of Madurai. The social life, administration and secular prosperity of this period is finely portrayed in the old Tamil classics Silappadikaram and Manimekalai.

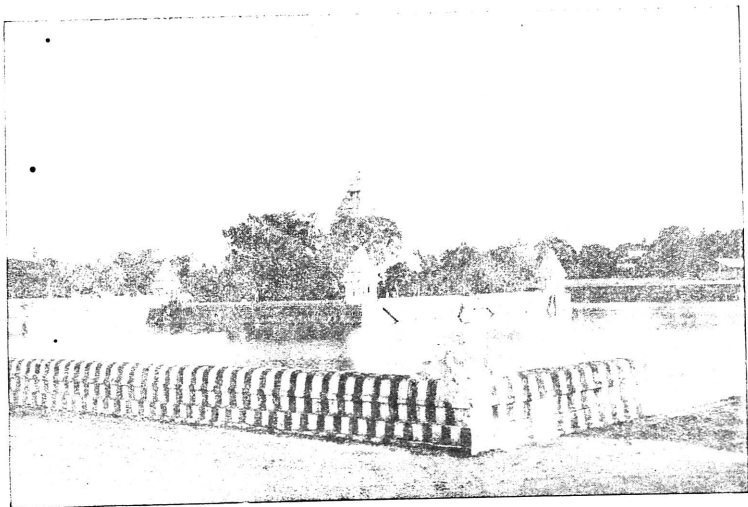
A CITY LAID OUT IN LOTUS FLOWER FORMATION

Pandyas ruled from here until the 14th century. The last of the Pandyan dynasty was Nan Maran.

The Lotus Pattern

Then came the Nayaks who ruled from Madurai from the middle of the 16th century till 1763 and their majestic imprint is still fresh. The Nayak dynasty founded by Viswanatha Nayak

in 1559 ruled Madurai for almost two hundred years. Under the fostering care of a succession of Nayak rulers Madurai once again flourished greatly. It was during this period that the modern City of Madurai was planned in the pattern of a lotus flower with the Meenakshi Temple in the centre. The lay-out was according to the rules of Silpasastras.



The Mariamman Tank, Madurai, the biggest in South India

The credit for these remarkable achievements must go to Viswanatha Nayak (1623-59) whose great energy and fine taste are reflected in the show places of modern Madurai, the Teppakulam, the Pudhumandapam, the Rayagopuram, Tamkam and his own palace later known as the Thirumala Nayak Mahal. The palace covered a wide area and European writers compared it to the ancient monuments of Thebes. Though this was pulled down by his grandson Chockanatha (1662-82) an open courtyard, survives today, around which runs a roofed arcade of great beauty, supported by tall stone pillars of 40' high connected by foliated brick arches of much elegance. The preservation and maintenance of this monument is due to the effort of Lord Napier who was the Governor of Madras in 1868.

The Nayak rule ended in 1736 when Muslims and Marathas appeared on the scene as rivals for power which the English had already acquired in South India. Direct English rule began in Madurai from the beginning of the 19th century and by the end of the century modern administration had been firmly established.

Madurai was made municipality in 1866. Railways came to Madurai in 1875.

Madurai the second largest City of Tamil Nadu has also witnessed considerable progress during the last few decades. Silk and cotton

PICTURE PAGES

Opposite Page :

1. Chief Minister Karunanidhi after unveiling a Statue of Periyar E. V. Ramaswami at Dindigul, pays his respects to Periyar.

2. Sardar Ujjal Singh, Governor of Tamil Nadu inaugurated the Fifth Conference of the State Ministers for Irrigation and Electricity at Ootacamund on 24-9-70. In the picture the Governor is seen with Dr. K. L. Rao, Union Minister, State Ministers and other delegates of the Conference.

3 & 6. Chief Minister presents trophies to the Leaders of the Soviet Cultural Troupe which visited the City in the last week of September.

weaving is traditionally the major industry of Madurai. It is still her staple industry. Spinning mills in and around Madurai feed the required yarn to the handloom industry that is unrivalled for quality and sheer size. Automobile ancillaries, electric appliances, furniture, needles for sewing machines, etc., are other items of important industrial units of Madurai. At Pudur three miles from Madurai is a flourishing Industrial Estate.

4, 5 & 7. Scenes from the performances given by the Soviet Cultural Troupe.

Centre Spread :

Views of Madurai and the surrounding shrines including Tirupparankundram, Kallalagar-koil as also the electric winch service to Palni Hills and the Vaigai dam.

Last Page :

1. Chief Minister conferring with Thiru Y. B. Chavan, Union Finance Minister at the Silver Jubilee function of the South Indian Film Technicians Association held at Rajaji Hall.

2. Thiru Lendum, Consul-General of New Zealand in India in earnest discussion with Chief Minister.

3. Thiru Tarlok Singh Riasthy, Punjab Minister for Public Relations and Tourism called on the Chief Minister for discussions.

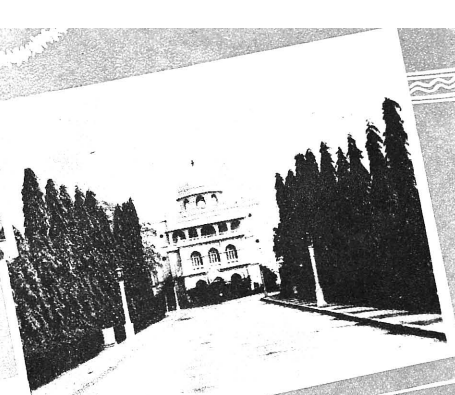
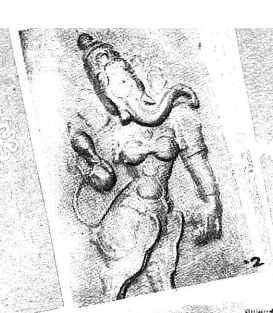
4. Chief Minister distributing prizes at the Family Planning Fortnight function at Saidapet.

5. Thiru Harchenko, New Consul-General of U.S.S.R. called on the Chief Minister at the latter's residence on 29-9-70 and presented a memento.

6. Chief Minister with Thiru Sunderlal Nahata at the function organised by Rajasthani Association.

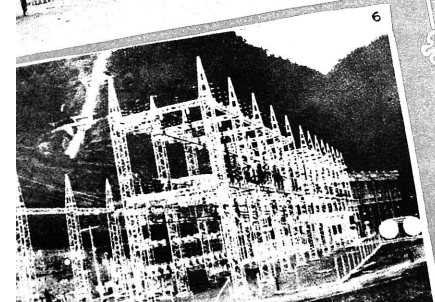
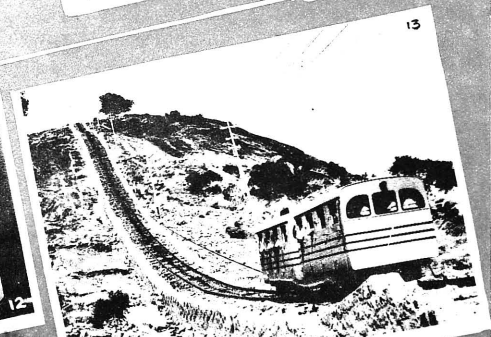
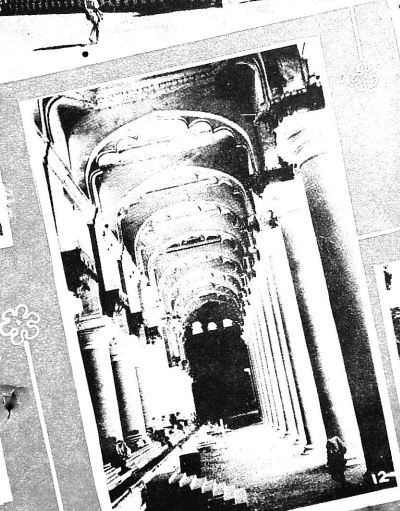
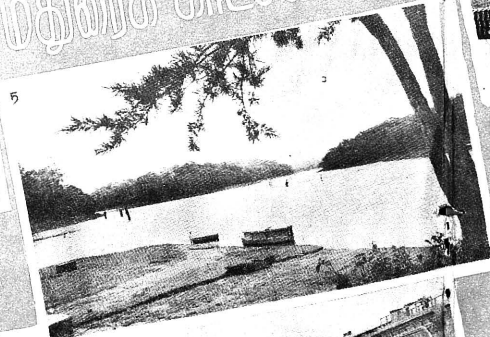
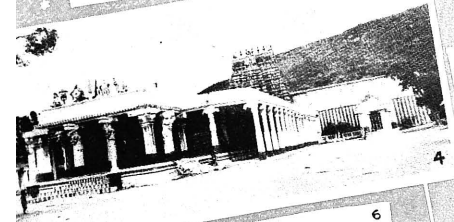
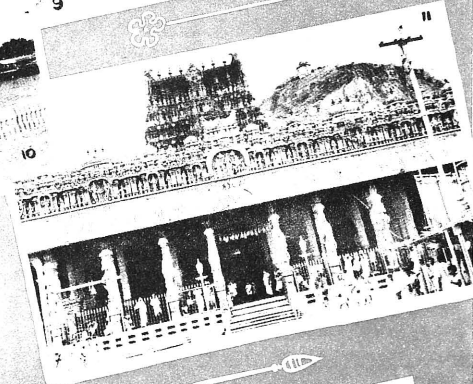
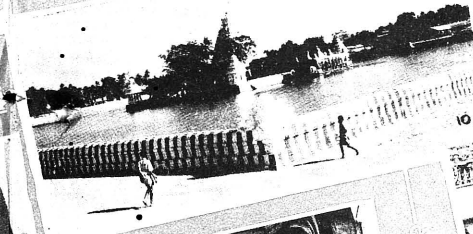






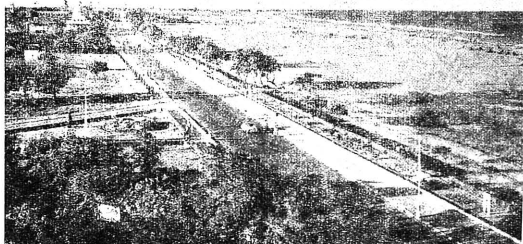
MADURAI AND ENVIRONS

மதுரைக் காட்கள்





THE URGE TO VISIT IS THERE



Our job is to fill the information Gap

“Next month we intend to visit South India, especially Madras and its adjoining area. But due to lack of proper information we are facing great hardship to finalise the programme. I earnestly request you to send me some ‘Guide Book’ containing

the general information of different tourist centres of your State.”

This is an enquiry from a person in Jamshedpur. This is one such of innumerable letters received from persons far and near not to speak of the foreigners seeking information of various topics. From the volume and type of letters received daily by the

Information Centre of the Tamil Nadu Government at Madras, the importance and the great potential of intourism in Tamil Nadu can be realised. Time and again experts have emphasised that tourism in India will depend largely on the development of intourism. It is in this context that many of the schemes for low-cost accommodations for tourists have been constructed in all centres of tourist traffic in our State by the Government of Tamil Nadu.

Of Saints and Ashrams

Here is another typical enquiry from an Australian : “We are at present making preparations for an extensive visit to India covering many areas. The main objective is to tour the shrines and religious places of Saints and Ashrams, etc., in your local and surrounding areas. We have gone to the tourist offices in Sydney and Melbourne but they have not been able to furnish us with more concise information required by us, other than the usual type of



Tamil Nadu Abounds in calm hill resorts ideal for holding camp-sites for large-sized tourist parties. Development of such sites has been recommended by the Nineteenth Report of the Estimates Committee on Tourism.

tourist leaflets. We are requiring extensive information, Via Air Mail, of your area, in particular detailed maps showing villages and other historic places not generally shown on tourist folders. We would also be thankful for any addresses of Societies or persons interested in communicating with us, having an interest in the many wonderful Saints and Religious leaders of India, if you have any such information available."

Bus connections

One Thiru Asok Basu writes from Calcutta :—

'I am (with my wife) visiting the State of Tamil Nadu in October

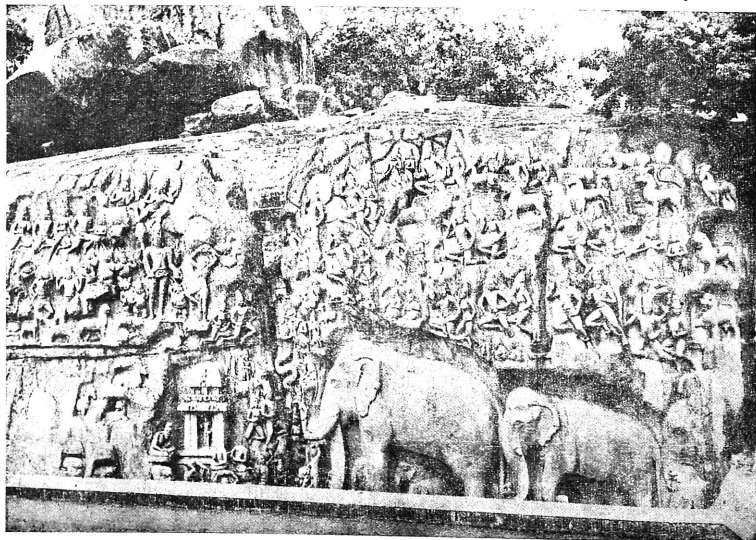
1970. I would like to have all information regarding places of interest, transport—especially bus connection, their fares and their timings—accommodations facilities and all other material necessary for any tourist to know, in the route of Kanyakumari, Madurai, Rameshwaram, Tiruchirappalli, Thanjavur, Pondicherry and Madras." Difficult as it may seem, he was furnished a rough itinerary, but alas we could not give him any pucca guide for bus connections! It is time we devised a State-wide bus guide strictly enforcing bus timings.

So varied are the questions asked and information sought that only properly trained

personnel can answer them to their satisfaction. Speed is another important factor.

Another person from Calcutta intends to make a motor tour of South India and he desires a complete circular itinerary with details of distances between places, and a list of P.W.D. Rest Houses, Dak Bungalows, Circuit Houses, etc., and if possible road maps of the places. Because his mode of travel is his own car we could give him a more definite itinerary, but we had to warn him against placing too much reliance on P.W.D. Rest Houses and Circuit Houses for his accommodation!

As far as Tamil Nadu is concerned it is able to satisfy the urge for



The bas-relief in stone at Mamallapuram shown above is but one of many tourist attractions in Tamil Nadu

travel and see new places that has been created among the people mostly by the cheap modes of transport such as Tourist buses and conducted tours. There are still unlimited possibilities to attract more and more people, from other States to Tamil Nadu especially our brethren from North of the Vindhyas. An imperceptible change though slow is taking place in important pilgrim centres like Madurai where a number of medium-priced lodging houses as distinct from cheap choultries are coming up with or without Government help. The tourist bungalows by themselves are not adequate to satisfy the large seasonal flow of such traffic and these lodgings are of help.

Tourism particularly intourism depends on the combined efforts of numberless entrepreneurs, from the smallest shop-owner to the most sophisticated hotelier. Everyone is involved, particularly those who benefit from our successful efforts. We lose most when organisational inadequacies limit tourist growth. The best example of interested persons putting up tourist accommodation is seen at Kancheepuram where the Silk saree merchants have built a choultry and a modern Guest House.

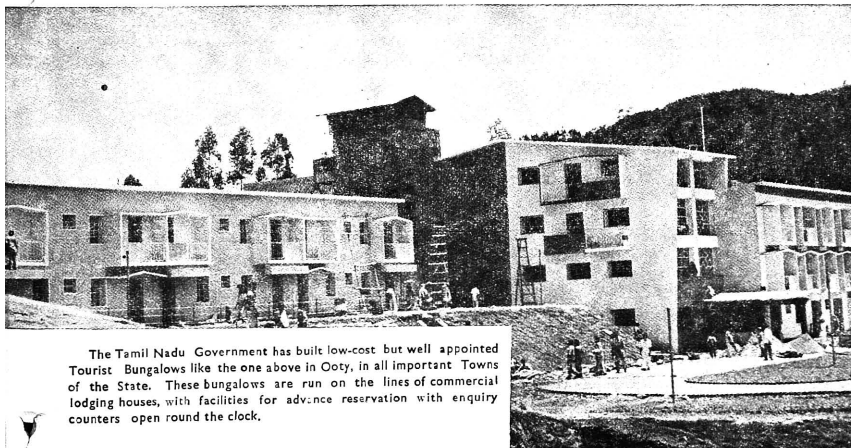
All Can Help

Furnishing information as requested by the tourists as above and assuring them that they can arrange a tour in the State to suit his or her pocket, is the first

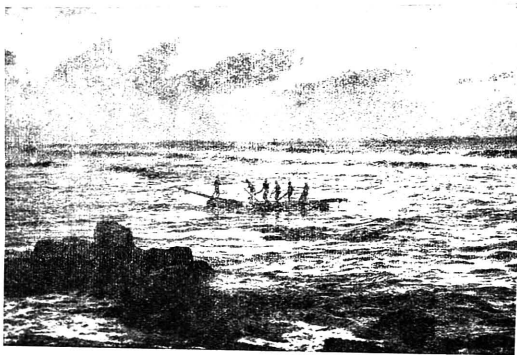
requisite of tourist development. The tourist must also be assured of comfortable accommodation, each according to his needs and pocket, and made to see as much as possible within the time at his disposal. This requires the rationalizing and streamlining of the information and administrative set-up to give them the right welcome and confidence. Literature containing general information as well as the special information sought by the tourists need to be produced.

Our Tourist attractions

The great temples, the sculptures and architectural wealth and the age-old festivals and customs and religious practices of Tamil Nadu are of perennial interest to



The Tamil Nadu Government has built low-cost but well appointed Tourist Bungalows like the one above in Ooty, in all important Towns of the State. These bungalows are run on the lines of commercial lodging houses, with facilities for advance reservation with enquiry counters open round the clock.



Places of scenic beauty abound in Tamil Nadu

the people of other States and also to foreigners. The pristine beauty and glory of the culture of Tamil Nadu have something to offer to others.

A Tourist is not a nameless or faceless person but a unique advertisement medium who will send in his wake numerous others by talking about his experiences and the places he had seen with his own eyes. Therefore this is a continuing affair and needs to be built up from year to year.

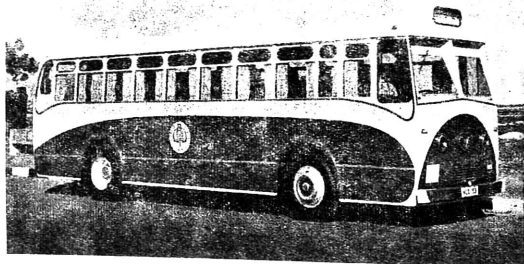
With the growing awareness of the need for developing tourism as a foreign exchange earner, the need to provide the infrastructure for the development of in-tourism should not be overlooked. Because both are complementary to each other, urgent is the need for proper development of in-tourism in Tamil Nadu by meeting the growing demand for information and services.

A beginning can be made

The in-tourist traffic usually travels in small family groups by train, or by car. Tourist buses are availed by large batches. In all the cases the know-how about routes, timings and places of stay are only by hear-say. The Tourist buses, though they

are profitable business the owners don't bother to acquaint themselves with the know-how needed to be of help to their passengers, whom we look upon as tourists. A high degree of proficiency is however seen in tourist bus operators in Bangalore. The Police Department in Madras and some important centres in the State provide some minimal assistance by way of providing protected parking zones, etc. More positive approach on the initiative of other departments of the Government or local authority may help promote in-tourism to a larger extent. Even if we can think of protected bath rooms in parking zones meant for Tourist buses, it would make the beginning of an effort in this direction.

Tourism is developing so fast in the world, as a major industry that one has to keep pace with the developments on all fronts both abroad and inside the country.



296 Luxurious tourist buses are available in all parts of Tamil Nadu



If you happen to be in South India in mid-January, you will have occasion to witness a unique harvest festival. To the farmer and cow-herds in Tamil Nadu, Mysore and Andhra Pradesh it is a special occasion for community rejoicing, reminiscent of ancient pastoral traditions. Rice fields are harvested and sugarcane is ripe for juice-extraction. This is the time for the farmers to relax and enjoy the fruits of their year's labour. The air is crisp and cool and there is laughter and mirth in the simple homes of peasants, now looking brighter with their freshly white-washed walls.



The cattle, particularly the bullocks, are elaborately painted, covered with silks and ornamented with garlands of conch-shells, bells and flowers. In the evening, all the cattle are collected and taken in a grand procession to the beat of drums. In Mysore this ritual ends in an open field where they are made to jump over a long line of hay set on fire as excited crowds watch the fun.

Both in Mysore and Andhra Pradesh the festival is called Sankranti and as in Tamil Nadu cattle is the centre of attraction.

THE CATTLE FESTIVAL



In many villages in Andhra, cock-fights, too are held.

In Tamil Nadu where the festival is called Pongal, it is a two-day rejoicing in which age-old custom rather than religion plays the dominant role. The freshly

harvested rice is cooked into a special dish called "Pongal" and then offered to the cow. Golden paddy ears are bunched and tied to the roof prominently near the entrance, to the house. The domestic cattle are washed and the draught animals are given a complete two-day holiday. In the evening, all the cattle of the village are collected and led out in a procession to the beat of drums and music. In some parts of Tamil Nadu, particularly in the Tiruchi district, a peculiar kind of bull-fight is held in which unarmed young men try to wrest

-RENDEZVOUS of YOUTH

bundles of currency notes tied to the horns of ferocious bulls.



There goes that unique mountain train of the Nilagiri Hills

The Nilagiri Mountain Railway commences from Mettupalayam, the terminus of the broad gauge system of the Southern Railway, and runs to an altitude of 7,500 feet to Ootacamund, one of the prettiest summer resorts in South India. The Scheme for the construction of a railway from Mettupalayam to Coonoor, a distance of 16.75 miles, dates as far back as 1854, but it was not until 1891 that the work of construction was started by the original Nilgiri Railway Company. In 1894, the Nilgiri Railway Company went into liquidation and a new company was formed in 1896. The line was finally opened in June 1899. On 1st January 1903, the Government purchased the new company and work was taken in hand to construct the 11.75 miles from Coonoor to Ootacamund. The line was completed in October 1908.

Ootacamund is situated in the heart of the blue Nilagiri mountains. Unlike Darjeeling and

Simla it lies on a plateau giving the appearance of a vast park. To the north-west of 'Ooty' are picturesque downs. To the west, south and south-west rise ranges of lofty hills adding to the grandeur of the scenery.

From Mettupalayam to Kallar, the first station, a distance of

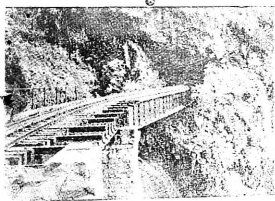
about four and three quarter miles, the line runs for the most part skirting the several hills, on a steep ascent the steepest gradient being 1 in 40. Beyond Kallar, the line takes a serpentine course through sloping hills necessitating sharp bends, which have, in many cases, a curvature of $17\frac{1}{2}$ degrees. The steepest gradient between



Kallar and Coonoor, a distance of twelve miles, is 1 in 12.5, after Coonoor the steepest bits being 1 in 23.81. Over the 29 miles between Mattupalayam and Ootacamund, there are 16 tunnels totalling 3,090 feet in length, 14 of these lying between Kallar and Coonoor. The line passes over many girder bridges some of them with spans as long as 100 feet, constructed over deep precipitous ravines. The deepest of these ravines has its bed at about $81\frac{1}{2}$ feet below the rail level. A large number of the bridges are situated at entrance to tunnels



apart and two and half inches above the running rail so that the tooth of one is directly opposite the gap of the other to ensure that the engine pinions do not work off the rack when negotiating curves. The teeth of the rack are spaced $4\frac{7}{32}$ inches centre to centre, and correspond to the pitch of the cogs of the driving wheel fitted to the locomotives. Special rack entries are provided for enabling the engine to enter the rack portion smoothly and to ensure proper meshing of the cogwheels of the engine with rack bars.



and on sharp curves, involving great engineering skill.

Special Devices

Owing to the extraordinarily steep character of the railway line between Kallar and Coonoor, rack bars on special chains, have had to be provided at several places centrally between the track rails. These rack bars are laid on the slope of the railway line itself and form a sort of ladder up which the engine climbs and pushes the train. These racks are laid on a double row about one and three quarter inches

The locomotives are tank engines of the four cylinder compound type; the high pressure cylinders working the adhesion engine and the low pressure cylinders superimposed to work the rack engine. Steam acts through a separate set of cylinders and drives a special crank-shaft connected by spur gearing with the axle whereby oil is forced by steam through a pipe on the pinions and thereby to the rack bars. This oiling is very essential to prevent undue wear on the rack bars which are subjected to heavy strain when engines are ascending.

Trains are pushed up and hauled down the track, thus obviating the danger of vehicles escaping by parting, as a result of couplings giving way. In view of the steep gradients the locomotives are provided with four independent brakes for controlling them. They are the hand and vacuum brakes for adhesion, the hand brake for the rack, and the air-compression brake. The hand brake operates on the rack wheel much in the same way as the brakes of a motor car. The air compression brakes are for use on descending trains. On such trains the engine is in front but with chimney trailing. But the engine is kept in forward gear and air is allowed into the cylinders and compressed by the pistons. The braking effect of the air compression brakes is controlled by two receiver valves 'low pressure' and 'high pressure.' By shutting these valves gradually, the braking effect is brought to a maximum, and by opening these valves gradually, the braking effect is reduced to a minimum. Besides, all coaching and goods vehicles are provided with separate brake both for the rack and adhesion. A vacuum brake lever is provided on each vehicle and for operating these in emergencies a brakesman travels on each vehicle. The speed of the train is generally maintained between eight and nine miles an hour on steep gradients of the track, and 20 miles an hour on comparatively easier sections.



Special tourist taxis—all four-seater, 14 h.p. vehicles—have been introduced in Madras City and in important towns for the benefit of tourists who prefer travelling in private, chauffeur-driven cars. These cars do not have the usual double-colour and meters.

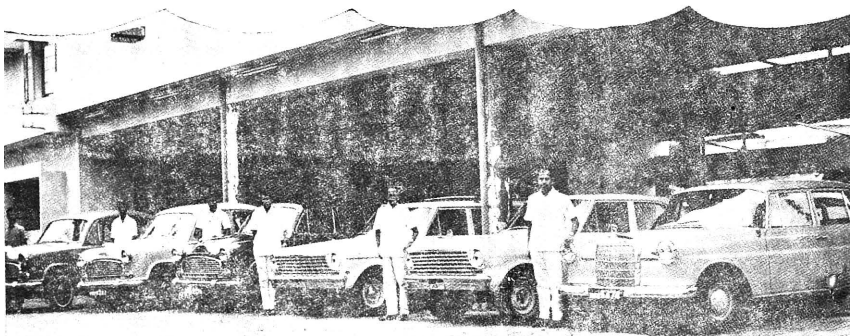
The Government of Tamil Nadu have amended the Motor Vehicle Rules to empower officials of the

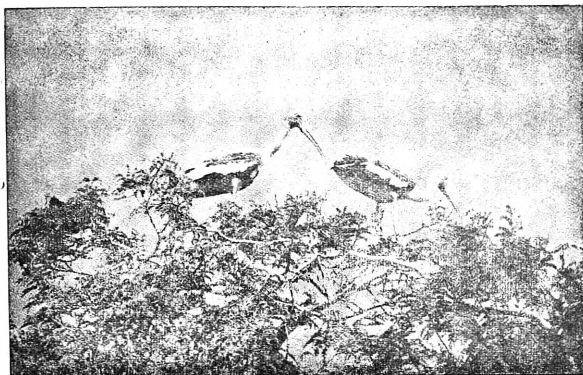
Tourist Department to inspect these taxis and report on their working. In Tamil Nadu 619 such taxis are plying. In addition, inter-state permits have been given to 20 taxis to ply in each of the States of Andhra, Mysore and Kerala.

The conditions for licensing these taxis are that the chauffeurs

should be able to speak English well. Before they are engaged, they are given a three-day re-orientation course at the Government of India Tourist Office, Madras, where they learn how to show small courtesies and be of real help to the tourist. They are all given trim, white uniforms and are enjoined to maintain high standards of personal hygiene. A Code of Conduct has been drawn up by the Department, to which they should scrupulously adhere. They are forbidden to indulge in touting on behalf of shops, hotels, restaurants, etc., or to accept commissions or favours from the tourist. They cannot act as tourist guides. Every tourist taxi is required to maintain a log-book and a complaint book.

Tourists are made aware that they could lodge a complaint against the car drivers if they are dissatisfied with his service or behaviour, with the local Tourist Centre.





Painted Stork

THE VEDAN- THANGAL BIRDS SANCTUARY

In the village of Vedanthangal in Madurantakam taluk of Chingleput district nestles one of the most unique and fascinating Bird Sanctuaries in India. It is 54 miles from Madras. The approach to it is along the well maintained, Grand Southern Trunk Road up to the 41st mile-stone ; where it branches off west to Vedanthangal for a distance of 13 miles. The last thirteen miles of diversion from the main road make a very pleasant drive through a wooded country.

This water birds sanctuary has been in existence for over one and a half century. The lake, about 74 acres in extent, situated amidst sylvan surroundings and nurturing a mass of sturdy Barringtonia acutangula trees with large spreading crowns in its centre, attracts every year between September and March, thousands of water birds to its trees for nesting and breeding. The lake bund supported by tall semi-evergreen trees on either

side is ideal for visitors, at the same time the lake waters protect the birds from its enemies, specially wild cat and mongoose who cause enormous damage to eggs and chicks. Coupled with this security, the care and interest evinced by the villagers in protecting them seems to have endeared the birds to this lake. The birds droppings are very good manure ; hence the villagers give the birds all manner of protection.

In short, immunity from danger, facilities to nest and breed, availability of food in these waters and the adjacent numerous lakes are considerations which appear to weigh with these feathered visitors to congregate at this lake from distant centres during the breeding season. Year after year, the birds have been colonising these trees and deserting them when the lake gets dry and the fledgelings are able to take to wing.

Here the handsome snow white egret is quite at ease with its neighbour, the cormorant, a jet black ugly looking bird. They all live together, nest together, breed together on the same trees and feed together in the same lake. The Barringtonia trees are seething with "millions" of birds. There is always a stream of fresh arrivals and departures seemingly purposeless. Some are seen hovering, some sliding, some flapping, some rolling, some preening, some diving and some slashing the water chasing fish. Egrets, herons, cormorants and ibises form a major portion of the bird population in the lake.

There is perfect orderliness, harmony and punctuality in the movement of the birds. The first to arrive at the breeding ground are the male adult birds. They are followed by female birds. The immature birds come last. The order is reversed on



Little Egret

the return journey. The young birds about a couple of months old, not capable of long and sustained flights, fly first with several halts on the way and the parent birds follow them. It surpasses one's imagination how the young birds which fly for the first time (without the aid of charts, maps and compass) know the exact flyway sometimes spread over thousands of miles and reach the correct destination.

The Darter

This is popularly known as the snake bird, on account of its long slender neck, when it swims, only its head is visible over the surface like the hood of a snake and the rest of its body is completely under water. It is of the size of a small duck with silvery streaks on the back and brownish head and neck. Its long bill is

as sharp as a javelin. This bird is found throughout the Indian Union, Africa, Malay region, Australia, and South America, haunting river banks and swamps singly or in pairs and sometimes in immense flocks.

Spoonbill

This bird, of the size of a full grown duck but with longer feet and neck, is so called on account of its spoon-shaped bill. It is of an Australian species of family related to storks. It is found throughout the Indian Union, Burma, Ceylon, Iraq, Japan and Amsterdam. With its broad flat bill it is able to sift small animals from the mud of ponds and lakes. Spoonbills are supposed to be dumb as not a note or sound escapes from them. They look solemn and dignified.

Pelican

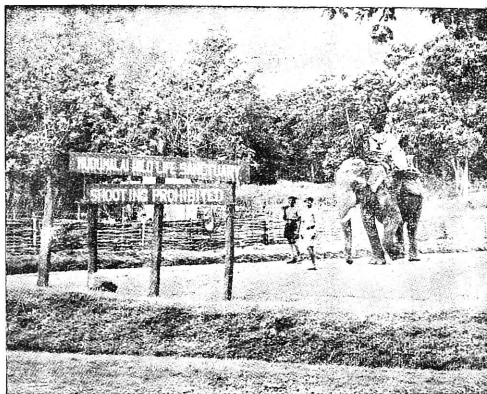
The largest bird seen in the Sanctuary is the pelican though few in number. It is about the size of a goose but short and stumpy with the lower half of the beak developed into a deep pouch, in which fish are carried to the youngsters in the nest. Its wing spread is about eight feet. Being a huge bird it takes off with effort to begin with and when settled down in the air it is capable of sustained flight, not inferior in majesty to that of the Eagle, the lord of the air. These birds have perfected an efficient method of fishing in flocks as wolves and wild dogs do. The birds form themselves into a crescent formation, each bird stationed a yard from its

neighbour and swim together from deep waters to the shore driving the terrified schools of fish before them. When the fish reach shallow waters, and start leaping about desperately they lower their massive and commodious bills and scoop their pouches full.

Apart from the water birds, there is quite a good collection of the common resident birds on the trees around the lake such as king fishers, king crows, India robin, wagtail, ashy crowned finch-lark, copper smith, koel, ring dove, bay-backed shrike, pied bush-chat, babbler, purple sun bird, brahmyn mynah, common mynah, hoopoe, the green bee eater, weaver bird, red vented bulbul, golden oricle and blue jay.



Spoon Bill



WILD LIFE SANCTUARIES IN TAMIL NADU

Mudumalai wild life sanctuary

There is only one place in the whole of India where one can view with ease at one time a single herd of more than four hundred spotted deer, seventy to eighty Gaur (Indian Bison) or forty to fifty elephants—and that place is Mudumalai Wild Life Sanctuary in the Nilgiris District, Tamil Nadu.

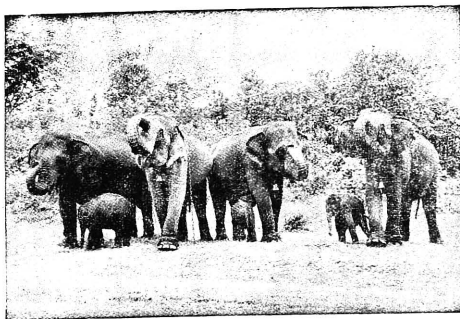
This sanctuary is 124 square miles in extent. Here the animals wander as they like in perfect peace and freedom. Herds of Gaur (Indian Bison), the largest of the bovines now surviving in the world are the greatest attraction. Many biologists from foreign countries visit Mudumalai to study the behaviour of the Gaur.

Mudumalai can be reached by bus either from Ootacamund or Mysore. The Ootacamund-Mysore road passes through the Sanctuary. It is 42 miles from

Ootacamund and 58 miles from Mysore. The nearest Air Port is Coimbatore and the nearest Railway Station, Ootacamund. A number of buses ply daily between Ootacamund and Mysore. The bus stops at Abhayaranyan Rest House and also at the office of the Range Officer, Wild Life No. I, Kargudi.

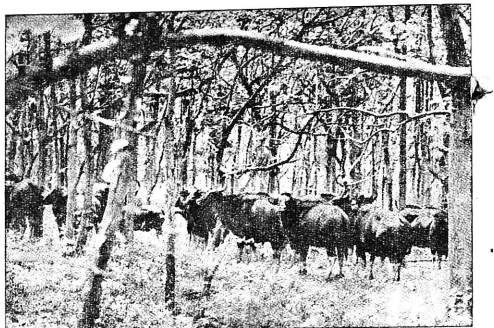
There are three Rest Houses in the Sanctuary, each with two suites of rooms. There is a cook attached to each Rest House who serves both vegetarian and non-vegetarian meals. Reservations for accommodation and joy rides on elephants, can be made by advance booking. The charges are moderate.

Tamed elephants of Mudumalai Sanctuary



To enable visitors to view wild life with ease and comfort, tree-top machans and observation towers have been built in suitable places amidst natural surroundings over-looking salt licks and water holes frequented by wild animals.

The best period to visit the Sanctuary is between February and June when the tall elephant grass dries up increasing visibility considerably. The most suitable time to go round the Sanctuary is between 6 and 9 in the mornings or 3 and 5 in the after-noons.



A bison herd

involving change of train at Thiruthuraiipoondi. There is a Forest Rest House right in front of Point Calimere Railway Station facing the sea.

As the winter sets in, a huge wave of insectivorous birds roll down to winter at Point Calimere attracted by the abundance of insect and vegetable food.

Very frequently a shoal of dolphins visit the sea-shore. As many as fifty dolphins were seen in a single school.

A sanctuary for the tiger, the first of its kind in India was constituted at Mundanthurai in Tirunelveli district. The extent of the sanctuary is 200 square miles.



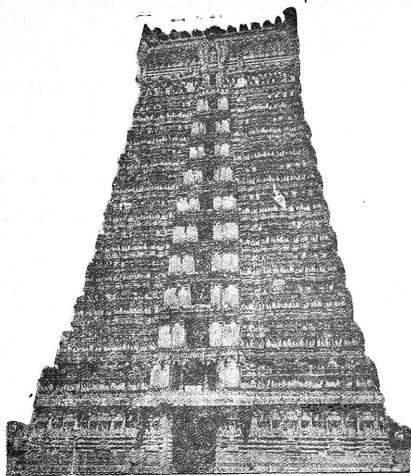
Madras deer park

The Deer Park 595 acres in extent, adjacent to Raj Bhavan, Guindy, is extremely popular both with the home and foreign tourists. This park with a network of roads, foot-paths, nature trails, lakes and ponds, all situated amidst sylvan surroundings offer good opportunities for viewing wild life. The main attraction of this park is the Indian Antelope popularly known as the Black Buck, found nowhere in the world except India. The Park also affords shelter to spotted deer, and white buck.

Point Calimere in Thanjavur district is noted for its incredible congregation of Black Buck, Spotted Deer, Wild Pig and heavy concentration of migratory waterfowl particularly flamingoes which is the chief attraction of this place.

Point Calimere is a night's journey from Madras. The most convenient train is Rameshwaram Express





A visitor to the South will be awe struck at the sight of gigantic gopurams or monumental gateways, which are a marked feature of the South Indian temple architecture. These gopurams, which dominate the skyline for miles around, often rise to a height of nearly 61 m. (200 feet). They represent the rich and artistic heritage of South Indian art and architecture and symbolise the ancient Dravidian culture and civilisation.

several storeys, each becoming smaller in size as it goes up. The early examples of gopurams are of stone, but the later structures are invariably found to be made of bricks. To reach the top there are steps inside and one can have a panoramic view of the surrounding area from the top. Conversely people bound for these temples either by walk or by carts are guided by these gopurams from miles away.

These lofty and lovely gopurams which are still in excellent state of preservation, were constructed many hundred years ago at the instance of various rulers who had an eye for beauty.

The most striking feature of a South Indian gopuram is that it is full of minute, intricate and ornamental carvings, depicting vivid scenes from domestic life, figures of gods and goddesses, animals, birds and snakes. In many cases, the hair, eyes, noses, mouths and sometimes even the teeth and the nails of the fingers and toes are executed with remarkable accuracy and precision. The gopurams of the South are distinctly a class by themselves and have no parallel elsewhere. Commenting on the architecture of the gopurams, an art critic, Fergusson writes : "These gopurams both in form and purpose, resemble the Pylons of Egyptian temples".

Srirangam, otherwise known as Bhuvanaikuntam, is the proud possessor of many artistic gopurams which amaze a visitor. The main entrance to the town is through a gopuram named Rayagopuram, constructed by Achuta Raya of Vijayanagar Empire. It is in an

In a temple architecture, there are gopurams on all the four sides, which are mainly entrance to the shrines. In the infinite diversity of their details and the minute variety of the carving lie the magnificence and grandeur of these astounding edifices. The superstructure of a gopuram consists of



THE TEMPLE
GOPURAMS of
TAMIL NADU

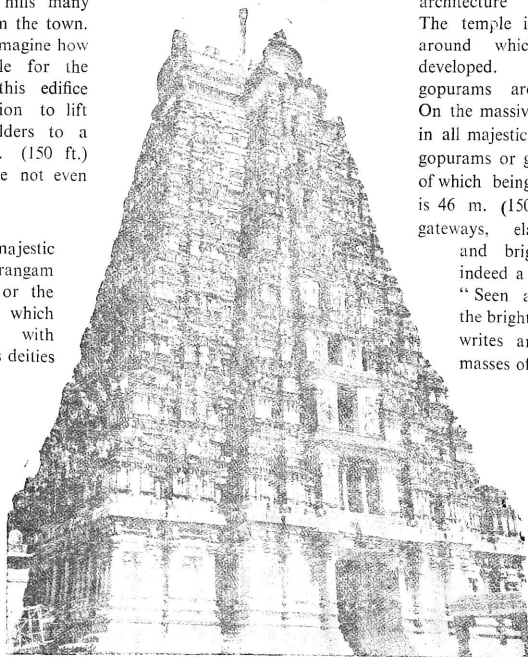
unfinished state. It had been built purely of huge granite stones, and no mortar has been used in its construction. It stands 46 m. (150 feet) high and 40 m. (130 ft.) broad, and the gateway measures 14 m. (45 ft.) by 7 m. (22 ft.). The granite stones were brought to the place from hills many miles away from the town. It is difficult to imagine how those responsible for the construction of this edifice were in a position to lift such heavy boulders to a height of 46 m. (150 ft.) when cranes were not even invented !

Yet another majestic gopuram in Srirangam is the Vellai or the white gopuram which is embellished with figures of various deities all over it. This gopuram is now under renovation by the U N E S C O team.

Tanjore has a good number of temples of which the most important one is that of Sri Brihadeeswara

— a magnificent monument to the power and glory of the Cholas. The temple was conceived by Raja Raja Chola, one of the prominent rulers of the Chola dynasty and built by his master architects. The pyramidal tower

or gopuram, built in the purest Dravidian style, rises to a height of 67 m. (220 ft.). It presents an imposing, appearance, dwarfing as it does everything else in the vicinity. It contains fourteen storeys all of which are richly embellished on the outside with stone carvings portraying various



gods, goddesses, animals and others. The gopuram is crowned with a huge dome which is carved from a single stone and weighs 80 tons. It is said that the structure was devised and constructed in such a way that

it never casts a shadow on earth despite its great height.

Among the numerous monuments of archaeological and antiquarian interest in Madurai, the most striking is the famous Meenakshi temple, which is an exquisite example of Dravidian architecture and sculpture. The temple is the focal point around which the city has developed. There are nine gopurams around the temple. On the massive outer walls stand in all majestic grandeur the four gopurams or gateways, the tallest of which being the south which is 46 m. (150 ft.) high. These gateways, elaborately carved and brightly painted are indeed a feast for the eyes. "Seen at a distance with the brightness toned down", writes an art critic, "the masses of colour thrown on the brick-work of these pyramidal towers are peculiarly effective and even when seen close the general result is very striking."

R a y a g o - puram, here is also a magnificent structure,

though unfinished, is another noteworthy tower in Madurai. The lowest storey of this structure occupies more than twice the space covered by any other gopuram and the sculptured figures are deeper cut

and richer in design, thus giving the tower a pre-possessing appearance. The door-posts are monoliths, 15 m. (50 ft.) high and 1 m. (3 ft.) square, carved with exquisite scrolls of foliage. "It is obvious" says an author "that had all the storeys been built on the same scale and design, that would then have been the most magnificent temple tower of India."

Chidambaram, the seat of the Saivaite cult, is sanctified by the famous temple of Nataraja or Siva who is worshipped in the form of Akasa or ether. The inner walls of the temple have four gopurams which are noteworthy. They face the four points of the compass. Of the four great towers the northern one is the tallest, while the other two contain perfect sculptural representations of the 108 postures relating to Natya Sastra or the science of dancing. The fine carvings, which arrest one's attention, are on the niches of the four main gopurams. These towers when lighted at night are visible from afar and in ancient days, served as beacons to mariners.

Kanchipuram, the Golden City of a thousand temples and one of the seven sacred cities of India, is a great centre of Hindu pilgrimage drawing thousands of devotees from all parts of the country. The temple of Varadarajaswamy, the biggest shrine in Kanchipuram, is built on a hillock and Lord Brahma is said to have performed a great sacrifice here. The two gopurams over the eastern and western entrances are prominent landmarks for miles around. The south gopuram of the Ekambara-

natha Temple at Kanchipuram is one of the largest in the South. This massive tower has ten storeys and is 57 m. (188 ft.) high.

The temple gopurams of the South, which are monuments of human patience, intelligence and skill, have withstood the ravages of time and stand as eternal landmarks of a glorious heritage. They

are a rare combination of grandeur beauty and grace. They captivate the mind by their profusion of detail and perfection of outline and there is no suggestion of superfluity in the endless concourse of figures and designs. These great edifices, which bear eloquent testimony to the supreme genius of the architects of yore, are to be seen to be appreciated.



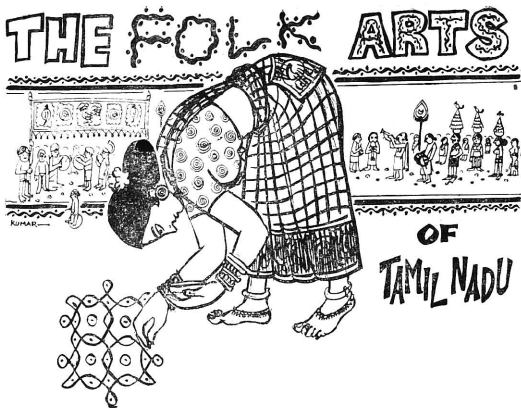
The first impact of a Bharata Natya performance on an audience which has never seen it before is one of surprise at the diversity of delicate and rather extraordinary movements.

A nation is best known through its plays and pas-times. The rustic folk of Tamil Nadu have their own recreational programmes to spend leisure hours in an artistic manner. They sing and dance in some central place of the village. To watch them perform a Kummi or a Kolattam on a moonlit night is a feast to the ear and eye.

Besides these entertainments provided by the people themselves, there are professional artists who give ballad music concerts and dances either in groups or solo, and stage dramas, especially during festivities that usually fall during summer months. Simplicity is the notable feature of these programmes. They are natural and free from inhibitions.

A deep reverential study of the folk arts of our people is bound to enrich our "Classical" arts, for the latter are as much a culmination of the former as they are products of aesthetical laws propounded by thinkers and seers.

The rustic folk are Nature's Children. The folk artists' imagination is spontaneous, daring and without preconception. It is elemental. The main difference between folk arts and classical arts is that



the former, unlike the latter has not been systematised and has no supporting theory or grammar. It is an unschooled art. The beautiful terracotta dolls made by the villagers, their simple drawings on the walls of houses, the pretty, though seemingly—complicated designs of 'Kolams' in the front-yard of their houses are all not only reflections of their wonderful imagination, but are indicative of their easy, natural approach to music and dance as well.

This glorious land of the Tamils, besides its hoary traditions in architecture, sculpture, the

classical arts and literature, is also the repository of a rich heritage of folk songs and dances. The ancient Tamil classics, Tholkappiyam, Silappadigaram, Agananooru, Purananooru, all contain numerous references to fine arts of the folk type. Rural life has been a spontaneous and perennial song from time immemorial. Its arts have always been deeply associated with all social and religious functions, with all festivities of happiness and joy. People irrespective of caste, colour or creed, men and women, young and old, have found joy in participating in these



cultural events and are profoundly familiar with the happy life that they promote.

Folk arts may be broadly classified under three heads, viz., Folk Music, Folk Dance and Folk Drama. Folk music includes songs of work and worship, marriage and ceremonial songs, children's songs and play songs and folk concerts like Villupattu, Lavani, Kaichilumpattu by professional troupes, etc. Folk dance includes Kummi, Kolattam, Pinnal Kolattam, Oyilkummi, Karagam, Kavadi, Poikkal Kudirai, Kaniyan Koothu, Chakkia Attam, Pulivesham, Vinindanai, etc. Drama includes Therukkoothu, Bommalattam and Pagalvesham. All these comprise both the rustic and the refined types.

Despite the boons of technology, the task of an agriculturer or a labourer still remains at laborious one. Yet, he cleverly manages to relieve the burden of his work and increase his productivity and efficiency with the help of song. It is by song and chant that his labour is regulated and stimulated. Evidently, labour set to music is labour lightened. However hard and monotonous the work may be, whether it be



the various agricultural operations fishing, load carrying or mixing mortar, his motto is "sing while you work and work while you sing."

They Steal the show

A large number of folk songs is meant to be sung by groups, for most of the work is turned out of collective effort. There are some that are sung exclusively by men, others exclusively by women, and a few by both. However, it is the women, who sing the first song to the new born child, who get the lion's share. Numerous ceremonies and functions mark their lives, and not one is allowed to pass without music. They sing and lull the child to sleep, they sing to greet her coming of age, they sing to celebrate her marriage and nuptial. In fact, they flood every concei-

vable occasion with song. Their "nobus" and "vratas" are many, and each is marked by song. When inevitable Death comes, they have a song ("Oppari") for that too!

The professionals who put up Therukkoothu or sing ballads are itinerant and avail the seasonal leisure of the farmers. With minimum effort, the maximum effect is produced, be it ballad singing, instrumental music or the dance and drama both of which involves costume and other stage aids.

These professional troupes are also engaged to provide entertainments to the people, particularly during festivals when villagers from far and near attend the celebrations, some walking long distances, and others arriving by canopied and decorated bullock-carts. They camp in shady groves, cook their own food and offer worship to the deity in whose honour the festival is held. They attend all night shows of folk entertainments and return to their homes with a sense of exhilaration. Ballads on Puranic themes are staged in drama form for nights in succession and crowds sit under the sky and listen and watch them with rapt attention.





Folk Festivals

Folk festivals abound in dances also. Besides the main attraction of the ballad or the drama, there are always attractive dance items such as Karagam, Kavadi, Poikkal Kudirai, etc. The line of distinction between the amateur and professional dances is thin. Even so is the difference between the secular and the religious. In the beginning, perhaps, there were no professional or dancing groups. Everything was in the nature of community dancing or the religious rite. Gradually, however, specialisation by a few led to professional troupes who, on account of the greater organisation and orderliness of their performances found favour with the people.

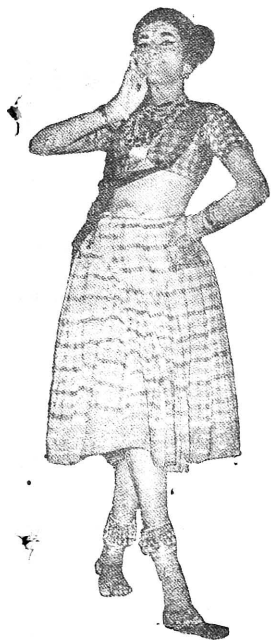


Work and Worship

Generally, all folk arts have a rich spiritual atmosphere which is sometimes subtle and sometimes strong. They are full of gods and goddesses and incidents and stories from their lives are the constant theme.

The untutored village children play about in the field, reciting sweet rhymes that describe their family deities. The labourers at work in different quarters sing in the name of the Sun God, the Rain God, the Elephant God and all the other deities they worship.

The beggar wandering from place to place sings not only devotional songs but often tells pastoral tales in rhythm. The villagers whose life is one of hard toil has constant vigil in the Universe be he in the field or at



As a collector of folk music and dance, I had the experience of actually taking part in their various activities, recreational music and dance, and felt the thrill of it while doing extensive research on the subject throughout the Tamil Nadu for a thesis, and later on as the Research Officer for folk arts for the Madras State Sangita Nataka Sangam.

Temple Culture

The temples of Tamil Nadu have been greatly responsible for a continuous interaction of cultural forces between the classes and the masses, the refined and the rustic. These temples provided periodical festivals in which music—particularly of the nagaswaram—

occupied a prominent place. The masses greatly benefited by it. Many of the great musicians of the past lived in villages, keeping their ears and mind open to all healthy influences, they did not think it beneath their dignity to assimilate in their music, such artistic forms as came to them from the masses. Whatever they felt would add to the beauty of their own art, they incorporated without hesitation.

There has thus always been a continuous process of free exchange. There is evidence of this in the fact that the 'chayas' (melodic contours) of many of the important ragas of carnatic music are seen in the folk melodies

any other work. Thus his work becomes his highest form of worship, though of course, he formally attends a function in his tiny village temple once or twice a year.

It is of special interest that one is able to experience the vitality of folk music and dance, only when they are heard and seen in their natural setting. The peasants can sing only when they are at a particular piece of work and in the customary environment. To join them in their work is a thrilling experience.





high thinking was the way of life and wherein the classes and the masses lived together and shared everything.

Folk music is rich in its variety of musical forms like kummi, Kanni, odam, kavadi-chindu, nondichindu, vazhinadai-chindu and lavani. In the sphere of instruments also folk arts has its own contribution to make; take udukkai for instance, which has developed fine styles of play. Udukkai is an example of compound musical instrument. And folk music drums are found in so many varieties!

Our villagers have always had a good deal of artistic creative faculty and they still have it. Most of their tunes and texts are all their own. They have enjoyed dance, drama and music for they were also participants. When they are impressed by something new, they are inspired by it and not merely led to imitate it. These talents and virtues must be kept alive and the folk arts preserved in all their vitality and gusto.

of Tamilnad : a typical example of this interaction of culture. Kuravanjis and other dance dramas staged in temples especially during festivals are midway between the rustic and refined types of arts and contain the essence of both. All these traditions add up to a social background wherein simple living and



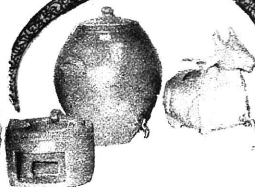
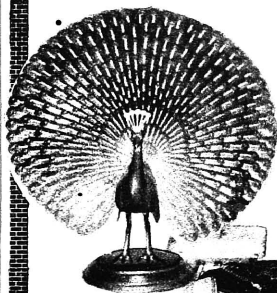
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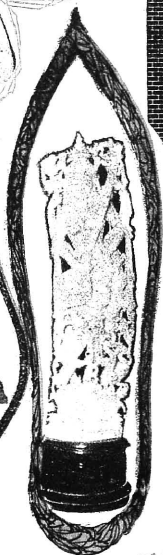
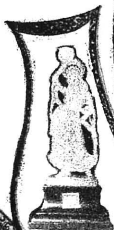
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