PRG. 86.1 (N)
1,000



CENSUS OF INDIA 1961

VOLUME II

ANDHRA PRADESH

PART VII—A (1)

SELECTED CRAFTS OF ANDHRA PRADESH

A. CHANDRA SEKHAR
OF THE INDIAN ADMINISTRATIVE SERVICE
Superintendent of Census Operations, Andhra Pradesh

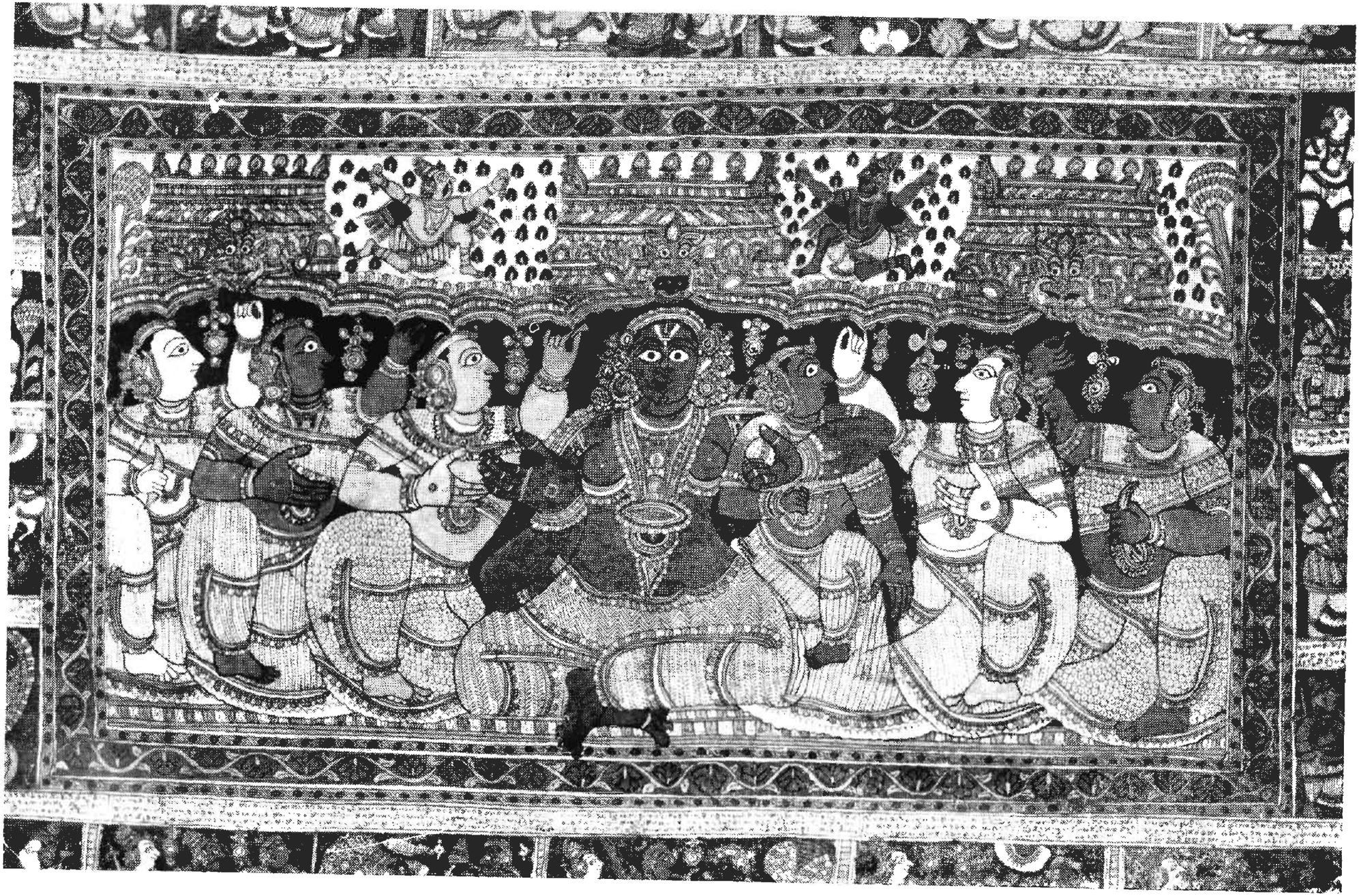
Price : Rs. 11.50 P. or 26 Sh. 10 d. or 4 $ 14 cents

Cata

1961 CENSUS PUBLICATIONS, ANDHRA PRADESH

(All the Census Publications of this State will bear Vol. No. II)

PART I (with Sub-parts)	..	General Report Report on Vital Statistics Subsidiary Tables
PART II-A	..	General Population Tables
PART II-B (i)	..	Economic Tables [B-I to B-IV]
PART II-B (ii)	..	Economic Tables [B-V to B-IX]
PART II-C	..	Cultural and Migration Tables
PART III	..	Household Economic Tables
PART IV-A	..	Report on Housing and Establishments (with Subsidiary Tables)
PART IV-B	..	Housing and Establishment Tables
PART V-A	..	Special Tables for Scheduled Castes and Scheduled Tribes
PART V-B	..	Ethnographic Notes on Scheduled Castes and Scheduled Tribes
PART VI	..	Village Survey Monographs
PART VII-A (1) PART VII-A (2)	..	Handicraft Survey Reports (Selected Crafts)
PART VII-B	..	Fairs and Festivals
PART VIII-A	..	Administration Report—Enumeration (*Not for Sale*)
PART VIII-B	..	Administration Report—Tabulation (*Not for Sale*)
PART IX	..	Maps
PART X	..	Special Report on Hyderabad City



KRISHNA LEELA

Central panel of a temple cloth hanging painted in red, blue, yellow, green and black vegetable colours at Kalahasti, Andhra Pradesh. The subsidiary panels around with captions above them in Telugu script depict the various incidents in the life of Lord Krishna.

Courtesy: National Museum, New Delhi.

FOREWORD

One of the first steps to be taken in the First Five Year Plan was the establishment of six Boards for the promotion of handicrafts, village and small industries: (1) The Khadi and Village Industries Board; (2) The All-India Handicrafts Board; (3) The All-India Handloom Board; (4) The Central Silk Board; (5) The Coir Board; and (6) The Small Industries Board.

The rapid expansion of the activities of these Boards which concentrated not only on production and techniques, but also on organisation, extension, credit, marketing, and export, consolidated and enlarged the position that the household industries sector had so long enjoyed in the nation's economic life. It was this fact that forced itself upon the preparations for the 1961 Census and demanded that household industry should be separately investigated for a proper accounting of the nation's manpower, resources and its specific contribution to the national income. The 1961 Census therefore asked a special series of questions on household industry, input of family and hired labour, and the periods over which household industry is conducted. It was felt, however, that an enumeration of the total number of establishments and their industrial classification would be incomplete without a proper description of what they produce and how they produce. It was important to make an assessment of the limits of rigidity within which traditional skill operates. This could be obtained by studying the caste, occupational, social and economic stratifications, the limitations of credit and marketing facilities, the dominance of custom over contract, the persistence of traditional tools and design forms, the physical limitations of transport, communication and mobility, the inability to adopt new lines or adapt to changing circumstances. It was important also to make an assessment of the limits of flexibility that traditional skill is capable of, because the transformation of traditional skills to modern skills is easier said than done and a thorough study may well reveal that it is perhaps cheaper from the social point of view to develop industrial skills from scratch than to try to graft traditional skill on alien soil. A rather tragic case of failure to make what would on the face of it seem a minor adjustment cast its heavy shadow on the nation when it was discovered that goldsmiths used to working on 22-carat gold all their lives felt sadly helpless when asked to work on 14-carat, so narrow and unadaptable were the limits of their skill and proficiency and so rudimentary the tools and equipment with which they and their forefathers had worked. This fiscal accident revealed that tools are even more important than skills.

An early opportunity was therefore taken in February 1960 to suggest to State Census Superintendents, that the Census provided a unique opportunity for conducting and documenting a survey of this kind. As such a survey was quite outside the usual terms of reference of Census work it was thought prudent cautiously to feel one's way with the thin end of the wedge of what would, it was hoped, prove to be an exciting pursuit. It was therefore considered the wiser course to wait until the State Census Offices felt so interested that they would no longer take the inquiry as an imposition but rather want to do it on their own and ask for the necessary staff and equipment. This office, too, in its turn, could make use of the interval to organise and elaborate the design of inquiry in order to feed the appetite that work in progress would serve to whet. Because it was a labour of love, sought to be unobtrusively thrust on one's colleagues and because the inquiry itself was so vast that normally it would demand in any country as big a set-up, if separately established, as the Census organisation itself and that over a much longer period, and because it was almost a pioneer venture, nothing like it having been undertaken since the 1880's, it was decided to move towards a build-up by stages, to let the inquiry unfold itself only as fast as my colleagues chose to ask for more.

Thus, in the first circular of 18 February 1960, it was suggested that the inquiry might be conducted through the agency of the Development Department, the State Director of Industries, the Director of Tribal Welfare, the Registrar of Co-operative Societies, and other organisations

concerned with the promotion of household industry. A draft questionnaire containing 30 questions in three parts was recommended for canvassing. It was suggested that information on this questionnaire, village by village and area by area, might either be obtained through the regular departmental channels of the State Government, or through the newly set up Census organisation, or through the hierarchy of the newly created Panchayats. Stress was laid on the need of photographic documentation and illustration of designs, shapes and forms not only by photographs but with the help of line drawings or sketches together with a full description of the materials used.

Almost the whole of 1960 and the first half of 1961 were spent in organising and taking the Census count, although several States even during this period had not allowed the grass to grow under their feet but made exploratory studies and decided in their minds how the inquiry should be organised. A series of regional conferences held in Trivandrum, Darjeeling and Srinagar in May and June 1961 revealed much enthusiasm among State Superintendents to proceed with the survey, but the need of separate staff and equipment was felt at the same time as the realization dawned that this was much too serious an inquiry to be treated casually and left to be achieved through the usual administrative channels and State Census Superintendents proceeded to augment their staff with qualified research and investigating officers, technical persons, photographers, artists, draughtsmen and other trained personnel.

This was followed by rapid progress in co-ordination between the Central and State Census offices in the matter of exchange and processing of information, documentation and investigation, of assisting each other with trained investigators and in editing and finalizing drafts, layouts, presentations.

Mention has been made of a questionnaire in three parts and thirty questions. The idea was to make a beginning with empirical, analytical studies based on a structured questionnaire which would replace general descriptive accounts that had obtained so far. The primary aim was to obtain a picture as much of the artisan himself as of his craft, to obtain a perspective of the artisan and his craft in his social and economic setting, the extent to which tradition bound him and the winds of change ruffled him, the extent of his mobility and immobility, the conditions of market, credit, new contacts and designs in which he operated, the frame of new as well as traditional producer-customer relationships in which he still worked, and how far he was ready to pierce his own caste-tribe socio-economic cocoon and make a break through to new opportunities promised by the Five Year Plans. The aim was to hold up the mirror to hereditary skills struggling with the dialectics of tradition and change.

Thus the first part of the questionnaire, purporting to be a village schedule, sought to take account of the size and population of the village, its remoteness from or proximity to centres of trade and commerce, in short, the degree of isolation in which the artisan worked, and the relative strengths of various communities in the village which would afford clues to social interdependence and the prevalence of the *jajmani* system. The second part was devoted to artisan communities in the village: the several castes of artisans, the number of families in each, the total number of workers, males and females, the extent of co-operative activity among them, the extent of dependence upon employers and of wage or contract labour. There were questions on the raw materials used, the means of their procurement, the possible extent of dependence on others for raw materials, the extent of the material that artisans can handle within the limits of their skill. There were other questions on the exchange and flow of designs, the use of colours, the ancientness of the craft and legends associated, the colonization of the craftsman, on patrons and customers and on social and economic contact with the world inside and outside the village. There were specific questions on the workshop itself and particularly the tools and the source of supply of these tools, because it was felt that tools decide everything and are the surest index of inertness or flexibility. Separate blocks of questions were designed to bring out the ramifications of artisan castes throughout the country and the ways they sustained them-

selves, the type of clientele they catered for, the extent to which they operated on money or barter or service, how specialized their craft was, how wide the market, how dependent they were on their socially preordained clientele and how restricted the latter was by the seemingly unalterable laws of social custom; the extent to which they could operate in the open market, the range of their wares and the sizes to which these were ordinarily restricted either by the limits of their own skill or the length of their customers' pursestrings. Inquiries were to be made about the operation of middlemen and of co-operative societies, the people who gave new designs and demanded new products. Finally the several stages of production of the articles themselves were to be fully described including the final and finishing stage and a list of very skilled craftsmen of each community was to be furnished. The third part was devoted specially to tribal communities and designed to find out how self-sufficient or dependent they were on the production and supply of manufactured goods, the extent to which they produced themselves or depended on others, their contacts with other communities and the specific forms of production and commerce through which these contacts were maintained.

Particular emphasis was laid on the need of obtaining as full an account as possible of unique regional design differentiations as they reflect not only the very culture patterns of the country but the persistent inventive faculties of the craftsmen. The importance was emphasised of giving full attention to articles of domestic use as it is in their shapes, designs and forms that the culture patterns and traditional skills persist most tenaciously.

Simultaneously with the investigation of specific crafts, State Superintendents proceeded to compile a comprehensive list of all types of handicrafts obtaining in their State. As for the specific crafts to be investigated several tables were devised from the structured questionnaire in order to guide investigators toward pointed observation and analysis, to enable them to write, not just general descriptions, but with their eye on the object and on facts.

Investigations conducted between September 1961 and May 1962, including a study group of all States and the Social Studies Division in December 1961 at Delhi, stimulated many of the States into going in for a much enlarged schedule. The revised village schedule itself, the counterpart of the first part of the February 1960 schedule, contained 19 large sections containing elaborate and probing questions. The Family Schedule for practising artisan families similarly contained 19 main questions each subdivided into many questions. The Family Schedule for non-practising artisan families contained 21 questions. There were schedules for the study of co-operative societies, of production-cum-training centres, and of consumer's preference. This enlarged schedule of investigation, in the formulation of which the States themselves actively assisted, was greatly welcomed. The surveys that will appear in this series will therefore consist of two main types : (a) those based on the original short schedule and (b) those based on the much enlarged schedule. In some cases Census Superintendents felt enthused enough to scrap the work based on the original short schedule and do it over again on the enlarged schedule. In the meantime much experience was gained on the analysis of facts and figures to clothe each observation with plenty of authentic information so that the reader could make his own judgement instead of being expected to see all the time through another pair of eyes.

This programme of survey of handicrafts and household industries has been fortified by several ancillary surveys, each one of which would deserve major attention. Along with the survey a compilation has been made of all handicraft centres in each State and an inventory prepared of skilled craftsmen. Photographic and other documentation has been built up to constitute what may now be regarded as the most considerable repository in the country. Elaborate and accurate maps of craft centres in taluks, tehsils and districts are either ready or under preparation. A full census of all fairs and festivals, weekly hats and markets, throughout India, has been taken and is being published for the first time. Andhra Pradesh has embarked upon a project of chronicling the social and religious antiquity and uniqueness of every fair and festival. A separate volume will be devoted to each district which promises to be of the

utmost value to sociologists and orientalists. A full and complete inventory, replete with sketches and measurements of every object, has been prepared of exhibits in museums of tribal crafts in India. There has been a fairly satisfactory survey of houses and buildings, indigenous architectural designs and use of local building material of the whole country. All this has been entirely a labour of love, patiently organised and executed under great strain and in disregard of health and comfort, for which I take this opportunity of expressing my appreciation and grateful thanks to my colleagues.

New Delhi,
July 30, 1964.

ASOK MITRA,
Registrar General, India.

PREFACE

In the Foreword, the Registrar General, India has been good enough to set out in some detail the genesis of the Rural Craft Survey undertaken by the 1961 Census Organization. I need hardly dwell on this further.

The method adopted in this State for conducting the survey was as follows. The Rural Craft Survey Schedule as prescribed by the Registrar General was translated into Telugu and adequate numbers of the same were printed and distributed to all the school teachers in villages through the Block Development Officers and the Zilla Parishads. We were encouraged to do so on account of the good account that the village school teachers gave as Census enumerators at the 1961 Census and the great co-operation they extended in conducting the Fairs and Festivals Survey of which a mention has also been made by the Registrar General in his Foreword. Along with the questionnaire a printed appeal was also addressed to each of the correspondents. The response was good and about 14,500 questionnaires were ultimately returned answered. The appeal and the questionnaire are printed as Annexure at the end of this book. The answering of this questionnaire in all particulars by the elementary school teachers who have had no training in surveys of this sort was none too easy and we did find several omissions and some of them had to be made good by the staff of this office visiting certain centres and collecting supplemental information. The response from certain towns and cities was not very encouraging. Perhaps the correspondents found it difficult to conduct surveys in urban centres. In the larger cities the tabulation staff of the Census organization carried out a quick survey and furnished the schedules.

The schedules that were returned answered provided a wealth of authentic information and 7 tables were built up districtwise and talukwise and for each city. All these tables became too voluminous to be printed completely. Therefore, three concise tables in the following form were prepared and printed in each of the District Census Handbooks that are being brought out separately as State Government publications.

TABLE—A

DISTRIBUTION OF ARTISAN COMMUNITIES

Sl. No.	Name of caste or community	Name of craft	No. of villages/ towns surveyed	Total No. of families in the villages/towns covered by the survey	No. of families working	Total No. of adult workers			No. of families working under co-operation	No. of families working in	
						Persons	Males	Females		Own houses	Workshops set up by their employers
1	2	3	4	5	6	7	8	9	10	11	12

TABLE—B

LIST OF VERY SKILLED CRAFTSMEN OF EACH COMMUNITY

Sl. No.	Name of village/town and Location Code No.	Name of craft	Name of community	Names of skilled craftsmen
1	2	3	4	5

TABLE—C

DISTRIBUTION OF ARTICLES OF CRAFTS BY MAIN MATERIAL USED, NUMBER OF PERSONS EMPLOYED IN PRODUCTION, SOURCE OF DESIGN, MANUFACTURE, MARKETING AND EARNINGS

Sl. No.	Industrial major group	Name of article	Name of main material	No. of villages/towns engaged in manufacture	No. of persons employed in production			No. of villages/towns engaged in manufacture of articles of		No. of villages/towns which produce for sale in open markets	No. of villages/towns where there are co-operative sales societies	Average earnings per worker per day
					Persons	Males	Females	Traditional designs	All other designs			Rs. P.
1	2	3	4	5	6	7	8	9	10	11	12	13

The main 7 Rural Craft Survey Tables that have been prepared are retained in the Census Office for reference and any scholar interested is welcome to use them.

Besides building up the statistical tables as explained above, the preparation of descriptive monographs on some of the noted crafts of the State was undertaken. The crafts selected for this purpose were :

(i) Filigree Industry of Karimnagar
(ii) Leather Puppet Dolls
(iii) Kalamkari Temple Cloth Painting of Kalahasti
(iv) Kalamkari Cloth Printing of Masulipatnam
(v) Woollen Pile Carpet Industry of Warangal and Eluru
(vi) Crochet Lace Industry
(vii) Brass and Bell Metal Industry
(viii) Bangle Industry

Of these the first five were studied by me personally during my tours on Census duty. The remaining three have been surveyed by the Deputy Superintendent of Census Operations, Shri K.V.N. Gowd. These studies provided us some diversion from the taxing Census duties and were, therefore, welcome. We could not undertake the survey of more crafts though we would have loved to do had time permitted. Andhra Pradesh is particularly noted for a number of exquisite handicrafts. Besides the above there were other renowned crafts like the handloom cotton and silk weaving industry with individual excellences at different centres of Andhra Pradesh, such as at Uppada and Peddapuram in East Godavari District, Venkatagiri in Nellore District, Dharmavaram in Anantapur District, Yemmiganur in Kurnool District, Gadwal, Amarchinta and Narayanpet in Mahbubnagar District, Siddipet in Medak District, Armur in Nizamabad District, Pochampalle in Nalgonda District, etc. There was the sophisticated Nirmal painting work now mostly concentrated in Hyderabad City. There were exquisite wooden toys made at Nakkapalle and Etikoppaka in Visakhapatnam District, Kondapalle in Krishna District and Nirmal in Adilabad District. There was also the intricate Bidriware for which Hyderabad has made a name. Hyderabad is also the centre of attractive Himroo shawl manufacture. The polished horn work and ivory inlay work in tortoise shells is carried on in Visakhapatnam. We leave it to others to conduct a survey of all these crafts.

In the present volume, the monographs on the following crafts studied by me have been presented:

(i) Filigree Industry of Karimnagar
(ii) Leather Puppet Dolls
(iii) Kalamkari Temple Cloth Painting of Kalahasti
(iv) Kalamkari Cloth Printing of Masulipatnam
(v) Woollen Pile Carpet Industry of Warangal and Eluru

I have attempted to give an authentic account of what I had observed, the history and the fortunes of these various crafts to the extent that they could be ascertained, and in what state they exist at present. I have also attempted to give some account of the techniques of the production, the life of the craftsmen and compile a list of the well-known master craftsmen. I shall be content if this study helps to fill any gaps that may exist in our knowledge of these crafts.

I wish to thank Dr. Roy Burman, and Mrs. Ruth Reeves of the Registrar General's Office for all their assistance and guidance in finalising my monographs. I also wish to place on record my appreciation of the assistance rendered by the following of my office: Deputy Superintendent of Census Operations, Shri K.V.N. Gowd; the Tabulation Officer of the Special Surveys Branch, Shri P. Pattayya; the Research Assistant, Shri T.V.S. Ramachandra Murty; the Statistical Assistant, Shri Y. Ranganna; the Artist, Shri M. Krishnaswamy, and a host of others in the Office who had tackled this taxing work of sorting out the rural craft schedules and preparing the voluminous tables and typing them. The printing was supervised by Shri T. Brahmiah, the Assistant Tabulation Officer.

Above all my grateful thanks are due to Shri A. Mitra, Registrar General, India, who has been the chief guiding spirit behind all our efforts at the 1961 Census Operations. It is his personal example and the encouragement we received from him that made us to venture into the several ancillary studies of the 1961 Census.

A. CHANDRA SEKHAR,
Superintendent of Census Operations,
Andhra Pradesh.

STATE MAP SHOWING THE CRAFT CENTRES SURVEYED

ANDHRA PRADESH

CRAFT CENTRES SURVEYED

ZONAL BOUNDARY —— STATE BOUNDARY ——

KILOMETRES 32 0 32 64 96 128 160 192

32 0 32 64 96 128 MILES

77° E 78° E 79° E 80° E 81° E 82° E 83° E 84° E

21° N 20° N 19° N 18° N 17° N 16° N 15° N 14° N 13° N 12° N

MAHARASHTRA

TO NAGPUR

TO BALHARSHAH

ORISSA

TO RAYAGHADA

TO CALCUTTA

KARIMNAGAR

WOOLLEN PILE CARPET

WARANGAL

FROM BIDAR

SILVER FILIGREE

FROM BOMBAY

MYSORE STATE

FROM BOMBAY

ELURU

MADHAVAPATNAM

LEATHER PUPPET DOLL

MASULIPATNAM

WOOLLEN PILE CARPET

KALAMKARI CLOTH PRINTING

CHAKARLAPALLE

TO BANGALORE

KALAHASTI

TO MADRAS

TO MADRAS

TO MADRAS

TO JALARPET

MADRAS STATE

KALAMKARI TEMPLE CLOTH PAINTING

LEATHER PUPPET DOLL

RAILWAY BROAD GAUGE

NATIONAL HIGHWAYS

CRAFT CENTRE

K. SWAMY
Artist

Prepared at the Office of the Superintendent of Census Operations, Andhra Pradesh, Hyderabad.

CONTENTS

SELECTED CRAFTS OF ANDHRA PRADESH

Monograph No.		*Pages*
	FOREWORD	i–iv
	PREFACE	v–vii
(i)	FILIGREE INDUSTRY	1– 14
(ii)	LEATHER PUPPET DOLLS	15– 35
(iii)	KALAMKARI TEMPLE CLOTH PAINTING OF KALAHASTI	37– 49
(iv)	KALAMKARI CLOTH PRINTING OF MASULIPATNAM	51– 66
(v)	WOOLLEN PILE CARPET INDUSTRY	67–117
	ANNEXURE	119–128

MAP

State Map showing the Craft Centres Surveyed . . . *Facing contents*

(i) FILIGREE INDUSTRY

Section		*Pages*
I.	INTRODUCTION	3– 4
II.	TECHNIQUE OF PRODUCTION	5–10
III.	ECONOMICS OF THE FILIGREE INDUSTRY	11–12
IV.	CONCLUSION	13
	APPENDIX	14

ILLUSTRATIONS

Plate No.		*Facing page or between pages*
1.	How the wire was drawn before the wire drawing machine was introduced	4
2.	Drawing wire through *kambechchu* to obtain thinner gauges	4– 5
3.	Two strands of silver are wound together	4– 5
4.	The pleated wire	4– 5
5.	The wound wire is heated	4– 5
6.	The wound wire is flattened	5
7.	Outer frames of a design fixed to a wooden board	6
8.	Inner ribs of a design being fixed within the outer frame	7
9.	A block being covered by *tankam* pieces	8
10.	A filigree block being polished	9
11.	A few finished products	9
12.	A silver filigree *attardan*	10
13.	A silver filigree *pandan*	10–11
14.	A silver filigree tray	10–11
15.	Creeper and flower design	11
16.	Karimnagar design	11

(ii) LEATHER PUPPET DOLLS

Section		*Pages*
I.	INTRODUCTION	17–18
II.	TECHNIQUE	19–20
III.	THE ART OF SHADOW PLAY	21–23
IV.	SOCIO-ECONOMIC CONDITIONS OF THE SHADOW PLAY ARTISTES	24
V.	CONCLUSION	25
	APPENDIX I	26
	APPENDIX II	27–28
	APPENDIX III	29–35

ILLUSTRATIONS

Plate No.		*Facing page or between pages*
1.	One of the formerly produced shadow play puppets	16
2.	The outline of the basic design marked on a cleaned and dried goat skin	18
3.	A typical leather puppet figure (head portion)	19
4.	A ceiling painting of Veerabhadra at Lepakshi temple	20
5.	A painting of Narasimha Avatar in Vishnumurti shrine at Lepakshi temple	20–21
6.	A typical single piece leather puppet figure	20–21
7.	Leather figures of animals and birds	20–21
8.	Bamboo sticks attached to the leather puppet figures. A performer demonstrates how they are held.	20–21
9.	Pedda Anjanayya and Chinna Anjanayya of Chakarlapalle demonstrate how the puppet figures are animated	21
10.	A group of performers behind the screen	22
11.	Song accompaniers	22
12.	Rama	22–23
13.	Rama, Lakshmana and Krishna (part figure)	22–23
14.	Ravana and Mandodari	22–23
15.	Vali and Sugreeva	22–23
16.	Bangarakka and Killegithirigadu	22–23
17.	A puppeteer reciting the lines of Hanuman, one of the most important characters in the epic *Ramayana*	22–23
18.	General layout of the shadow play	22–23
19.	Behind the screen	23
20.	The leather puppet figures are packed flat in a rectangular bamboo basket	24
21.	Itinerant *Tholubommalata* family moves about in a bullock cart with all their belongings	25
22.	The leather puppet doll players of Madhavapatnam near Kakinada, East Godavari District	27

(iii) KALAMKARI TEMPLE CLOTH PAINTING OF KALAHASTI

Section		*Pages*
I.	INTRODUCTION	39–41
II.	RAW MATERIALS AND EQUIPMENT	42
III.	PROCESSES OF PRODUCTION	43–45
IV.	DESIGNS	46–47
V.	COST OF PRODUCTION	48
VI.	CONCLUSION	49

ILLUSTRATIONS

Plate No.		*Facing page or between pages*
1.	A Kalamkari cloth said to be 100 years old	38
2.	A recently painted Kalamkari cloth	38
3.	A typical temple cloth panel	38–39
4.	The outline of figures being drawn in black, free hand by a skilled worker	42
5.	Alum solution being applied on the painted cloth	43
6.	Cloth being boiled in a cauldron	44
7.	Boiling a temple cloth after alum solution has been applied on it	44–45
8.	Red dyed cloth being spread on the Swarnamukhi river bed for bleaching	44–45
9.	The dyed cloth spread on the river bed is sprinkled with water	44–45
10.	Red dyed cloth spread on the river bed at the beginning of the bleaching process	45
11.	Dyed cloth spread on the river bed at the end of the bleaching process	45
12.	A Kalamkari panel showing detail of *Krishna Leela.*	46
13.	A Kalamkari painted temple cloth said to be 100 years old	47
14.	Kalamkari panel strips for use as *shamiana* edges	47
15.	Shri Cherumathur Ramachandran	49

(iv) KALAMKARI CLOTH PRINTING OF MASULIPATNAM

Section		*Pages*
I.	INTRODUCTION	53-55
II.	RAW MATERIALS AND IMPLEMENTS	56
III.	PROCESS OF MANUFACTURE	57-60
IV.	DYES	61-62
V.	DESIGNS	63
VI.	CRAFTSMEN	64
VII.	COST OF PRODUCTION AND TIME TAKEN	65
VIII.	CONCLUSION	66

ILLUSTRATIONS

		Facing page or between pages
	Map showing the location of Kalamkari Industry in and around Masulipatnam Town	53
Plate No.		
1.	Shri Venkataswamy Naidu	54
2. 3. 4.	Printing Blocks	56-57
5.	Tray-cum-printing pad	58
6.	Printing tray and the bamboo separators	58
7.	Mungi Subba Rao, an old worker attending to printing	58-59
8. 9.	Wax processing	58-59
10.	Three legged bench used for wax processing	58-59
11. 12.	*Kalams*	58-59
13.	Indigo vat	60
14.	Cloth being boiled for removal of wax	61
15.	Yellow colour being applied by a short *kalam*	61
16.	A finished door curtain	62
17.	Kalamkari cloth of Jainamaz design—A Muslim prayer cloth	63
18.	Shri Rekapalli Pardhasaradhy Naidu with some of his workmen	64
19.	Medals awarded at the London Wembly Exhibition, 1924	65

(v) WOOLLEN PILE CARPET INDUSTRY

A—WARANGAL

Section		*Pages*
I.	INTRODUCTION	69-71
II.	CARPET DESIGNS	72
III.	RAW MATERIALS AND IMPLEMENTS	73
IV.	PROCESSES OF MANUFACTURE	74-77
V.	PRICE STRUCTURE OF THE PILE CARPETS	78
VI.	CONDITION OF THE WORKERS	79-81
VII.	CONCLUSION	82

ILLUSTRATIONS

Plate No.		*Facing page or between pages*
1.	A coloured picture of a pile carpet of Warangal along with the designer	68
2.	Thotti design	72
3.	A Persian design	72
4.	Doctor design	72-73
5.	Typical Warangal carpet	72-73
6.	Some of the implements used	73
7.	A carpet design worked on a graph sheet	74
8.	A girl spinning the woollen yarn	74-75
9.	Dyeing vat	75
10.	Warp wound up by rolling round a bamboo	76
11.	Loom with warp mounted	76
12.	Weaving under progress	77

(v) WOOLLEN PILE CARPET INDUSTRY—*Concld.*

B—ELURU

Section		*Pages*
I.	INTRODUCTION	85-86
II.	TECHNIQUES OF MANUFACTURE—COMPARISON WITH WARANGAL	87-88
III.	DESIGNS	89-90
IV.	PROCESS OF MANUFACTURE	91-93
V.	CASE STUDIES	94-103
	APPENDIX I	104-110
	APPENDIX II	111-115
	APPENDIX III	116-117

ILLUSTRATIONS

		Facing page or between pages
	Map showing the location of Woollen Pile Carpet Industry in Eluru Town	85
Plate No.		
1.	Hashimkhani design	88
2.	Pile carpet loom	92
3.	The main hall of the workshop of the Co-operative Carpet Weaving Centre, Eluru	92
4.	Tools and implements	93
5.	Carpet being cut to level with finishing shears	93
6.	Shri Moody and his team of workers	96
7.	An exquisite carpet manufactured by M/s. Moody Stores, Eluru	96
8.	A carpet manufactured by M/s. Moody Stores, Eluru	96-97
9.	A carpet manufactured by M/s. Moody Stores, Eluru	96-97
10.	House-cum-workshop of Shri Mahmood Zeelani, Adivarpet, Eluru	97

(i) FILIGREE INDUSTRY OF KARIMNAGAR

SECTION I

INTRODUCTION

Introductory

1. In the heart of Karimnagar, a district headquarters town of Andhra Pradesh, is located a very unostentatious little shop with a board, Tarkashan* Industrial Co-operative Society. Hardly any one realises that this is the centre of production of one of the most exquisite and delicate handicrafts of Andhra Pradesh, viz., the silver filigree work. Filigree work is not uncommon in other parts of the country like Orissa. But Karimnagar claims a technique and quality of its own which are unique.

History and origin

2. The history of the Filigree Industry of Karimnagar has been traced back to about 200 years. One Shri Kadarla Ramiah of Elgandal and one Shri Sriramoj Venkataramiah of Manakondur both of the traditional goldsmith community of Kamsali appear to have originated this industry. Elgandal and Manakondur are villages lying within a distance of about 7 miles from Karimnagar. Elgandal was the district headquarters of the then existing administration. Judged by some of the old designs of the products of this industry, it would seem that the art and design had been borrowed from foreign countries of the Middle East. There is no recorded history, however, of this industry. The present workers who are the direct descendants of the founders of the industry state that their ancestors used to tour foreign countries and it was quite likely that they had picked up the technique and the designs from those countries and with their own dexterity developed it here.

3. The industry appears to have been patronised mainly by the Jagirdars and the ruling Nawabs and the type of articles produced were purely of silver and the designs were individualistic and expensive more intended to serve the individual needs and tastes of the well-to-do, which apparently resulted in the concentration of this industry at one centre and with only a few craftsmen's families taking to it. Thus it was not broad based and did not depend on popular demand from the ordinary people. However, the products of this industry enjoy a great reputation for quality, strength and delicacy of workmanship. It is said that in 1911 the filigree articles of this area were specially selected for the Delhi Durbar. At the Calcutta Exhibition on the occasion, the filigree articles are said to have secured the first prize (I have, however, not been able to lay my hands on any record pertaining to this).

4. The industry seems to have faced a period of adversity perhaps due to the disturbed fortunes of the ruling Nawabs. About 76 years ago the Nizam's Government appears to have taken some interest to better the lot of these workmen and invited them to shift themselves to Karimnagar, the new district headquarters, where they were offered some house sites free of cost to build their houses and establish themselves there.

5. Karimnagar town is a municipality with a population of 31,554 (1961 Census) and lies about 96 miles from Hyderabad in the north north-east direction. It is connected by a good asphalt road from Hyderabad. It is not served by a railway.

The craftsmen families and master craftsmen

6. There are now about 35 families in Karimnagar town, all of them of Kamsali community (goldsmiths and silversmiths) who are now engaged in this industry. The following are the 'house names' or surnames of these families:

(1) Kadarla
(2) Sriramoj (Bommakanti)
(3) Katnepalle
(4) Gadde
(5) Kannoju
(6) Tipparti
(7) Erroju
(8) Katta
(9) Ravala
(10) Vangala

7. The following are the master craftsmen:

(1) Kadarla Narayana
(2) Katnepalle Sudarsanam
(3) Sriramoj Chandraiah
(4) Gadde Nagabushanam
(5) Gadde Venkatadri
(6) Katnepalle Rajamani
(7) Sriramoj Kanakaiah
(8) Kadarla Hanumaiah
(9) Tipparti Ramakrishnaiah
(10) Sriramoj Jagannadham

* "Tarkashan" in Urdu means drawing of wire.

8. The workers, 80 in number, have organised themselves into a co-operative society called Tarkashan Industrial Co-operative Society which practically holds a monopoly of the craft. *Tarkashan* in Urdu would mean drawing of wire. The following are the present office-bearers of the Co-operative Society:

President: Shri Sriramoj Chandraiah.
Secretary: Shri G. Venkata Krishnaiah.
Manager: Shri K. Rajamani.



Plate 1. How the wire was drawn before the wire drawing machine was introduced.



Plate 2. Drawing wire through *Kambechchu* to obtain thinner gauges.

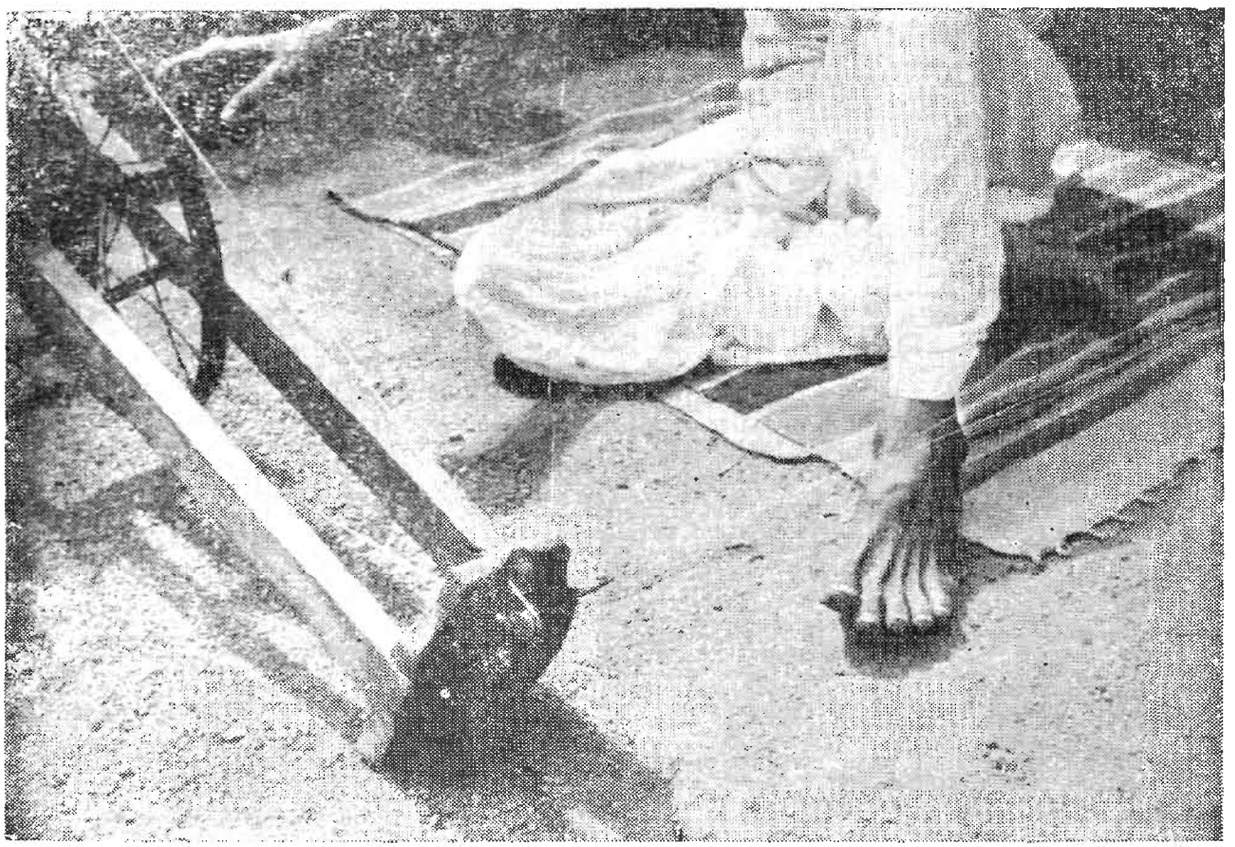


Plate 3. Two strands of silver are wound together.

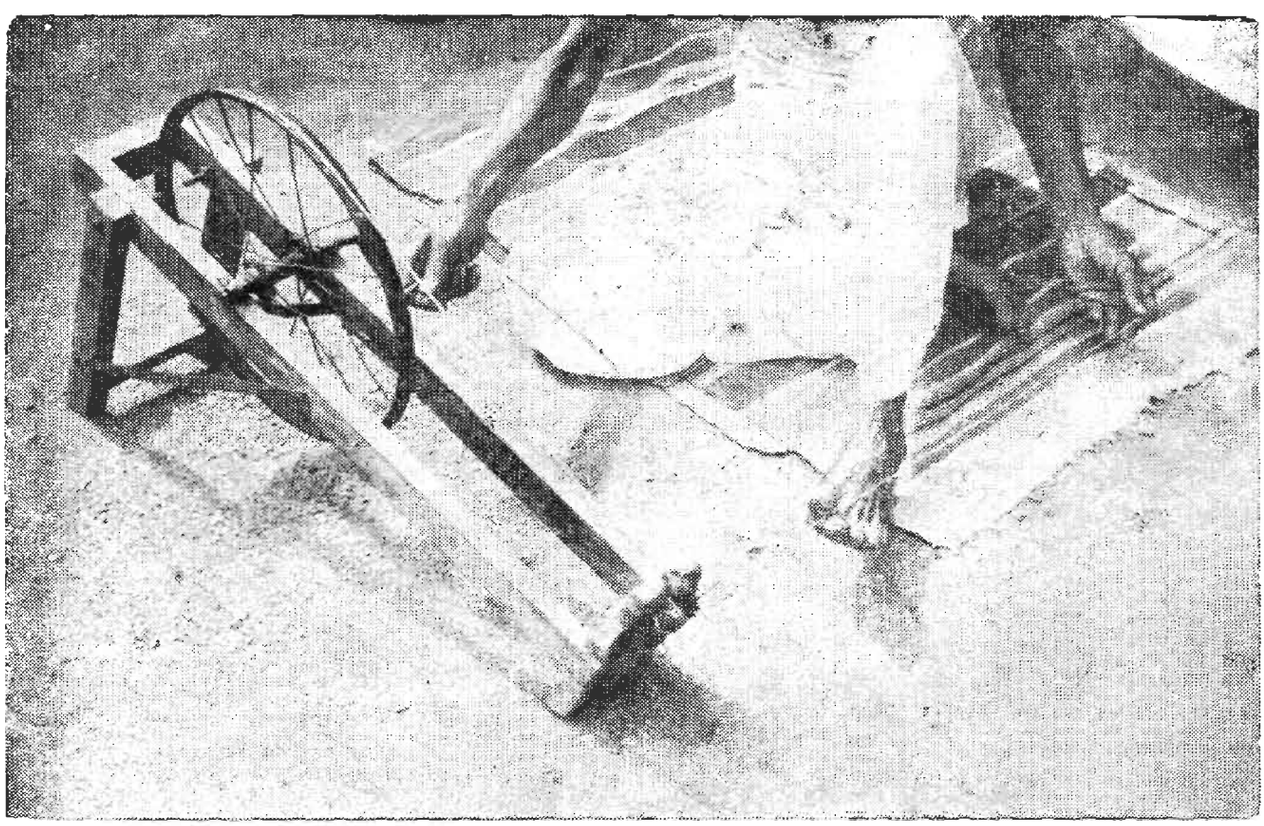


Plate 4. The pleated wire.

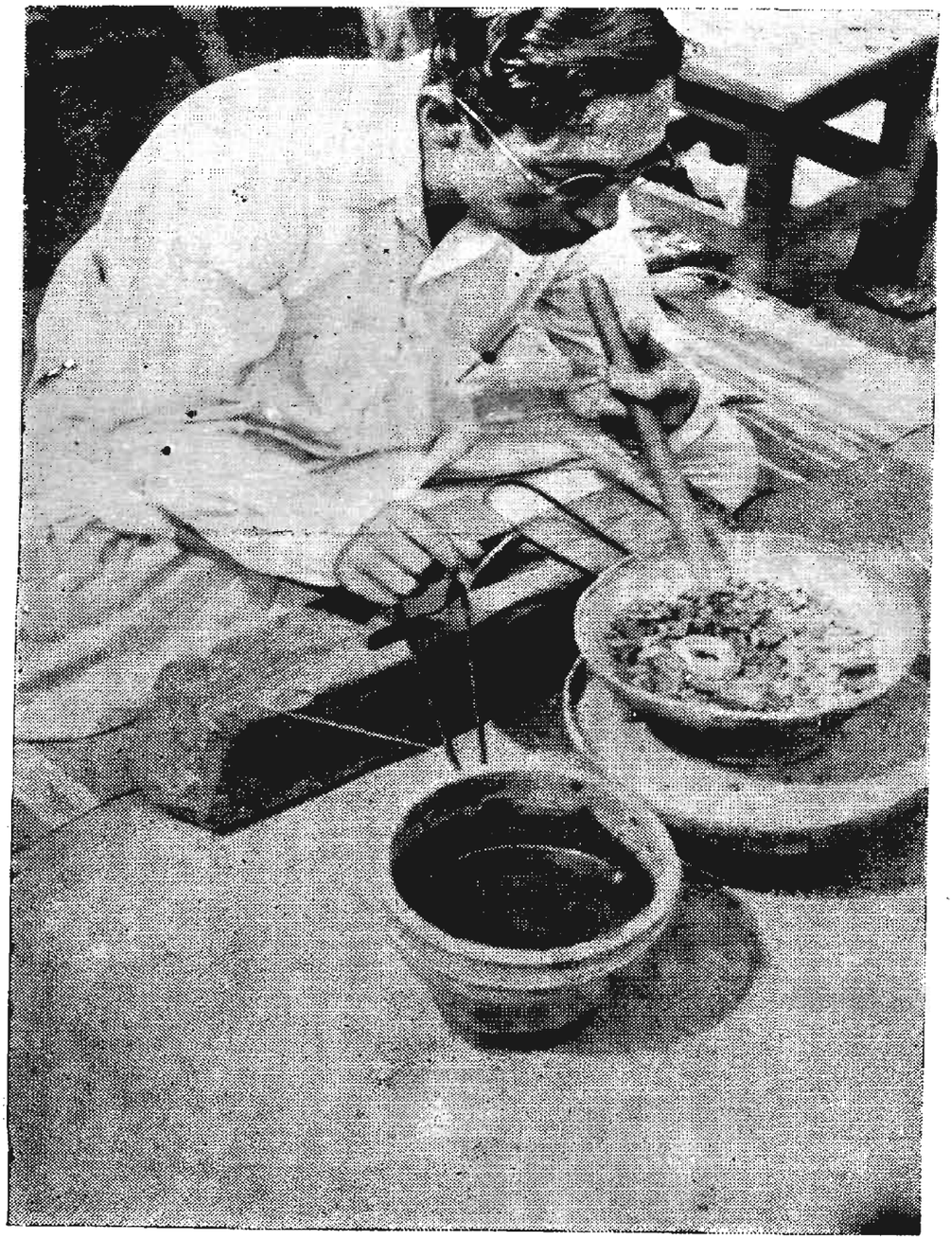


Plate 5. The wound wire is heated.



Plate 6. The wound wire is flattened.

SECTION II

TECHNIQUE OF PRODUCTION

Raw materials

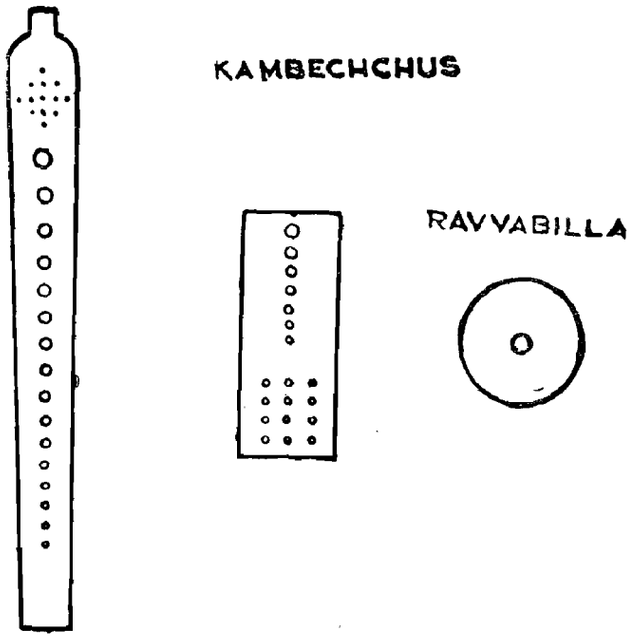
9. The uniqueness of the Karimnagar Filigree products is that they are made of pure silver without any mixture. In other parts of the country where filigree work is practised cheaper alloys are said to be utilised. The Karimnagar Filigree workers claim that the utilisation of pure silver gives their articles strength and intrinsic value.

10. The main raw material needed for the Karimnagar Filigree work is therefore silver. A very small quantity of copper and brass is needed to make up the soldering material for joining the filigree pieces. The other articles utilised in the manufacturing processes as will be explained in the succeeding paragraphs are bee wax, *nawasagar*, *gumchies*, *bhoonsa*, sulphuric acid and coal.

The manufacturing processes

Stage I:

11. Pure silver ingots are put through a wire-drawing machine which the Co-operative Society had recently acquired with government assistance and round wire is drawn down to 14 gauge. Before the acquisition of the machine, the silver ingots were beaten on an anvil and elongated into some sort of rough wire and then it was heated and put through a steel plate wire gauge called *jantharpatti* or *kambechchu* which had apertures of different gauges. One end of the wire was passed through the *kambechchu* and tied to an iron peg nailed into a vertical wooden pillar and the worker took the *kambechchu* round and round the pillar by levering it with some strong iron implement so that as the wire was drawn through the hole of a particular gauge in the *kambechchu* it was reduced to that gauge. (Please see Plate 1). The wire was passed down from one gauge to the next smaller gauge and redrawn till the required gauge was reached. This was both laborious and time consuming. The hand operated drawing machine has undoubtedly facilitated the easy drawing of the wire. Even then the indigenous *kambechchu* cannot be dispensed with altogether. The drawing machine can reduce the silver ingots to a wire of 14 gauge only. It is necessary to draw the wire into much thinner gauge down to 36 gauge for the various types of designs that have to be executed. Therefore, the 14 gauge wire has to be drawn manually through the *kambechchu* to obtain wire of thinner gauge. (Please see Plate 2). The *kambechchus* are of different sizes. There are also circular discs called *ravva billa* with an aperture at the centre which are also used for drawing wire particularly of smaller gauges. The following drawings illustrate these instruments:



Silver wire of 36 gauge is mostly used for all the finer work.

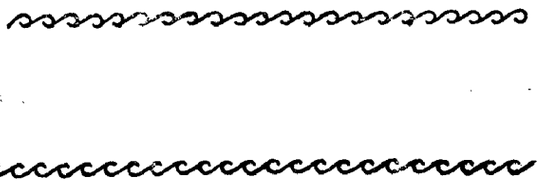
Stage II:

12. The next stage consists of the twisting of the thin silver wire and flattening it. This is perhaps the most important stage of preparation before the designs themselves are executed.

13. Two strands of the silver wire of 36 gauge prepared under the previous process are now wound together using a *charkha*. Before winding the wire it is heated in a charcoal furnace. The strands have to be wound and rewound thrice over till ultimately a fine pleated string of silver is got (Plates 3&4). The finally wound wire is rolled and put in a furnace (which is no more than an earthen pot broken into half and kept in an inverted position with burning coal in it) for 2 to 3 minutes (Plate 5).

14. The pleated wire is cut into pieces of about $2\frac{1}{4}'$ long. Each piece is then flattened very carefully on an anvil by beating lightly with hammer (Plate 6). The

flat strip that comes out will be about 36 gauge with granular edges or pleats on either side. Please see the figure below :



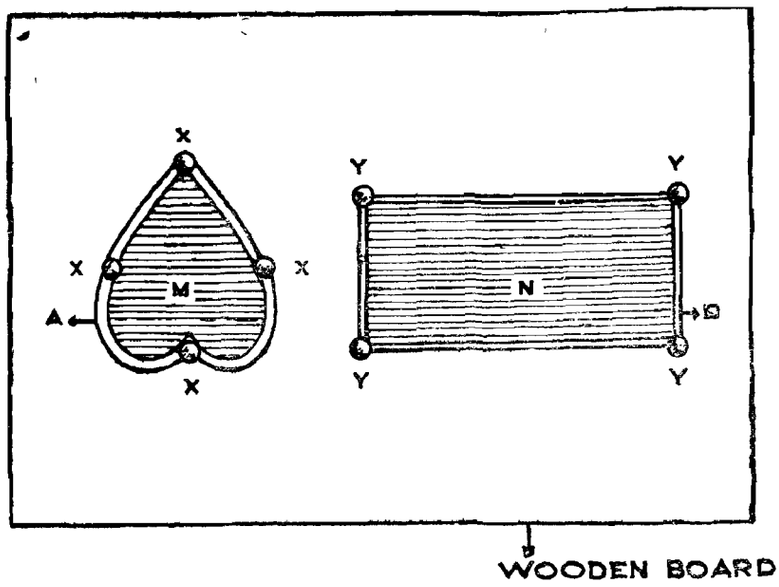
(An exaggerated illustration of a flat strip with pleat-like edges).

15. The preparation of these thin flat silver strips out of the twisted wire with fine granular edges is the whole secret of the filigree work. These flat pieces are later bent into different shapes and fixed vertically into spaces within a frame as will be described below giving the final piece a most attractive and delicate appearance.

Stage III:

16. Any article to be produced will be made up of a number of component parts that are pieced together. Each of these parts will be made into a block with an outer frame within which the required design is worked out and the finer details filled in. For example, a *pandan* or the box to carry betel leaves and nuts, etc., will be made up by five rectangular blocks, namely, the four sides, and the lid being joined together and fixed on to a silver plate bottom. Each of these rectangular blocks will have a thick silver frame within which the required design is made up by finer pieces being shaped and put together and fixed as will be explained in the following paragraphs.

17. Silver wire of 14 gauge is needed for working up the outer frame. The 14 gauge round wire that is drawn from the machine is beaten into the shape of a square wire and pieces of this 14 gauge square wire are cut, shaped and joined together to form the outer frame of a given design. This frame is fixed flat on a wooden board which is smeared with bee wax to hold the silver frame as also to keep in position the pieces that are filled later to make up the inner design. An extra quantity of bee wax is applied at a few places around the outer thick frame to keep it firm as in the illustration below. Plate 7 also shows a wooden board with a few outer frames fixed.



A & B : Outer frame of 14 gauge

M & N : Wax smeared surface

X & Y : Bee wax reinforcements

18. The next step is to fill the space within the frame with the main ribs of the design. These main ribs are usually the creeper stems, leaves, flowers, etc., and these may themselves form into small frames in the shape of a heart, circle, flower petals, leaves, etc., which have to be further filled with finer work. These ribs are made up by circular silver wire of 18 to 20 gauge being flattened to about 30 gauge flat wires. This flat wire is cut to convenient sizes and bent to form the required shape. These are fixed vertically

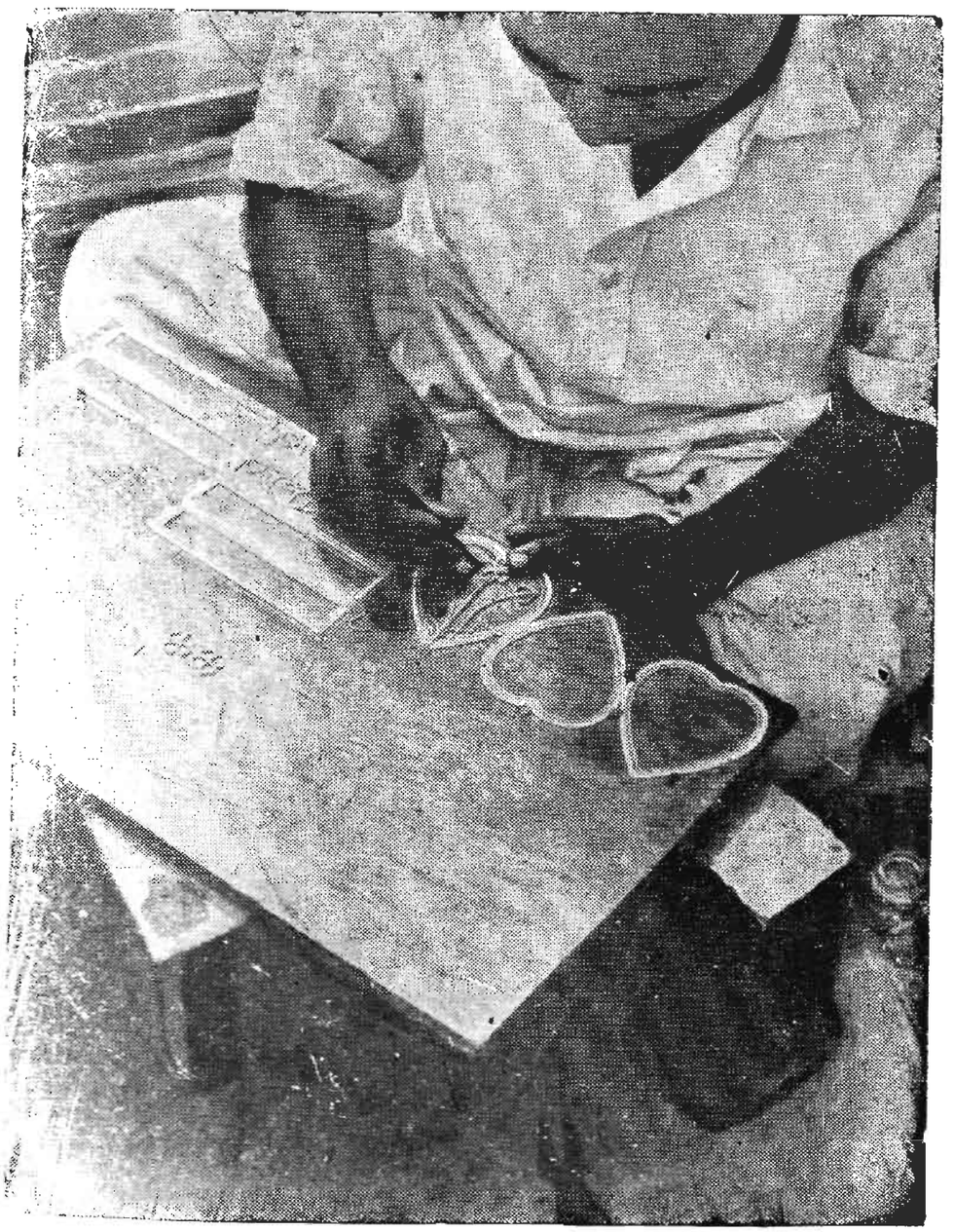


Plate 7. Outer frames of a design fixed to a wooden board.

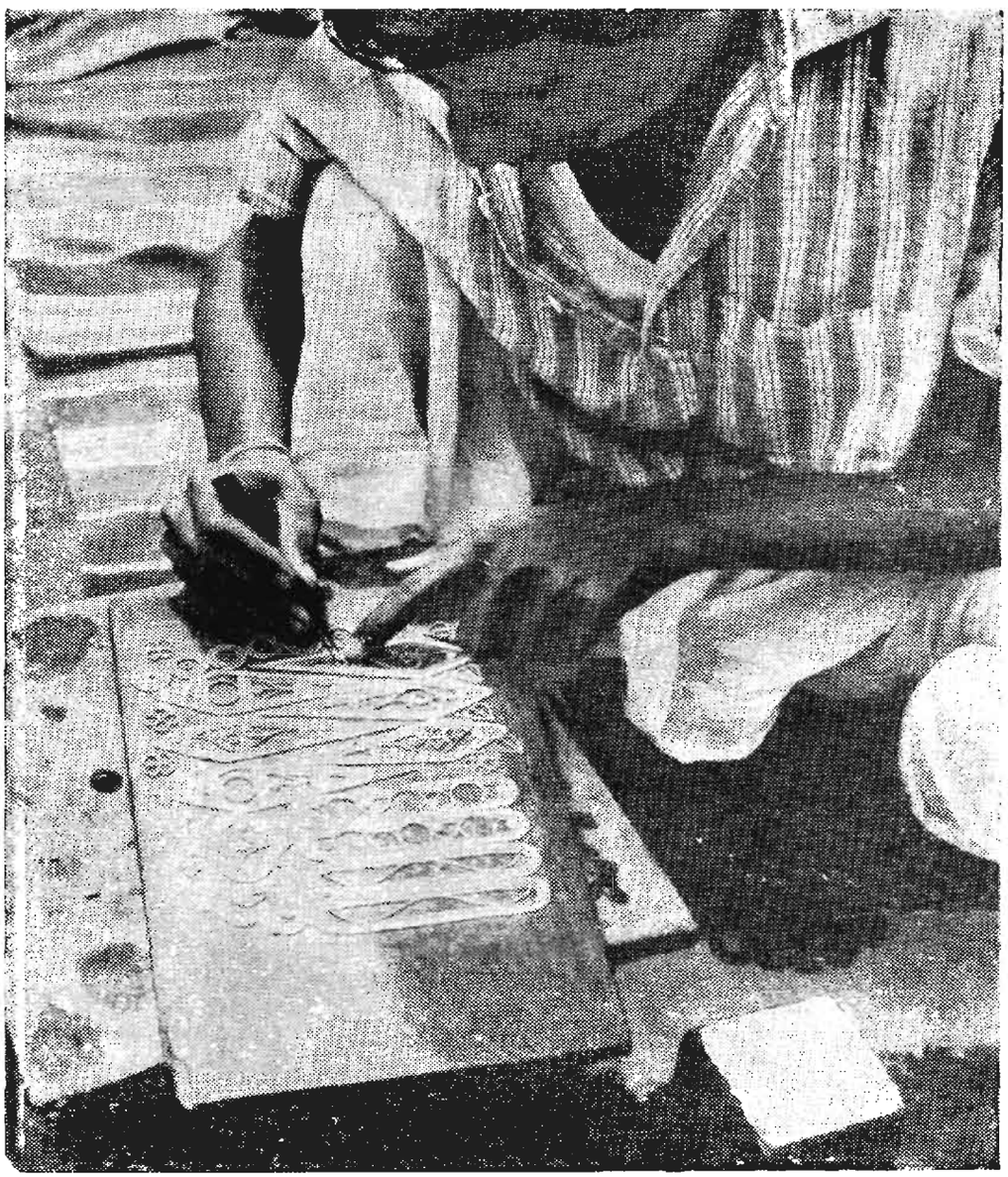
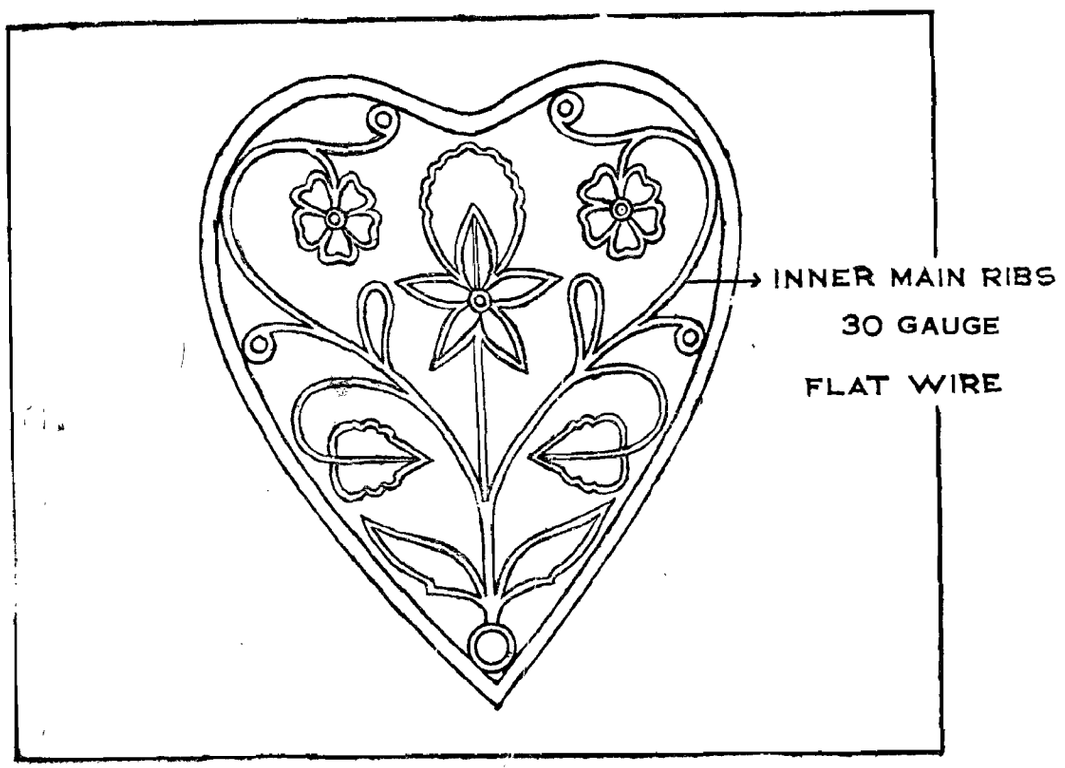


Plate 8 . Inner ribs of a design being fixed within the outer frame.

within the outer frame on the wooden board. The main ribs of the design are formed by the vertical face of the flat wire and not the broad side. Please see the illustration below:

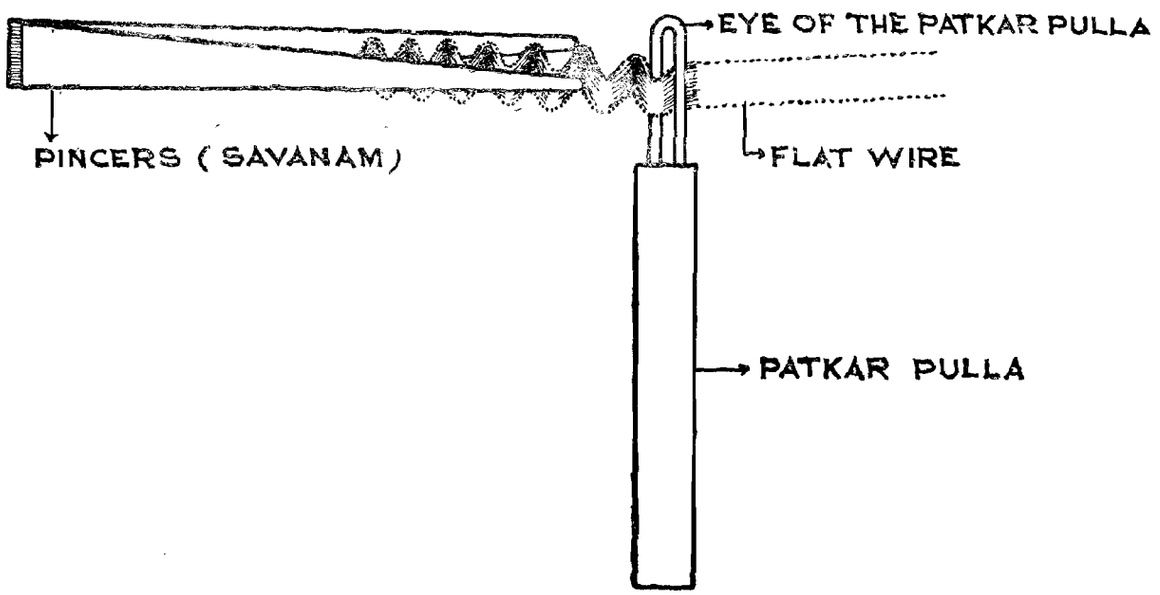


19. Plates 7 & 8 illustrate the inner ribs being fixed within the outer frames on the wooden board. The dextrous hands of the craftsman neatly shaping the flat wire into delicate designs with the help of a pair of small pliers or pincers is very interesting to watch. After a design is finalised the craftsman makes a number of pieces of these inner frames of standard shapes such as hearts, circles or leaves and fixes them in proper places within the outer frame on the waxed wooden board. In the photographs a number of these pieces lying loose on the wooden board may be observed.

Stage IV:

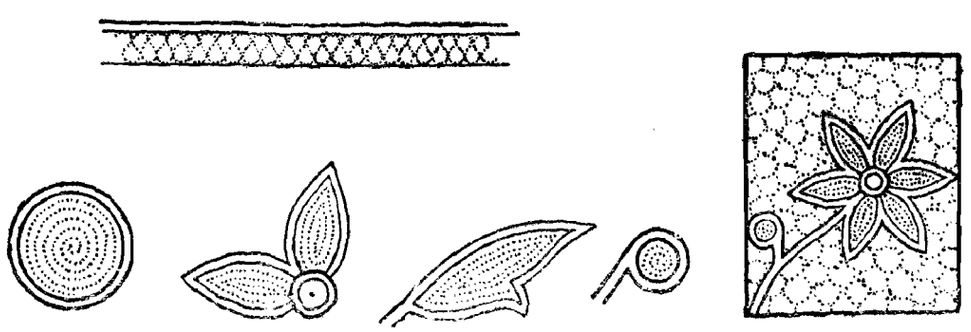
20. The next step is to fill in the whole interspaces within the design with delicate tendrils or circular pieces which gives the entire product its character of filigree. It is these fillings that give the filigree work its distinct and delicate appearance of a mosquito curtain finish. It is here that the plaited silver wire flattened to 36 gauge with granular edges, the preparation of which was described under Stage II comes in.

21. This flat wire strip is corrugated or rolled into different shapes and is used for filling all the interspaces of the main design. A pair of pincers and an instrument called the *patkar pulla* which is no more than a bent wire attached to the end of an iron rod to form an eye (please see the illustration on page 8) are used for giving the flat wire a regular corrugated shape. The flattened wire which is passed through the eye of the *patkar pulla* is bent very dextrously into a wavy design by turning the *patkar pulla* in alternate directions with the trained fingers of the filigree expert. The bent wire is fed into a pair of pincers (please see the illustration on page 6). This is a delicate operation which is executed beautifully and with considerable speed by the expert.



22. The corrugated wire is pressed in the middle to give it the shape of alternative wave. The wire is sometimes ( ) wound to give the shape of concentric circles ( ), the circular piece so made is sometimes pressed to give it an elliptical shape ( ). Small pieces of the flat wire are bent to form small Ss or double circles ( ) which are used in innumerable numbers to fill in the interspaces of the filigree design. The workmen usually store these in large numbers in small glass bottles.

23. The workman proceeds to fill the interspaces within the frame work, the preparation of which has been described under Stage III. The corrugated continuous wire strip is used for filling the space along the border, the concentric circles within the spaces of circular inner frame, the elliptical pieces in the interspace of leaves or oblong flower petals and all other interspaces are filled with the small Ss or double circles. These pieces are also fixed vertically so that only the granular edges of the flat wire show up. (Please see the illustrations below).



All this is done with the help of pincers. This operation requires great dexterity and patience. The fillings have to be closely packed together uniformly so that the ultimate net-work may have the strength and a uniformity of texture. The waxy surface of the wooden board helps to keep all the fillings in position.

24. As already observed it is the filling of the interspaces within the outer designs by these delicately bent pieces that gives the filigree work its distinct character. The flat thicker surface of the main ribs of a design show as a contrast against the granular delicate surface of the finer fillings of outer spaces rendering the whole design very attractive.



Plate 9. A block being covered by *tankam* pieces.



Plate 10. A filigree block being polished.

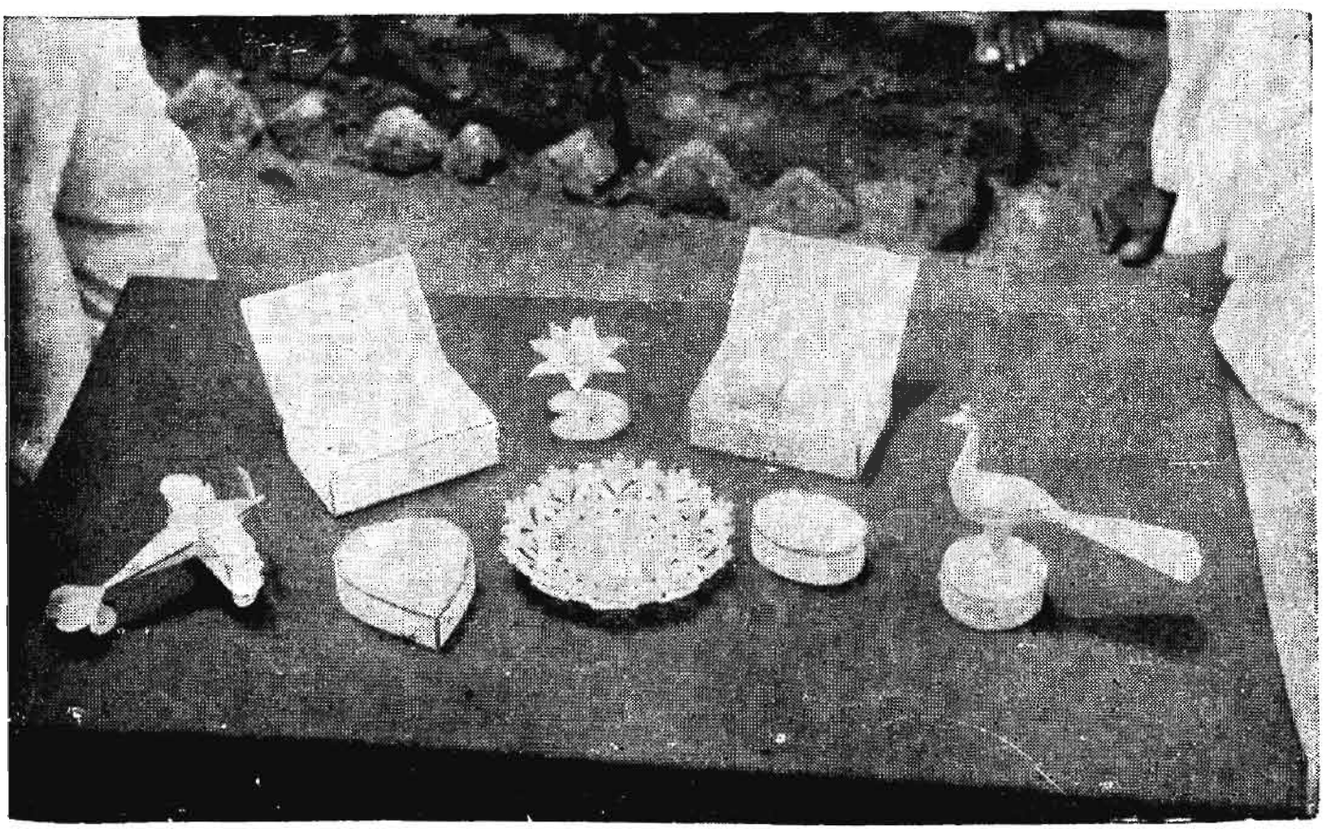


Plate 11. A few finished products.

Stage V:

25. The next stage is to see that the entire design along with the outer frame is fixed firmly together.

26. The workman secures together the entire design as laid in position on the wooden board by a gummy substance. For this purpose he prepares a solution of borax locally called *veligaram* or *sohaga* mixed and boiled in water. A fine paste is also prepared by rubbing briskly *guruginja* (*abrus precatorius*—the seed used as grain in the measurement of weight of gold) with its outer cover removed against a flat stone with a little water spread on it. The *veligaram* solution and the *guruginja* paste are mixed together and spread over the finished design on the wooden board.

27. The entire block of design along with the outer frame is then carefully removed from the wooden board by heating the block to melt the bee wax. The frame with the design in it remains intact on account of the close packing and the spreading of the gummy solution as detailed in the last paragraph.

28. The next step is to see that the entire design so delicately made up with thousands of individual pieces put together is firmly fixed. For this purpose the workman prepares small square strips 1/3" square cut out of a very thin sheet of an alloy of silver and copper mixed in the proportion of 3:1. This is locally referred to as *tankam*. These *tankam* pieces are spread on the design so as to completely cover it (Plate 9). The block with the *tankam* pieces spread on it is placed on a charcoal furnace. After the block is heated sufficiently, dry paddy husk is sprinkled on it which bursts into a flame helping to completely melt the *tankam* spread on the design. This is very important. The workman keeps testing by sprinkling the paddy husk to see if the block has been sufficiently heated to enable the *tankam* to melt. The *tankam* melting away with a burst of flame as if by magic is almost greeted with joy on the face of the workman! The molten *tankam* apparently gets into the crevices and helps to secure together all the silver pieces firmly and permanently. The workmen reckon that for 100 tolas of the main silver work, 6 tolas of *tankam* will be required. The block is then removed from the furnace and cooled by dipping in cold water.

Stage VI:

29. The final stage is to clean the blocks, polish them and join the component units to make the finished product.

30. The block after it is removed from the furnace on completion of the *tankam* process is put in dilute sulphuric acid for about 5 minutes. It is said that originally the workmen used to use mere tamarind solution for the purpose. It is then polished with a fine wire brush which gives it the final gloss (Plate 10).

31. The finished blocks are then attached together to make up the required articles. Almost all the articles are fixed on to a plain bottom plate of silver. The bottom silver plates are also prepared by workmen themselves by beating silver into thin plate and cutting into shape. The Co-operative Society has acquired a plating machine which helps to press silver into plates of required gauge. The joining of the component blocks is done by soldering them with an alloy of silver and brass mixed in the proportion of 2:1, called *ravva*. It is reckoned that for an article of 100 tolas of main work 1 tola of *ravva* will be needed.

Articles and designs

32. The filigree articles that are generally produced are trays and *pandans* (betel leaf holders), which are very widely used particularly by the old Jagirdari families of Hyderabad. The *pandans* are generally rectangular in shape. They are also produced in different shapes such as heart, circular, oval and so on. Various other fancy articles such as *kumkum* containers, scent holders, cigarette cases, match box holders, etc., are also being produced in different shapes such as aeroplanes, peacocks etc. The basic mode of manufacture of component parts and designs is the same. The different shapes are produced by the ultimate joining together of the component units. Plate 11 gives a few typical articles that are produced. The following is a complete list of the type of articles that are produced by the filigree workers:

1. *Attardans* (scent containers) in the shape of lotus, peacock, flowers, aeroplanes, birds, crane, fish, lotus flower with leaves.
2. Powder or *kumkum* boxes in rectangular, octagonal, heart, oval, round and mango shapes.
3. Trays in different shapes—rectangular, heart, oval, round, octagonal, flowers with grapevine leaves, etc.
4. Flower stands, calendar stands, lamp stands, visiting cards cases.
5. Cigarette cases, ash trays, match box holders.

6. Buttons for sherwanis, coats and shirts.
7. Broaches with designs of leaf, bird, star, branch, butterfly, etc.
8. Ladies' ornaments such as bracelets, bangles, necklaces, *lolacks*, *jumkas*, etc.
9. *Pandans* in different shapes.

Some of the above articles reproduced in Plates 12 to 14 display the exquisite workmanship of the filigree industry.

33. The designs adopted are generally floral designs with creepers, leaves and flowers (Plate 15). The workmen are prepared to execute any design given to them by a customer. There, however, appears to have been a general decline in the standards of design and delicacy of work now executed. The oldest original design is called the *Karimnagar* design which reflects most delicate and exquisite workmanship (Plate 16). The present tendency is to have more and more bolder designs with less and less finer work. The designs illustrated give an idea of some of the delicate workmanship involved. There is no organised effort at the standardisation and improvement of designs.

Workshop and tools

34. The workshop facilities and tools required for this industry are very simple indeed. The very fact that the industry is being carried on in a little country-tiled shed in the backyard of the office-cum-workshop of the Co-operative Society bears testimony to the simple needs of the workmen. Only 4 families use this workshop. The rest carry on the industry in their own homes. The ordinary equipment of the gold or silversmiths appears quite adequate to carry on this industry. Only a special skill has to be developed for the delicate technique involved.

35. The equipment and implements needed may be listed as follows:

1. A furnace, blower and crucibles for smelting silver and the preparation of silver ingots, *tankam* alloy and *ravva*.
2. Anvil and hammer, wire drawing equipment such as *kambechchus* of different gauges.
3. *Charkha* for twisting wire.
4. Wooden boards and bee wax.
5. Pincers (*savanam*), *patkar pulla*, cutting pliers.
6. Simple charcoal furnaces (broken pots with charcoal).
7. Polishing brush.
8. Other ancillary equipment such as vices, chisels, files, hack-saw, hand drills, punches, tongs, shears, compasses.
9. (Wire drawing and plating machines which have been acquired by the Co-operative Society are considerable labour saving devices).

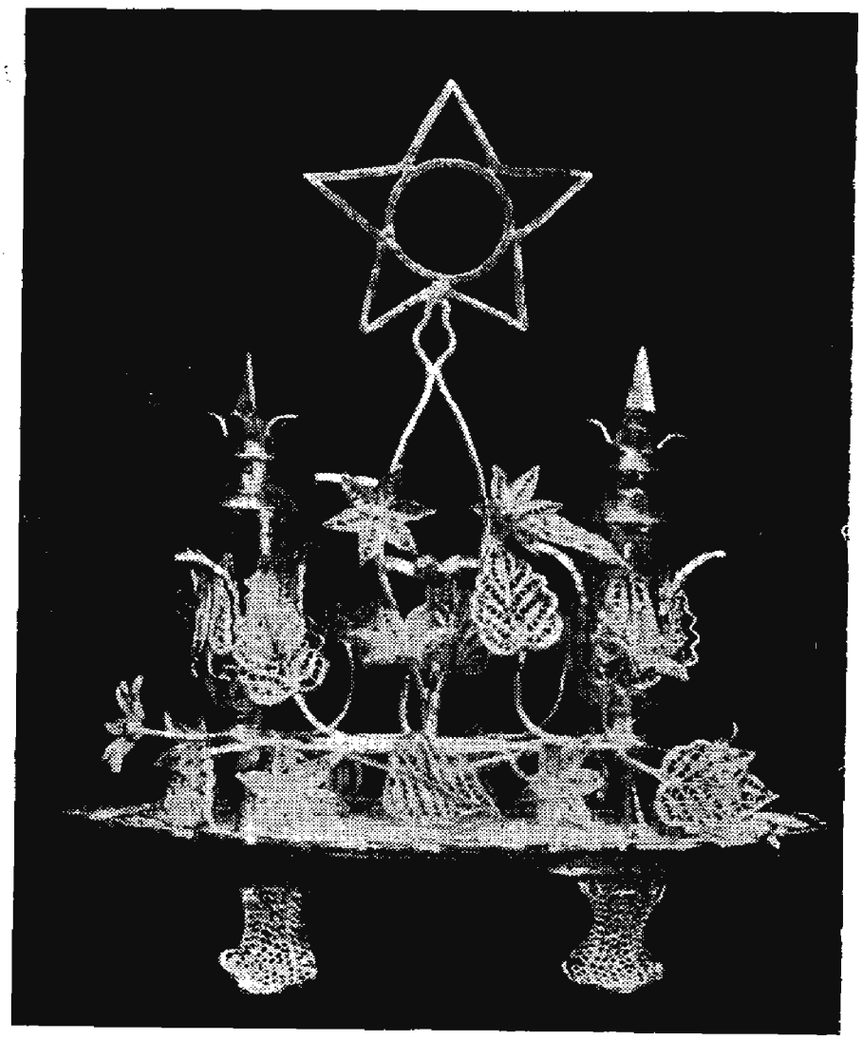


Plate 12. A silver filigree *attardan*.



Plate 13. A silver filigree *pandan*.



Plate 14. A silver filigree tray.

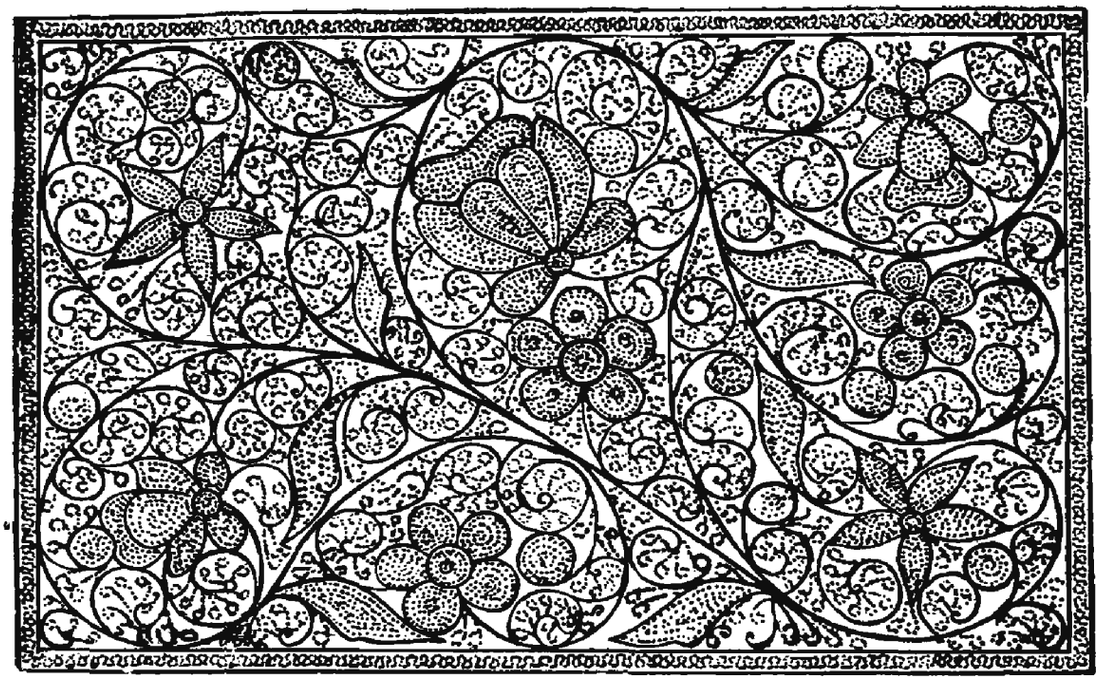


Plate 15. Creeper and flower design.

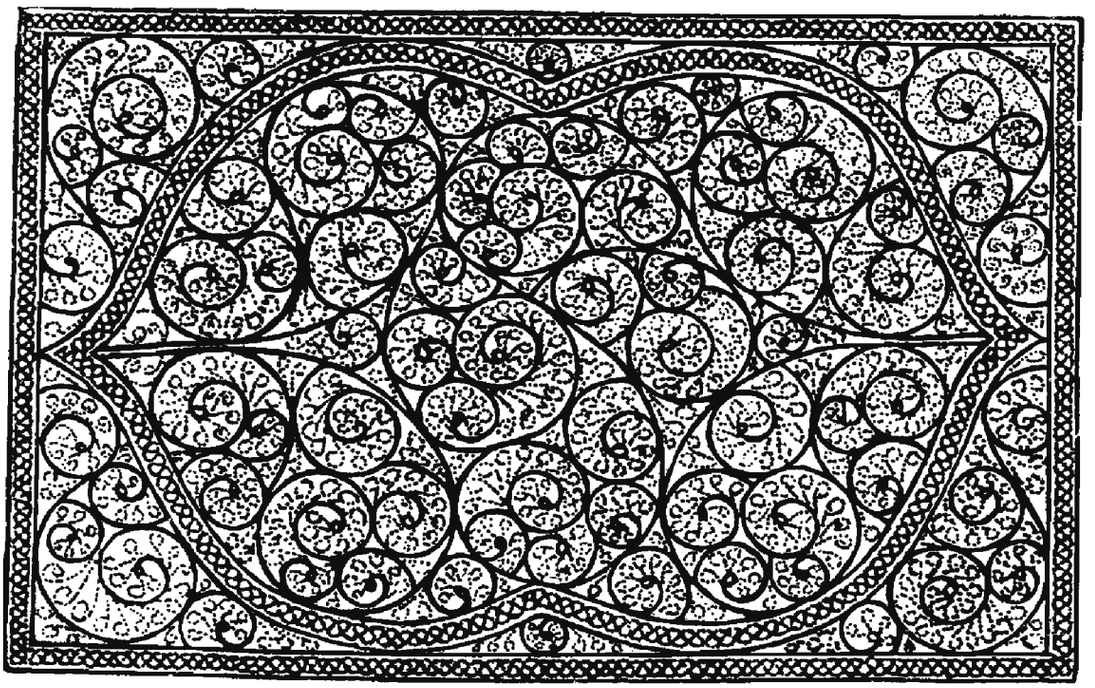


Plate 16. Karimnagar design.

SECTION III

ECONOMICS OF THE FILIGREE INDUSTRY

Cost of production

36. The cost of an article is almost entirely made up of the cost of silver which is the main ingredient plus the labour charges.

37. The cost of an article is arrived at on the basis of its weight. Even the labour charges are arrived at on a graded scale with reference to the weight of an article.

The cost of silver in an article of 10 tolas weight is taken as— Rs. 25/–

The labour charges are worked out at the rate of Rs. 2/– per day for a craftsman. It is reckoned that a craftsman will be able to work on 2 tolas of silver a day. Therefore, an article of 10 tolas is said to involve 5 days labour of one craftsman. Hence the labour charges on this article are— .. Rs. 10/–

The sale price of the article is fixed at.. Rs. 35/–

The workmen have also got a rough and ready system of calculating the weight of the articles. The articles are reckoned to be generally 1½ fingers in height. Every single finger width of such an article is said to consume 2 tolas of silver. Thus an article 5 fingers in width is said to consume 10 tolas of silver.

The statement given in the Appendix gives an idea of the time taken by a worker in the manufacture of an article with two tolas silver.

Annual production and marketing

38. The following statement gives the details of annual production for the last four years.

Year	*Value of the articles produced* Rs. P.
1957–58	20,969.94
1958–59	15,501.33
1959–60	17,127.06
1960–61	12,389.59

The average production works out to Rs.16,496.98 P.

39. The average annual sales are reported to be as follows:

Source of marketing	*Value of articles sold* Rs. P.
To the Government Sales Emporium ..	10,425.56
In open market	9,697.55
Total	20,123.11

There is no regular demand for the articles. Articles are produced as per the demands placed on the Society. It is reported that generally the workmen have full work during November to May when the demand seems to be more.

Earnings of a worker

40. The average earnings per month of the skilled and semi-skilled craftsmen are reported as follows:

	Full time worker	*Part time worker*
1. Skilled craftsmen	Rs. 67.50	Rs. 30.00
2. Semi-skilled craftsmen	Rs. 50.00	Rs. 20.00

41. The following statement gives the total number of skilled and semi-skilled workmen engaged in filigree work at Karimnagar:

	Skilled craftsmen	*Semi-skilled craftsmen*	*Full time*	*Part time*
1. Workers within the fold of the Co-operative Society ..	25	10	6	29
2. Workers outside the Society ..	24	—	—	—

Government assistance for the industry

42. At one time it looked as though this industry which enjoyed a fame all of its own might become completely extinct. The industry faced severe competition from filigree work in other States which used

cheaper alloys and took to more mechanised production and obviously the cost of production was much less than the Karimnagar products. But the Karimnagar filigree worker is too proud of his own technique and the pure silver content of his articles giving them a high intrinsic value to change over to any cheaper modes of production. The decline of the influence and economic power of the Jagirdars also had its adverse effect on this industry.

43. The advent of the popular Government saw the needs of this reputed but declining industry. In the year 1957 they provided security to enable the Tarkashan Industrial Co-operative Society to obtain credit facilities to an extent of Rs. 25,000/-. The Society has managed to repay Rs. 10,000/- so far. The Society has managed to acquire their present office-cum-workshop at a cost of Rs. 7,000/-. The Government also gave an outright grant of Rs. 5,000/- in 1956-57 with which three wire drawing machines costing Rs. 1,200/- each have been acquired. The State Government has been sanctioning managerial assistance to an extent of Rs. 3,000/- per year from 1957-58.

SECTION IV

CONCLUSION

44. This noted handicraft of the Andhra Pradesh State does not appear to have as yet reblossomed into the state of its former glory. It has no doubt been revitalised by the efforts of Government. Greater patronage, standardisation of designs and products, perhaps a slightly improved workshop facilities, and stimulation of demand by creating interest in foreign markets may go a long way to put back the industry on a firmer path of progress.

45. Before I conclude I wish to express my gratitude to the office-bearers of the Tarkashan Industrial Co-operative Society and its workmen who so patiently explained to me all the aspects of the industry and demonstrated the various processes. I am also thankful to the Assistant Director of Industries for the information he furnished and last but not the least the Collector of Karimnagar and the Revenue officials who rendered all the assistance to enable me to study the industry thoroughly.

APPENDIX

Statement showing the time taken for manufacturing of the silver filigree articles

WORKING CHART

Name of the worker: Shri K. Sudershan.

Silver (two tolas) given to him on 12-8-1958 at 10-50 A.M.

(a) Melting the silver (two tolas)	...	10-55 A.M.	5 minutes taken.
(b) Drawing wire from the machines with the help of an assistant (wire gauge No. 14)	...	11-00 A.M.	5 -do-
(c) Heating the wire and drawing the wire from the wire-gauge to make further smaller size with hand for outside of design. Size of wire is 18 gauge	...	11-15 A.M.	15 -do-
(d) Heating and drawing wire for inside design, further smaller size, through wire gauge with hand operation. Wire size is gauge No. 36	...	12-10 P.M.	55 -do-
(e) Winding the wire through *charkha*	...	12-35 P.M.	25 -do-
(f) Flattening the wound wire by hammering with hand	...	1-10 P.M.	35 -do-
Interval	...	1-10 to 2-30 P.M.	
(g) Arranging the wire according to the design	...	2-30 to 5-30 P.M. 3hours; and on 13-8-58, 11-00 A.M. to 12-45 P.M. 1-45 hours.	
(h) Soldering, preparing and fixing	...	1-45 P.M.	1 hour taken.
(i) Polishing	...	2-15 P.M.	30 minutes taken.

Time taken for manufacture of two tolas of silver filigree article (tray) is 8 hours 35 minutes.

(The above statement has been prepared by courtesy of the Manager of the Co-operative Society and Industrial Inspector, Karimnagar).

(ii) LEATHER PUPPET DOLLS



Plate 1. One of the formerly produced shadow play puppets painted in only red and black. The height of the puppet is about 5½′.

SECTION I

INTRODUCTION

Introductory

1. As part of the 1961 Census studies, a survey of rural arts and crafts has been taken up. One such rural art chosen for study in Andhra Pradesh is the *Tholubommalata* or leather puppet figures shadow play.

2. The *Tholubommalata* prevailing in a few areas of the Andhra Pradesh State is a unique art and is quite different from the puppet dolls play that one witnesses elsewhere in this country or the puppet plays developed in some foreign countries. Both in technique and presentation they are entirely different. While in the puppet shows as commonly known, the puppets are shown directly to the audience on the stage with their actions remotely controlled by means of strings, in the shadow play under study, the puppets, the animators, articulators, singers, etc., are all behind a white screen. The beautiful pictures made up of translucent flat leather figures are silhouetted against the screen with a light behind as will be explained in detail in the succeeding paragraphs, and the pictures are animated by the performers, producing an amazingly attractive effect. It is perhaps nearest to the modern technicolour film show. In their hey day, these plays must have been one of the most popular forms of entertainment. The shadow play teams moved from village to village with their simple equipment as the modern touring cinemas did. The Rayalaseema (particularly Anantapur District of Andhra Pradesh and Bellary District of Mysore State which was once part of Rayalaseema) appear to have cradled this art. Plate 1 gives a typical old leather puppet.

Origin and history

3. It has indeed been difficult to assess the period of origin of this art. Some authorities believe that this is a very ancient art. Judged by the traditional pictures that are made for the shadow plays which seem to have some correlation with the contemporaneous architecture and painting, this art must have developed mainly in the 16th century under the patronage of the Vijayanagar rulers. Till about three or four decades ago these shadow plays were extremely popular in rural areas. As has been the fate of several such stage arts, the invasion of the modern cinema into rural areas brought this art also into decay. The attachment of the people to this art and the great esteem in which it was held is evidenced by the fact that in the oft famine affected area of Rayalaseema there is a belief that the performance of the *Tholubommalata* helped to invoke the blessings of the God of Rain! My colleague, Shri S. R. Ramamurty, I.A.S., erstwhile District Collector of Anantapur District tells me that during the last drought period of 1959-60 he did respect the sentiment of the local people and arranged a performance of the *Tholubommalata* at the district headquarters, and lo the rains did come! There is also a popular saying in the area "తోలు బొమ్మలాట తొంభై ఆమడ పోయి కూడ చూడవలసిందే" which means that one should not miss a *Tholubommalata* even if one has to cover a distance of 900 miles to see it. All the same, the art has been languishing. I found it hard even to locate the troupes who now practised this art. There was a village in Anantapur District named after this art itself as Bommalatapalle. Apparently, the *Bommalata* experts should have settled in this village at one time. Now, there is none in this village who knows the art and it is reported that some families who knew this art and were residing in this village had left the village years back and nobody knows where they had gone. During my tours in Anantapur District I was able to locate only two troupes. One was at Chakarlapalle, a hamlet of Somandapalle in Penukonda Taluk of Anantapur District.* Chakarlapalle lies on the main road, Anantapur to Bangalore, and it is 8 miles from Penukonda town, a Revenue Divisional headquarters of Anantapur District towards Bangalore. Chakarlapalle is also connected by train, located on the Guntakal-Bangalore meter gauge section of the Southern Railway. One Pedda Anjanayya and his son, Chinna Anjanayya, and their wives, who have the *Bommalata* equipment, practise this art. They have taken to agriculture as their main occupation and they put up the shadow play during the off season when invited to do so. Another troupe, an itinerant one, was located while it was camping at a village, Sirekolam on the outskirts of Hindupur town, a taluk headquarters of Anantapur District. This was a professional touring troupe hailing from Avulenna village in Belaguppa Firka, Kalyandrug Taluk of Anantapur District. This troupe has been putting up shows in the adjacent villages. One Balappa, aged 80 years, was the oldest member of this troupe.

*Since recording this monograph I have been able to locate a concentration of the leather puppet doll player families at a place called Madhavapatnam within 3 miles of Kakinada, East Godavari District. A brief account of them is given at the end of this monograph as Appendix II

His son, Hanumantha Rao, aged 50 years, seems to be managing the troupe and is assisted by the members of his family. It is observed that the *Tholubommalata* is performed as a household art by the members of the family participating and hardly any outsider is engaged on payment of wages or remuneration. The families practising the art could not themselves say who were the others practising the art or which are the centres where the art thrives. It would appear obvious that the families who practised the art had settled down here and there in remote villages in a few taluks of Anantapur District, which tract formed the heart of the Vijayanagar Empire of the later period (16th-17th century A.D.). It is interesting to find that almost all the people who practise this art speak a corrupt form of Marathi. At the recent Census several people practising the art of *Tholubommalata* returned their language as Killakothu basha. It is not clear if they migrated from Maharashtra during the Vijayanagar period and whether they brought down the art of shadow play from there or developed it locally.

4. An extract pertaining to this art from the Telugu Encyclopaedia (Vijnanasarvasvamu) is translated and given as Appendix I to this monograph for the information of the reader.



Plate 2. The outline of the basic design marked on a cleaned and dried goat skin.

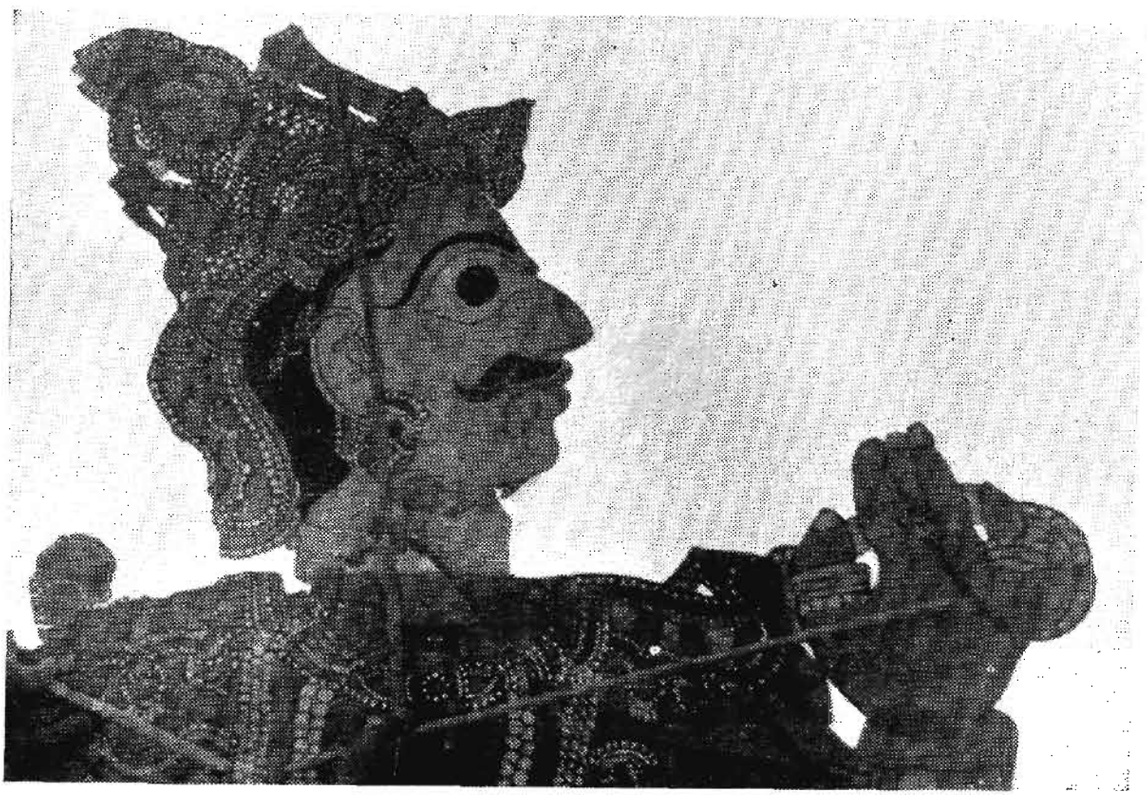


Plate 3. A typical leather puppet figure (head portion).
[Note the jewel-like effect of the holes in the design]

SECTION II

TECHNIQUE

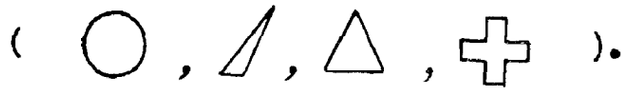
Manufacture of the puppet figures

5. The *Tholubommalata* performers themselves prepare almost all their equipment. The main part of their equipment is of course the collection of leather puppet figures itself. The leather figures are prepared as follows.

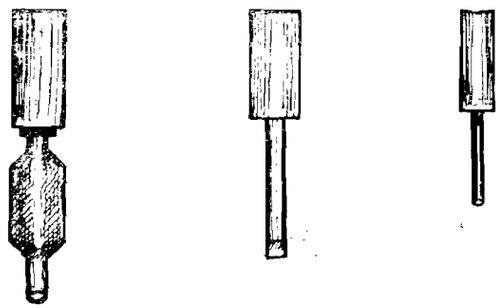
6. The basic raw material is wet skin of a goat or deer. The wet skin is dipped in warm water and cleaned with the help of a sharp knife to remove the hair and all sticky matter. No salt is applied and no process of tanning is involved. The skin is merely made into a uniformly thin and clean membrane. This process takes about a day. The cleaned skin is then allowed to dry for a day. The dried skin looks clean, white, thin but stiff about 1/32″ in thickness and translucent. The skin will also be devoid of any smell. The skin is now ready for being cut into the shape of the required figure. Each wet skin costs about Rs. 5/-. Oftentimes the skins are presented to the performers by the patrons. Normally, three skins are needed to make a complete figure with moving parts, namely, the head, trunk and the limbs.

7. The traditional *Tholubommalata* performer is a consummate artist. He proceeds to draw the outline of the figure he has to cut on the dried skin. Sometimes the figure is merely traced from older figures. The cleaned and dried skin which is almost transparent is placed over an old figure and the main lines are traced either by pencil or charcoal and sometimes by a sharp instrument which when run on the skin marks a groove. When old figures are not available or some original type of figure is contemplated, then the outline of the figure is merely drawn free hand on the skin. The inner design of the figure to represent the jewellery and clothing is then marked in delicate outline by means of a sharp instrument. The figure is then cut out along the outer line of the drawing with an ordinary pair of scissors. The sizes of these puppet figures vary from about 3′-6″ to 5′-6″. They are generally made to conform to the actual size of human beings, if possible. Much smaller figures as also larger sized figures are not unknown. (Please see Plate 2 which shows the outlines marked on a plain dry skin that has already been cut to shape).

8. The next operation is the punching of holes in the skin in accordance with the designs to represent jewellery. This is a delicate operation done very deftly by cutting out holes of different shapes according to a set design. Some holes are round, some oblong, some triangular and some in the shape of a cross.



These holes are made with the help of a circular punch and small sharp and delicate chisels.



The chains or the patterns of holes when finished present a striking appearance particularly when the figures are silhouetted against a lighted screen, as they are intended to be done, giving the illusion of shining jewellery that these holes represent. (Please see Plate 3).

9. The next step is to colour the leather figures. Chemical dyes are used for the purpose. Different colours are used to give the picture a colourful appearance. The older pictures had only two or three colours, mostly red and black. With the availability of larger variety of dyes and apparently in order to make the pictures more attractive to the audience, the artists started using various colours such as red, blue, green, violet, pink, yellow, black and white. Aesthetically, the modern figures with the larger flash of colours look gaudy, though they are perhaps more popular with the rural folk. The older pictures were richer in workmanship (designs of jewellery and clothing) and the few colours were blended more naturally rendering the picture more dignified. The colours are mixed in water and spread on the skin as per the design with a piece of rag rolled into a lump. The colours are applied on both sides of the skin. No definite sequence of application

of dyes is observed. However, a general convention of applying particular colours to particular characters is followed. For example, the picture depicting Krishna or Rama is generally coloured blue, and Anjaneya green. The female figures are generally dyed orange or yellow. But this convention is not strictly observed. These dyes are not indelible and the performers have to be particularly careful during the rainy season to see that the figures do not get wet. The figures are periodically smeared with coconut oil and polished by rubbing with a piece of cloth. This preserves the colours and renders the figures more shiny and attractive on the eve of the show. The chemical dyes cost about Re. 0.75 P. to Re. 1.50 P. per tola. For a full figure about 1/4th tola only of the dye is required.

10. The normal size of the human puppet figure is about 6' from head to toe. There are figures much larger in size as also much smaller. The head portion is prepared on a separate piece of skin, the trunk on a separate piece and the limbs in separate pieces. In some figures the head and body together are made on a single piece. Each leg is made of one piece. The hands are, however, made into three different portions, namely, the palm, fore-arm and the upper arm. The entire figure is made up of these different portions being hinged together by means of a strong string so that the portions can easily be moved about. The head portion is, however, attached to the body by means of a bamboo stick which is secured to the body through loops so that it may be possible to rotate the stick and change the direction of the face from one side to the other. Please see the illustration in Plate 1.

Types of figures produced

11. The *Bommalata* troupe keeps a wide range of figures which will be needed for the various types of plays it has to perform. In certain plays as many as 80 figures will be needed. Sometimes the clever performer produces the effect of different figures by interchanging the heads and the trunks. It may be realised that these figures are collected in the family over generations and judged by the cost of the figures, it is obviously impossible for the poor performer to manufacture or collect the whole lot in one's own life time.

12. The artist generally follows a traditional design for the human forms of the Puranic figures. In respect of these human figures a great semblance is noticed between them and the famous ceiling paintings of the historic Lepakshi temple* which is located at a distance of about 12 miles from Hindupur in Anantapur District. Please compare the leather figure in Plate 3 and the figure of Veerabhadra (Plate 4) which is a famous central ceiling painting at Lepakshi. Even the colour scheme of the old traditional leather figures resembles that of these paintings. Further more, the painting of Narasimha Avatar reproduced in Plate 5 gives us an indication of the source which inspired the puppeteers to punch mark the leather puppets in order to simulate ornaments. Hence, my conclusion that the art of leather puppet shadow play should have developed about the same time as the Lepakshi temple came into being, i.e., about 16th century A.D., apparently under the patronage of the ruling Vijayanagar kings who were great patrons of art. Plate 6 shows a typical single piece leather puppet figure.

13. The leather puppets include figures of animals, birds etc. (Plate 7). It is of interest to note that the figure of three cows with heads in different positions looking as though they have a common body is found to have been adopted from a similar sculpture piece at the Lepakshi temple.

14. These various figures are produced by each of the *Bommalata* parties for its own use and never for sale and they are bequeathed from generation to generation in the family. I could manage to get a few odd obsolete pieces from the parties with some difficulty after offering them fairly attractive monetary reward.

*Lepakshi is noted for its famous temple to Veerabhadra, "a notable erection in the style of the best of the Vijayanagar architecture built on a low rocky hill". It was constructed by one Virupanna, a treasurer at Penukonda to king Krishnadevaraya of Vijayanagar in the year 1538 A.D. The temple excels both in architectural grandeur of the stone sculptures as well as artistic beauty of its ceiling and mural paintings.



Plate 4. A ceiling painting of Veerabhadra at Lepakshi temple.

Courtesy : Archaeological Survey of India.

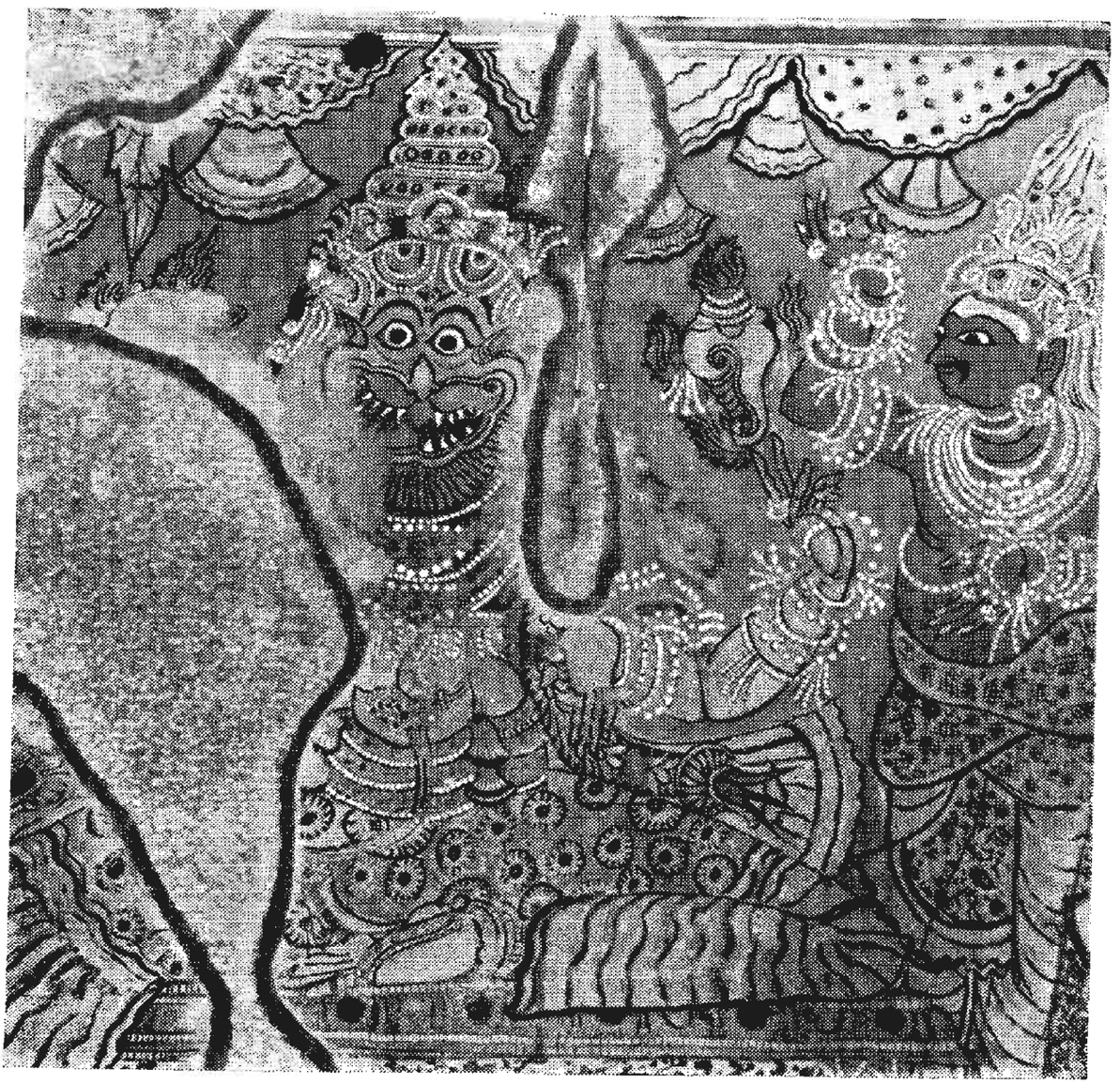


Plate 5. A painting of Narasimha Avatar in Vishnumurti shrine at Lepakshi temple.

Courtesy : Archaeological Survey of India



Plate 6. A typical single piece leather puppet figure.

Courtesy : Publications Division, Ministry of Information & Broadcasting.

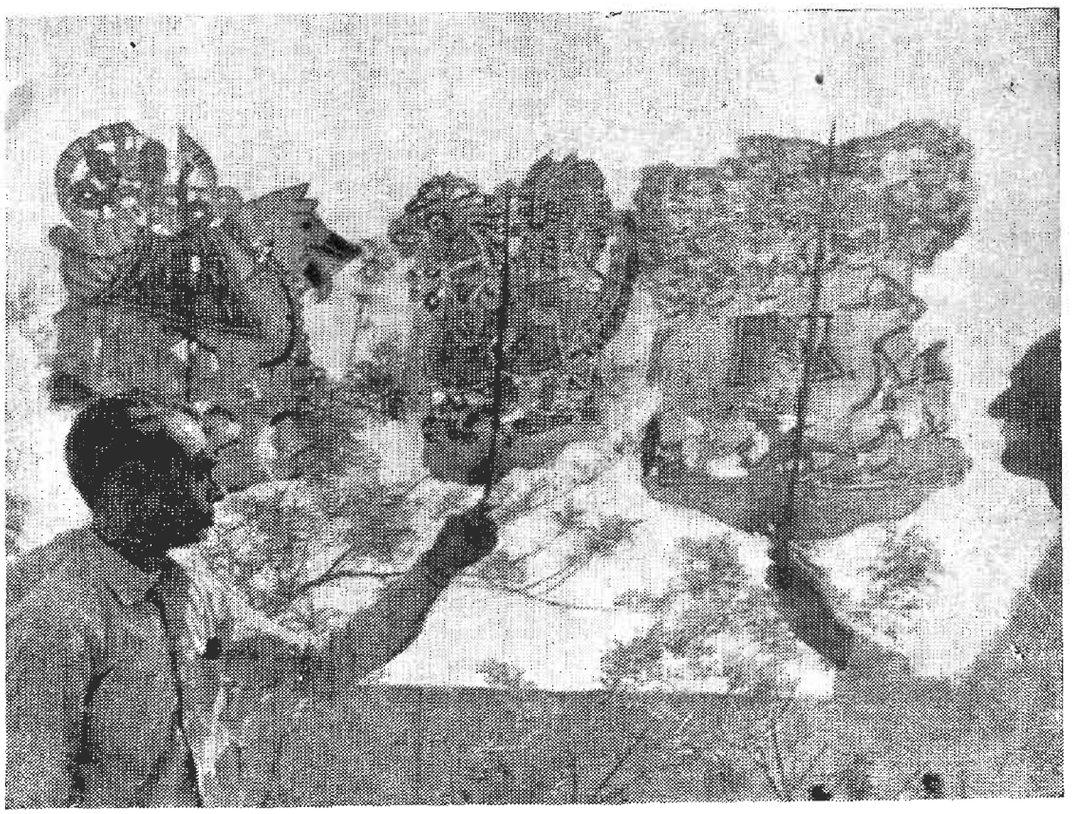


Plate 7. Leather figures of animals and birds.



Plate 8 : Bamboo sticks attached to the leather puppet figures. A performer demonstrates how they are held.



Plate 9. Pedda Anjanayya and Chinna Anjanayya of Chakarlapalle demonstrate how the puppet figures are animated.

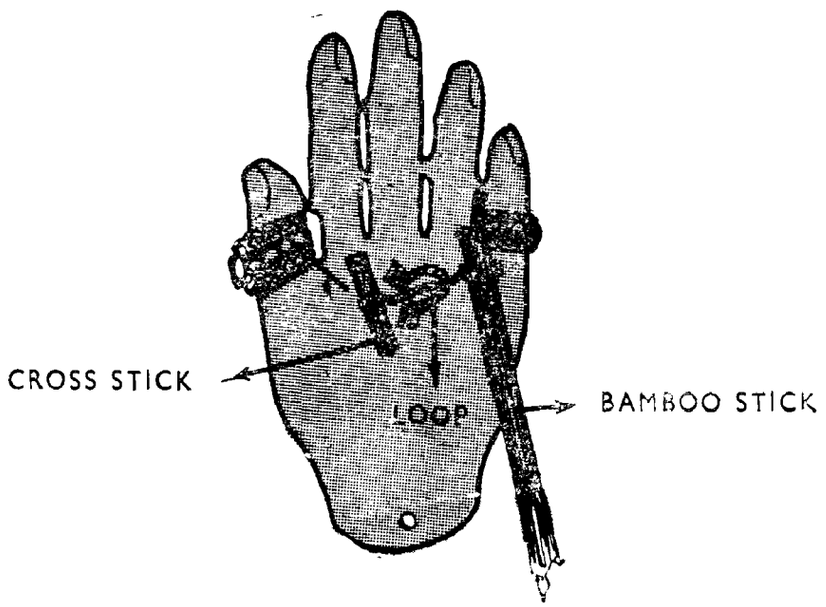
SECTION III

THE ART OF SHADOW PLAY

15. In the previous paragraphs the details of how the leather puppet figures are prepared have been explained. The technique of performing the shadow play will now be examined.

Animation

16. It is stated that the earliest models of the leather shadow play figures consisted of a single piece with immovable limbs. The entire figure was made merely to bend down or up or turn round during the course of the play. The ingenious performers soon discovered a method of animating the figures by making the neck and joints of the limbs flexible by joining independent pieces together loosely. The art of animation is simple but requires great dexterity and practice. As already explained, the head of the figure is secured by means of a bamboo stick which is passed through two loops in the trunk portion thus helping to keep the head and the trunk together; and at the same time by the manipulation of this stick the entire body or the head can be bent or by twisting it the head can be turned in opposite direction. Two other bamboo sticks are attached one each to the centre of the two palms of the figure by an arrangement of a loop and a cross stick. Please see the illustration below which helps the sticks to be easily attached or removed.



These two sticks play a great part in imparting action and life to the picture. The performer holds the centre stick or the head stick in one hand which helps to keep the entire body of the figure in the required position and the face in the required direction. The other two sticks are held together in the other hand by the performer. (Plate 8). By the very dexterous and trained movement and manipulation of the left hand by the performer, the puppet figures are made to salute, fight or gesticulate, as required. In Plate 9 a couple of performers demonstrate how the puppet figures are animated. The ultimate effect of the movements is most realistic and amusing.

Projection on the screen

17. As explained in the introductory part, the technique of the leather puppet figure shadow plays is quite different from what is popularly understood of the puppet doll shows. The puppets are not directly shown to the audience. The audience sits in front of a big white screen the same as in the ordinary cinema show. But the projection of pictures is not done from behind the audience on to the screen as in the ordinary film shows. The entire operation takes place on the other side of the screen. Behind the screen, at a distance of $1\frac{1}{2}$ to 2 feet from it, two lamps are hung. In the olden

days these lamps consisted of burning wicks fed with castor oil. They have gradually taken to the petromax light, which is easily available in the rural areas and is found to be more convenient; but it is believed that the old castor oil lamps produced a much better effect. The shadow play performers take their position behind the screen taking care to see that their own shadows are not projected on the screen. The leather puppet figures are then brought forward and held closely against the screen. The lights help to silhouette the translucent leather figures against the white screen in all their splendour of colours. The effect produced on the other side of the screen where the audience gathers is thrilling and beautiful. It looks as though the figures come from nowhere, for, the moment they are taken beyond the range of the rays of the light of the lamps falling on the screen the figures seem to disappear into nothingness. The players take care to see that their own bodies or limbs do not come between the lamps and the screen. The sticks attached to the puppet figures help the players to keep their hands as far away as possible from the screen and the figures are animated entirely by the manipulation of the sticks. Plate 10 shows a group of performers behind the screen.

Composition of the Shadow Play troupe

18. The Shadow Play troupe may consist of the following:

(1) Two to four figure operators-cum-articulators: They are the main performers. They attend to the manipulation of the figures to the accompaniment of conversation and songs, which they themselves produce by assuming the roles of the figures which they manipulate.

(2) A couple of accompanying singers: One of them should be a lady. These additional singers supplement the singing of the main performers. These additional singers are chosen for his or her volume of voice and lung power. They are often required to give a long and loud '*ragam* ending' to each line of a song. Some of these individuals claim with pride that their voices could be heard over a distance of 3 miles! Plate 11 shows a couple of these reputed singers. The song accompanier is called *kosuteeyu vadu* (కోసు తీయువాడు). They also help to keep the timing of the songs with the help of two small bronze cymbals (తాళాలు) which are struck against each other, the pace of striking varying with the tempo of the song. (The complete absorption of the singers and the striking of the time keeping cymbals by them may be observed in Plate 11).

(3) Drummer.

(4) Harmonium player.

(5) One to play on a small *nagaswaram*, a piped instrument, *mukhaveni* as it is called.

19. The figure operators put up an inspiring display and get completely into the mood and spirit of the play and the part that they depict. They sing, dance, jump, shout, whisper, weep along with the figures that they animate. They thus give complete life, in the shape of action, speech and mood to the figures that are projected on the screen. The audience cannot but be thrilled, inspired and moved by the very realistic depiction of the characters.

20. The performance can be very exhausting to the players, requiring skill, physical power and artistic talent and a spirit of devotion. The performance generally starts after dinner round about 9 P.M. and goes on throughout the night. Some of the players, both men and women, admit that they have to consume some intoxicant liquor to enable them to stand the strain and help them to put up a really spirited performance.

The Shadow Play themes

21. Themes from the epics, the Ramayana and the Mahabharata are adopted for depiction through the shadow plays. The popular plays are—

(1) Lakshmana *murcha* or Lakshmana losing consciousness in battle with Indrajit, son of Ravana.

(2) *Pathala havanamu* (or *homamu*) or Ravana's *tapas*.

(3) Mahiravana *charitra* or the story of Mahiravana.

(4) Draupadi *vastrapaharanam* or snatching away Draupadi's wearing apparel.

(5) Keechaka *vadha* or destruction of Keechaka.

(6) *Virata parva* or the period when Pandavas were in the court of King Virata.

Thematic resumes of the above stories are reproduced in Appendix III, which will give the reader an idea of the literature which forms the motivating force behind the shadow puppet performances and their sustained popularity among the rural folk through the ages.

22. Naturally, the figures produced for the shadow plays depict the puranic figures such as Rama, Lakshmana, Sita, ten-headed Ravana, Mandodari, Monkey-God Hanuman and so on (Plates 12 to 15). There is no

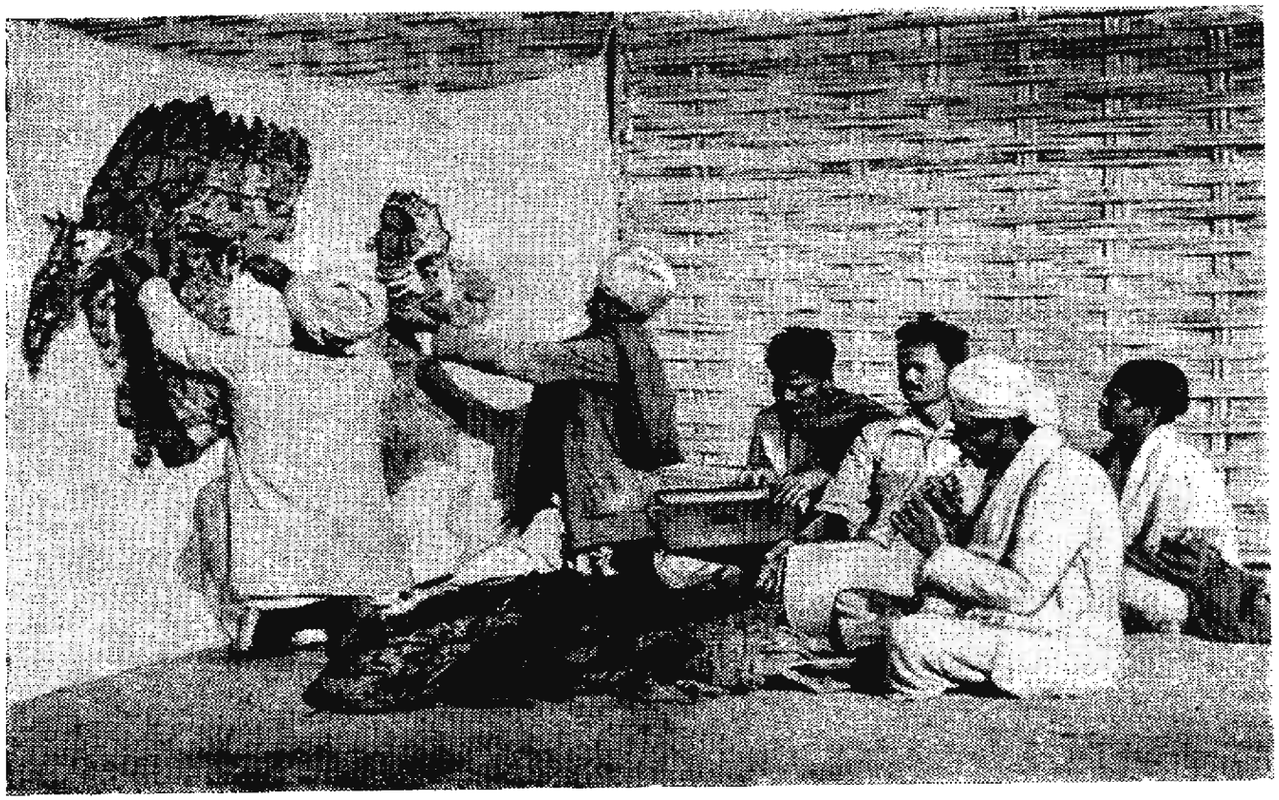


Plate 10 . A group of performers behind the screen.



Plate 11 . Song accompaniers.



Plate 12. Rama.

Courtesy : Government Museum, Madras.



Plate 13. Rama, Lakshmana and Krishna (part figure).



Plate 14. Ravana and Mandodari.



Plate 15. Vali and Sugreeva

Courtesy : Publications Division, Ministry of Information and Broadcasting.

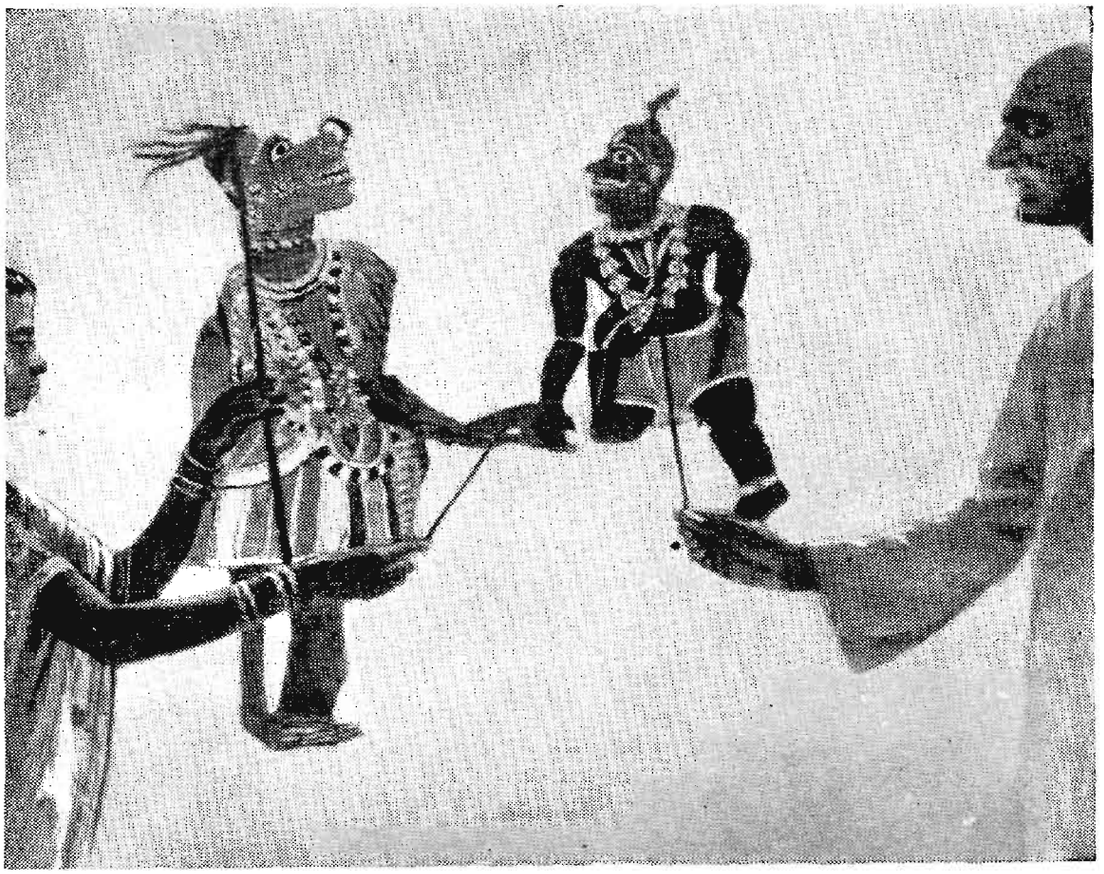


Plate 16. Bangarakka and Killegithirigadu.

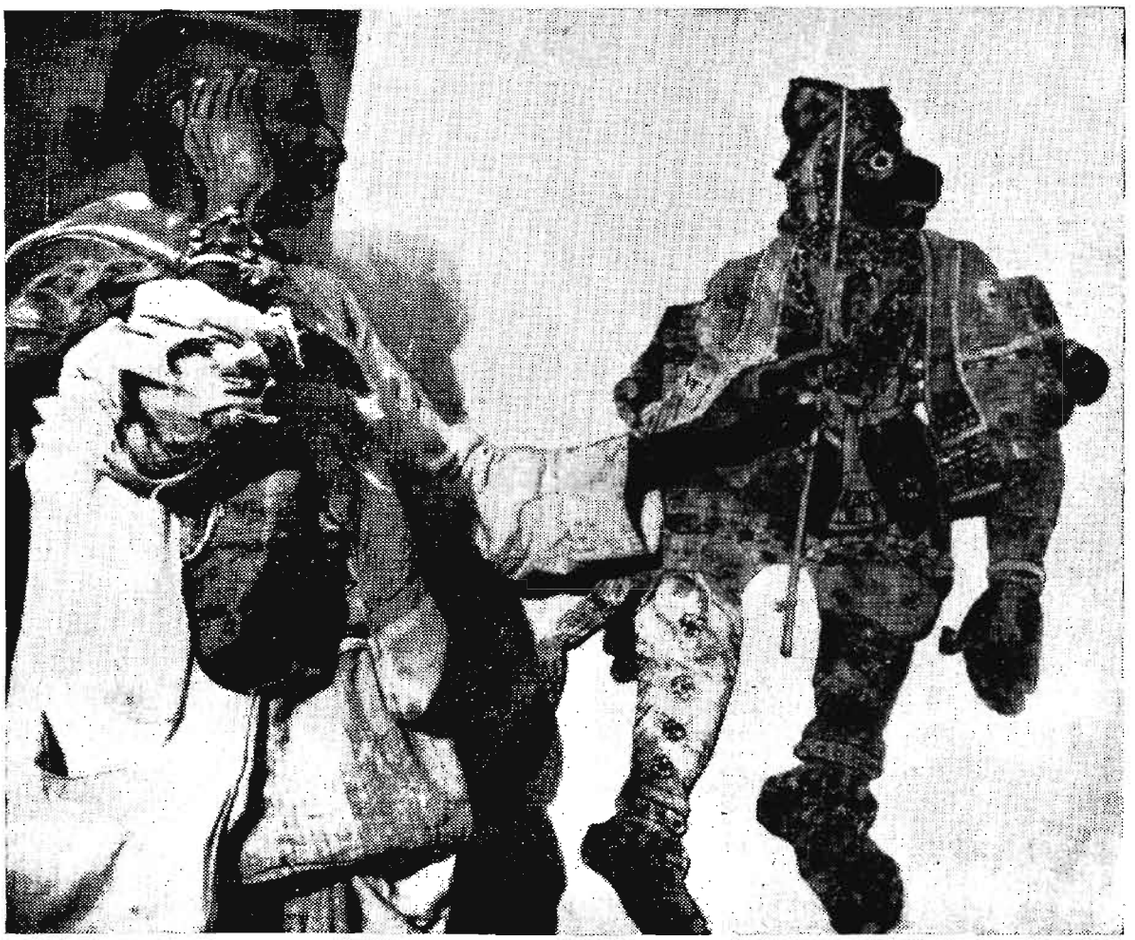


Plate 17. A puppeteer reciting the lines of Hanuman, one of the most important characters in the epic *Ramayana*.

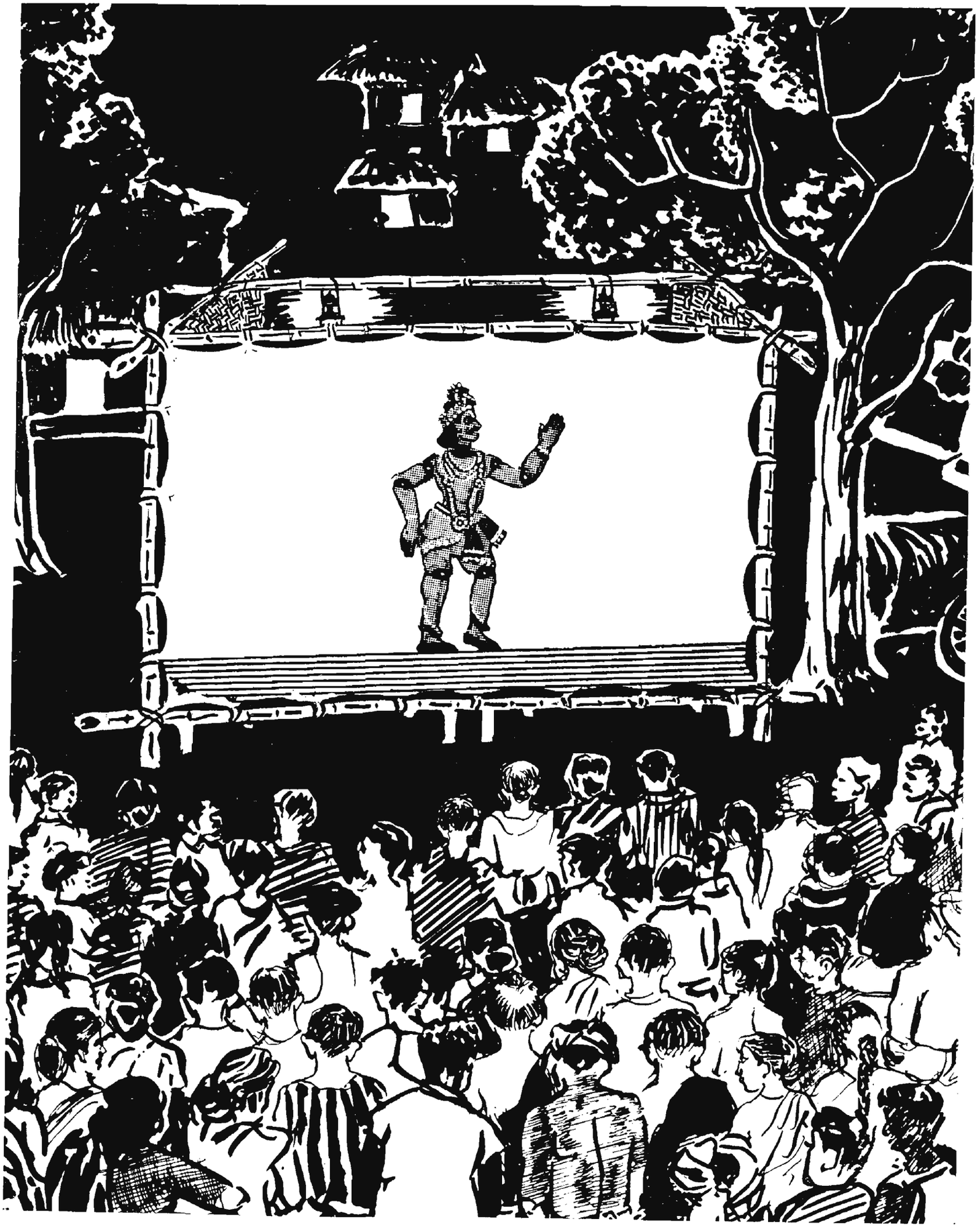


Plate 18. General layout of the shadow play.



Plate 19. Behind the screen.

particular convention regarding the dress or the complexion of the different figures representing the Devatas or Asuras. As already indicated, the heads and the bodies of the figures are interchanged to suit the convenience of each play.

23. The performers do not neglect the lighter side of the entertainment. They present the inevitable pair, Killegithirigadu and Bangarakka, the clowns of the shadow plays (Plate 16). The jokes cut and the conversation sometimes tend to be on the vulgar side, which the rustic audiences seem to enjoy thoroughly.

24. Each troupe of players maintains a manuscript of the text, conversation and the songs adopted for each play. Surprisingly enough, the lady members of the troupes seem to be better educated than the men. All the same, every member of the troupe knows these texts by heart and everyone can recite them with finesse and understanding. While reciting the lines of his character, the puppeteer holds his hand to his ear and we find this in Plate 17.

25. For putting up the puppet shows generally a central and open space in the middle of the village is selected. Sometimes it may even be the middle of a wide street within the village. A temporary stage is erected with bamboo frame work and thatties to cover the sides and the rear. The size of the stage is about 9′ long, 7′ broad and 8′ high. The front portion of the stage is covered by a white screen made up of sarees or dhoties pinned together by crude babul (acacia ferruginea) thorns. A foot or so behind the white screen a couple of wooden planks are spread one over the other with some interspace created by placing small cross sticks. When the performers walk and jump on these planks, necessary sound effects are produced particularly when depicting scenes of fighting and so on. Oil lamps or petromax lights are hung from the top about a couple of feet away from the screen behind it. The performers stand almost in line with the lights with the puppet figures held against the screen and manipulated by the hands with the help of sticks attached to the figures so that the light rays from the lamp fall on the screen through the figures and the shadow of the performer himself is avoided. At one end of the stage the required figures for the drama are kept in a basket container or on an open cot. The song accompaniers stand or sit at one end of the stage and perform their task. Plates 18 & 19 give some idea of how the stage is set. The shows generally commence at about 9 or 10 P.M. and last till 4 to 5 A.M. the next morning. The performers generally commence the show by singing an invocation to Lord Vigneswara and Goddess Saraswathi.

SECTION IV

SOCIO-ECONOMIC CONDITIONS OF THE SHADOW PLAY ARTISTES

26. As already indicated, the shadow play artistes are in straitened circumstances.

27. Of the two troupes that were contacted, one was an itinerant whole-time playing troupe. This troupe hails from Avulenna village, Belaguppa firka of Kalyandrug Taluk of Anantapur District. The head of the troupe is an 80 years old veteran, Balappa. He is too old to take active part. So his son, Hanumantha Rao (aged 50) and daughter-in-law, Lakshmamma, mainly run the shows. They are, of course, assisted by their son, Subba Rao (aged about 25 years), and daughter-in-law, Sanjeevamma. An outsider, one Kesava Raju, has also become a member of the party by marrying one of the daughters of Hanumantha Rao. He also assists in singing and playing on the harmonium. They speak Marathi amongst themselves.

28. These people claim that the art of shadow play has been in the family for the last 3 or 4 generations. They had been sanctioned some lands in Inam called *Bommalata manyams* in their village. But they hardly ever cultivate the land. They are not even able to say what is the extent of the land given. The lands are leased out to outsiders and the players move about in different areas putting up the shows. The place where I was able to contact them was about 70 miles from their parent village, which gives an idea of the distances they travel to put up shows. The entire family moves about in a double bullock cart in which they carry all their equipment, which consists of nothing more than their musical instruments and a large flat rectangular bamboo basket in which all the leather puppet figures numbering 80 or more are packed flat (Plates 20 & 21). The troupe camps at any place where there may be a choultry (rest house) and cover the surrounding villages.

29. The villagers who invite the troupe for putting up a show provide all the facilities of the stage, viz., the screen, which is made up of a couple of white sarees or dhoties stitched together, the oil lamps or petromax lights and the erection of the open air stage. The villagers also provide the members of the troupe with all their maintenance and it is a custom to offer the performers turmeric and betel nuts. An over-all remuneration of Rs. 30/- is given for one performance. The members of this troupe aver that they do not take alcoholic drinks, though the truth seems to be that they generally do. Each play lasts almost the whole of the night and can be very strenuous. The performers put up the shows generally on alternate days.

30. As regards the second troupe, it hails from the village of Chakarlapalle, Penukonda Taluk. Pedda Anjanayya (aged about 50 years) is the head. His wife, Hanumakka, assists in singing. Pedda Anjanayya's son, Chinna Anjanayya, (aged about 30 years) and the latter's wife, also called Hanumakka, take leading parts in the performances. Hanumakka is more literate than Chinna Anjanayya. She was originally from Gundampalle, hamlet of Melavoi village of Madakasira Taluk. She says that her father has been attending to agriculture, though it would appear that many years ago her ancestors too practised *Tholubommalata*. This lady, however, acquired the art only after her marriage with Chinna Anjanayya. These people also speak Marathi.

31. This family has taken to settled agriculture in the village. It has, however, not given up its ancestral art completely. This family too keeps its collection of the leather figures neatly packed in a flat basket. In the off season the members of this family put up shows, if invited by others. From what I could see of the inspiring display that was given at a demonstration, Pedda Anjanayya, the head of this family, appears to be an adept at the art. The troupe is very poor economically and requests monetary aid for improving their musical instruments.

32. The art passes on from generation to generation. No special training is given. The youngsters start assisting their elders in all aspects of the play from their childhood and acquire the art themselves through actual participation.

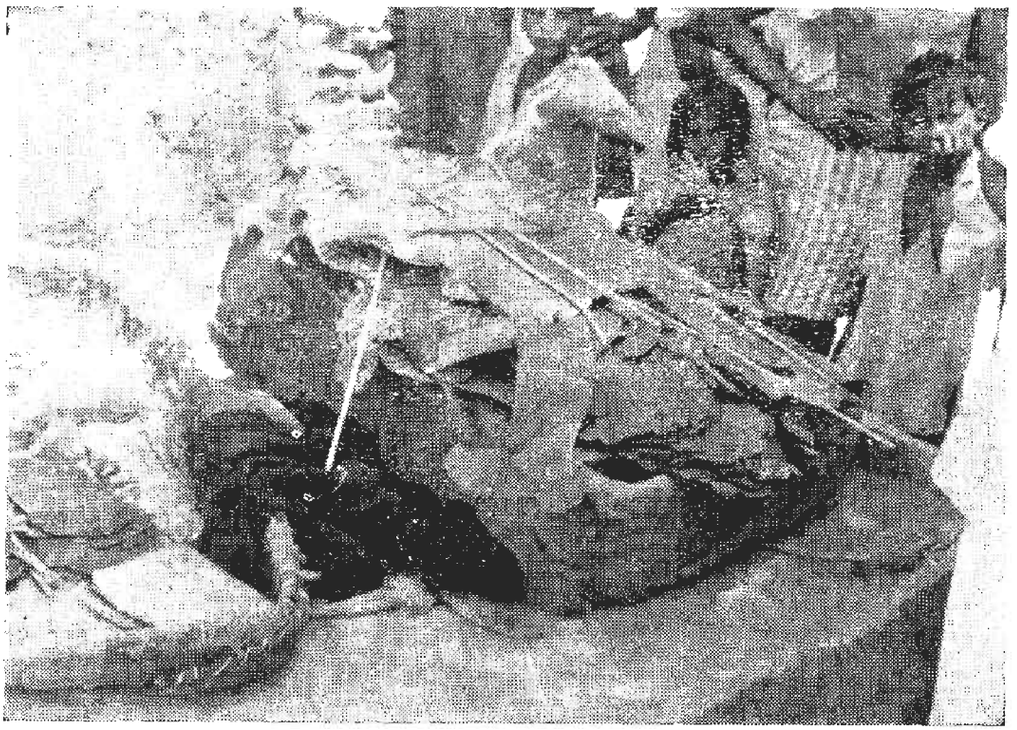


Plate 20. The leather puppet figures are packed flat in a rectangular bamboo basket.

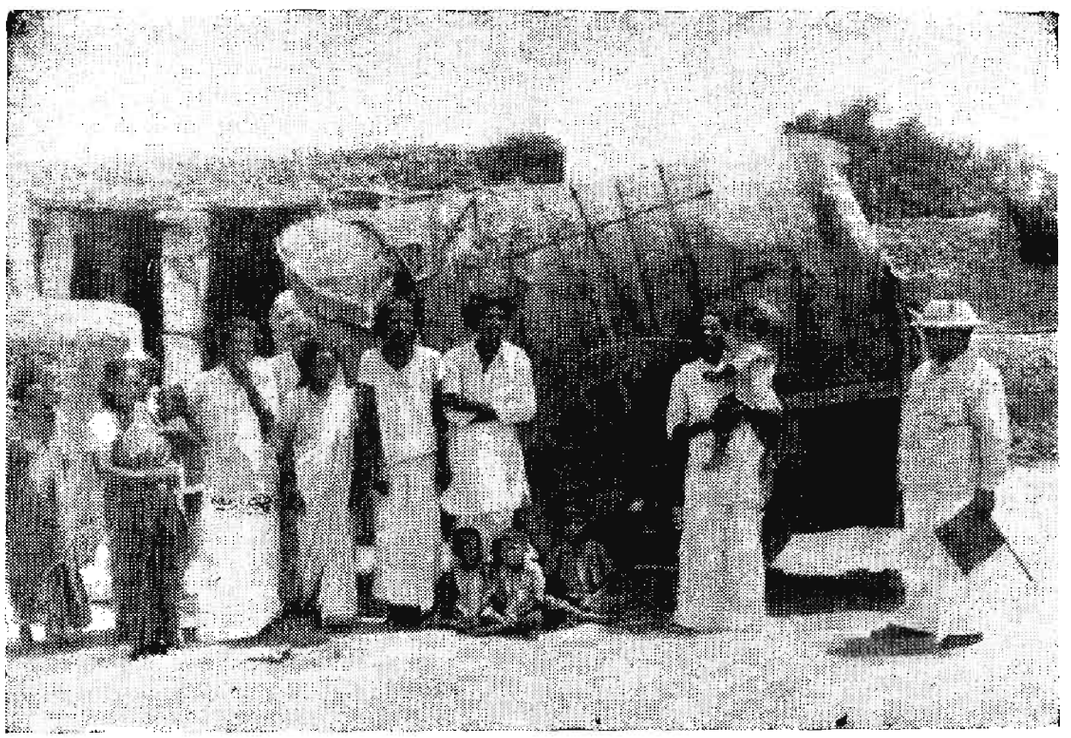


Plate 21. Itinerant *Tholubommalata* family moves about in a bullock cart with all their belongings.

SECTION V

CONCLUSION

33. This, then, is a brief account of the almost forgotten art of *Tholubommalata* of Rayalaseema, which must have at one time enjoyed great popularity. It has been languishing for want of adequate patronage and, of course, because of competition from the modern cinema.

34. I am most grateful to Shri Kalluri Subba Rao, M.L.A., of Hindupur, who is by himself a patron of art and literature and a well known social and political worker, who was kind enough to spare almost two days of his valuable time and helped me to locate one of the troupes and also took me round that famous Lepakshi temple and not minding the strain he was put to in his advanced age. I must also record my thanks to the Deputy Superintendent of Census Operations, Kurnool, Shri Sivappa, who had worked in this area earlier as a Block Development Officer and whose local knowledge was most useful, and to Shri G. Subramaniam, Block Development Officer, Penukonda and Shri S. Ramireddy, Village Munsiff of Somandapalle, for all the assistance they gave me in getting the troupe at Chakarlapalle to give a demonstration. And, of course, my thanks are in no small measure due to the artistes themselves who patiently explained and demonstrated all the intricacies of their art.

APPENDIX I

A translated extract from the Telugu encyclopaedia "Vijnanasarvasvamu"

LEATHER PUPPET DOLLS PLAY (*THOLUBOMMALATA*)

The leather puppet doll shows in the western parts of Andhra are staged mostly by Marathas. In Kannada areas they are referred to as of *Ki* (*shi*) *llekya* (*khya*) *ta* tribe and in the north-western Tamilnad they are called *Killekyata* people. In Andhra Pradesh they are known as *Bommalatavaru* (i.e., those staging puppet shows) or *Charmanatakulu* (i.e., those staging leather doll plays). Among the rural folk, the characters Bangarakka and Kethigadu in the puppet doll plays are very popular. In Rayalaseema, the latter character, i.e., Kethigadu is called Killegithirigadu. This in the Dravidian language is commonly understood to be a "mischievous or quarrelsome fellow". The importance and popularity which this character Killegithiri (Kethi) gadu assumes in the puppet plays must have been the origin for the performers themselves being called by that name. Those who stage stories from Bhagavata are referred to as Bhagavatas; and those who put on the show Yakshaganas (story of Jakkus) as Jakkus. On this analogy, it is reasonable and appropriate to suppose that those who play the (Kille) Kethigadu doll have derived their name from this character. Their mother tongue is a regional corrupted form of Marathi. They had migrated to the neighbouring areas of the country from Belgaum, Satara, Kolhapur, Poona and Bijapur. The reasons for their migration must have been either the expeditions of conquest by rulers or political upheavals in their own country, or the favourable reception they had had in the neighbouring areas. The relationships that had thrived between these two parts of the country from the times of Satavahanas (1st--3rd century A.D.) were inseparable. The epic Panditaradhya Charitra gives sufficient evidence to prove that in the festival proceedings (*Parusanadakas*) of Srisailam, the Aare tribe also participated along with other Dravidians and Telugu people. Wooden and leather puppet doll shows were staged on the occasion of the festival of Sivaratri. The name of the performers had not been mentioned. However, it is probably not far from the truth to say that the people who thronged from neighbouring areas to see Lord Mallayya of Srisailam were quite familiar with the puppet doll plays

2. The supporting factors available are not sufficient to decide whether Telugu people and others had learnt the art from the Aare tribe or whether they themselves knew it. It is not possible to say who imbibed the art from whom. Moreover, all those who stage the puppet doll plays in South India are not Marathas. Uru Jangams in the Mysore State; Katubus in the border areas of Bombay and Mysore; Kuthadis in the Madurai Tanjore region, Balijas in some parts of Bellary District; Ite Bondilis in Visakhapatnam District; Telugu Gollas, Gumpus and Jangams in Godavari District; etc., are the other communities who perform puppet doll plays and are different from the Aare sect of people. In the Andhra area, puppet doll players are found mostly in the following places, viz., Sarvasidhi, Srungavarapukota, Kallepalli Agraharam (Visakhapatnam); Mandapeta, Angara, Yelamanchili, Tanuku (Godavari); Singarayakonda (Nellore); Ramadurg, Belgal (Kurnool); Kadamalakunta, Oddepalli (near Lepakshi), Avulenna, Jarutlaramapuram (Anantapur); Sondur, Thoranagal (Bellary). They have Inam (gift) lands also in some places.



Plate 22. The leather puppet doll players of Madhavapatnam near Kakinada, East Godavari District.

APPENDIX II

An account of the Leather Puppet Doll players of Madhavapatnam, East Godavari District

Within three miles of Kakinada, the head quarters town of East Godavari District—one has to divert from the Kakinada-Samalkot road by about a couple of furlongs—lies a small village called Madhavapatnam. This village is almost entirely made up of migrant families who originally practised leather puppet doll plays. There are about 60 families, who call themselves Telaga Bondilis. It is said that the earliest settlers to this village came in 1911 and the village has gradually grown up as the families multiplied. All the existing families go by either of the two surnames, Vanaparthi or Thota. These Telaga Bondilis speak corrupt Marathi as their mother tongue. They claim to have come down from Bellary District. They seem to have secured the patronage of Pithapur Rajah in the past and settled down in this area. Some of them have acquired some landed property and taken to cultivation. A few others have become petty shop keepers. A majority of them, however, appear somewhat unsettled and in straitened circumstances. Plate 22 shows a group of these villagers.

2. It is a remarkable feature that almost every resident of this little village practises some art or the other. Several youngsters have taken to dramatics; they are good singers and also good at playing on certain musical instruments such as the harmonium, tabla etc. Some girls are trained in *Bharatanatyam* and there is one lady who is considered an adept in *Harikathakalakshepam*. The elders can quote scriptures and Sanskrit *slokas* very fluently. The entire village, despite the poverty of the residents, seems to be saturated with art. Their traditional art of leather puppet shows is, however, languishing.

3. Only the elders above the age of 45 years have good knowledge of the leather puppet doll plays. The younger generation seems to be losing interest. Those aged less than 15 years do not seem to know this art at all. The puppet doll artistes complain that since three years the patronage of the people has almost completely dwindled. However, they claim that even now once in three months the players go about putting up shows.

4. The production of the puppet figures, the puppet show technique and the themes for the show are the same as those described in the main monograph. However, I observed that the pictures produced by these people are gaudier in colours and look more like the present day stage characters. The traditional designs and colours which are more evident in the possessions of the Rayalaseema *Tholubommalata* families are somewhat scarce, perhaps because of their being further away from the original home of the *Tholubommalata*. The history of the Madhavapatnam settlers also goes to prove that Bellary (Rayalaseema) from where they migrated was the home of the art of leather puppet dolls shadow play. The Madhavapatnam players, however, seem to have a larger variety of figures, sometimes more ingenious and interesting (such as the various types of *Rakshasas* who are depicted as guarding the Lanka in the Ramayana, some with crocodile jaws and some with crane beaks, etc., who are depicted as swallowing Hanuman). These players who have come to exhibit their art in distant parts apparently have tried to cater to the tastes of the local people by gradually changing the types of figures so as to resemble the stage players and have also tried to rouse the interest by more ingenious figures.

5. If anybody would wish to gain first hand knowledge of this art, Madhavapatnam seems to be a very convenient centre to visit. One can camp at Kakinada which has good accommodation and boarding facilities and the village is within easy reach. The following are some of the *Tholubommalata* experts of the village.

(1) Vanaparthi Krishna Murthy
(2) Vanaparthi Ramamurthy
(3) Thota Rangoji
(4) Thota Anjaneyulu
(5) Vanaparthi Suryanarayana

6. A complete list of all the Telaga Bondilis of Madhavapatnam who claim to have knowledge of the art of leather puppet dolls plays is given below:

(1) Vanaparthi Krishna Murthy
(2) Vanaparthi Anjaneyulu
(3) Thota Venkata Rao
(4) Thota Anjaneyulu

(5) Vanaparthi Koteswara Rao
(6) Thota Subba Rao
(7) Thota Subhadra
(8) Thota Gani Raju
(9) Thota Simhachalam
(10) Thota Davanam
(11) Thota Ramana
(12) Thota China Nagabhushanam
(13) Thota Rama Murthy
(14) Thota Anjaneyulu
(15) Vanaparthi Kondaiah
(16) Vanaparthi Neelakantam
(17) Vanaparthi Thrinadha
(18) Thota Gangadharam
(19) Thota Thrimurthy
(20) Thota Hanumantha Rao
(21) Vanaparthi Ganemma
(22) Vanaparthi Musaliah
(23) Thota Chalapati
(24) Thota China Rama Murty
(25) Thota Rangoji
(26) Thota Kotilingam, s/o Narayana Swamy
(27) Thota Balakoteswara Rao
(28) Vanaparthi Venkoji
(29) Vanaparthi Sree Ramulu
(30) Vanaparthi Linga Raju
(31) Vanaparthi Koti Rama Murty
(32) Thota Peddiah
(33) Thota Baliah
(34) Vanaparthi Venkoji
(35) Vanaparthi Peda Krishna
(36) Vanaparthi China Krishna
(37) Vanaparthi Nagabhushanam
(38) Vanaparthi Peda Veeranna
(39) Vanaparthi China Veeranna
(40) Thota Anjaneyulu
(41) Thota Krishna
(42) Thota Tulasi Rao
(43) Vanaparthi Suryanarayana
(44) Thota Venkata Rao
(45) Thota Rama Rao
(46) Vanaparthi Chiranjeevi
(47) Vanaparthi Rama Murthy
(48) Vanaparthi Appa Rao
(49) Thota Nagabhushanam
(50) Thota Venkata Rao
(51) Thota Suryanarayana
(52) Thota Appa Rao
(53) Thota Viswanadham
(54) Thota Rama Murthy
(55) Thota China Venkata Rao
(56) Thota Kotilingam
(57) Thota Kotamma
(58) Thota Narasimham
(59) Thota Soma Raju
(60) Thota Simhachalam
(61) Thota Kondamma
(62) Thota Kotilingam
(63) Vanaparthi Appala Konda
(64) Vanaparthi Sree Ramulu, s/o Appala Konda
(65) Vanaparthi China Ganemma
(66) Vanaparthi Viswanadham

7. One Shri M. V. Ramana Murthi, a resident of Kakinada, is said to have conducted a research into *Tholubommalata* with the assistance of a scholarship awarded by the Government of India. I did not have the pleasure of meeting him, as he had shifted his residence to Madras. His last known address is 69, Lake View Street, West Mambalam, Madras-33.

APPENDIX III

Shadow Play Themes

RAMAYANA

Ramayana is a well known Hindu epic. A brief resume is given below. The themes selected for shadow plays represent certain incidents in this great epic.

2. King Dasaratha rules the kingdom of Kosala to the north of the river Ganges. Ayodhya is its capital. Dasaratha has three wives—Kausalya, Sumitra and Kaikeyi. In the midst of all his prosperity, Dasaratha has one regret—namely, that he has no son. To achieve the desire, he performs *yaga* or a sacrifice for progeny, as a result of which four sons Rama, Lakshmana, Bharatha and Satrughna are born to his queens. The princes are given all the training necessary for kings and they grow up to be strong, virtuous and brave.

3. One day, Viswamitra arrives at King Dasaratha's court and seeks the assistance of the eldest prince Rama to protect their *yagna* from the mischief of *Rakshasas*. On the advice of Vasishtha, Dasaratha reluctantly agrees to and sends Rama and Lakshmana with Viswamitra. Viswamitra initiates the princes in the two secret *mantras*, *Bala* and *Atibala*, which guard them from fatigue and harm. Then, in their journey through the forest, Rama kills the female monster Taataka. Viswamitra teaches the two princes *mantras* required to use the various *astras* or divine weapons. Afterwards, Rama and Lakshmana keep vigilance over the performance of *yagna* by Viswamitra and other sages to protect it from the onslaught of the two *Rakshasas*, Mareecha and Subahu. The former *Rakshasa* is hurled off near to the sea and the other is killed along with the army of theirs.

4. Viswamitra, Rama and Lakshmana learn about the great sacrifice being performed by Janaka, the philosopher king of Mithila and decide to go there. On their way to that city, they come across Ahalya, a pious lady who is redeemed of her curse by the touch of Rama's feet. Viswamitra and the princes are welcomed by King Janaka. Rama bends the mighty bow of Rudra which breaks into pieces with a big crash. Janaka celebrates the marriage of his daughter Sita with Rama. On his way back to Ayodhya after the marriage, along with his father Dasaratha and retinue, Rama meets Parasurama, the *avatar* of Vishnu preceding to his own, and consumes all his power. Thereupon, all live happily in Ayodhya for about 12 years.

5. One day, King Dasaratha thinks of his old age and decides to perform the coronation of Rama. Preparations are afoot for it. Mandhara, the queen Kaikeyi's trusted companion tenders uninvited and fateful advice to the latter to ask for the crowning of her son Bharata instead of Rama. Though averse to the idea at first, Kaikeyi succumbs to the evil counsel on persuasion. When Dasaratha comes to her palace that night, Kaikeyi reminds him of the two boons he offered to her long back at the time of a battle, and demands as the first gift to crown her son Bharatha in place of Rama the very next day, and as the second boon to send Rama to live in Dandaka forest for 14 years. Dasaratha is thunderstruck with grief; but he cannot help because he has sworn in the name of Rama himself to fulfil the desires of Kaikeyi. He falls on the floor unconscious with extreme agony. Kaikeyi sends for Rama and mentions the two boons asked for by her of Dasaratha which he, however, could not grant on account of his affection for Rama, namely—Bharatha should be anointed *Yuvaraja* and Rama should leave the very day for forests to remain in exile for 14 years. Rama cheerfully accepts the demands and renunciates the coronation. Sita and Lakshmana also follow Rama to the forest, in spite of Rama's efforts to dissuade them. Dasaratha expires of a broken heart. Ayodhya is sunk in darkness and lamentation.

6. The family preceptor Vasishtha sends for Bharatha, who has been staying at his uncle's place, to return immediately to Ayodhya. Bharatha denounces what has been done by his mother Kaikeyi, and decides to go to the forest and bring Rama back to Ayodhya and see that he is crowned. Followed by a large army and citizens, including the sage Vasishtha and the widowed queens of Dasaratha, Bharatha goes to the forest seeking the abode of Rama. He meets him on Chitrakoota hill, where all the four brothers and the mothers reunite. When Rama is told that his father is dead, he falls down with grief like a tree felled by an axe. Afterwards, Bharatha begs him repeatedly of returning to Ayodhya and ruling the kingdom. But, Rama would not relent from his decision of obeying his late father's behests. On a suggestion put forth by Vasishtha, the sandals of Rama are given to Bharata; and Bharata agrees to discharge the duties of King under Rama's name with his sandals

as token for that. They return to Ayodhya and thereafter Bharata rules the kingdom as a religious duty staying at Nandigrama near Ayodhya.

7. Rama, Lakshmana and Sita move about in the quiet forests, full of interesting animals and colourful vegetation, from *ashram* to *ashram* meeting several *rishis* and sages. They assure the latter of protection from the troubles caused by the *Rakshasas* who dwell in those forests and cause hindrance to their *tapas*. Rama receives blessings from all the *rishis*, including the great sage Agastya, who feel rejoiced at having Rama in their midst. Agastya advises Rama to take residence in Panchavati on the bank of river Godavari and presents to him a divine bow, an inexhaustible quiver of arrows and a sword also.

8. One morning Soorpanakha, a *Rakshasa* woman and sister of Ravana, who is roaming about in the forest is attracted by the beauty of Rama and accosts him for love making. Lakshmana cuts off her nose in anger. She runs loudly wailing to Khara, another brother of hers, who is living in that forest, to complain about the insult and mutilation wrought to her by the two handsome young men in the forest. Khara, enraged at this, attacks Rama with a big army, but is slain by the latter in a battle.

9. When Ravana hears about this loss to his race and about the beauty of Sita, through the few *Rakshasas* who survive the battle and through his dear sister Soorpanakha with the woeful tale of her humiliation, he is infuriated to wreak vengeance by carrying away Sita to his city and killing Rama and his brother. He conceives a plan that Maricha should transform himself into a beautiful stag and appear before Sita. When Sita sends Rama to fetch it for her, Maricha should draw away Rama to a far distance and should cry in a voice resembling Rama's, *Ah Sita, Ah Lakshmana*, hearing which Sita would send Lakshmana for Rama's help; and Ravana would carry her off to Lanka when she is alone. Maricha agrees to the plan much reluctantly, because he knows the power of Rama and that Ravana is acting against *dharma* and to his own ruin. Sita is attracted by the exquisite beauty of the deer, that is Maricha in disguise, and desiring to possess it pleads with Rama to catch it for her. Rama, unable to resist her entreaties longer, sets out with bow and arrows to catch the deer alive or even dead; and he entrusts Lakshmana with the duty of being vigilant for Sita's safety at the *ashram*. Maricha takes Rama very far out, when the latter, tired of the pursuit, bends his bow and strikes with an arrow. Maricha resumes his real form and simulating Rama's voice calls out Sita and Lakshmana, before falling dead. Sita insists that Lakshmana should go to the rescue of Rama, eventhough Lakshmana assures repeatedly that no harm overtakes Rama. Unable to realise the import of the evil designs of the *Rakshasas*, Sita, in her frenzy for Rama's safety, speaks very harshly to Lakshmana and also threatens to take her life. Lakshmana, much against his will to disobey Rama's command, leaves Sita alone in the *ahsram* and follows the direction in which the voice is heard in search of his brother in the forest. Ravana, who has been waiting for this opportunity transforms himself into a mendicant ascetic and approaches Sita in the *ashram*, who offers him fruits and roots as to a guest. Ravana's desire for Sita grows irresistible and he proposes to her to be his wife. When Sita refuses, he resumes his form and carries her away in his chariot into the air. Sita wails loudly.

10. Jataayu, the old bird king of eagles and a friend of Dasaratha, hears the cries of distress and gives a fight to Ravana obstructing his aerial car. But, the bird-hero is desparately wounded with his wings cut off by Ravana. Sita, who is overwhelmed with grief and anger is repeatedly tried by Ravana to be convinced of his own glory for winning her over. But Sita detests his argument as absurd, and warns him that he is to find his end in Rama's hands very soon. While they are flying in the sky over a mountain where some people are seen, Sita ties up her jewels in a cloth and throws the bundle down, hoping that the ornaments might give some clue to Rama in which direction she is carried away. Ravana takes Sita to Lanka and keeps her in Asoka garden near his palace, as a closed prisoner under the care of some female *Rakshasis*, allowing her time to make up her mind towards Ravana.

11. When Rama returns with Lakshmana to the *ashram* after the futile chase of the deer and does not find Sita there, his sorrow knows no bounds. He takes that Sita has been eaten away by the *Rakshasas* and becomes apparently mad in his terrible disconsolation. Lakshmana's efforts to console Rama are of no avail. The two brothers search for Sita all the forest moving about with grief-stricken hearts and crying aloud. They meet Jataayu, the bird hero, who has given battle to Ravana and got multilated, waiting precariously with last breath to give Rama the information about the calamity fallen to Sita. He tells that Ravana took Sita in a southern direction. Then Jataayu dies. Rama and Lakshmana feel grateful for the noble eagle king, who was like the second father to them, and perform his obsequies.

12. On their further way through the forest, Rama and Lakshmana meet Kabandha, a barrel-shaped monster, who, before giving up his life, gives clue that Sugreeva living on Rushyamooka hill on the bank of river Pampa could be of help to them. Later, the princes come across the *ashram* of Sabari, a saintly woman of a forest tribe, awaiting for the bliss of Rama's *darshan*, and accept the fruits served by her. They continue their journey to the Pampa river. Lakshmana goes on advising Rama not to lose fortitude and tries to infuse fresh energy and enthusiasm in him.

13. As they reach the vicinity of the abode of Sugreeva, the *Vanara* prince, who has been persecuted and ejected from his kingdom by his brother Vali, Rama and Lakshmana are met by Hanuman, the chief minister of Sugreeva and welcomed. The two parties, namely, Rama and his brother, and Sugreeva and his followers narrate their respective stories of joys and sorrows and seek mutual help and assure each other. The jewels of Sita, which were thrown down by her and picked up by the *Vanaras* here are shown to Rama, whereupon his anguish for Sita's predicament increases, as also his anxiety to destroy the *Rakshasa*, who has abducted her so cruelly. In order to restore Sugreeva to his earlier position as king of the *Vanaras*, Rama goes to his succour in the fight with Vali and slays Vali from a vantage point behind the trees. Valorous and noble Vali condemns Rama for assassinating him stealthily and causelessly. He dies after entrusting the care of his beloved son Angada and his wife Tara to the care of Rama and Sugreeva. Sugreeva is crowned king of the *Vanaras* at Kishkindha and Angada their *Yuvaraja*. Thereafter, Rama and Lakshmana wait for four months in a cave at Kishkindha for the rainy season to pass.

14. After this period, Sugreeva musters all his army of *Vanaras* and places it at the disposal of Rama. The enormous army surging with wondrous strength is divided into eight parts and sent to all corners of the earth with stringent instructions to search vigorously for Sita and return with news in a time of one month. Rama as well as Sugreeva somehow feel confident that Hanuman's efforts might be crowned with success; and Rama, therefore, gives his ring to him to show to Sita as token of bonafides of the messenger from its owner. The hordes which went to east, west and north return and report that Sita is found nowhere. But, the team which went to south comprising Hanuman and Angada with other *Vanaras* continue their search to farther and farther south. They meet on way Sampati, the old vulture king and brother of Jataayu. He can see even things which are very far off. Thus, he finds Sita captive in Lanka surrounded by *Rakshasis*; and learning this the *Vanaras* jump with joy. They decide that Hanuman alone with all his intelligence, courage and strength is capable of crossing the ocean, finding out Sita and coming back safely. Hanuman grows immensely big in stature, flies into the sky and crosses the mighty ocean, which is 100 *yojanas* (*i.e.*, about 900 miles) in width. He conquers all the troubles created by demons etc. on the way, with the strength of his firm resolve to be of service to Rama. He sets foot in Lanka with full hope and reduces himself into the size of a little monkey for facility of easy search without being observed by the *Rakshasas*.

15. Hanuman moves about all the apartments and avenues of the magnificient buildings of Ravana's capital city, and is amazed at the enormity of wealth and nobility of splendour with which it is filled. He carefully searches all places, mansion to mansion, but cannot find Sita among the innumerable women of exquisite beauty seen there. At last, Hanuman finds Sita seated on the golden platform around the stem of a tall and spreading tree in the beautiful Asoka park; and his heart leaps with unbounded joy. While Hanuman keeps perched among the leaves on the tree, Ravana approaches Sita and tries to convince her to have pity and love for him, and to accept him. But, Sita scorns him with hatred and contumely and warns him that he will surely be killed by the arrows of Rama, unless he makes amends even at this late stage for his fault and appeals for the mercy of her husband. Ravana warns that the time assigned for making up her mind would be over in two months and goes away.

16. Hanuman gets down from the tree, makes obeisance to Sita and narrates the story of Rama extolling his virtues and attractive qualities. Sita receives the signet ring of Rama with joy and kisses it with her eyes. Sita gives a precious jewel of hers to be carried to Rama as token. Hanuman grows in form to a huge size and devastates the parks and buildings in the Lanka and roars in triumph saying that the day of destruction of Lanka is drawing near. Many *Rakshasa* commanders sent by Ravana for capturing Hanuman are crushed. Fear enters Ravana's heart for the first time; he wonders at the extraordinary strength and valour which a strange *Vanara* has. He sends forth his young son Aksha; a fierce battle ensues, and in the end he falls down dead. Ravana is shaken with rage and he now calls Indrajit, the conqueror of Indra, to take up the task. Indrajit, succeeds in capturing Hanuman with *Brahmastra*, and the *Rakshasas* tie the hands and legs with ropes and drag Hanuman to Ravana's presence. Hanuman advises Ravana to give up his wicked path and seek Rama's friendship, so as to escape from annihilation of his race together with his life and prosperity. Ravana orders the *Vanara* to be

killed; but Vibheeshana propounds that envoys from a king should never be killed but can be punished, if necessary. Hanuman's tail is soaked in oil and set on fire and he is taken through all the streets and by-lanes of the city. He notes in silence all the secrets of the city for future use. Suddenly he magnifies his body, jumps from place to place and sets all palatial buildings ablaze with fire. After that, he takes leave of Sita and returns to Kishkindha.

17. Rama listens to the account narrated by Hanuman of his experiences. The description about the condition in which Sita was found being held prisoner closely guarded by *Rakshasas* and her emaciated looks full of anxiety for early redemption from her suffering, and the jewel of hers handed by Hanuman fill Rama with extreme grief, while at the same time he finds supreme joy at the fact that Sita is alive and safe in Lanka. Sugreeva and others reassure Rama and inspire him to action; and the mighty *Vanara* army starts on its marching towards the south.

18. There in Lanka, Vibheeshana, the younger and righteous brother of Ravana, earnestly pleads with the latter to restore Sita to Rama's self honorably, at least in view of the impending ruin to his glory and to the land, foretold by the several bad omens seen since Sita was brought over to that place. But his counsel is rejected by Ravana who disdains and insults Vibheeshana and calls him his enemy. Unable to put up with the fallacious and evil ways of Ravana fraught with inevitable danger and realising that there is no place for him thereafter in Lanka, Vibheeshana renounces all his possessions and flies with a few followers to Rama's camp on the other side of the ocean and seeks refuge. Rama accepts Vibheeshana to his company in accordance with his *dharma* that no one who seeks protection shall be rejected.

19. In order to find a way out for crossing the ocean with all the army, Rama prays fasting for 3 days on *darbha* grass on the seashore. The king of the Sea blesses Rama with indication that Nala, a warrior in the *Vanara* army, has ability to build a causeway. And, accordingly a huge causeway is constructed across the sea by all the *Vanaras* under the supervision of Nala. The army marches on it and reaches Lanka. The two parties—Ravana and his *Rakshasa* army on one side and Rama and his *Vanara* army on the other—prepare themselves for the battle, posting generals on all sides and arranging battle arrays.

20. Rama exhorts his army as to how to be alert during the course of the battle. The *Rakshasas* are apt to deceive *Vanara* hordes in several ways. As to the appointments for the battle positions, Hanuman is to face Indrajit at the western entrance, Rama and Lakshmana to meet Ravana and also to direct the strategy of assault on Lanka; and Sugreeva and Vibheeshana to stay behind with the main army. The *Vanara* army surrounds Lanka from all sides. Rama sends a final word through Angada, son of Vali, to Ravana intimating that if he surrenders Sita and asks to be forgiven, he can be happy ; otherwise, death would be imminent for him. Ravana rejects the offer. Assault on Lanka begins. Ravana and his advisers survey the hostile army from the top of a tower in the palace. The spies of Ravana extol the invincible strength of the enemy and suggest that honourable submission would be desirable. But, Ravana becomes more furious with his foolish and relentless obstinacy.

21. The two armies collide. There is a fierce battle going on. Besides that, duel fights between individual warriors take place—Angada encounters Indrajit, Hanuman meets Jambumali etc. Thousands of *Rakshasas* lay killed with Rama's arrows. The battle rages fiercely. There are heavy losses on both sides. Indrajit arrests the movements of Rama and Lakshmana with the serpent darts, from which, however, they are extricated by Garuda, the eagle companion of Lord Vishnu. Ravana sends his mighty warriors one by one as commanders of big armies, and in the intense battle that ensues they are all slain by the *Vanaras*. Big boulders and uprooted trees come handy for the *Vanara* hordes to face the imperial host.

22. After the battle proceeds for some time, Ravana himself descends in his chariot with his majestic and glowing form like the Sun. He gives fight to Rama and Lakshmana; but goes back humbled and dejected for the day. Thereupon, Kumbhakarna, Ravana's brother, is awakened from his sleep; and Ravana praises his strength and prowess and appeals to him to save the situation. Kumbhakarna boasts that he can vanquish the enemy. Seeing his mighty form across the fortress wall, the *Vanaras* are frightened and flee helter skelter. They are rallied together with great difficulty in battle formation by the chiefs. Kumbhakarna strikes down Sugreeva and renders him unconscious and takes him to Ravana's palace. But, Sugreeva meanwhile revives with life and escapes to Rama. Kumbhakarna displays enormous strength and gives terrible battle destroying a large proportion of the *Vanara* army. Only Rama's arrows succeed in wounding him and cutting off his head finally. Ravana swoons at the news.

23. Afterwards, some more *Rakshasa* warriors are also defeated and slain by the enemy and Ravana is bewildered at his losses on the battle field. He is amazed

at the strength of Rama and doubts if Rama is not Narayana himself? Ravana's son, Indrajit comforts his father, gathers an army and furiously comes down on the *Vanara* forces and kills or wounds thousands of them. He casts *Brahmastra* against Rama and Lakshmana and they fall unconscious on the ground. On the advice of the elderly leader Jambavan, Hanuman springs into the air, goes towards Himalayas and brings down Sanjeevi hill, which contains medicinal herbs to restore life. Rama and Lakshmana regain strength and the battle is resumed. Rama orders the city to be set on fire. Sugreeva does. City is reduced to ashes. Some more *Rakshasa* commanders perish. Indrajit resorts to trick warfare and keeps himself invisible in the air. He creates a false Sita with sorcery and kills her before the *Vanaras,* who are thus deceived for grief. Then, he begins a sacrifice for attaining supernatural powers. Vibheeshana exposes Indrajit's magic. Lakshmana and Indrajit fight with each other. At last, the powerful son of Ravana and the conqueror of Indra is killed.

24. Rama feels happy at this loss to the enemy and his brother's achievement. Ravana goes heart broken. In his despair he wants to put an end to Sita's life; but his minister advises him against it as the killing of a woman brings disgrace to the glory of Ravana. Ravana agrees to desist from this. He himself starts on his divine chariot drawn by eight horses. Ravana and Rama are engaged in a grim battle. Lakshmana and Vibheeshana also fight with Ravana. Lakshmana falls down unconscious. Sanjeevi hill brought by Hanuman again restores life. Indra sends his chariot for the use of Rama. There follows a wonderful battle. Rama at last applies *Brahmastra* which pierces Ravana's chest and his majestic form falls on the battle field.

25. Vibheeshana is crowned King of Lanka. In order to testify the purity of her character, Sita enters a fire kindled in the presence of all. The God of fire lifts Sita in his arms and presents her to Rama.

26. All return to Ayodhya. Rama is crowned.

PATHALA HAVANAMU *OR* RAVANA'S TAPAS

27. The battle between Rama and his brother Lakshmana with the *Vanara* forces on one side and Ravana with *Rakshasa* forces on the other rages fiercely. The losses on both sides are heavy. Indrajit, the son of Ravana, gives outstanding battle to the Ayodhya princes; but in the end he also meets his death. When Ravana himself faces defeat at the hands of Rama, a sense of despair takes over him and he goes to Sukracharya, the supreme preceptor of the *Rakshasas* and solicits guidance as to how to conquer Rama and his forces. Sukracharya tells Ravana that if he conducts a sacrifice *havana* or *homa* in a secret place, and if that is completed successfully without interruption to the end, then he would be rewarded with a supernatural chariot, horses and bow and arrows from the sacrificial fire, with which he can vanquish all the enemies. He imparts the necessary *mantras* for that sacrifice. Ravana goes to the inner apartments of his palace and constructs an underground chamber for the purpose. All gateways for the city are closed and the sacrifice is commenced secretly without being let known to anybody. Ravana bestows all concentration and observes strict silence. But, the sacred smoke from the sacrificial fire envelopes the palace and the vicinity. This is noticed by Vibheeshana, who intimates Rama about the dire consequences of the successful completion of the *homa* taken up by Ravana. Therefore, Vibheeshana advises Rama to send Hanuman, Angada etc., to put obstacles to Ravana's *Pathalahoma.* Angada is sent with Hanuman and some *Vanara* commanders. Vibheeshana gets information clandestinely through a *Rakshasa* watch-woman as to how to enter the *Pathalagriha* of Ravana, where the sacrifice is being performed. Angada reaches there by killing the *Rakshasa* warriors watching it. Hanuman and others follow him. They roar loudly to break the vow of silence of Ravana. They put all sorts of obstacles to Ravana's performance. But, Ravana's concentration is not disturbed at any cost, even though he is actually beaten by the *Vanaras.* His strong desire to vanquish Rama is the guiding force for his will. Then, Angada thinks over and enters the ladies' apartments and drags Ravana's wife Mandodari to his presence. He insults and humiliates her in the very presence of her husband. Other *Vanaras* follow suit and humiliate the other wives of Ravana. Mandodari wails loudly crying for help and complaining that what is the use of Ravana being alive if his wife is thus put to shame by enemies in his presence. Ravana is aiming at killing the enemy and securing the kingdom, while his wife is put to disgrace at the hands of the enemy forces. Then, Ravana could not tolerate the mischief any more and immediately takes his sword and strikes Angada with it. Thus, the *Pathala homa* is disturbed. The object of the *Vanaras* is achieved. They go to Rama and report about it. Mandodari urges Ravana to desist from fighting with Rama, but he doesn't pay heed to her advice.

MAHIRAVANA CHARITRA *OR* THE STORY OF MAHIRAVANA

28. During the course of the battle between Rama and Lakshmana with the *Vanara* forces on one side and Indrajit, the son of Ravana, with the *Rakshasa* forces on

the other, Indrajit fights very furiously and kills or wounds thousands of *Vanaras*. He casts *Brahmastra* by which Rama and Lakshmana fall unconscious on the battle field. The information that they have re-gained consciousness through the effect of Sanjeevi hill brought over by Hanuman troubles Ravana very much. He then seeks the aid of his relative Mahiravana, who is called Pathala Lankeswara or lord of another *lanka* (island) in an under-world. Mahiravana arranges that two of his commanders should abduct Rama and Lakshmana from the battle camp, while they are asleep in the night. But, Hanuman scents the impending trouble and keeps watch over the persons of Rama and his brother by improvising a safe enclosure around them with his tail elongated to an infinite length. The commanders of Mahiravana go back humiliated at the hands of Hanuman. Then, Mahiravana himself sets forth to achieve his object. He comes in the disguise of Vibheeshana, whereupon Hanuman allows him enter the enclosure to approach the sleeping princes. Mahiravana takes away Rama and Lakshmana stealthily to his domain. Afterwards, Vibheeshana arrives on the scene to enquire about the welfare of Rama and his brother. Their absence from the artificial fort reveals the mischief of Mahiravana; Vibheeshana and Hanuman go to Pathala Lanka and through the help of Mahiravana's son and sister they recover Rama and Lakshmana and transport them to their original place in the battle camp. Next morning, Rama and Lakshmana wake up from sleep normally, as if nothing has happened during the night.

DRAUPADI VASTRAPAHARANAM *OR* SNATCHING AWAY DRAUPADI'S WEARING APPAREL

29. This is a dramatic event occuring in the great Hindu epic, Mahabharatha.

30. After Draupadi is lost to Kauravas in a game of dice by the eldest of the Pandava brothers, Yudhishthira, Dushasana, the wicked brother of Duryodhana darts after her, catches her by the hair and drags her to the Court. She is struck with horror, but controls her anguish and appeals to the elders gathered there for justice and points out that Yudhishthira, having already lost himself as wager in the game, has no right to stake Draupadi. Some discussions follow in the Sabha; Karna rises up and says that even the clothes worn by the Pandavas belong now to Sakuni (an uncle of Kauravas), who has won all their property. The Pandavas lay down their upper garments to show that they are ready to follow the path of *dharma* at any cost. Seeing this Dushasana goes to Draupadi and sets to seize her clothes by force. All earthly aid having failed, Draupadi feels utterly helpless and implores divine mercy addressing the Lord of the world to save her. She then faints away. Dushasana starts pulling off Panchali's (Draupadi's) robes; but as he tries to pull off the robe fresh garments are seen to clothe her body endlessly. Soon a great heap of resplendent clothes is piled up. Dushasana is tired and he desists from his wicked act of *Vastrapaharanam* or snatching away wearing apparel. It is a marvel of God. Draupadi's honour is saved. Thereupon, Bhima utters an oath loudly saying that he would tear the breast of Dushasana and drink his heart's blood. Dhritarashtra soothes Pandavas with words of gentleness and affection.

KEECHAKA VADHA *OR* DESTRUCTION OF KEECHAKA

31. This is an incident from Mahabharatha proving the valour of Bhima, one of the Pandava brothers.

32. According to the conditions of the wager in the second game of dice in which Yudhishthira, the eldest of the Pandava brothers, loses to Duryodhana, the Pandavas have to spend the thirteenth year of their exile incognito so that their whereabouts are known to nobody. They approach Virata, the King of Matsya, for employment in domestic service in his royal palace. Yudhishthira puts on the garb of a *sanyasi* and becomes the King's companion under the name Kanka. Bhima works as the chief of the cooks. Arjuna assumes the name of Brihannala and teaches dancing and singing to Princess Uttara, the daughter of Virata. Nakula looks after the horses and Sahadeva the cows and bulls. Draupadi is passing her days as Sairandhri serving Sudheshna, Virata's queen. She lives in the inner apartments of the palace as maid and companion.

33. Keechaka, the brother of Sudheshna, is the commander-in-chief of Virata's army and he has vast influence on the King. He concieves an uncontrollable passion for Draupadi and makes amorous overtures to her. Draupadi resists and gives out that *Gandharvas* are her husbands and they would kill those who try to dishonour her. One day Keechaka pursues her madly intoxicated with wine, as also with power and influence. Draupadi goes that night to Bhima and appeals piteously for protection and revenge. Bhima starts to kill Keechaka immediately. But, Draupadi stops and tells him not to be hasty. They contrive a plan that Keechaka should be beguiled to come alone the next night to a lonely corner in the dancing hall, where Bhima should lay waiting for him, disguised as a woman instead of

Draupadi. Next morning, Draupadi pretends yielding to Keechaka's attentions and asks him to come to the dancing hall that night. Keechaka revels in happiness. That night he goes perfumed and decked himself to the appointed spot. He gropes his way in darkness and lays his hands on the person of the sleeper who turns out to be Bhima. There ensues a fierce struggle between Keechaka and Bhima, who are both warriors of strength. In the end Bhima kills Keechaka and reduces his body to a shapeless mass of flesh. Draupadi wakes the guards of the palace and tells that *Gandharvas* had come to her rescue and killed Keechaka as he tried to molest her.

VIRATAPARVA (THE PERIOD WHEN PANDAVAS WERE IN THE COURT OF KING VIRATA)

34. This represents an interesting phase in the great epic story of Mahabharatha.

35. From the beginning of the 13th year of Pandavas, exile, the spies of Duryodhana have been searching to locate them but failed. The news of Keechaka's death arouses suspicion in Duryodhana that Bhima might have been the *Gandharva* who killed Keechaka, and the lady who was the cause of killing might be Draupadi. He thinks of invading Virata's (Matsya) Kingdom, because, if Pandavas are hiding there, they will certainly come out to fight for helping Virata, and then, they can be easily spotted out. If they are discovered before the stipulated time of 13 years is over, they will have to go to forest again according to the agreed conditons of the dice game.

36. King Susarma, the ruler of Trigarta invades Matsya Kingdom from the south. All Pandavas in disguise except Arjuna (Brihannala) go to war on the side of King Virata. Susarma is defeated. At the time when the people are jubilant over the news, Duryodhana attacks from the north and despoils the cattle ranches on the outskirts of the city. The cowherds run to Uttara, the son of Virata and complain appealing for protection. Uttara boasts of his valour and proudly says before the ladies of the palace that if he could get a good charioteer, he would recover all the cows single-handed. Draupadi proposes that Brihannala is an expert charioteer who has served Arjuna previously. Uttara sets off to the battle with Brihannala as charioteer, and commands the latter to drive quickly. But, as soon as the Kaurava army is sighted, which is headed by great warriors, Uttara trembles, throws off the bow and arrows, gets down from the chariot and flees towards the city in panic. Arjuna pursues the running prince shouting him to stop and behave like a *Kshatriya*. Uttara begins to sob in utter fright. Arjuna says kindly soothing the prince's fears that he would himself fight with the Kauravas and that it would be enough if the prince only drives the chariot. Then, the chariot is driven to a tree near the burial ground, upon which the arms of Pandavas are kept hidden at the time of beginning the 13th year of their exile period. The identity of Pandavas is revealed by Arjuna that they all have been in the court of prince Uttara's father. Consternation takes over all the elders in the Kaurava army when they hear the sound of *gandiva*, the Arjuna's celebrated bow. Kauravas prepare for war with Arjuna. Drona arranges battle arrays of the army. The battle proceeds. Duryodhana is defeated and flees away from the field. But Arjuna taunts him with cowardice. Fight is resumed. Bhishma and others protect Duryodhana. Arjuna finally employs a weapon, *Sanmohanastra* which makes Kauravas fall down unconscious on the battle field. While they are in that condition, Arjuna snatches away their garments. Kauravas return to Hastinapura after the humiliating defeat. The cattle of Virata are regained. Victory goes in the name of Uttara himself, as Arjuna sends messengers in advance to the city to proclaim that.

37. When King Virata is unduly jubilant over his son's supposed success in the battle with the mighty Kaurava army, Yudhishthira asserts repeatedly that whoever has Brihannala as charioteer is bound to be sure of victory. Virata is ired at his remark and flings the dice at Yudhishthira's face and gives a slap on his cheek. The latter is hurt and blood flows down his face, when Sairandhri attends on him. Subsequently, while all sit in King Virata's hall of assembly with leading citizens who have come to celebrate the victory of the King Virata and the prince Uttara, Pandavas disclose their identity. Virata's joy knows no bounds. He offers his daughter, princess Uttara, to Arjuna in marriage. But, since he has been her teacher, Arjuna says that it would not be proper for him to wed her. Then, it is accepted that the princess would be married to Abhimanyu, the son of Arjuna.

(iii) KALAMKARI TEMPLE CLOTH PAINTING OF KALAHASTI



Plate 1. A Kalamkari cloth said to be 100 years old. [Krishna with *Ashtabharyas* —$7\frac{1}{2}' \times 7\frac{1}{2}'$ — said to have been supplied to the Kalahasti Pilot Centre by the All India Handicrafts Board. This is believed to have been produced by Arni Changayya, a reputed craftsman who was living in the early part of this century at Kalahasti.]

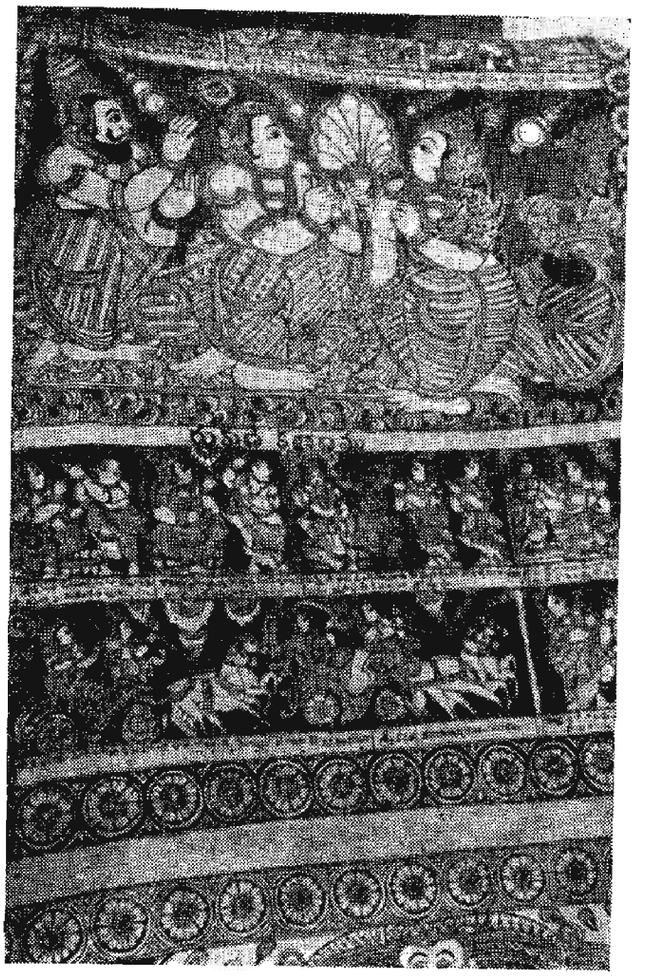


Plate 2. A recently painted Kalamkari cloth.

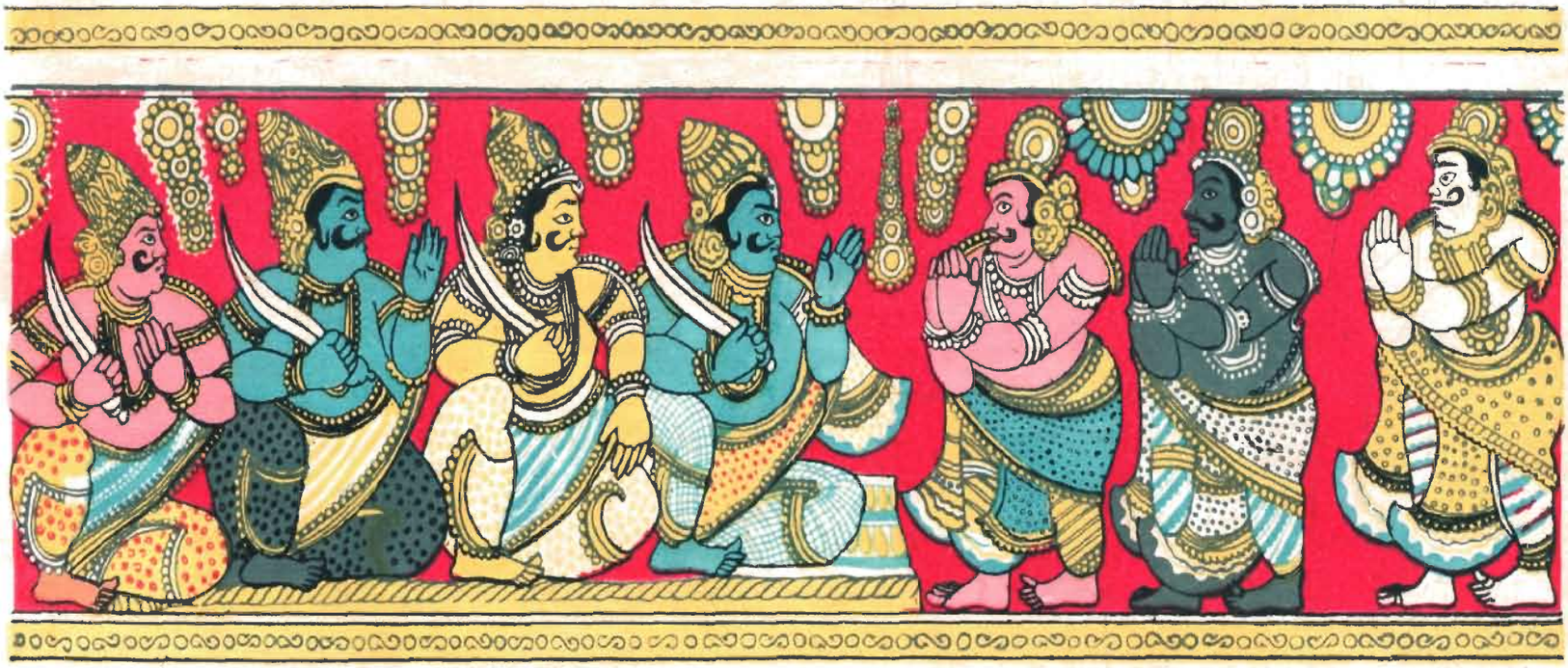


Plate 3. A typical temple cloth panel.

SECTION I

INTRODUCTION

Introductory

1. As one walks through the textile section of the National Museum at New Delhi, one cannot fail to be impressed by a magnificient specimen of a temple cloth that hangs on a wall, containing an entire panel depicting the great Epic of Ramayana. This specimen was produced at a place called Kalahasti, a temple town of Andhra Pradesh.

Kalahasti town

2. Kalahasti is a town, recently constituted into a Municipality, with a population of 26,460 (1961 Census) lying in Chittoor District at the southern corner of Andhra Pradesh State. It lies on the Gudur-Renigunta Section of the broad gauge railway line of the Southern Railway. It can be reached conveniently by road by branching off due west from the Grand Trunk Road at Nayudupet, 68 miles to the north of Madras or 42 miles to the south of Nellore. Kalahasti lies 17 miles to the west of Nayudupet on the Nayudupet-Tirupati road. It is picturesquely situated on the bank of river Swarnamukhi. Kalahasti town is also a great pilgrim centre where a very imposing and fine temple devoted to Lord Siva (Kalahasteeswara) is located. There are interesting legends connected with the religious importance of this place, but it is outside the scope of this monograph to cover them. The reader may refer to the Census volume on "Fairs and Festivals". The town is only 23 miles from the famous pilgrim centre of Tirupati.

A brief history of the craft

3. In this place of religious importance arose the industry of Kalamkari temple cloth painting. There is no information about how and when the industry originated. There is a story related by one of the Kalamkari workmen about a Kalamkari expert from Nellore side who was addicted to drink and happened to visit Kalahasti about a hundred years ago. He was made to drink heavily and under its influence he gave out all the secrets of the technique of Kalamkari work. The Kalahasti workmen thus came to learn the art and develop it here. This would suggest that perhaps the Kalamkari printers of Masulipatnam, who had specialised in Kalamkari printing for centuries, might have passed on their knowledge to the Kalahasti workmen who developed their own designs to suit the local demand and specialised in temple cloth printing. Kalahasti and its surroundings were under the control of Zamindars. The religious importance of the place and the patronage of the Zamindars must have undoubtedly proved propitious for the development of the industry here. There are some old temple cloths found at the Government Museum, Madras, and in the possession of other institutions, which are said to be at least 100 years old. These are quite exquisite and, judged by the highly developed state of the work that these printed cloths reveal, the industry should have existed for at least half a century before that. The industry, however, appears to have been concentrated only in the hands of a few families. The craftsmen were not traditional weavers, but Balijas who are generally from the lower rungs of society. The Balijas do not represent any definite professional community. They are mostly labourers. They are also known to take to certain professions such as bangle making. To the knowledge of the local people, the following persons of the community who resided in Kalahasti town are known to have practised the craft of Temple Cloth Painting

	Name	*Age*	*Remarks*
1.	Jonnalagadda Lakshmaiah	55 years	Now working as a teacher in an elementary school in Sriharikota island of Nellore district.
2.	Jonnalagadda Ramaiah	(Age not known)	Now working as an accountant in a shop at Kalahasti.
3.	Cherumathur Ramachandran	30 years	Working as a Jobber at the Pilot Production-cum-Training Centre for Kalamkari Art, Panagal, Kalahasti.
4.	Arni Kalappa	(Not alive)	Died a bachelor 3 years ago at the age of 55. None of his family is practising the art now.
5.	Jampala Yanadi	(Not alive)	Died 4 or 5 years ago at the age of 60. None in the family is practising the art now.

Arni Changayya, father of Arni Kalappa (No. 4 above) is reputed to have produced some temple cloth fabrics of outstanding beauty and was also recipient of medals for his fine workmanship at the Exhibition of Indian Arts Manufacturers held in Delhi in 1902-03. His sons

Arni Kalappa and Chengalvarayan continued the craft after the demise of their father. They were not attending to it whole time, but were also engaged in cultivation. It is strange that both the brothers remained unmarried. Kalappa died 3 years ago at the age of 55 and Chengalvarayan also passed away a year ago at the age of 60. There is none in the family who attends to this craft now.

4. The craft appears to have almost completely disappeared about 25 years ago. It survived till then mainly due to the patronage of the local Zamindars and the agency of Kishanchand Chellarams, a leading textile firm of Madras City who used to place orders with the Kalahasti printers and market the products. The institution of Zamindaris disappeared and Chellarams also stopped placing orders about 20 or 30 years ago. Temple cloth painting is not the type of craft which can be mass produced. The craft depended on the individual demand of temples and similar institutions and the patronage of the Zamindars. The production of each piece involves considerable labour and obviously it is very expensive. A square yard of finished cloth may cost as much as Rs. 27/- and therefore, there can be no demand from the common man for this type of product. The craft is such that it cannot possibly provide continuous employment to any large section of workers. It is more of an individualistic art requiring great artistic skill in drawing human figures, the intricate designs etc., on the part of the craftsmen. The individual specialised craftsman apparently excelled in his own art and certainly met the limited demands as and when received from the temples or other select patrons. No need arose for mass production and the craftsmanship was not broad-based. It is no wonder that the craft died out almost completely about 20 years ago. The few remaining craftsmen took to alternative avenues of livelihood. It looked as though the craftsmen were aware that they could not depend solely on this industry and so had prepared themselves for alternative occupations. For example, Jonnalagadda Lakshmaiah (age 55), the oldest surviving expert in the art, was a secondary grade trained teacher. He has taken to the teaching profession. His own son, one Gurappa Setty, though trained in the Kalamkari art, was also a higher grade trained teacher. Jonnalagadda Lakshmaiah's brother, Ramaiah, took to shop accountancy and his son Gajendran, though trained in the Kalamkari art, became a lorry driver by profession. One feels sad at the lot of these people who were the masters of one of the most exquisite crafts but had to abandon it and take to some alternative occupations, some of which (e. g., lorry driving) can hardly go hand in hand with such a spiritually dedicated and artistic calling as temple cloth printing and painting !

Pilot Production Centre, Kalahasti

5. The almost forgotten art of the temple cloth printing was revived by the efforts of the All India Handicrafts Board, under whose auspices a Pilot Production-cum-Training Centre was organised at Panagal, on the outskirts of Kalahasti in 1958. In the first batch of trainees 5 boys were trained. They were paid a stipend of Rs. 30/- per mensem. The qualifications prescribed were that they must have acquired a fairly good standard of drawing and should have high school education. It was fortunate that Jonnalagadda Lakshmaiah, an old hand at the craft who had been working as an elementary school teacher, was engaged as an instructor at this centre. Of the five boys trained one was the son of Lakshmaiah himself and another the son of his brother, Ramaiah. As has already been mentioned, on completion of training the two boys took to alternative occupations—one as a teacher and the other as a lorry driver. The remaining three were absorbed in the Centre itself as skilled workers. One of them is Cherumathur Ramachandran who no doubt came from a family which originally practised this craft but had given it up about 20 years ago, and he is now working as a Jobber at the Centre on a salary of Rs. 75/- per mensem. The other two were not connected with this craft in any way before they were trained. One Munikrishnan, a Pillai, is the son of the Karnam of Kadur, Satyavedu Taluk and the other Ramanaiah came of an oil-monger community (Gandla) of Chittoor District. These two boys have stuck on as skilled workers at the Centre. They are paid a daily wage of Rs 3/–. They have been working from August, 1959 and they have so far managed to earn their wages continuously. It is a matter of great satisfaction that these boys have acquired considerable skill in the art and their products are in no way inferior to the old specimens. Perhaps it brings credit to the teacher Jonnalagadda Lakshmaiah, the old expert, who has passed on his knowledge so perfectly to his pupil. Some other boys trained at this centre have secured employment as drawing masters.

Kalamkari painting

6. The Kalahasti temple cloth painting and printing is done entirely by Kalamkari process, i.e., with the help of a *kalam* or pen which will be described later. But the technique differs somewhat from the well-known Kalamkari printing of Masulipatnam.

7. While there is similarity in the colouring processes of the Kalamkari printed cotton fabrics of Masulipatnam and the temple cloth painting of Kalahasti, in so far as only pure vegetable dyes are used by both and they are applied by means of a *kalam*, the two processes vary

fundamentally in one regard, namely, that the designs on the Masulipatnam specimens are firstly block printed and then the colours are painted with a *kalam*, whereas in the case of the Kalahasti product the entire work is *Kalamkari* i.e., even the designs which consist of mythological human figures, flowers, border designs, etc., are all drawn free hand with a *kalam*, as will be described in the succeeding paragraphs. Thus the Kalahasti processed cloth appears to be more truly a *Kalamkari*. The Masulipatnam variety can, to a certain extent, be mass-produced and can cater to different needs. The Masulipatnam products consist of table cloths, curtains, bed covers, sarees, skirt pieces etc., printed by the yard. In the Masulipatnam variety, when once the outlines of the designs are printed with blocks, the application of the molten wax and the colouring can be undertaken even by semi-skilled workers, mostly women, whereas the designs of the temple cloths of Kalahasti are wholly dependent upon individual skills of both the hand and the imagination. They can be drawn only by the expert artist and this requires considerable patience and great competency in draughtsmanship. The Kalahasti craftsman specialises only in the designs needed for temple cloths which consist of panels depicting the stories from the epics. No wax processing is involved in the Kalahasti technique. The coloured picture at the beginning of this monograph depicts a typical temple cloth panel of Kalahasti.

SECTION II

RAW MATERIALS AND EQUIPMENT

8. **Raw materials and equipment needed**

(1) *Gadha* or *kora* cloth (cloth woven with unbleached yarn) of about 25 counts, the product of Meenakshi Mills, Madurai, being the kind preferred. *Khaddar* and silk are not useful for the processes involved.

(2) The following materials are needed for the preparation of different dyes:

Dye	*Material from which made*
Black :	Iron filings, sugarcane and palmyrah jaggery solution.
Red :	*Pobbaku* (A kind of water weed resembling casuarina leaf)
	Surudu root bark (Sassafras albidum)
	Manjishtha root or madder root (Rubia tinctorum)
Yellow :	Myrobalan flower (mixed with mango bark and alum solution)
Blue :	Indigo and alum solution

(3) Alum

(4) Dried tender myrobalans (Terminalia chebula)

(5) Buffalo milk

(6) Charcoal made of tamarind twigs

(7) *Kalams* or pens made of split bamboo with felt tied round

(8) Mugs

(9) Low wooden bench

(10) Woollen blankets

(11) Large vessels—copper, brass or earthen

(12) Flowing water

(13) Sheep dung



Plate 4. The outline of figures being drawn in black, free hand by a skilled worker.
[A. Munikrishnan, s/o A. Muniswamy Pillai, Karnam, Kadur, Satyavedu Taluk]



Plate 5 . Alum solution being applied on the painted cloth.

SECTION III

PROCESSES OF PRODUCTION

Process I: Preparation of cloth for taking the outline

9. Thick *gadha* or *kora* cotton cloth of about 25 counts of the required size is taken. *Khaddar* or silk is not useful. *Gadha* cloth manufactured by Meenakshi Mills of Madurai is preferred by the Kalamkari workers of Kalahasti.

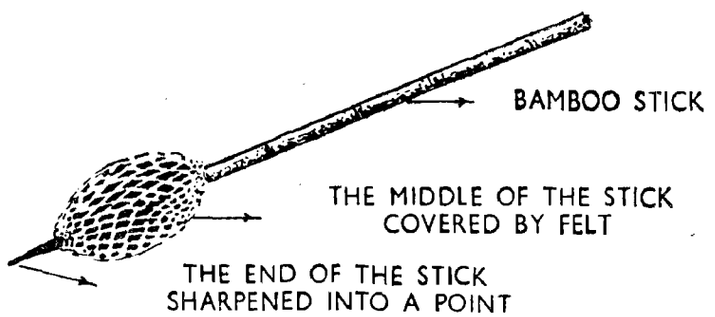
10. The cloth is washed well in flowing water to remove the starch. The Swarnamukhi river that skirts Kalahasti town is obviously suitable for the purpose. No soap or other washing material is applied.

11. The cloth is then soaked in myrobalan solution which is prepared as follows: Dried tender myrobalans are soaked in water and ground into a fine paste. A solution is prepared by mixing 3 tolas of myrobalan paste in 2 gallons of water for soaking one yard of cloth. The cloth is kept soaked for a night and then dried. In fact the cloth is generally soaked twice and then dried. Sometimes buffalo milk is also added to the solution. It is said to prevent the spreading or clotting of colour when applied later to the mordanted cloth.

12. This immersion in the myrobalan solution is necessary in order to enable the black dye to become permanently fixed in the fibres of the cloth. The cloth dipped in the myrobalan solution has a yellow appearance and is ready to take the black dye.

Process II : Drawing of outline designs in black

13. The cloth is spread on a long low wooden bench to enable the artist to squat down with the bench in front of him at a convenient height. The Kalamkari artist then proceeds to draw on the cloth the outlines of the figures and designs with charcoal sticks made of tamarind twigs. He sometimes copies the design from other pieces of finished designs or draws on paper and copies it on to the cloth. I have also seen an artist draw the figures merely from memory. Over this the artist draws the final lines with a black solution called the *kasam*. (How the *kasam* is made will be explained in the next paragraph). The artist makes use of an ingeniously made pen or *kalam* in drawing the outlines. This *kalam* consists of a bamboo stick about 6" to 8" long with an end sharpened into a point with a pen-knife.



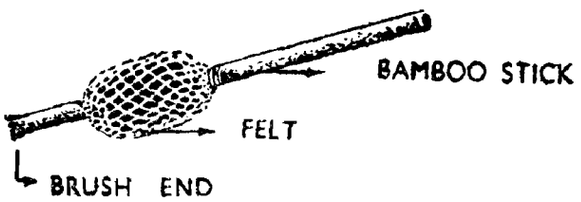
A little way up from the pointed end a thick padding of felt or wool is made and tied round the stick with a string. When the pen is dipped in the black colour solution, the felt sponge absorbs and retains it. The artist draws the lines, making use of the pointed end of the *kalam* as a pen-point and, by exerting a slight pressure on the sponge, the point is kept supplied with the required quantity of the dye. The expert artist sometimes does not even care to draw the initial designs with the charcoal twigs. He draws the picture free hand straightway with the *kalam*. Plate 4 shows one of the skilled craftsmen drawing the designs. All the intricate figures and designs in the photograph have been drawn by him free-hand. The artist is able to maintain correct proportions of the body and limbs of the figures and also depict their expression and action beautifully. By constant practice the artist develops a knack of drawing the figures with great ease, accuracy and aesthetic perceptivity.

14. The *kasam* or black dye is prepared as follows: Sugarcane jaggery (molasses) and palmyrah jaggery are mixed in the proportion of 1 : 2 and a solution made by dissolving the jaggery mixture in water. Iron filings are put in this solution and allowed to ferment for 15 days. The resultant liquid is called *kasam*. When this solution is applied on a cloth soaked in myrobalan solution, a permanent black colour results. If this is applied on plain cloth without the myrobalan base, the black colouring does not take effect.

15. The above process is almost similar to the one adopted by the Kalamkari cloth printing industry at Masulipatnam, except that in respect of Masulipatnam work outline printing in black with the *kasam* is done by means of engraved wooden blocks and not by free-hand drawing. In the preparation of the Masulipatnam *kasam* gum is also added to it so that it can be used in a paste consistency for block-printing on cloth.

Process III: Red colour dyeing

16. After the outlines of the panels and the designs are drawn first in charcoal and then with the *kasam*, the craftsman proceeds to give the cloth its background colour, namely, red. The general background of almost all the temple cloths produced here is red. Besides the general background, some of the figures themselves may also have to be given a red or pink colour. Wherever red colour is needed on the cloth, the workman paints over those areas with an alum solution which is prepared to the following proportions: One Lb. of alum to be dissolved in 6 mugs of water, the capacity of each mug being about 5 Ozs. The solution is kept in an enamel mug and the cloth is spread over a woollen blanket and the craftsman applies the solution to the cloth with the help of another type of *kalam* which is no more than a bamboo stick about 6" long with felt or wool tied round the middle. The brush end of the stick is formed by striking it with stone against a hard surface. See figure below:



This *kalam* is dipped in the alum solution and the felt body of the pen absorbs it. The workman applies a gentle pressure on the soaked felt which makes the solution run down the pen on to the brush end and is thus applied to the areas of the cloth wherever needed. The absorbent felt body on the *kalam* comes useful also to blot up any excess solution that might run on to the cloth. Plate 5 illustrates the application of the alum solution.

17. The cloth is then washed in flowing water and dried in the sun preparatory to its being dyed red.

18. The process of red colour dyeing is interesting. Pure vegetable colours are used for the red dye. The materials used are—

1) *Pobbaku* (పొబ్బాకు): a thin leaf, resembling casuarina leaf, secured from the river margin near Nayudupet,
2) *Surudu* root bark (సురుడువక్క): said to be available in all forest areas, and
3) *Manjishtha* root: also said to be available in the forests.

These substances are powdered and mixed in equal quantities. About 1½ Lbs. of this mixture will be needed for dyeing 6 yards of cloth. The mixture is put in water in a big copper, brass or pottery vessel along with the cloth and boiled for 1 or 2 hours. Plates 6 & 7 illustrate the cloth being boiled in a cauldron.

19. As already observed, the temple cloth has generally a deep red background. There will also be some figures in red colour. In order that the colour of the figures may not be identical and get completely merged with the colour of the background thus rendering the figures indistinct, the craftsman uses a skilful process of 'differential dyeing' i.e., the general background requiring deep red colour is put through the process of red colouring twice i.e., application of alum solution and boiling in red dye as described above. In respect of the figures which should take only light red, the application of alum is done only once at the subsequent stage before the cloth is put through the repeated dyeing process, so that the figures get only one light coating, thus rendering them distinct from the deep red of the background.

Process IV: Bleaching

20. After process III, even though the red dye will penetrate the fibres of the cloth only in those areas where the alum solution has been applied as a result of the boiling, the general red colouring effect is bound to leave a stain on the other areas not covered by the alum solution, such as over the human figures etc. It is necessary that these areas should once again be restored to white so as to take the other colours which are meant to be applied over them. Therefore, after process III, the cloth undergoes an interesting bleaching process developed by native ingenuity. A solution of sheep's dung is prepared and the cloth is soaked in it overnight for 12 hours. The cloth is rinsed in flowing water in the morning and then spread on the moist river bed called *javuku* surface (జవుకు) and water is sprinkled on it constantly (Plates 8 & 9). This bleaching process goes on for a week continuously—soaking in the sheep dung solution at night and drying on the river bed during the day, at the end of which activity the cloth will retain the red colour only where planned i.e., in those areas originally covered by the alum



Plate 6. Cloth being boiled in a cauldron.

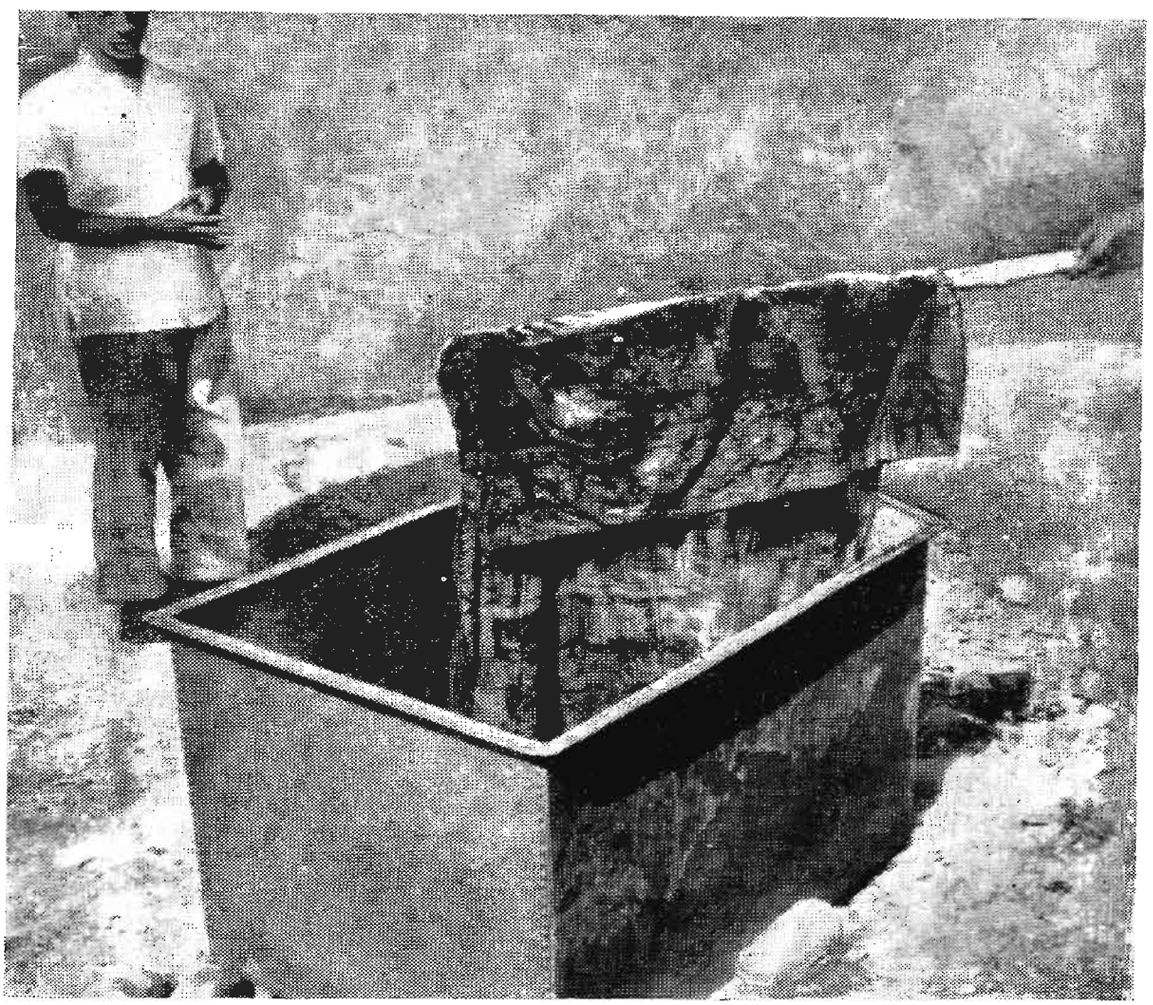


Plate 7. Boiling a temple cloth after alum solution has been applied on it, in a copper cauldron full of water in which mixture of *pobbaku* leaves, *surudu* and *manjista* root, which produces a red dye colour, has been put.



Plate 8. Red dyed cloth being spread on the Swarnamukhi river bed for bleaching.

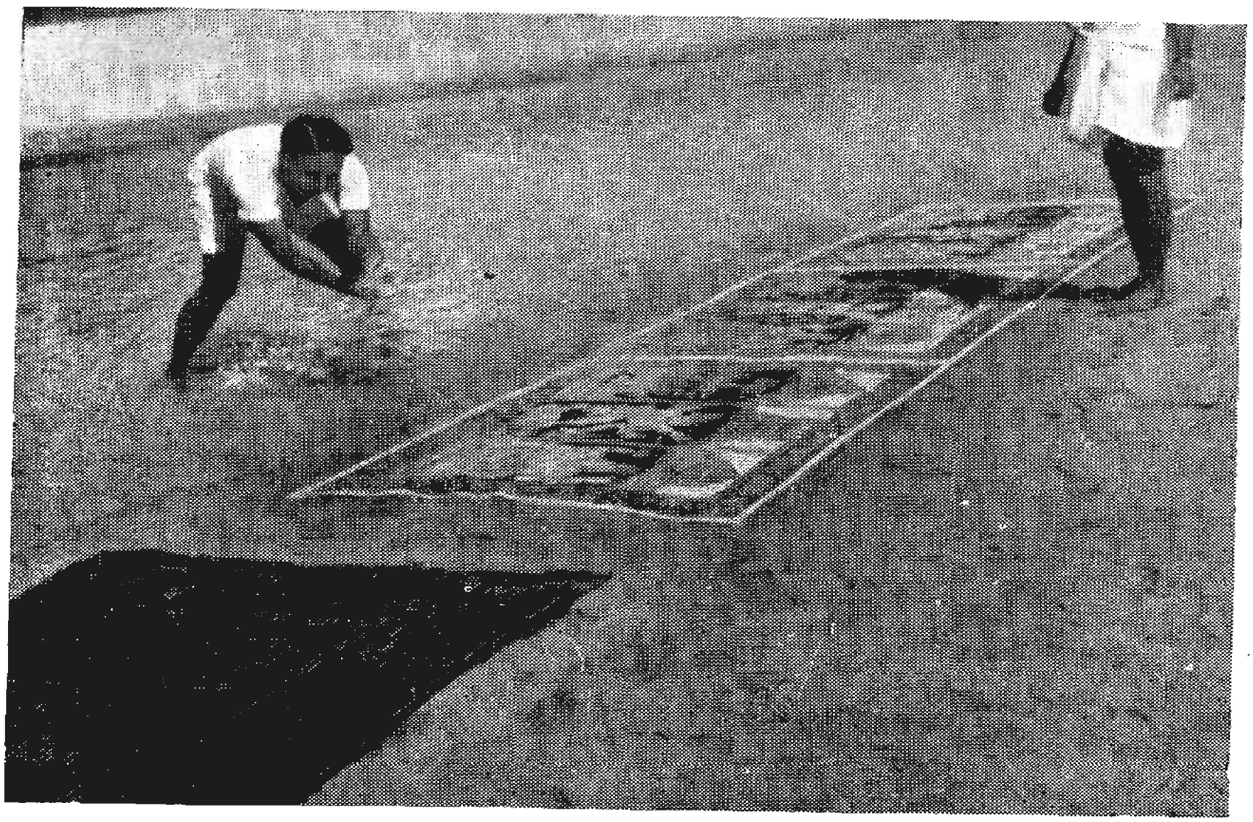


Plate 9. The dyed cloth spread on the river bed for bleaching is constantly sprinkled with water.



Plate 10. Red dyed cloth spread on the river bed at the beginning of the bleaching process. The figures, etc., covered by dull red may be noticed.

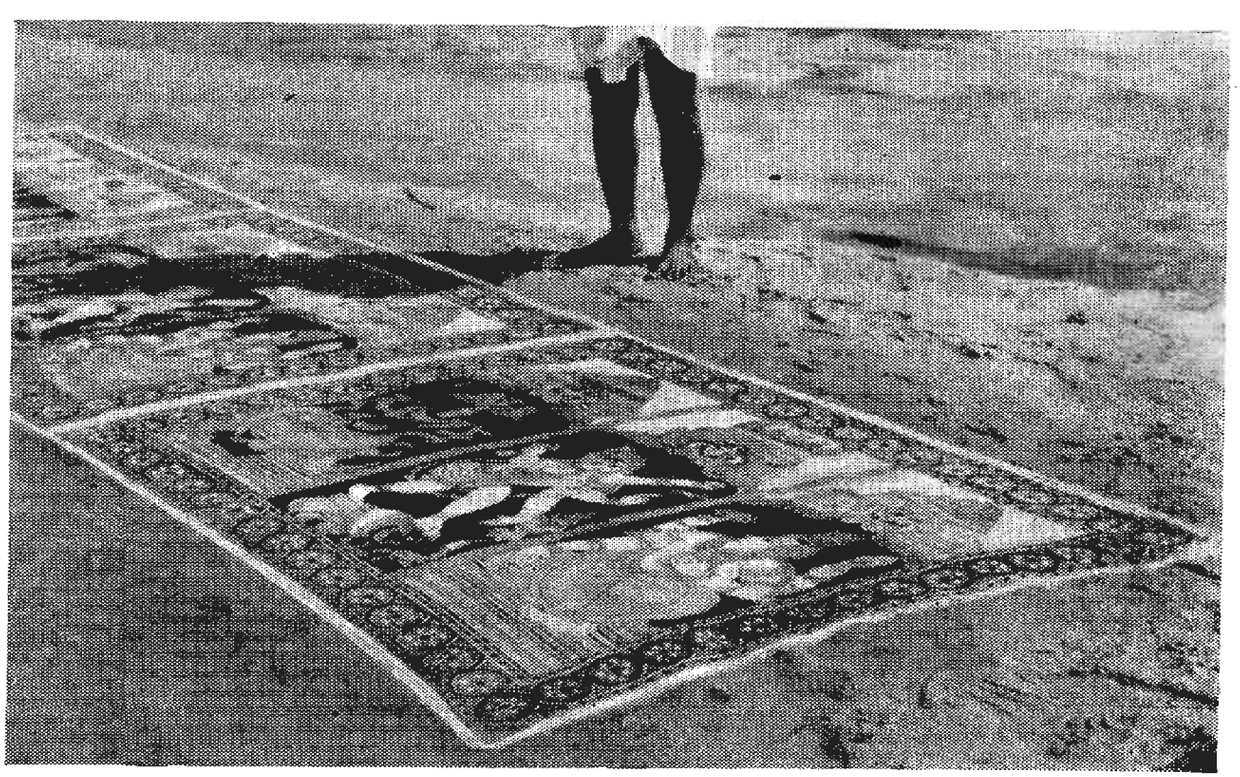


Plate 11. Dyed cloth spread on the river bed at the end of the bleaching process. [It may be noticed that areas to which alum solution had been applied have taken deep red colour and other areas such as the body of the figures, etc., have been bleached into pure white.]

solution, whilst the rest are rendered pure white. Plates 10 & 11 illustrate the change that comes over after this bleaching process.

Process V: Colouring the figures

21. After process IV, the figures on the design are ready to take other colours that are needed. The colours adopted are generally yellow, blue and green (green being obtained by painting blue over areas coloured yellow), while some figures are left without any colouring at all. Though there is no definite convention about what particular colours the different figures should have, the colour scheme generally is as follows: female figures are usually yellow; *Devatas* are depicted in blue; *Rakshasas* in red and green, and some figures are left uncoloured altogether.

22. After the bleaching process, the cloth is dipped in a milk solution. This helps in applying the colour only to the areas required, that is to say, it prevents the running of one dye colour into other already dyed areas of colour. About 1½ ollocks (¼ of a seer) of buffalo milk is required for 1 yard of cloth.

23. After the bleaching process, the first colour to be applied is yellow. The yellow dye is produced by powdering dried myrobalan flowers and boiling them in water. About 6 flowers are boiled in 1 Lb. of water. This dye is applied with the bamboo *kalam*. The yellow colour is applied to depict the jewellery on the figures and also for the bodies of some of the human figures. Especially the female figures are generally dyed yellow. In order to fix this yellow colour, the areas requiring it are first painted over with alum solution in which mango bark is soaked. The solution is prepared with a strength of ¼ Lb. of alum to 6 mugs of water.

24. The cloth is then washed in flowing water and dried.

25. The application of blue or green colour is then undertaken. After the yellow colouring process and the washing and drying are completed, the cloth is once again soaked in the milk solution and is ready for the next colouring process. The blue colour is prepared with a solution of indigo mixed with a little alum. This is applied with the bamboo *kalam* wherever blue colour is needed. In those areas, where green is required the yellow dye colour will have been applied beforehand and over this blue is then applied, thus changing the yellow colour into a beautiful soft green.

26. The cloth is finally washed in flowing water and then dried. The final product is ready.

SECTION IV

DESIGNS

Design themes

27. As has already been pointed out, Kalahasti Kalamkari work specialises in producing temple cloths used as canopies over the idols during festive celebrations or as panels to hang on the walls to provide a back ground for religious functions. Quite obviously, the themes adopted for the designs are from the epics and the Puranas. The following are some of them:

1) Dhruva Vijayam
2) Daksha Yagnam
3) Dasavataram
4) Sitarama Kalyanam
5) Sampoorna Ramayanam
6) Mahabharata - Virataparvam
7) Venkateswara Charitam

28. It is somewhat surprising that there is no standard book of designs or scenes from which the artist-craftsman can copy out his panels. The reproduction of them seems to be based purely on tradition. Though there is no standardisation, there is an amazing similarity in the colours, the purely decorative designs, the spatial divisions of the compositions and the forms, postures and expressions of the figures. These figures have a graphic uniqueness of their own. The Kings, *Rishis*, Gods, Goddesses, *Rakshasas*, Demons, etc., are full of an alive and plastic grace and dignity. It makes one pause when one remembers that without benefit of any formal art school education the artist produces these figures free-hand. The pupil learns the rudiments of design from his master and also from the greatest teacher of all—the ancient temple cloths themselves. But even whilst the student maintains the traditional pattern, there is also scope for his individual expression. Even the wording of the titles that are painted with the *kalam* containing the black dye along the borders of the design to interpret each scene of a panel, have no standardisation. The artist explains briefly and clearly what each scene represents. Please see the title wording in Plates 2 & 12.

Need for a standard book of designs

29. It is a matter of great satisfaction to note that the quality of the traditional temple cloth designs now produced are in no way inferior to those produced decades ago. A comparative study of Plates 1 to 3 given at the beginning bears this out. However, I would have preferred that a standard book had been produced in which all the traditional panels were printed, for it won't be long before many of these excellent creations of imaginative art disappear and the corruption of modern art sets in. In fact, I found that one of the young craftsmen who is quite excellent at producing the traditional panels has produced for himself in the Kalamkari techniques and materials a door curtain with a modern belle on it—apparently half nude! This is a dangerous trend. In my opinion, the glory of the temple cloth painting for which this sacred place has made an indelible name for itself should not be thus tarnished. The Handicrafts Board is well advised to bring out a standard book explaining the processes and techniques of the art and reproducing some of the standard designs for the present generation as well as for those of the future to follow.

30. I am, however, glad that this temple cloth art has been adapted to suit modern needs in at least one direction, namely, that instead of a large piece of cloth containing the entire story of an epic, the traditional pictorial incidents are now being produced in strips which can be cut and used as *shamiana* borders. This will be inexpensive and at the same time it will serve to preserve the richness of the original art. Plate 14 illustrates these strips. The standard size of the larger panels is generally 2 yards x 1½ yards. The small strip panels are of the size 54 "x 12".

Border designs

31. The panels usually have attractive, purely decorative borders within which the scenes are contained. The court scenes and marriage *pandals* in particular are embellished with beautiful line drawings in the borders. The following are some of the standard designs adopted for this purpose.



కంగోరా (*Kangora*)



పిల్లి అడుగు (*Pilli adugu*) Cat's foot steps

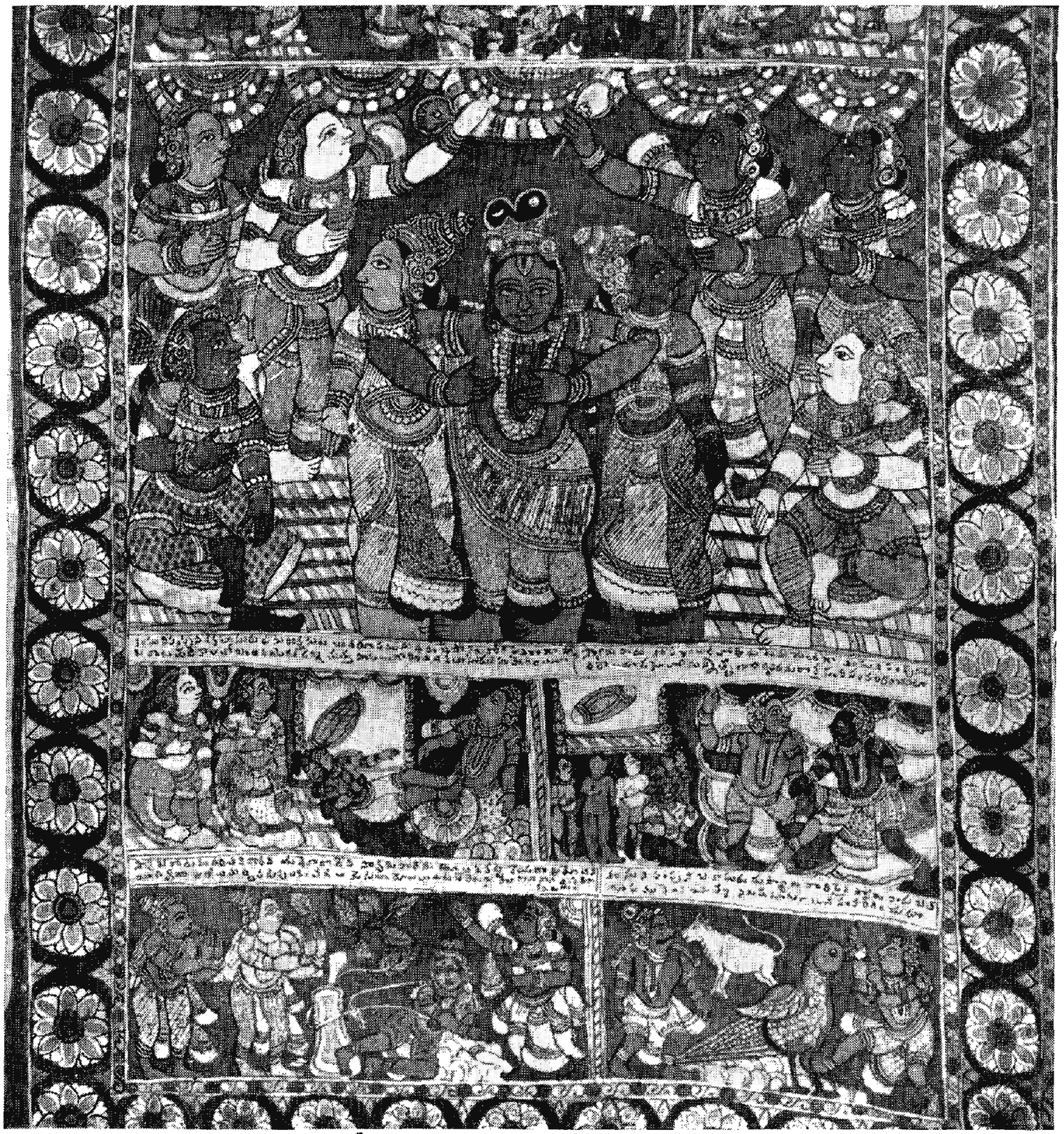


Plate 12. A Kalamkari panel showing detail of *Krishna Leela*.
Dimensions—7′ × 4′.

Courtesy : *Mrs. Kamaladevi Chattopadhyaya, Chairman, All India Handicrafts Board.*



Plate 13. A Kalamkari painted temple cloth said to be 100 years old.



Plate 14. Kalamkari panel strips for use as *shamiana* edges.



కమలం (*Kamalam*) Lotus



బండి చక్రం (*Bandi chakram*) Cart wheel

32. The size of the cloth on which the panels are produced depends on the orders. Generally, the bigger panels depicting a complete story, say, Sampoorna Ramayanam, can be produced on a cloth of 6 yards by 1½ yards.

SECTION V

COST OF PRODUCTION

Cost structure

33. The cost of the finished product is based on the cost of the cloth and on accessory materials and the workers' wages, of which the last item by the very nature of the work claims the largest share.

34. Supposing one yard of cloth is taken up for the work, the cost may be estimated as follows:

		Rs. P.
(a)	*Cloth*	
	Cost of 1 yard of cloth ..	1.37
(b)	*Accessory materials*	
	Cost of colouring materials ..	1.50
(c)	*Wages*	

Assuming that one worker attends to all the items of work and finishes the product, his wages at Rs. 3/- per day work out as follows:

	Item of work	*Time required*	*Wages* Rs.
(i)	Drawing of outlines of the design ..	3 days	9/-
(ii)	Alum water painting ..	1 day	3/-
(iii)	Colouring processes ..	2 days	6/-
(iv)	Washing process ..	1 day	3/-
		Total	21/-

Since the bleaching process is attended to by the Jobber of the Kalamkari Art Centre, who is a regular paid employee, no separate wages are charged for this processing in the cost structure.

Total cost: Rs. 1.37 + Rs. 1.50 + Rs. 21.00 = Rs. 23.87 or roughly Rs. 24.00

Add: Overhead charges at 12½% of the cost, i.e., Rs. 3/-

The selling price of the finished product .. Rs. 27/-

Thus, the finished temple cloth will be sold at Rs. 27/- a square yard.

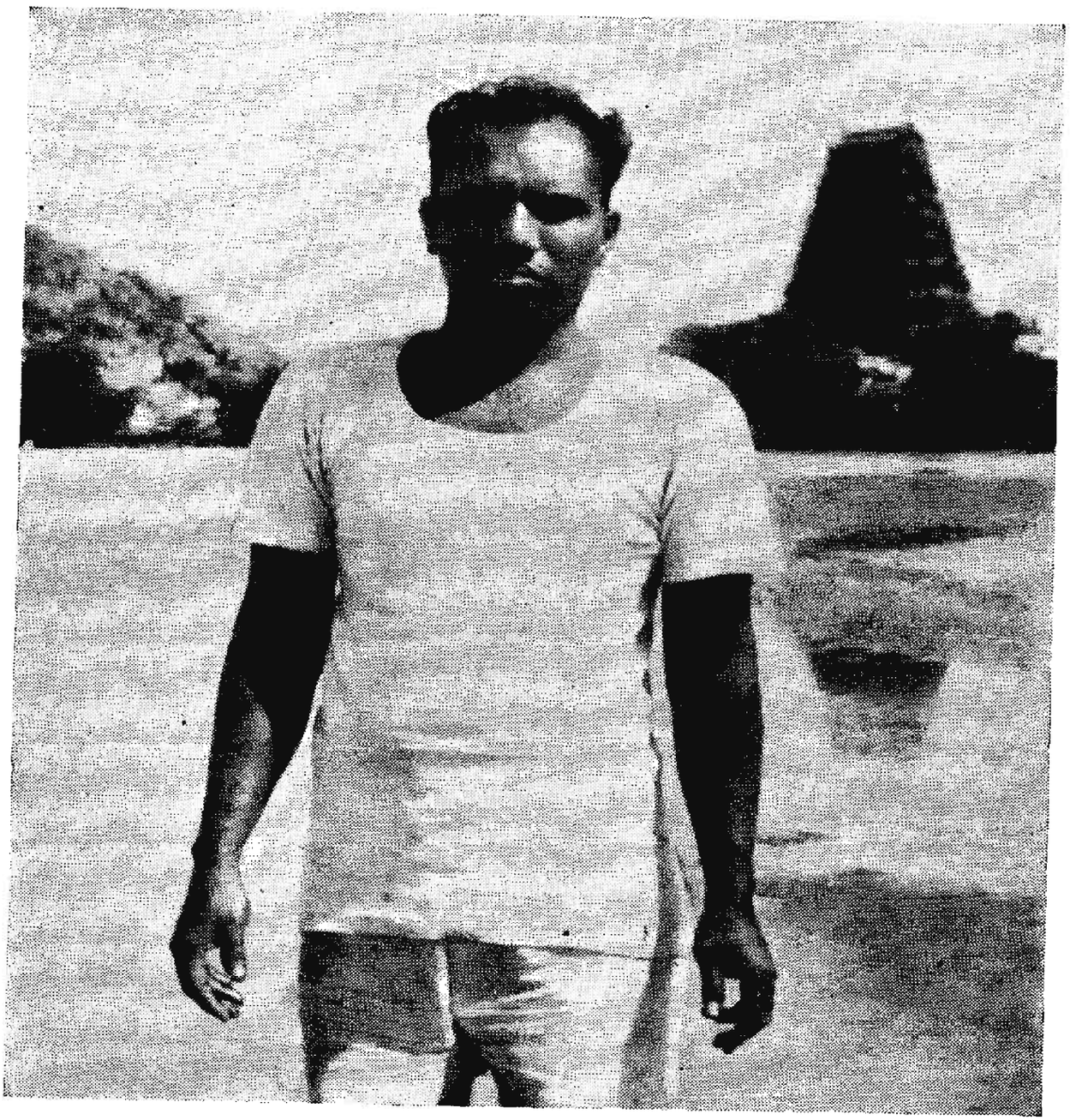


Plate 15. Shri Cherumathur Ramachandran, Jobber, Pilot Production-cum-Training Centre of Kalamkari Art, Panagal, Kalahasti, standing on the Swarnamukhi river bed. The famous Kalahasti temple is in the background.

SECTION VI

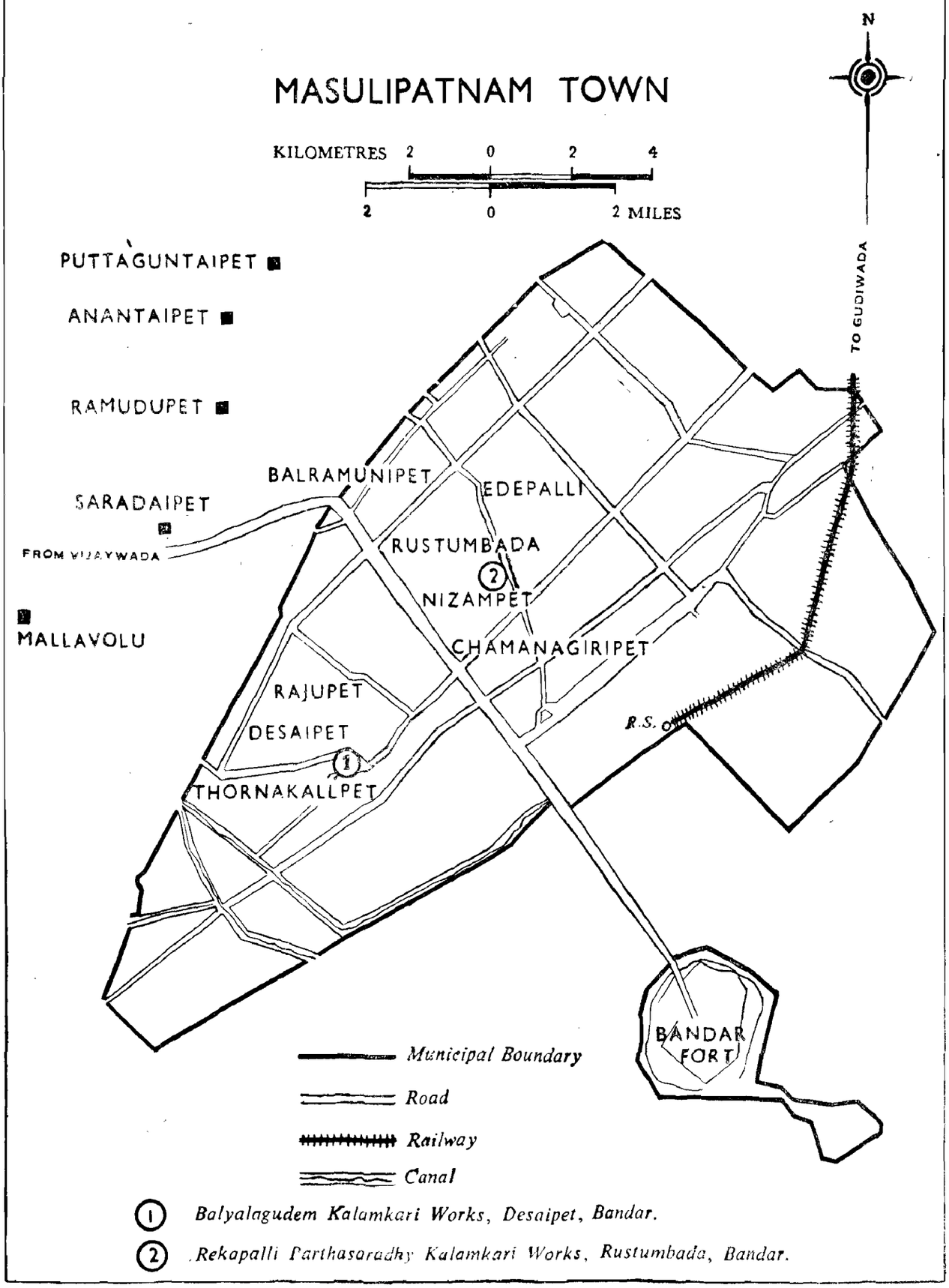
CONCLUSION

35. As may be seen from what has been mentioned before, the temple cloth Kalamkari work at Kalahasti is a highly specialised and individualised art requiring a natural artistic bent and great patience on the part of the craftsmen. The products cannot be mass produced. The industry can thrive only on special demands from those who can afford the temple cloths. The general public obviously cannot afford them and the Rajas and Zamindars have disappeared. Only institutions such as the temples, *mutts* etc. can and should encourage this art. The Religious Endowment Boards should give a fillip to this industry. Also some demand for the temple cloths could be created in foreign markets purely as works of art, although in view of its limited utility in foreign countries perhaps the demand cannot be expected to be large or lasting. It is therefore difficult to foresee that any large number of workers can be sustained by this industry. A few persons with natural aptitudes should certainly be trained in the art and encouraged to take it up as a subsidiary occupation. The students in the local schools at Kalahasti could perhaps also be taught this art as a hobby. The Training-cum-Production Centre established by the All India Handicrafts Board, which has recreated a definite amount of interest in the art, should continue. As has already been mentioned, production of a standardised book on this art should be undertaken.

Acknowledgements

36. I wish to record my thanks to those in charge of the Pilot Production-cum-Training Centre, Kalamkari Arts, Kalahasti (Panagal) for all the trouble taken to explain to me the various processes of production. I am particularly thankful to Sri Cherumathur Ramachandran, the son of the soil whose ancestors practised this art and who by himself has now taken up work as a Jobber at the Production-cum-Training Centre, and to the trainees of the Centre who demonstrated the various processes. The Extension Officer, Industries, of the Kalahasti Development Block, was particularly helpful in taking me round the Centre and making me acquainted with the work. Let me not forget the local Tahsildar and the Deputy Superintendent of Census, Chittoor, Sri G. C. Subba Rayudu, who, despite the fact that the 1st of January, 1962, which day I visited Kalahasti was a holiday, took the trouble of accompanying me and assisting me in the collection of material for this monograph.

(iv) KALAMKARI CLOTH PRINTING OF MASULIPATNAM


MASULIPATNAM TOWN
N
KILOMETRES 2 0 2 4
2 0 2 MILES
PUTTAGUNTAIPET
ANANTAIPET
RAMUDUPET
SARADAIPET
FROM VIJAYWADA
MALLAVOLU
TO GUDIWADA
BALRAMUNIPET
EDEPALLI
RUSTUMBADA
NIZAMPET
CHAMANAGIRIPET
RAJUPET
DESAIPET
THORNAKALLPET
R.S.
BANDAR FORT
Municipal Boundary
Road
Railway
Canal
1 Balyalagudem Kalamkari Works, Desaipet, Bandar.
2 Rekapalli Parthasaradhy Kalamkari Works, Rustumbada, Bandar.

SECTION I

INTRODUCTION

A brief history of the craft.

1. Any student of the economic history of our country cannot fail to recollect with pride the great glory that the Indian textiles enjoyed from times immemorial and the absolute sway they held over the world markets for centuries on end, and note with regret the sad decay that the industry was thrown into after the Industrial Revolution of the West. The 'chintz' and 'calicos' of Masulipatnam had received world-wide recognition and occupied a pride of place amongst the Indian textile products from the earliest times. There is evidence of the extensive trade in the dyed sheets of Masulipatnam as early as the close of the first century of the present era. It is obvious that Masulipatnam port was one of the well-known ports of the ancient sea routes of the world. It is believed that the hand printed cloth of Masulipatnam was popular with the ancient Greeks even before Christ. It is no wonder that this coastal town of Masulipatnam which was flourishing with trade and industry should have attracted quite a few foreigners. In 1611 the English founded their second settlement in India at Masulipatnam, which continued to be their headquarters until these were finally removed to Madras in 1641. Three years after establishment of the English settlements came the Dutch, and in 1669 the French followed. The town had been a place of great importance and it has been referred to by a Dominican Friar who visited it in 1670 as being "famous all along the coast of Coramandel" and as "resembling Babel in the variety of tongues and the differences of garbs and costumes".[1] It should indeed have been a proud and busy town with a great variety of people walking its streets, and no wonder the foreign powers must have cast an ambitious eye to gain control over this commercial town. The endless struggles between the Western Powers for gaining control over these Indian possessions are too well known. Ultimately in 1759 the British managed to wrest the area from the French and by a treaty with the Subhadar of Deccan, Masulipatnam with its adjacent area passed on to the British East India Company. Even to this day certain parts of the Town bear the names of the various nationalities which traded here centuries ago. An area occupying a space of about 1,300 sq. yards is called 'French-pettah', there is another area called the 'English-palem' and at some little distance the 'Volanda-palem' (Hollander-town) with an old Dutch graveyard. Shri Venkataswamy Naidu, a veteran Kalamkari worker relates that one of the officers of the Persian Emperor Naushervan camped at Masulipatnam at the bidding of his master to acquire Kalamkari cloth for his tents. This officer pitched up his tent called *Ankotur* at a place in Masulipatnam and the tent was specially decorated with Kalamkari cloth to meet the taste of the Persian officer. This particular spot came to be called Inugudur in commemoration of this and it continues to bear the same name till today.

2. This historical town of Masulipatnam lies on the Eastern coast of Andhra Pradesh along the Bay of Bengal and situated on 16° 11′ North Latitude and 81° 8′ East Longitude. It is the terminus of a railway line of the Southern Railway and lies within a short distance of 43 miles due east from the important railway junction of Vijayawada. A good road connects Masulipatnam with the State headquarters, Hyderabad which lies about 200 miles to its west. Masulipatnam is a corrupted form of *Machilipatnam* meaning fish town. It is also popularly referred to as *Bandar* town meaning a port. It is the headquarters of Krishna District and the present Census (1961) has given this town the status of a city with a population of 101,417. But the City has almost a sleepy look and seems to be no more than a shadow of its prosperous existence in the past. The port area has the appearance of a war-scarred old town. The spacious old buildings quite majestic in appearance are crumbling down, but they help one to picture the glorious days that the town had seen. A few centuries ago the city should have been buzzing with activity, the whole parts of the town being occupied by the proud craftsmen who produced the world famous hand printed cloth which found a ready market everywhere and the traders from many a nation thronged to the city vying with each other to establish contacts with its craftsmen-merchants. The Masulipatnam cotton dyers produced various types of printed material—canopies with special mythological designs for the Hindus, the prayer carpets for the Mohammadens with their typical Middle-Eastern designs, the tent lining cloth which was a favourite with the Persian rulers, the chintz i.e., small printed design on cloth by the yards of special designs to suit the tastes of the Westerners, table cloths and curtain cloths printed in most attractive colours and designs, sarees and

1 Imperial Gazetteer of India—Provincial Series (Madras, 1908)—Page 325.

dhoties to meet the needs of the local consumers. The demand for these textiles was universal and the craftsmen excelled in their art to satisfy the tastes of one and all. Describing the dyeing industry of Southern India, the Imperial Gazetteer records as follows: "In Masulipatnam and elsewhere in Southern India, admirable chintzes have for many centuries been turned out, which are really hand printed textiles, so perfectly coloured that it is sometimes difficult to distinguish them from the finest embroidery."[1]

3. Thus the calico printing and dyeing industry of Masulipatnam held an undaunted sway till about the middle of the 18th century. The Industrial Revolution of the West and the banning of calicos into England in 1721 gave a death-blow to this industry. The discovery of chief chemical dyes by the Western producers "injured the artistic feelings of the people and demoralised the indigenous crafts".[2] "The delicacy and harmony of colour which formerly characterised Indian fabrics gave place to brilliant, if not gaudy and discordant tints, while the reputation of these fabrics for durability of colour had at the same time been undermined".[3] It is too well known to the student of the Indian Economic History that India, which held the foremost place in the manufacture and export of the finest textiles and printed cloth, started importing cloth by the 19th century. The Imperial Gazetteer of India-Provincial series-Madras, 1908, observing the decline of the Industry records as follows:

"An Industry for which Southern India was till quite recently celebrated was the manufacture of block-printed and hand-printed cotton stuffs. Its decline was rendered conspicuous by a comparison of the collection of these fabrics exhibited at the Delhi Darbar Exhibition in 1903 with the splendid series which was sent to the Indo-colonial Exhibition at London in 1886. Now-a-days at former centres of this industry e.g., Masulipatam and Walajapet, old wood-blocks, many with elaborate and beautiful patterns of Persian origin, may be seen piled up in corners or in the roof covered with dust and cobwebs of years. The printed cottons of Masulipatam consisted of canopies, screen cloths, prayer cloths etc"[4]

4. The decline was fast and almost complete. By the middle of the present century it became almost impossible to locate any one who practised this craft in Masulipatnam. The present Kalamkari workers who are only a handful now claim that the industry supported hundreds of people at one time. The industry was being carried on in almost every home in certain wards of Masulipatnam town. Edepalle, Rustambada, Chemmanagiripeta, Balaramunipeta, Rajupeta and Desaipeta localities in Masulipatnam town were full of families who practised this art. Ramunipeta, Saradaipeta, Pottiguntaipeta and Anantarajupeta on the outskirts of the town also housed a number of Kalamkari workers. Mallavolu was the centre of block making and printing specialists. Most of the households of Kapu community practised the Kalamkari Industry. But so complete was the decline that the craftsmen sought other avenues of livelihood. A few patriots like the late Dr. B. Pattabhi Seetharamayya an eminent citizen of the country who hailed from Masulipatnam and occupied the coveted position of the Presidentship of the All India Congress Committee, and later, after Independence, the Governorship of a State and the late Shri M. Krishna Rao Pantulu, the Editor of Krishna Patrika tried hard to revive the industry. Their efforts were not rewarded with much success. Sri Venkataswamy Naidu (Plate 1) who is by himself an expert in the field of Kalamkari work has taken upon himself to organise a few workers into a co-operative society and has started to manufacture printed cloth on a small scale. The advent of National Government has given an impetus to the revival of the Indian handicrafts, and considerable encouragement is now being given to enable this once famous local industry to raise its head again.

Kalamkari explained

5. The dyeing and printing industry of Masulipatnam is called the Kalamkari Industry—*Kalamkari* meaning ' working with pen '. The colours are mostly applied on to the cloth by means of hand painting by a peculiar type of pen or *kalam*. The Kalamkari Industry of Masulipatnam claims that the dyes used are all of pure vegetable origin which are said to give strength to the cloth unlike the chemical dyes which adversely affect the texture of the cloth. It is also believed that the vegetable dyes become brighter and brighter at each wash, whereas the chemical dyes keep fading away. The technique of the Kalamkari painting of Masulipatnam consists of the application of the colours to a cloth by means of a pen or *kalam* on certain portions and certain other portions rendered impervious to the colour by the application of molten bee wax. This is a rather intricate process and will be described in detail in the following Sections.

1 The Imperial Gazetteer of India (Clarendon Press, Oxford, 1908) The Indian Empire—Vol. III—Economic—Page 177.

2 *Ibid*—Page 181.

3 *Ibid*—Page 181.

4 Imperial Gazetteer of India—Provincial Series (Madras, 1908)—Page 64.

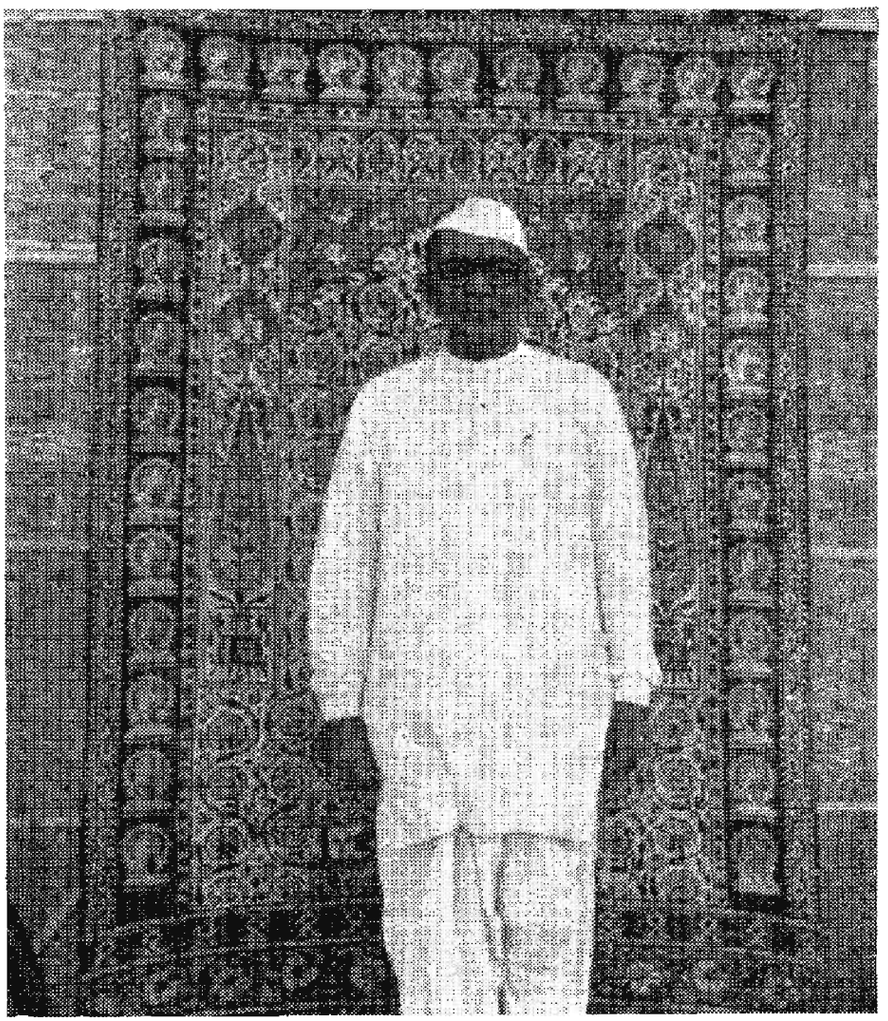


Plate 1. Sri Venkataswamy Naidu.

6. At present the Kalamkari work is being carried on at two centres in Masulipatnam town viz., at (i) Balyalagudem Kalamkari Works, Desaipeta, Bandar, and (ii) Rekapalli Parthasarathy Kalamkari Works, Rustumbada, Bandar.

7. The map on page 52 illustrates the localities in and around Masulipatnam town which are connected with the Kalamkari Industry.

SECTION II

RAW MATERIALS AND IMPLEMENTS

8. The raw materials and the implements required are the following:

(1) The base on which Kalamkari printing and dyeing is carried on is *kora* (unbleached) long cloth of 40 or 60 counts. Hence it forms the chief material constituting the Kalamkari fabric.

(2) Vegetable dyes—These will be described in detail later.

(3) (a) A work bench of size 63″ long, 27″ wide and 18″ in height to enable the worker to squat by its side and attend to block printing work. (Plate 7).

(b) A three legged low table 45″ x 12″ x 18″ for wax processing and other colour dyeing (Plate 10).

(4) Printing blocks (Plates 2 to 4).

(5) Stamping pads to hold the dye for block printing which will be described in detail in a subsequent paragraph (Plates 5 & 6).

(6) *Kalams*—which will be described in detail later (Plates 11 & 12).

(7) Bee wax.

(8) Dyeing vat (Plate 13).

(9) Broken pots for melting wax.

(10) Large copper pots for boiling (Plate 14).

(11) Fuel.

(12) Cow-dung used for bleaching processes.

(13) Buffalo milk.

(14) Water.

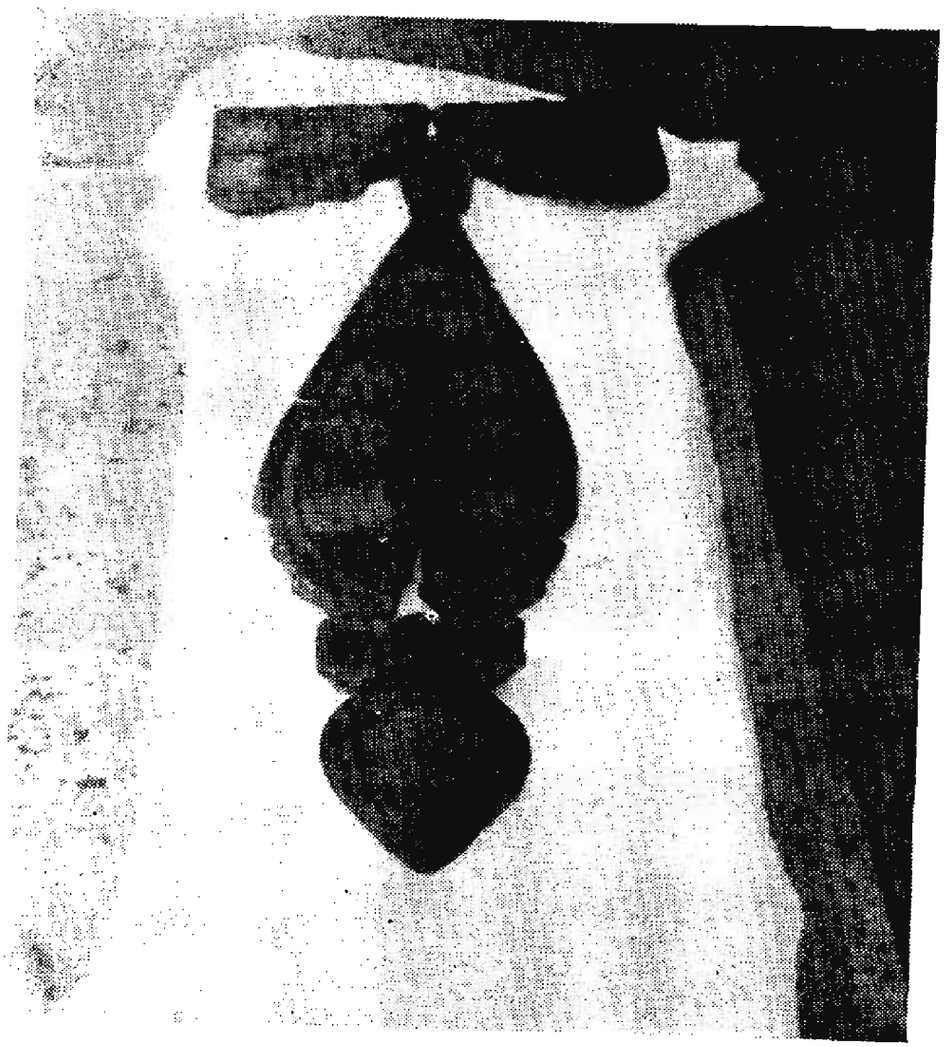


Plate 2. Printing block.

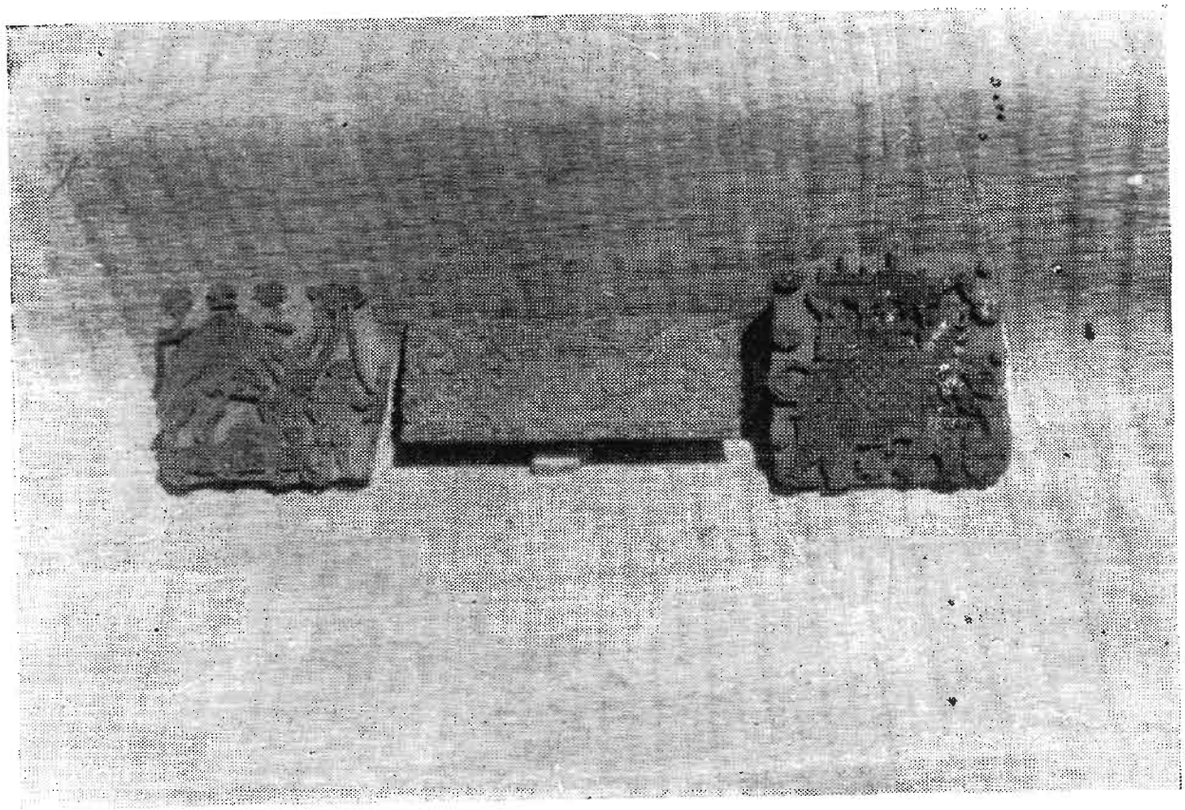


Plate 3. Printing blocks.

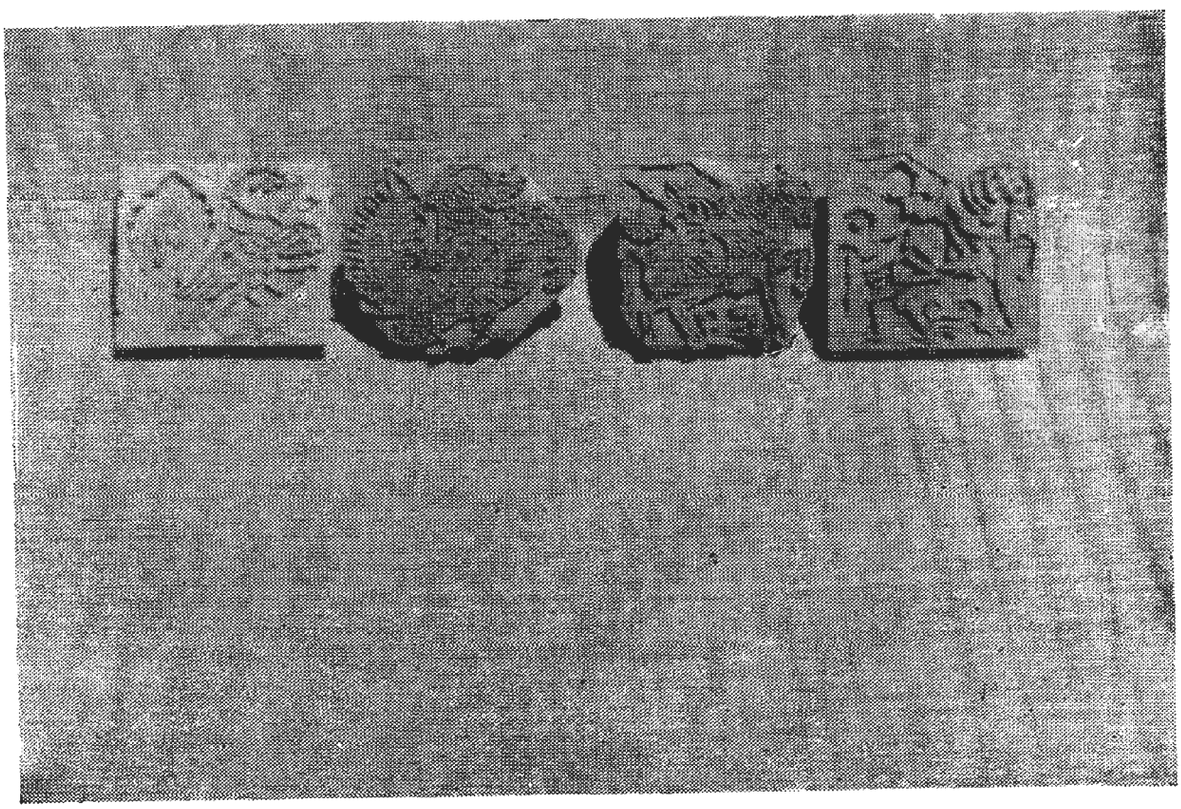


Plate 4. Printing blocks.

SECTION III

PROCESS OF MANUFACTURE

The stages of Kalamkari processing

9. The Kalamkari printing process involves a series of long and complicated operations. These will be described in detail stage by stage in the paragraphs to follow. For convenience, the operations may be divided under six heads:

A. Initial preparation of cloth
B. Outline block printing
C. Wax processing
D. Blue dyeing
E. Yellow dyeing
F. Finishing

The detailed stages under each of these operations are described below.

A. Initial preparation of cloth

10. *Stage* 1: *Preparing the cloth for Kalamkari process: Kora* long cloth is the chief material over which the Kalamkari work is carried out. Experiments were tried on *khadi* cloth which proved unsuccessful. Therefore, the mill-made *kora* long cloth is used as the basic material. The *kora* is a kind of rough unbleached long cloth and when it comes out of the mill it is usually light brownish in colour and not also starched. Before this cloth is utilised for Kalamkari processing it has to be cleaned and bleached white. No chemical bleaching powder should be used in this process. It is believed that the usage of bleaching powder will adversely affect the strength of the cloth as also will have a deleterious effect on the dyes applied. An indigenous method of effective bleaching without affecting the strength of the cloth has therefore been evolved. The *kora* long cloth which is cut to the required sizes is soaked in a goat or buffalo dung solution in a big pot. The cloth is kept soaked throughout the night and the next morning it is cleaned in the flowing water of a river or canal and then dried on the water weeds. This bleaching process is repeated for four or five days when the cloth becomes spotless white.

11. *Stage* 2: *Mordanting of cloth in myrobalan solution*: The next stage is the mordanting of the bleached cloth in myrobalan (terminalia chebula) solution for taking up the block printing. Myrobalan solution is prepared by pounding myrobalan fruit (*karakkaya* ಕರಕ್ಕಾಯ) as it is locally called) is pounded and mixed in water and the solution is filtered. Two seers of myrobalan is required to prepare a solution sufficient for 40 yards of cloth. In this solution half a seer of fresh buffalo milk is also added. It is said that the milk prevents the spreading of the dye on application. The cloth is dipped into this solution taking care to see that the entire cloth is uniformly soaked and it is then dried. After this mordanting process, the cloth becomes yellowish in appearance.

B. Outline block printing

12. *Stage* 3: *Block printing :* The next stage is the printing of the outlines of the design determined. These outlines are printed either in black or in red or a combination of both. Most of the designs are standardised in the sense that the workers know by common usage what type of designs are printed for the margins, the body etc., of the different types of curtains, table cloths etc., that are produced. The design etc., will be discussed in greater detail elsewhere. The Kalamkari workmen usually have a large number of printing blocks. The printing blocks are engraved on teak wood pieces of convenient size. Plates 2 to 4 illustrate the typical blocks used. The very intricate design executed on these blocks indicates that it is an expert's job and a great amount of dexterity is needed in preparing the blocks. I have been given to understand that years ago there were quite a few who specialised in the block making. They belonged to Rangaraju community and lived in Mallavolu village on the outskirts of Masulipatnam town. They attended to only block making and were not Kalamkari workers themselves. It is understood that, for want of demand and patronage, the block makers had been fast disappearing. At present there are only two persons who are said to be good in making the blocks, namely, (1) Gujjaram Rukmaji of Rangaraju community residing in Mallavolu of Bandar Taluk, and (2) Gadireddi Narayana, Rustambada, Bandar. The latter gentleman appears to have taken to painting of doors and windows as, apparently, he does not receive sufficient number of orders for block making to keep him fully engaged in it.

13. Having decided on the particular design and selected the blocks, the outline printing is done. The block printing is attended to generally by men workers. As already indicated, this printing is done in black or in red or both. The black and red printing dye is also manufactured by the Kalamkari worker.

14. *Black colour*: The black colour, *kasam* as it is called by the Kalamkari workers, is prepared as follows. Small pieces of iron are heated with cow dung cakes till they become red-hot. They are cooled and cleaned to ensure that no rust is left on them. These iron pieces are then kept inside a pot filled with salt water. To this is added some slightly fermented jaggery. The pot is then closed air tight and allowed to stand undisturbed for about three weeks. The solution is then tested to see if it has acquired deep black colour. It is important that the solution is taken out for printing at the proper time. If allowed to stand too long it is said that the colour gets lightened. The solution is believed to give the smell of a ripe wood apple, when adequately fermented. Some babul tree gum is mixed with the solution and then it is filtered. The firm black solution that now results is the *kasam* which is now ready to be used for printing.

15. *Red colour*: The red colour for block printing is called *karam* by the Kalamkari worker. It is prepared as follows. A gum solution is prepared by mixing the babul tree gum in water and filtered so that it is rendered clear. A decoction of alum is prepared by boiling about half a viss (0.7 Kg.) of alum in a seer of water. The gum solution and the alum decoction are then mixed, which forms the *karam* and is used for printing the red outlines. They acquire firm red colour after the process described in stage 5.

16. *Printing pads*: The *karam* or the *kasam* have to be kept in conveniently large ink-pad like structures suited for dipping the printing blocks. For this purpose, wooden trays made of deodar or teak wood, 18" long, 12" wide and 2" deep are prepared. Into this tray, bamboo separators half an inch thick are introduced breadth-wise. Usually there will be about 21 bamboo separators fitted into a tray of this size. There are smaller trays also with proportionately smaller number of separators. Over these, flannel, felt or cotton cloth padding is spread. Now the tray-cum-printing pad is ready to take the required printing colour. One of the trays will contain *kasam* or black colour and the other *karam* or red colour. It will be obvious from the construction of the tray-cum-printing pad that it is so made as to keep the soft padding on the top uniformly supplied with the required colour and also prevent the dye in the tray from spilling. Plates 5 & 6 show a tray-cum-printing pad.

17. With the printing blocks selected and the printing pads with the required colour, black or red, by his side, the worker proceeds to print the outlines. Plate 7 shows an old worker attending to the block-printing. For convenience of block printing, a dyeing table made up of neem or teak wood about 63" long, 27" broad and 18" high is used, over which a cloth, gunny bag etc., are spread so that the surface is soft and facilitates the block printing and renders it uniform. The block printer sits by the side of the low table and attends to the printing.

18. The outline designs so printed will be floral or made up of animals and birds. The body of these designs are later given the required colouring under subsequent processes of dyeing which are something peculiar to the Kalamkari Industry of Masulipatnam. These will be described presently.

19. *Stage 4*: *Washing*: After the block printing, the cloth is allowed to dry for about two or three days. It is necessary that it should be dried in sun for at least one day. It is then taken and cleaned in running water of a canal and is then dried on water weeds. Washing should be done preferably before sunrise.

20. *Stage 5*: *Scalding*: This process is intended to give permanent red colour to the outlines printed in *karam*. It also helps to remove the gum and myrobalan juice from the cloth. Taking that we are dealing with 40 yards of cloth, a big copper vessel of 60 gallons capacity is taken and filled with water, and 3/4 viss(1.05 Kg.) of *chiranji*† bark with *jaji* *leaves and *chiriveru* powder is added and heated. Eighteen tolas(209grams)of *alijarin*+ is also added. *Chiranji* root which was originally obtained from Mathewada near Warangal and Kumbakonam in South India is not available now. Therefore *manjista* roots or *majith* or *madder* as they are called which are available in local market are used instead mixed with *alijarin* to obtain the red dye. The solution is brought to boil. The cloth is then dipped in the boiling solution and kept for a few hours. The boiling is continued till almost the entire solution in the vessel is absorbed by the cloth.

21. *Stage 6*: *Bleaching*: After the scalding process described in the previous stage, the cloth has got to go through the bleaching process again so that excepting the areas where black and red outlines are printed the rest of the area is rendered white. The bleaching process now involved is the same as described under stage 1.

22. *Stage 7*: *Starching*: The cloth is then starched before it is put through the next all important wax process. Rice starch is prepared by boiling $\frac{3}{4}$ seer of rice in sufficient quantity of water for every 40 yards of cloth. The starch solution is taken out in a separate vessel and the cloth is soaked in it and then dried by spreading it on grass.

* Woodfordia floribunda † Bauchnania latifolia.

+A red dye imported from Germany since 1918. It is also referred to as *peepa* colour and it was being supplied in drums which are called *peepas* in Telugu.

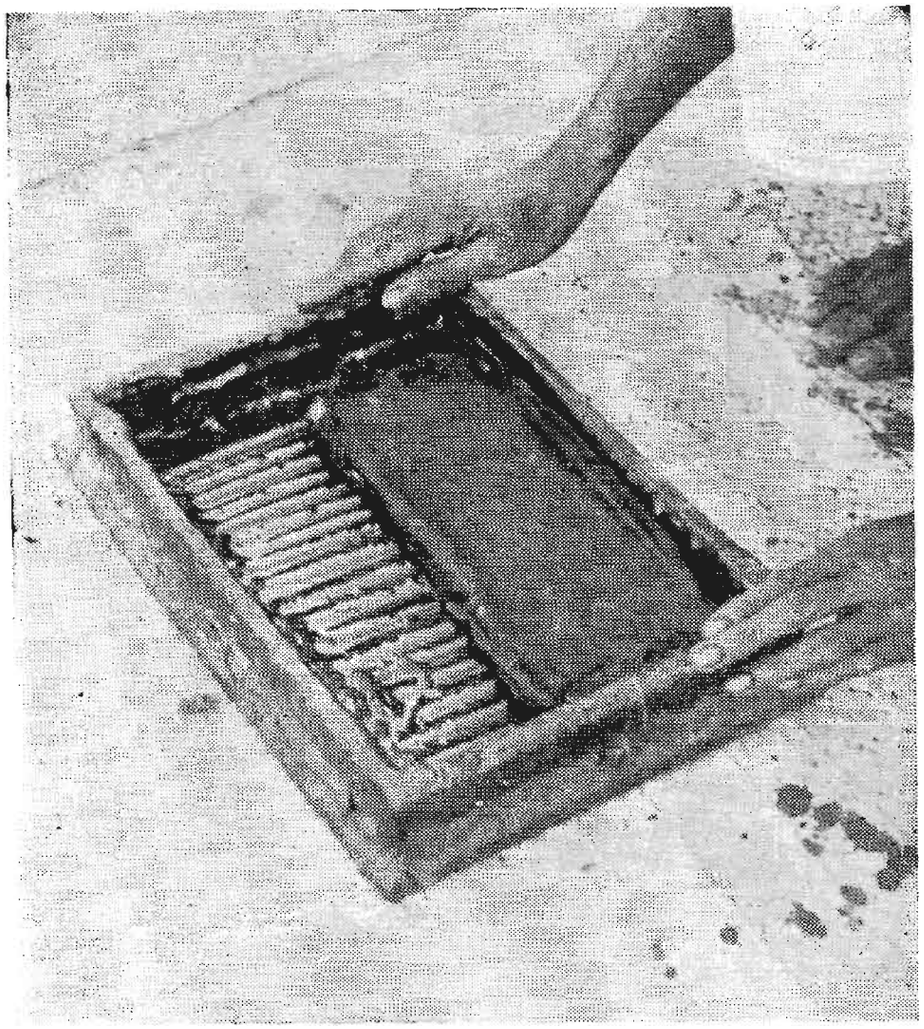


Plate 5 . Tray-cum-printing pad.

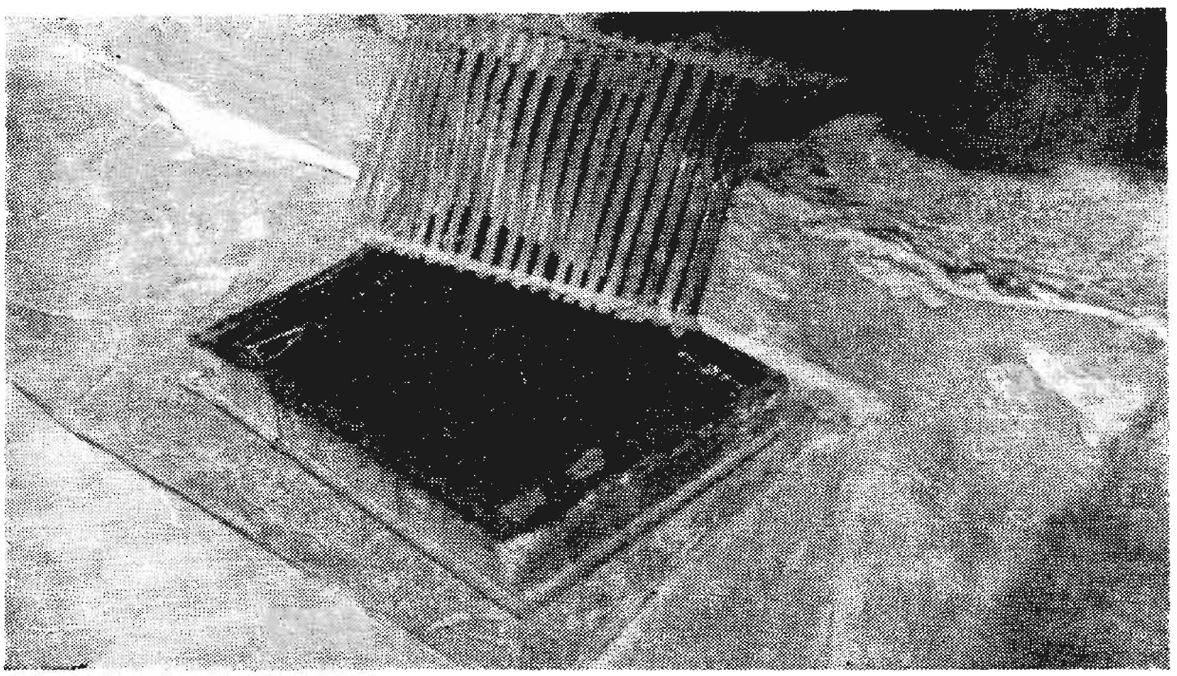


Plate 6 . Printing tray and the bamboo separators.

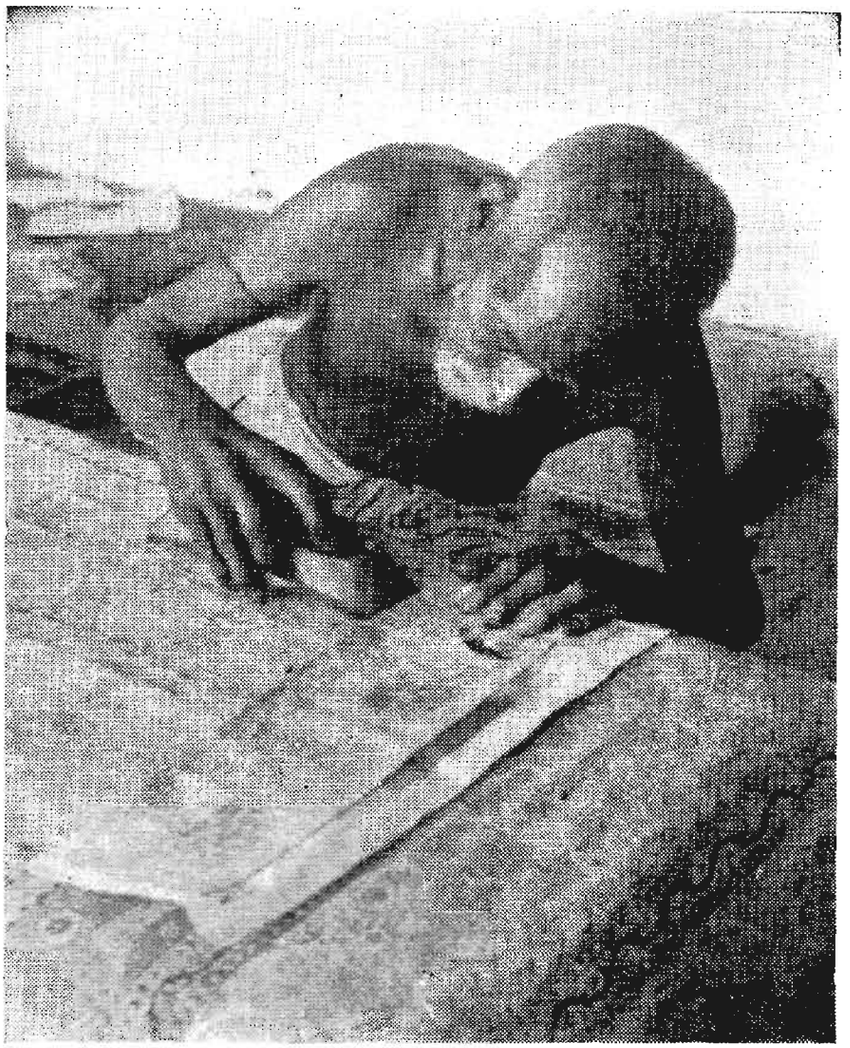


Plate 7. Mungi Subbarao, an old worker attending to printing.



Plate 8. Wax processing.



Plate 9. Wax processing.

THREE LEGGED BENCH USED FOR WAX PROCESSING

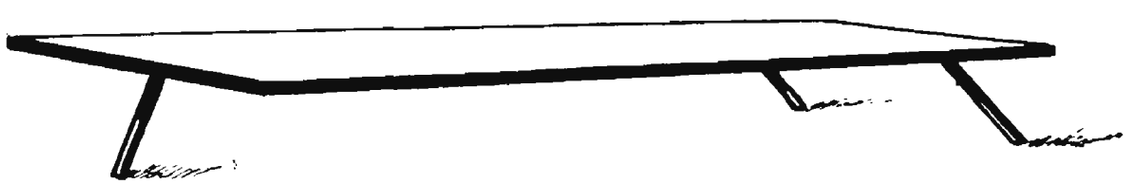


Plate 10 .

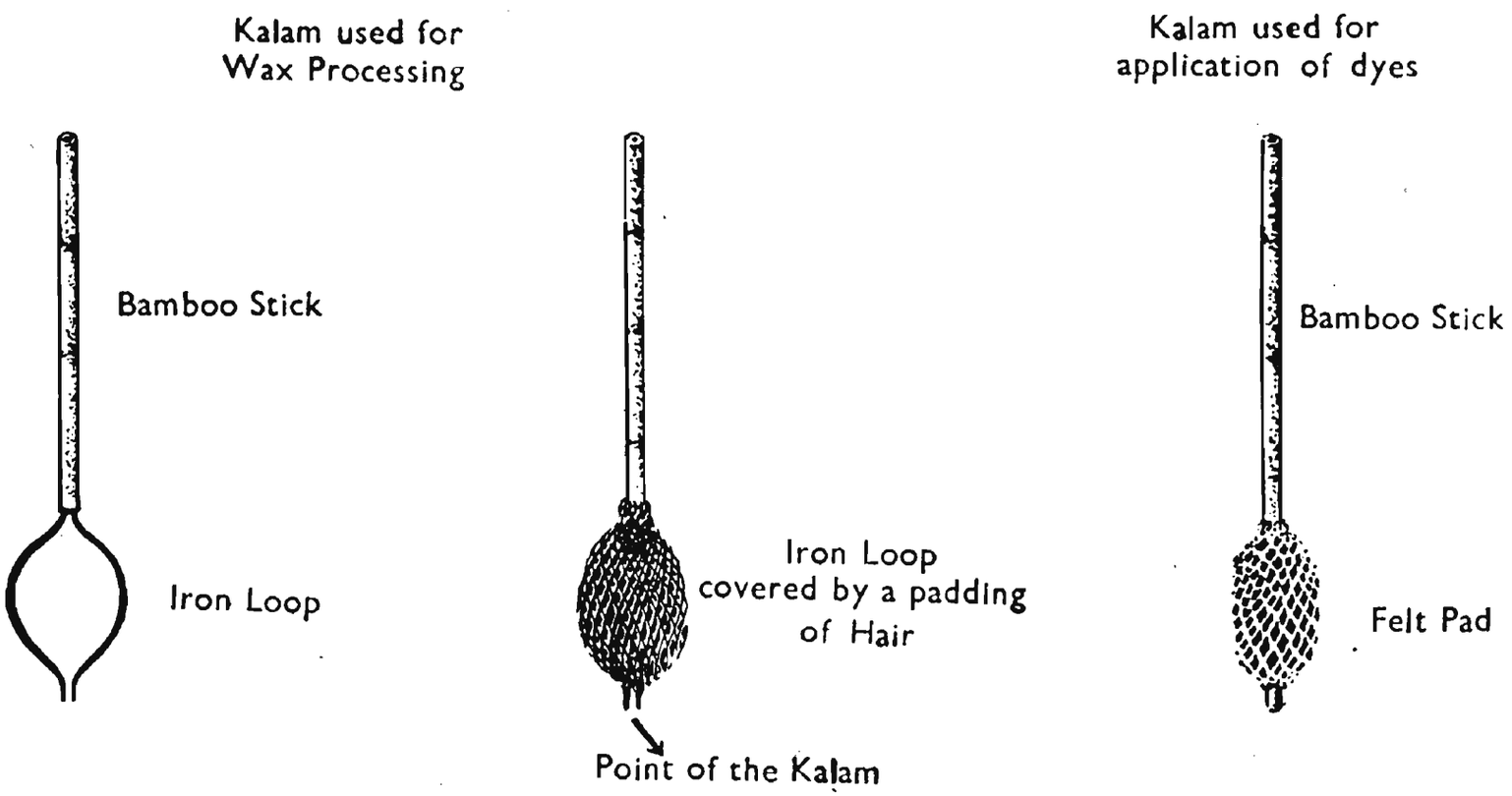


Plate 11. *Kalams.*

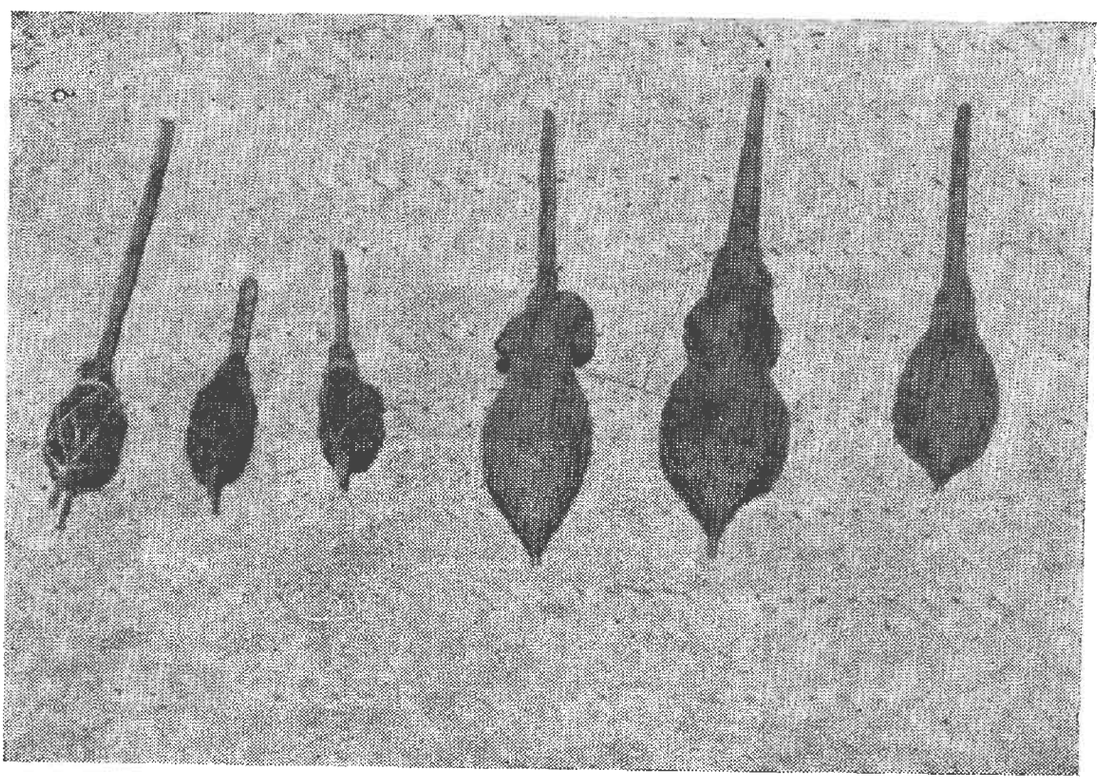


Plate 12. *Kalams*.

C. Wax processing

23. *Stage* 8: *Wax process*: This is the important process which distinguishes the Kalamkari printing of Masulipatnam from other common dyeing industry. It is no doubt a monotonous process and in fact a few centres have been producing cloth looking similar to the Masulipatnam Kalamkari cloth by utilising chemical dyes and doing away with the wax processing altogether. But the traditional Kalamkari worker and particularly Shri Venkataswamy Naidu, who has almost become the father of the revived Kalamkari printing work of Masulipatnam, looks down upon any other process than the traditional process, for the simple reason that it is this wax process and the application of vegetable colours which mark out the Masulipatnam Kalamkari Industry as something unique. It may be easier to produce chemical dyed cloth without taking all the trouble of the wax process, but it is no match to the quality and strength of the traditional Kalamkari processed cloth of Masulipatnam. If the wax processing and indigo dyeing are given up, it is as well that Masulipatnam Kalamkari work itself is given a go by.

24. It is in the course of this important stage of the processing of the fabric that all the characteristic implements of the Kalamkari industry are brought into play. First of all, a low bench 45" long, 12" wide and 18" in height with only three legs, two at one end and one in the middle of the other end of the bench, is needed. This will enable the workers to conveniently sit with the bench close to them and shift it to the required angle for working with ease. Plate 8 shows three workers with the typical benches in front of them. Plate 10 illustrates the bench. The next implement required is the famous *kalam*. This *kalam* consists of an iron loop attached to one end of a bamboo stick. The loop is completely covered by a thick pad of human hair which is secured over the loop by a string. Plates 11 & 12 illustrate these *kalams*. The next requirement is an earthen pot or more conveniently a half broken pot forming a shallow basin. The hearth is prepared with the help of three bricks with paddy husk placed in the middle and lit. The husk is not allowed to burn into a flame but the fire is kept going without the flame. The earthen pot basin is put on this husk with bee wax in it. The bee wax melts and the low heat of the hearth keeps the wax in a molten state but without unduly raising its temperature. Care is taken to see that unduly large quantity of wax is not kept in the pot, lest it should overflow and fall into the hearth which may burst into a flame and result in an accident. The molten wax should be only of a suitable consistency so that it can be conveniently applied on to the cloth. If it is overheated and too fluid there is a risk of it not sticking to the cloth but rolling away. If it is too thick it will form into a solid and may not stick to the cloth at all. The Kalamkari worker by his experience knows what consistency has to be maintained. The molten wax is thus kept ready and the workers sit round it with work benches and the starched outline printed cloth spread over it with the *kalams* in their hands. The *kalam* is dipped in the molten wax. The pad absorbs the liquid wax. The workers by exerting gentle pressure on the pad make the wax run down the points of the *kalam* and thus apply it to the cloth over all the required areas leaving aside those portions of the cloth which have to be dyed blue. The rest is all fully covered by the molten wax. Plates 8 & 9 illustrate the application of molten wax on the starched Kalamkari cloth. This wax covering is necessary in order to see that blue dyeing that is done under the next stage does not spread on to the portions covered by the wax. The workers know by their experience of the de signs, which are the portions of the cloth which have to be dyed blue and which have got to be covered by the wax. The cloth covered by the molten wax is put in the sun for a little while till the wax film shows signs of melting. This is considered necessary so that any gaps not effectively covered by the *kalam* may be got automatically filled by this spreading of the wax film when it melts under the sun.

25. This wax covering process is attended to by the women workers at their homes. Women of Kapu, Muslim and Gowdu communities have been attending to this work. They are normally paid piece wages for this work. One can earn about Rs. 1.25 to Rs. 1.50 per day.

D. Blue dyeing

26. *Stage 9*: *Blue dyeing*: The special blue dyeing process is a matter of prestige to the traditional Kalamkari worker. The blue dye is prepared very carefully by making use of natural vegetable colour obtained from the indigo plant which is grown extensively in the neighbouring taluk of Divi and also in Jaggayyapet and Nandigama Taluks of this District. The blue dye required for the Kalamkari dyeing is prepared as follows.

27. Six seers of 'cassia allata' (locally called *tandipa ginjalu* తంది గింజలు- easily available in local market; grown on canal bunds) seeds broken into small pieces are boiled in a pot of water. A blue solution using half a viss (0.7 Kg.) of indigo is then prepared. These solutions are poured into a cement tub of dimensions $5' \times 2' \times 2\frac{1}{2}'$ which is 2/3rds filled with hard water. A little lime water is also added. The solution is well stirred. The 'allata' boiled solution as also the indigo solution should be constantly added to the tub till the

entire water gets the colour of the required depth. It is said that it would take about a fortnight to prepare the indigo vat of the correct dye. When once the blue dye is carefully prepared in the vat, it is supposed to keep its quality for 15 days and can be used during this period and not longer.

28. After the blue dye is so prepared in the vat, the wax covered cloth which is neatly folded is then dipped in the dye solution and kept in it for a few minutes and then taken out and hung on a bamboo pole put up across the vat at a little height. The cloth has to be examined to see whether it has taken up the blue colour uniformly, if not, it should be dipped again. It may require two days for 40 yards cloth to be dyed blue under this process. The cloth is then spread out resting it on pegs. Even at this stage if any spots are found on the cloth not adequately dyed, the blue dye solution taken out from the vat can be applied on to the cloth by using a soft brush made up of just some dry grass blades. Plate 13 shows wax covered cloth being dipped in an indigo vat.

29. *Stage 10: Wax removal:* The vital blue dyeing process having been finished, the cloth has now got to be relieved of the wax covering so that it may be put through the other dyeing processes. For this purpose the cloth is put in a big copper vessel and boiled. The molten wax comes out of the cloth. The cloth is then removed and dried in order to take out all traces of wax on the cloth. It can be scooped out with a spoon made out of cocoanut shell. All the wax thus recovered can once again be utilised for wax processing. Plate 14 shows the cloth being boiled for the removal of the wax.

30. *Stage 11: Cleaning and bleaching of the cloth*: After the removal of the molten wax the cloth has got to be cleaned and bleached. The old Kalamkari worker was so conservative that he made his own soap for the purpose of cleaning and bleaching of the cloth as well. He prepared it out of a filtered solution of saline earth and lime and adding gingelly oil to it and boiling it. The solution is later poured on to a thick cloth and one has to stamp on it with bare feet to bring out the soapy substance. The hard substance that forms can be cut into cakes of soap ready for washing the Kalamkari cloth; but at present the worker has taken to the use of other common cloth washing soaps from the bazar such as 501. The Kalamkari worker prefers a cleaning agent without any alkali.

31. *Stage 12: Starching*: After the cloth is cleaned subsequent to the blue dyeing, it has to be once again starched as under stage 7. While starching buffalo milk is also added, which is said to prevent the colours from spreading out when dyeing.

E. Yellow dyeing

32. *Stage 13: Dyeing the cloth yellow and green*: We have so far seen that the Kalamkari cloth has taken the outline designs in black and red and some interspaces dyed blue. The remaining colours that are usually applied to the Kalamkari designs are yellow and green. The yellow colouring material is also a vegetable dye obtained by boiling myrobalan flowers in water. This yellow colour is applied on to the Kalamkari cloth spread on the low work benches already described, by means of a small *kalam* different from that used for waxing process and it is made up of a mere bamboo stick with felt tied in the middle. This *kalam* is dipped in the yellow colour and by exerting pressure on the felt the worker applies it wherever needed. The felt is also useful for blotting back any excess dye that may flow out of the *kalam*. The areas to be coloured green would have already been dyed blue in the indigo vat dyeing process. The yellow myrobalan colour is applied on these portions which are already dyed blue so that a green colour is evolved at the required places. Women workers attend to this Kalamkari colour printing. Plate 15 shows the yellow colour being applied by a short *kalam*.

F. Finishing

33. *Stage 14: Application of alum solution:* With the application of yellow colour, the dyeing processes are almost all complete. The colours so applied are all now confirmed and made permanent by dipping the cloth in alum solution. The cloth is then dried in the sun for a day. The cloth is then dipped in hard water for about half an hour and then soaked in cow dung solution and wringed and tied up into a bundle and kept away for a night. Then it is washed in a river and dried over water weeds. The process is repeated another night. This gives the yellow colour brightness and polish which will otherwise be dull and patchy. Ultimately the cloth is boiled and washed with soap. The washing with soap is done carefully so that all traces of dirt, etc., are removed and the colours brought out in their full lustre.

34. With this the long, laborious and somewhat complicated process of bringing out the Kalamkari fabric is completed. It is said that it would take about two months for a piece of cloth to undergo all these processes and come out as a finished product.



Plate 13. Indigo vat.

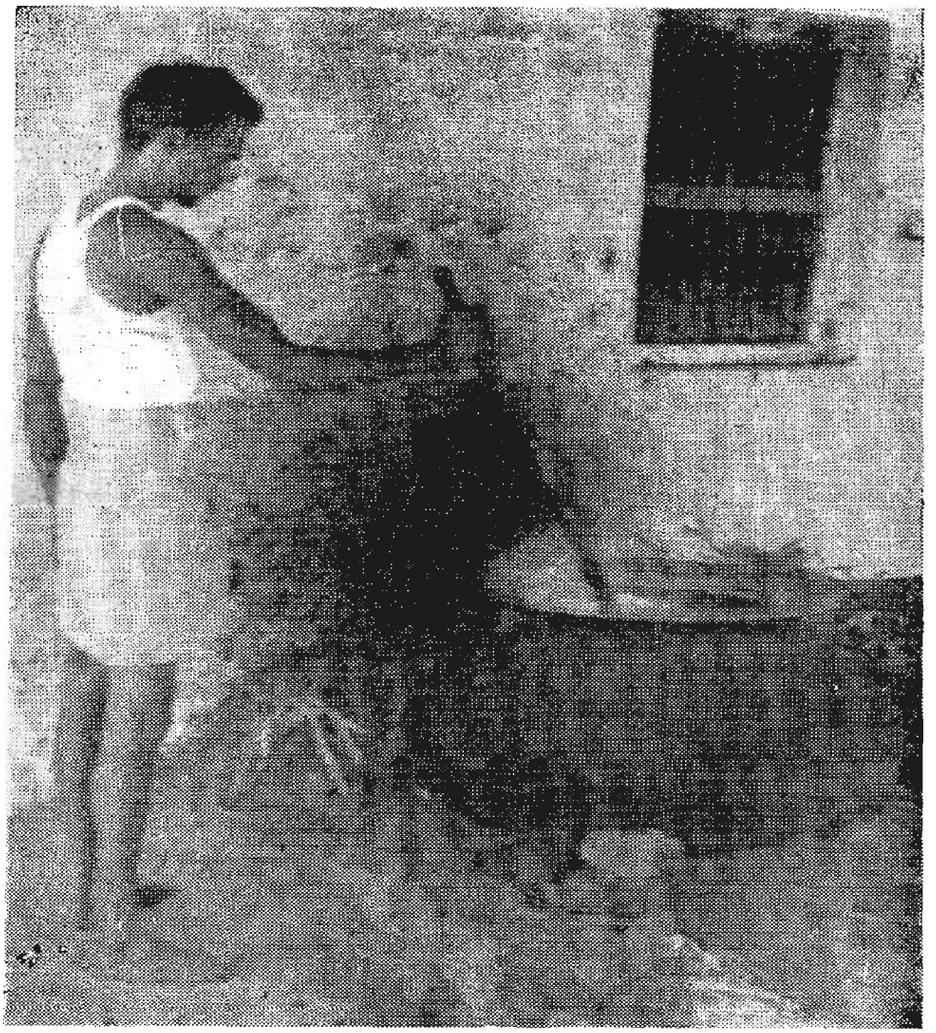


Plate 14. Cloth being boiled for removal of wax.



Plate 15. Yellow colour being applied by a short *kalam*.

SECTION IV

DYES

35. We have already seen under the processes of manufacture that the colours adopted in Kalamkari printing work are (1) black, (2) red, (3) blue, (4) yellow, (5) green and other colours obtained by a combination of individual colours.

36. As had already been pointed out, one of the main characteristics of the Masulipatnam Kalamkari Industry is the usage of vegetable dyes, which are claimed to be more lasting and they do not affect the strength of the structure of the cloth, but on the other hand are believed to strengthen the cloth. The roots, seeds, leaves barks etc., needed for the various dyes are generally available locally in and around Masulipatnam. In describing the processes of manufacture, the method of obtaining the various vegetable dyes has already been mentioned. For convenience these are once again related below.

37. *Black dye:* The black dye is obtained by a fermentation of iron pieces in jaggery solution.

38. *Red dye:* The red dye is obtained by boiling together a root called *chiriveru*, *jasmine* leaves and *chiranji* bark. *Chiriveru* is found near about Masulipatnam, Tallapalem and Gokaram villages. *Jasmine or Jaji* leaves (Jasminum sambac) are obtained from villages around Rajahmundry and also in the forests of Bhadrachalam. The *chiranji* (Bauchnania latifolia) also called Kumbakonam bark can be secured from Hanumakonda and Mathewada in Warangal District and also from the forests of Bhadrachalam.

39. It may have to be, however, pointed out that from about 1918 *alijarin*, referred to as *'peepa* colour' since it is supplied in drums, which is a red dye imported from Germany, has started to be used very commonly by the Kalamkari workers. As *chiranji* is not available now-a-days *manjista* or *majith* or *madder* is used along with *alijarin* to obtain red dye.

40. An extract from a booklet on Dyes of the Imperial Chemical Industries is reproduced below:

"*Alizarine Red:* It is a striking fact that the ancient colour known throughout the West as Turkey red is still the fastest red dye for cotton. The various reds dyed either from a reduction vat, after the manner of indigo, or produced by coupling two components on the fibre, the so called azoic reds or brenthols do not compare with Turkey red, which still stands supreme when used over a prolonged period with constant exposure and washing.

The origins of Turkey red are buried in the remote and unrecorded past, but the credit for its discovery is commonly ascribed to India, where it has long been known that a red shade could be produced on cotton or wool by using an extract obtained from the dried roots of the *madder* plant. It is significant that the modern word *madder* closely resembles the old Sanskrit *madhur* which was the name of the plant in the East in olden times. Moreover, the production of any red colour with *madder* presupposes the knowledge and use of alum, and the art of mordanting with alum was certainly discovered by Indians about 2000 B. C. The original red was first produced by dyers of Malabar and Coramandel, but there is some uncertainty as to whether the dye used was extracted from the *madder* root or from a closely related plant called 'Oldenlandia Umbellata'.

The marvel is that such a colour should even have been produced by the simple methods of trial and error, for it involved the use of oil, alum and lime as well as numerous subsidiary substances, in a complicated and prolonged service of mordanting processes. The colour as originally dyed was probably not very brilliant and many minor alterations, guarded with great secrecy, were made in order to improve the shade. General different vegetable oils were used, and these were generally emulsified by treatment with sodium carbonate. Some operations, such as the 'sumaching' and 'dunging' process, are rather puzzling to modern chemists, but they do see the logic of the final 'cleaning' processes and recognise the vital role which must have been played by local water conditions for instance, when it contained calcium, which is a necessary ingredient, or iron, which is fatal just as the suitability of the water in the Vale of Leven in Scotland, was the major reason for the development of Turkey red dyeing in that locality, so we may confidently assume that water played an important part in determining the quality of the red produced in different places in the East. This also partly explains the fact that *madder* red was often named after its place of origin—Adrianople red, Bokhara red and so on."

41. *Blue dye*: Blue dye is obtained from the indigo plant which is grown quite commonly in Krishna District around Nagayya Tippa and Kosurivanipalem villages

of Divi Taluk as also in Nandigama and Jaggayyapet Taluks of the same district. The method of preparation of the blue dye in an indigo vat has already been described in some detail under the manufacturing processes which may be referred to.

42. *Yellow dye*: The yellow dye is obtained from myrobalan flower which is boiled in water.

43. *Green dye and other colours*: As has already been described, the green colour is obtained by applying the yellow myrobalan dye over the blue dye. Similarly, the Kalamkari worker by his experience obtains other colours like chocolate colour, violet etc., by combining the basic dyes.

44. Alum solution is indispensable for fixing the dyes on the cloth. This also imparts a lustre to the various colours on the cloth.



Plate 16. A finished door curtain.

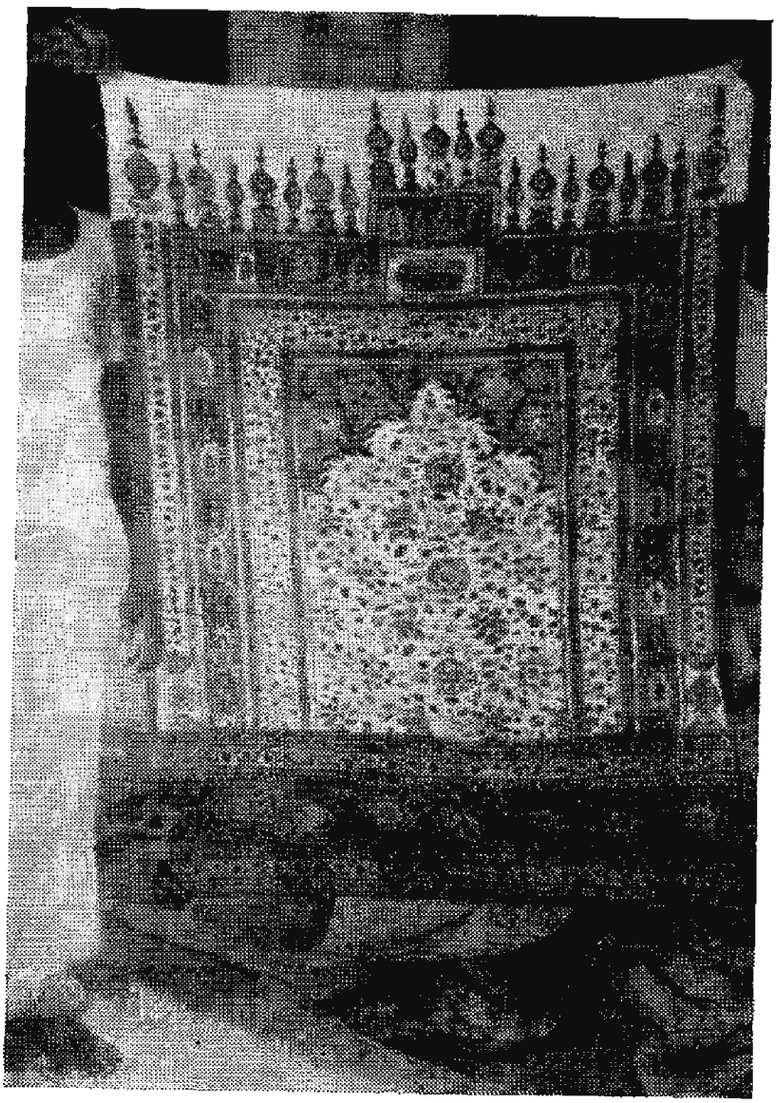


Plate 17. Kalamkari cloth of Jainamaz design—
A Muslim prayer cloth.

SECTION V

DESIGNS

45. The designs and the varieties of the Kalamkari printed fabrics of Masulipatnam had been evolved originally to meet three types of demands, (1) for export to Persia and other Middle-Eastern countries, (2) for export to Western countries, and (3) for meeting domestic consumption as also for export to the Far-Eastern countries like Ceylon, Singapore, Penang etc.

46. The products exported to the Middle-Eastern countries consisted of bed sheets, curtains (Plate 16), *shamiana* covers, prayer cloths etc., for which typical Persian designs are adopted for printing. The varieties coming under this category bore the following names of Persian or Arabic derivation: Gulabadami, Guleheli, Cherangmorkmath, Gulebachadar Bagal, Jainamaz (Plate 17).

47. The products intended for export to the Western countries like the U.K., the U.S.A., France and Germany consisted of *palangposh* or bed sheets, door curtains, table cloths and serviettes. For this variety floral and animal designs are generally adopted. Of late, cloth by the yard with small designs of flowers or leaves printed is also being produced for export.

48. The third variety intended for domestic consumption and export to Far-Eastern countries consisted of Sangadi sarees, which are sarees of dark background with white and red spots. Multan sarees, which have a white background with red and black designs, have wide *pallu* borders. *Balabuta* saree is another popular variety with white background and red and yellow borders with flowers here and there over the body of the saree.

49. There is a great variety of border designs. A few popular designs are *muthyala pandiri* which means a *pandal* studded with gems, the four leaves, hills and sour eyes, *gandabherunda* or double bird design. Borders of table cloths and curtains with figures of horses, elephants camels, swans, parrots are also quite common. Curtain cloths with a central figure of Lord Buddha or Sri Krishna have also become quite popular. Canopy cloth intended for temple purposes or *dhoties* for the purpose of *puja* with borders of *gandabherunda* are also generally prepared. There is a demand for them mainly from the Vaishnavites. Pieces by the yard required for skirts or jacket pieces are also made 36″ wide with small floral designs.

SECTION VI

CRAFTSMEN

50. The industry is apparently indigenous and not borrowed from elsewhere. It is believed that the industry existed in this part of India even in the pre-Christian era. It is said that in the ancient days the Buddhist Chaitya Viharas were decorated with Kalamkari cloth and even the Greeks under Alexander are said to have acquired this cloth. The reason apparently why this industry developed around Masulipatnam was that the materials needed for the dyes were available adequately in the neighbourhood. There was clean flowing water of the Krishna river running through the canal nearby. As also the saline soils which are all needed for the various processes of Kalamkari manufacture were also readily available. Masulipatnam was an ancient trading town and at one time an important port situated on the world seaways. Till the occurrence of the great tidal wave of 1864, it was a good port. Telagas who form the lower middle class inhabited Masulipatnam town in good numbers and they had taken up to this industry. Under the Golconda rulers the industry received a further fillip with the contact of the Persians. Masulipatnam was an important commercial sea port of the Golconda Kingdom. Still later, the commercial interests of foreigners as the French, British and Dutch came to be centered in Masulipatnam. All these gave a boom to the famous Kalamkari industry of Masulipatnam. It is said that the localities of Rustambada, Nizampet, Balaramunipet, Edepalli of Masulipatnam Town were occupied almost entirely by hundreds of families engaged in Kalamkari industry and their condition was prosperous. It is claimed that the first automobile in the Town was owned by one of the families engaged in Kalamkari industry! But, after about 1930, the industry had a great downfall and very soon it had become almost a forgotten industry. Though the Telegas are mainly engaged in the industry by the very nature of the different types of processes involved in producing the Kalamkari fabric, people of different communities are engaged in different processes.

51. At present, the Kalamkari printers of Masulipatnam Town are divided into two broad groups. One group, headed by Shri Vinnakota Venkataswamy Naidu wants to follow only the traditional method of Kalamkari production. The second group headed by the enterprising Shri Rekapalli Parthasaradhy has taken to the cheaper method of production using chemical dyes and does not resort to the wax processing at all. Shri Rekapalli Parthasaradhy runs a Kalamkari centre in Rustambada adopting the cheaper processing. The centre is located in his own house and a number of workers are engaged in the centre. Plate 18 shows Shri Parthasaradhy Naidu with some of his workmen. Shri Parthasaradhy Naidu also belongs to a family of traditional Kalamkari workers. But he believes that the old method of wax processing cannot keep pace with the present tempo of large scale production and that it would also be costlier as much labour is involved.

52. In the traditional method of production, we have seen that the distinct processes involved are printing, dyeing, wax processing and bleaching. At present there are 11 families of Telagas and ex-tappers who can attend to dyeing and printing. The wax processing i.e., only the covering of certain portions of the cloth by molten wax is attended to mostly by women in about 16 families, belonging to ex-tappers, Muslim and Kapu communities. The yellow painting with *kalam* is also attended to by women of about 15 families mostly of Kapu community. The washing and bleaching is attended to by four washerman families. It has already been pointed out that the block engraving is done only by 2 persons, namely, Gujjaram Rukmaji and Gadireddi Narayana.

53. The wax processing and indigo dyeing under the traditional method is a specialised process which requires skill and experience. It is said that at present Shri Vinnakota Venkataswamy Naidu, Shri Murangi Ranga Rao of Rajupet, Bandar and Shri Venkaiah, Balyalagudem, Bandar are the only experts in the field. Under a scheme of training, a few persons are being trained up. Four students, two of Kapu community and two of ex-tappers community had already been trained, who have been engaged in the co-operative centre as paid workers. Four more, three Kapus and one Gowdu, were being trained at the time of the survey.

54. A comparison with the Kalamkari products of 1925 and earlier would, however, show that the present products are inferior to the traditional ones. It may require a few more years for the present workers to reach the excellence of their fore-fathers.

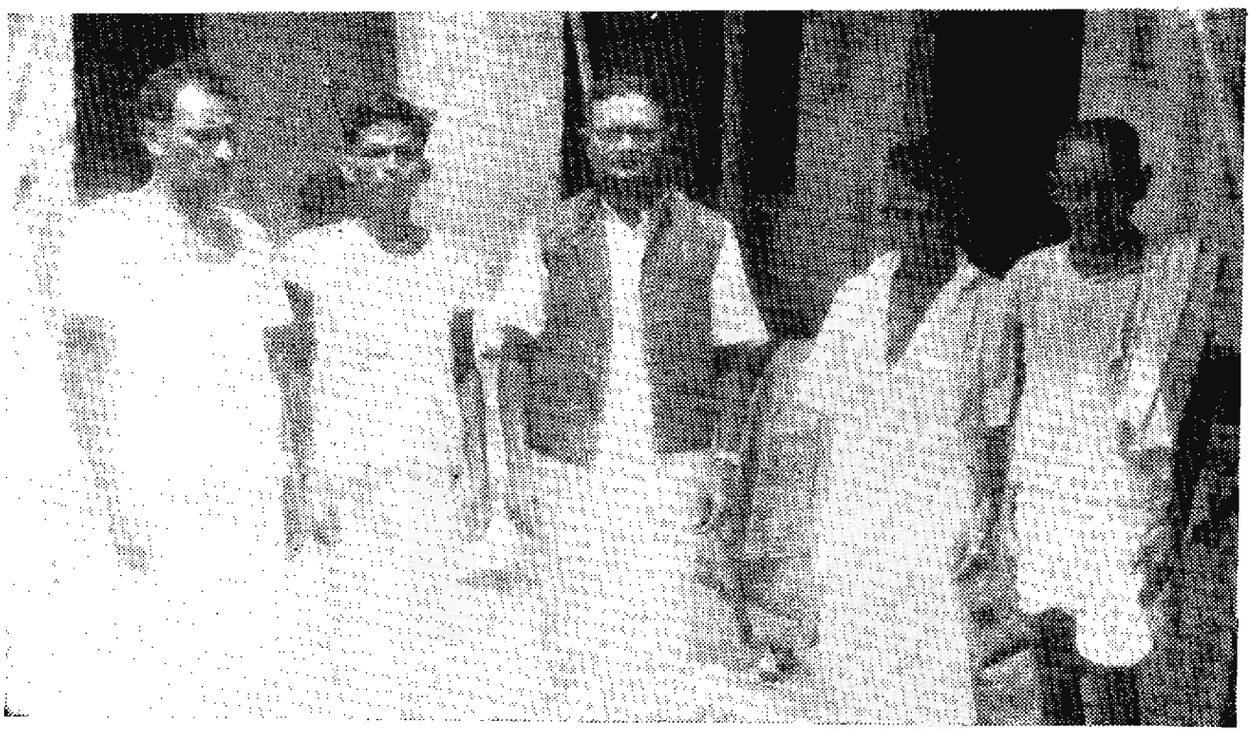


Plate 18. Shri Rekapalli Parthasaradhy Naidu with some of his workmen.



Plate 19. Medals awarded at the London Wembly Exhibition, 1924.

SECTION VII

COST OF PRODUCTION AND TIME TAKEN

Price

55. The Kalamkari products are sold at the following rates:

	Rs. P.
Bed sheets of size 54" x 90" ..	9.00
Curtains of size 50" x 90" ..	10.00
Skirting cloth 36" wide ..	3.50 per yard.

The prices of table cloths vary according to size. The proportionate cost of production of the Kalamkari fabric can be distributed amongst the various items as follows:

Item	*Proportionate expenditure*
Cloth	33 %
Cost of dyes	21 %
Labour charges ..	38 %
Supervision fees ..	2 %
Profits	6 %

56. *Time taken for different processes of manufacture:* Assuming that 100 yards of cloth is taken for Kalamkari processing the following statement would show how much time is needed to put it through the various processes and also the labour involved.

Process	*No. of days*	*Labour*
(1)	(2)	(3)
1. Washing of the cloth ..	4	2
2. Myrobalan mordanting ..	1	2
3. Block printing	9	4
4. The block printed cloth allowed to stand for	3	Nil
5. Washing of the cloth	2	2
6. Boiling the cloth for red colour ..	1	2
7. Washing & bleaching	4	2
8. Starching	1	2
9. Application of wax	8	8
10. Dyeing in blue colour	4	2
11. Removal of wax	1	2
12. Washing of the cloth	4	2
13. Starching	1	2
14. Application of yellow dye for yellow and green colours ..	5	8
15. Cloth allowed to stand for ..	1	Nil
16. Application of alum solution ..	1	1
17. Cloth allowed to rest	1	Nil
18. Washing finished products clean ..	3	2

The above break up is somewhat approximate. It does not mean that the labourers or workers are engaged fully in those particular processes throughout the period indicated. A block printer who is generally a man is paid a wage of Rs. 3.50 per day and a Kalamkari wax or yellow colour painter, who is a woman, may earn about Rs. 1.25 to 1.50 a day.

SECTION VIII

CONCLUSION

57. As had been pointed out in the introductory portion of this monograph, the stoppage of imports of these products into Persia in the year 1930 badly affected the industry. The fine pieces that were being produced for the Persian market ceased to be produced. The Industrial Revolution of the West had also hit the Masulipatnam industry badly. The industrialisation of the textile industry within the country, the competition from the cheaper mill products, the chemical dyes etc., also sounded a death knell on the Masulipatnam Kalamkari Industry. It was only the patriotic spirit in a few leaders which sought to revive this once famous industry. In 1934 the All India Spinners Association made efforts to encourage the industry by trying to create a demand by arranging demonstrations at various exhibitions. In 1940 sales of the Kalamkari products were organised through the Khadi Board. In 1952 the Kalamkari workers tried to sell their goods through a few Madras firms. The industry still languished. In 1954 the Bàlyalagudem Co-operative Cottage Industries Production and Sale Society Limited No. 1727 was registered, mainly made up of the ex-Kalamkari workers, who were made to manufacture cot tape and plate leaves, in order to give them a livelihood. The Society consisted of 319 members with a paid share capital of Rs. 935/-

58. The All India Handicrafts Board evinced interest in the industry and encouraged the Society to take up manufacture of Kalamkari fabrics. It is heartening that in the last two or three years some demand in foreign markets had been created. This Society is able to export Rs. 5,000 to Rs. 6,000 worth of products monthly. The Cottage Industries Emporia are able to secure Kalamkari pieces worth Rs. 15,000 per year from the Co-operative Society. The other agencies which absorb the Kalamkari products are the Victoria Technical Institute of Madras which purchases about Rs. 1,000/- worth of Kalamkari goods and Carona Arts and Crafts in Madras which purchases Rs. 5,000/- worth.

59. At the London Wembly Exhibition in 1924 it is understood that the excellence of Kalamkari products was recognised by the award of medals. Plate 19 shows the medals proudly preserved by their awardee Shri Venkataswamy Naidu himself. The old workmen have mostly taken to other avenues of employment. The qualities of the Kalamkari products of the present day are far inferior to those that were the pride of this industry a few decades ago. I do not know if it will be right to encourage the cheaper process of manufacture that is resorted to by some, doing away with the traditional method of wax processing. One finds it rather difficult to distinguish the cloth prepared under the two processes. Sometimes the Kalamkari cloth prepared using the chemical dyes looks even more attractive to start with as the chemical dyes appear brighter and more showy. But it is obvious that they can never have the keeping qualities of the vegetable dyes of which the industry was justly proud in the past. Even though by the chemical dyeing the cost of manufacture can be cut down and the products brought out at a much greater speed, it will be unfortunate if the traditional Kalamkari industry is forgotten altogether. It is the traditional wax-processing and the vegetable colour dyeing which gave this industry its fame and marked out its uniqueness. It is claimed that even if an old Kalamkari cloth may come to the stage of tearing away by its age, the original dye never fades away. It is most important that the traditional processes should be preserved and a market developed for them only by prescribing certain standards. I have no doubt that with the present demand not only within our country but even outside for artistic products produced by traditional craftsmen, the Kalamkari Industry of Masulipatnam will once again come to its own.

60. Before concluding I wish to record my thanks to Shri Vinnakota Venkataswamy Naidu and Shri Rekapalli Parthasaradhy Naidu for explaining to me very patiently all the aspects of the Kalamkari Industry and also to the craftsmen and craftswomen who demonstrated the various processes of manufacture.

(v) WOOLLEN PILE CARPET INDUSTRY

A—WARANGAL



Plate 1. A coloured picture of a pile carpet of Warangal along with the designer.

SECTION I

INTRODUCTION

1. There are two centres in Andhra Pradesh noted for the woollen pile carpet industry, viz., Eluru and Warangal. The first part of this monograph covers the industry as it exists at Warangal and the second part deals with Eluru.

2. Warangal is an important district headquarters of Andhra Pradesh lying at a distance of about 90 miles north-east of the State capital, Hyderabad with which it is connected by train as well as a good asphalt surfaced road. Warangal with a population of 156,106 is the fifth largest city of Andhra Pradesh. This historic city is noted for its archaeological remains, having been the seat of the famous Kakatiya dynasty which ruled the Telugu country in the 13th/14th centuries. It later came under the control of the Muslim rulers of Delhi and then Golconda. The pile carpet industry for which this place earned a name appears to have been introduced by some Muslim *nawabs* of the place. The industry was obviously borrowed from Persia. It is interesting to find that the looms, the technique of production, the tools, the original designs are almost the exact replicas of those found in Persia. The pile carpet weavers are almost entirely made up of Muslims.

3. No one can remember nor is there any recorded account of how this industry was first introduced into Warangal. One Mohd. Khaja (aged 72) who is the only expert designer of the pile carpets of Warangal and whose family had been associated with this industry traditionally relates the following fanciful story : About 700 years ago, a potter who was digging a mound of earth for manufacture of pots discovered an old carpet piece buried. This was brought to one of the ancestors of Mohd. Khaja. The carpet piece was carefully examined and analysed and the local Muslims started manufacturing similar products at Warangal. But, it is mysterious how this original carpet came to be buried under a mound of earth! The more feasible explanation for the location of the industry in Warangal seems to be that a number of tanneries existed at Warangal. The district supplied considerable quantity of raw wool. It is said that annually about 5 lakhs bales of raw wool are produced in the district of which about 3 lakhs bales are exported to other parts of India as Mirzapur in Uttar Pradesh, Panipat in the Punjab and Eluru in Andhra Pradesh. It is well known that during the time of the Golconda rulers there was free intercourse of trade and culture between this part of the country and the Middle Eastern countries. Persia is obviously the home of the carpet industry, from whom this industry seems to have been borrowed into this part of India under the patronage of the local *nawabs*.

4. Mr. A. Cecil Edwards in his book *The Persian Carpet* explains the origin of the carpet industry in Persia as follows :

" The hand knotted carpet of Persia was an invention of her nomadic shepherds, for it would seem to be in natural course of things that people who possessed a disposition for form and colour would not for long be satisfied to cover their tent floors with the skins of animals. The urge to decorate would have stimulated them to devise something warm and comfortable; but gayer, more amusing and more colourful than a sheepskin rug. Such a fabric must consist of two elements; a woollen pile to give thickness and warmth and to embody the colour and the pattern; and a solid back or foundation to which the tufts of wool could be attached. Inevitably, the tribal rug could be evolved."

5. The Warangal pile carpet industry cannot trace its origin to any such local evolution. The industry with its technique already devoloped in Persia appears to have been introduced into Warangal for no other reason but the availability of the chief raw material, namely, wool, at the local tanneries and the demand for the pile carpets from the luxury loving *nawabs*. It would appear that originally, mostly prayer carpets of size $4' \times 2'$ and a set design were being manufactured here and supplied to the Muslim nobility. It is, however, not clear when exactly the woollen pile carpets started to be manufactured at Warangal.

6. Apparently due to the inherent dislike of the Hindus to handle raw skins and wool, the tanneries had become the monopoly of Muslims. The pile carpet industry was, therefore, started by engaging workmen who were all Muslims.

7. The Warangal pile carpets soon established a name for themselves. They were able to secure even

a good foreign market in the West. It is said that generally carpets of size 7′ x 4′ were being exported to an extent of about 10,000 pieces per month. This industry had thriving business till about 30 years ago. Shanjir Pachan Fazal Seth, Nabi Seth and Bhupati Veeraiah were the wholesale merchants who were dealing with these carpets. The industry at its peak was providing employment to about 500 craftsmen. It so happened that the greed for quick profits made some capitalists to introduce some inferior material in the manufacture of the carpet. The present workers say that the manufacturers started using *sagarmatta* fibre instead of jute fibre as weft threads in order to bring down the cost of the manufacture, but this particular fibre is not long lasting and becomes brittle and breaks when the carpet is folded. The usage of this inferior material marked the death-knell of the industry itself. The demand for the Warangal carpet in the foreign market died down. Several of the workers were thrown out of employment. They took to alternative occupations as *tonga* drivers, agricultural labourers, etc., to eke out their livelihood. In the year 1930-31 a Government Carpet Factory was stated to rehabilitate these workers. The factory ran for about 15 or 16 years and then it too was closed down.

8. No specific reasons are revealed for the failure of the carpet factory. Some of the old workers who had knowledge of its existence and working attribute the failure to financial breakdown. But, one Sri C. Kodanda Rao, who had worked as Manager in the factory for some years upto February 1947, gives out a different and more probable version. The factory was started and financed from the Industrial Trust Fund of the erstwhile Hyderabad State mainly on an experimental basis. The policy of the then Government was not to run industrial concerns themselves but to encourage private individuals to take up such undertakings successfully. The factory was not running on loss but, on the other hand, it is claimed that it was making profit when Sri Kodanda Rao left it at the time of communal disturbances. Negotiations were then afoot to sell away the unit to Late Thayabjee. Later, Sri Thayabjee, a partner of the local Azamzahi Mills took up the industry, but he also did not run it and the factory fell into disuse gradually. It appears the factory was not found adequately profitable by Late Thayabjee owing to certain hardships like shortage of supply of raw wool, woollen yarn, dye stuffs and chemicals and also regarding disposal of stocks produced, and this caused him to dismantle it.

9. In 1952 the Warangal Cottage and Small Scale Industries Co-operative Society Limited, Warangal (Registered No. 20688) was started with 177 members and a share capital of Rs. 3,712.00. The Society could start production of the pile carpets only in 1955. The office, the workshop, as also the sales department are located in a building in the main bazaar of Warangal town at 9/47–48, Mukhramjahi Road, Warangal. The pile carpet workers are mostly located in Mandi Bazaar, Fort, Warangal and Ursu which are all predominantly Muslim localities. The chief craftsmen engaged in this industry outside the Co-operative Society are the following:

1. Syeduddin, Fort, Warangal
2. Syed Masuq, Ursu, Warangal
3. Md. Ankus, Near Railway Gate, Warangal
4. Subedar, Ursu, Warangal
5. Md. Ali, Ursu, Warangal

The following members of the Co-operative Society are actively engaged in the industry:

1. Bazrullah Baig
2. Md. Afzal
3. Syed Abdul Khader
4. Md. Ali
5. Abdul Kareem
6. Md. Ismail
7. Syed Zamal
8. P. Ellaiah
9. D. Badraiah

It may be mentioned that the last two in the list above belong to a Scheduled Caste and they seem to have taken to this industry for the first time.

10. The following are some of the well-known traditional craftsmen, some of whom have either left the industry altogether or some are now dead.

1. Pardadi Bandelli Saheb, Mathewada (Dead)
2. Chuzurtar Bandelli Saheb (Dead)
3. Khajjeli Mada Saheb
4. Khajjeli Hussain Mia Saheb
5. Darga Mahbub Ali
6. Shaik Ali
7. Baig Fateh Mohammed
8. Fateh Dadi Saheb
9. Ranganpet Miran Saheb
10. Gaddepu Saheb Ali
11. Shaik Mastan

11. There is only one good designer of the pile carpets left, namely Mohd. Khaja who is 72 years old. He may be seen in the coloured photograph in Plate 1. It is regretable that nobody has been trained to take his place.

12. The five craftsmen who work outside the Co-operative Society and listed earlier have looms at their homes. They produce carpets on them. Their family members also help them on weaving as well as with other operations like spinning, hanking, dyeing etc. They employ hired labour as and when necessary depending upon the exigencies of the work on hand, quantum of demand etc. The labourers employed are also people conversant with the technique of carpet weaving, but they are mostly unskilled workers and have to be constantly guided by the master craftsman himself.

13. There may not be more than 40-50 workers who have this industry as their source of livelihood at present. One who works on carpet looms cannot generally go in for any additional work and *vice versa*. It is, therefore, hardly possible to find any worker who has this craft as a subsidiary source of livelihood.

SECTION II

CARPET DESIGNS

14. The old traditional designs of the Warangal carpets go by the following names:

1. Hashim Khani
2. Delhi Khani
3. Teerandas Khani
4. Mahbub Khani
5. Thotti designs

These are all Persian designs and said to consume a lot of labour. Plates 2 & 3 illustrate two of them. Originally prayer carpet of size 4′ × 2′ with a special design of a rectangular figure with a dome at the top called "Zehanawaj" was a popular carpet that was being produced. Of late the centre has taken to the production of any modern design with floral or geometrical figures in accordance with the order of the customers. The carpets produced are of the following sizes:

6′ × 3′	12′ × 9′
7′ × 4′	15′ × 12′
8′ × 5′	

The maximum width upto which a carpet can be made is 18′. The carpets are produced with 4½ knots of pile per inch, 5 knots or 6 knots. Even finer carpets with 8 or 10 knots per inch are also produced on special orders.

15. It has to be mentioned here that the designs are not standardised. Generally, the designs which could be manufactured are too numerous, but they bear no individual names as such. No particular care is bestowed at Warangal for naming the carpets by their design. The design of the carpet is selected by the customer or the Co-operative Society from the album of photographs maintained at the Society or the book *Carpet Annual* (British Continental Trade Press, 222 Strand, London). For example, a design selected by one Doctor Sanghi of the local M. G. M. Hospital, for his personal use some time back from the *Carpet Annual 1955-'56* and manufactured and supplied by the Society is going under the name Doctor design (Plate 4). Similarly, a carpet made for a particular Minister of the State Government sometime ago is still called Minister design. But, now-a-days the choice of the customers seems to be more for simple designs of flowers at the corners. So, floral motifs have acquired more demand and that too which are simple and plain to look at, without being gaudy and elaborate.

16. Generally, hand-spun woollen yarn is used for these carpets. But, for the specially fine carpets mill-spun yarn imported from Amritsar or Singapore is used. The cost of the carpet is obviously governed by the quality and the quantity of the yarn used, which forms the chief raw material. Mill-spun yarn costs Rs. 8/- per pound whereas hand-spun yarn only Rs. 1.50 to Rs. 2.00 per pound. Carpets of 5 or 6 knots cost Rs. 3.50 to Rs. 4/- per square foot irrespective of the design. Plate 5 gives a typical pile carpet of Warangal.

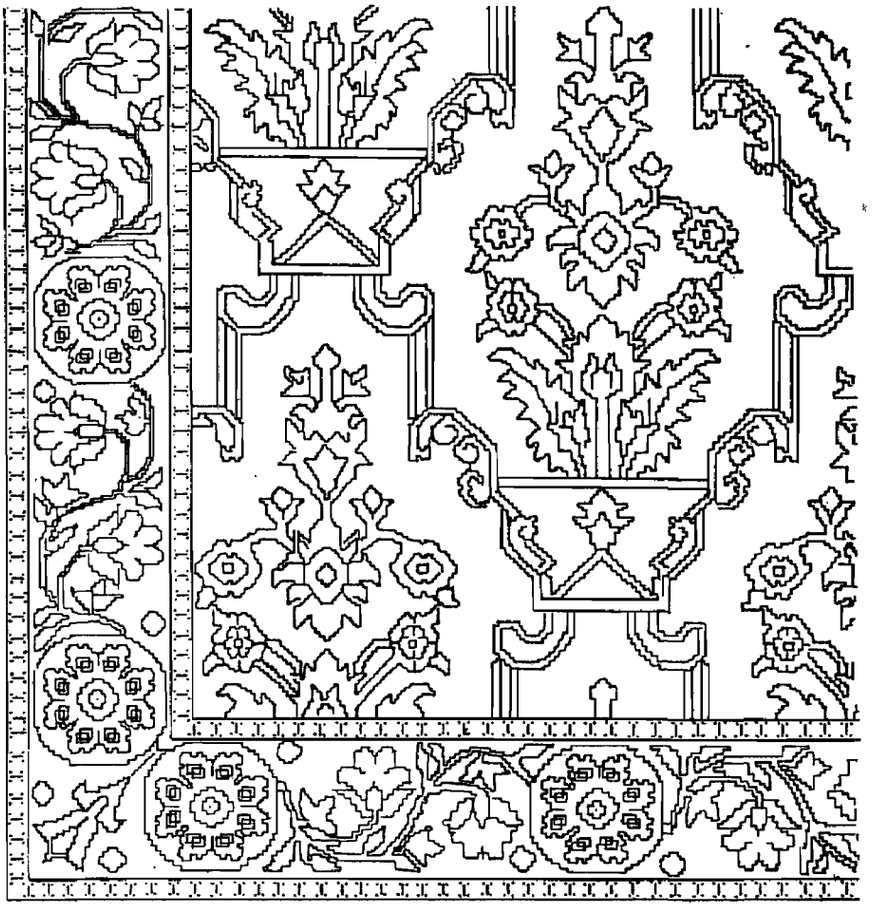


Plate 2. Thotti design.

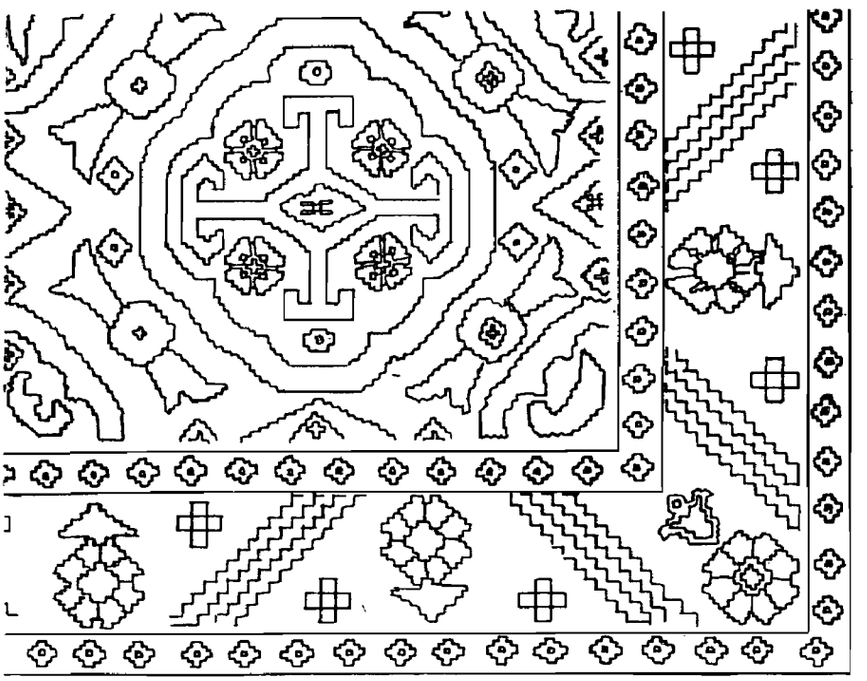


Plate 3. A Persian design.

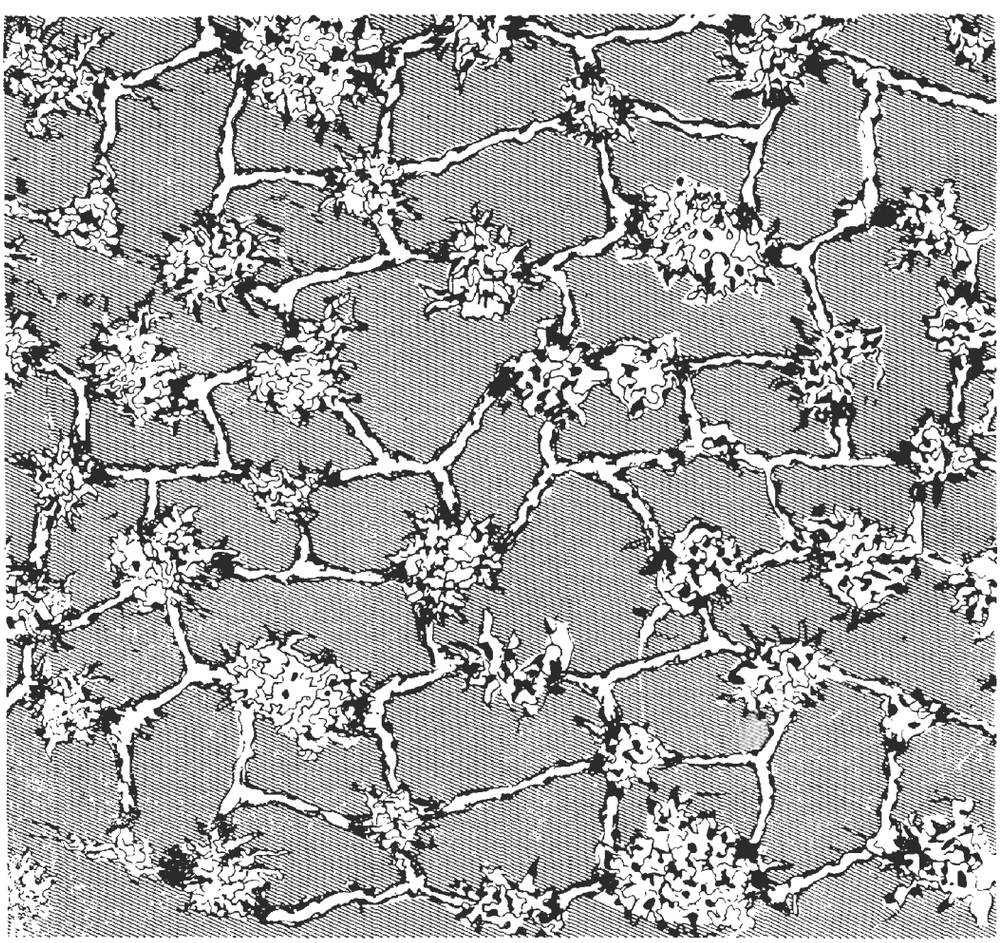


Plate 4. Doctor design.

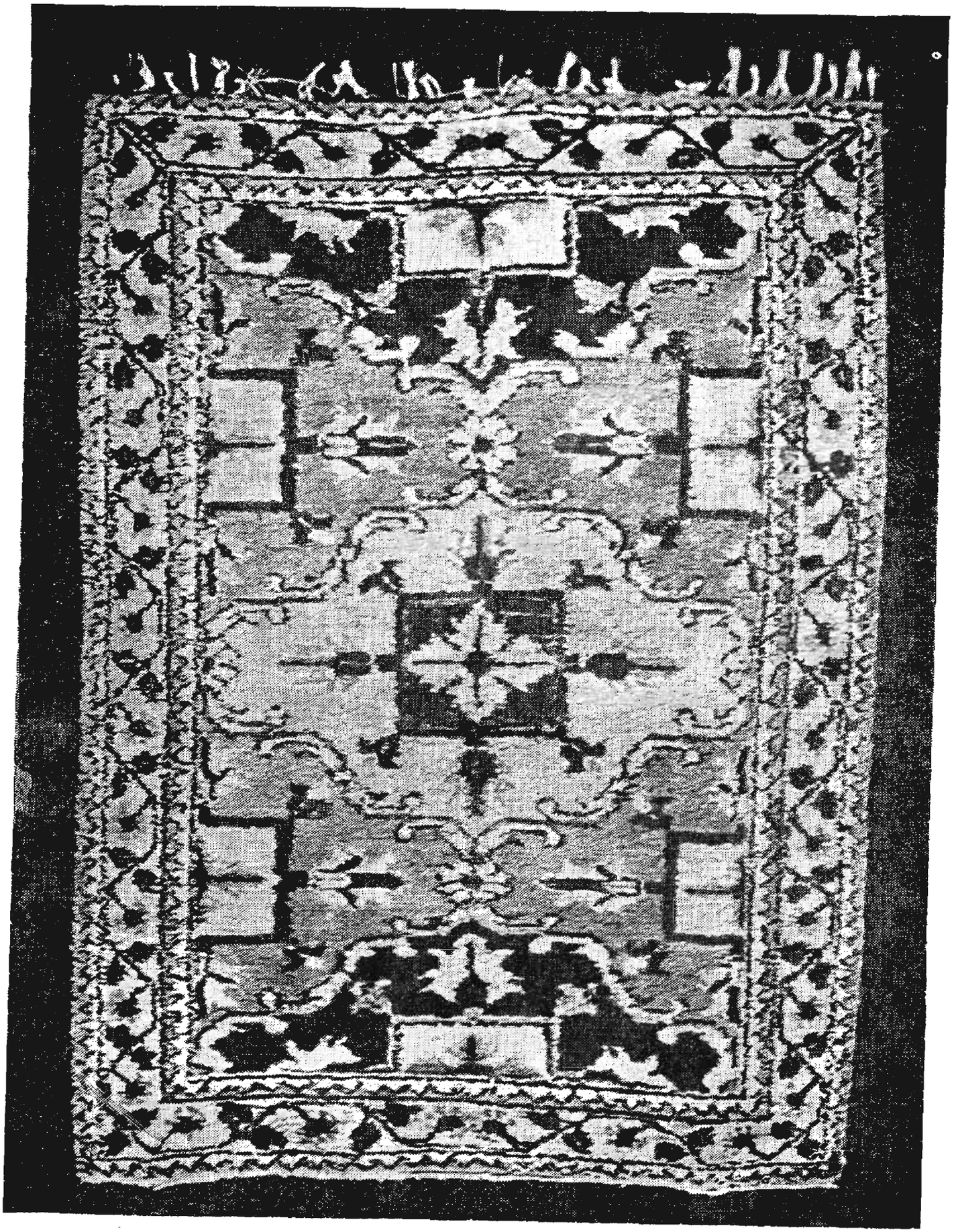


Plate 5. Typical Warangal carpet.
Size: 7′×4′; Technique: Hand-knotted.
Colours: Deep green, off-white, red, orange, etc.

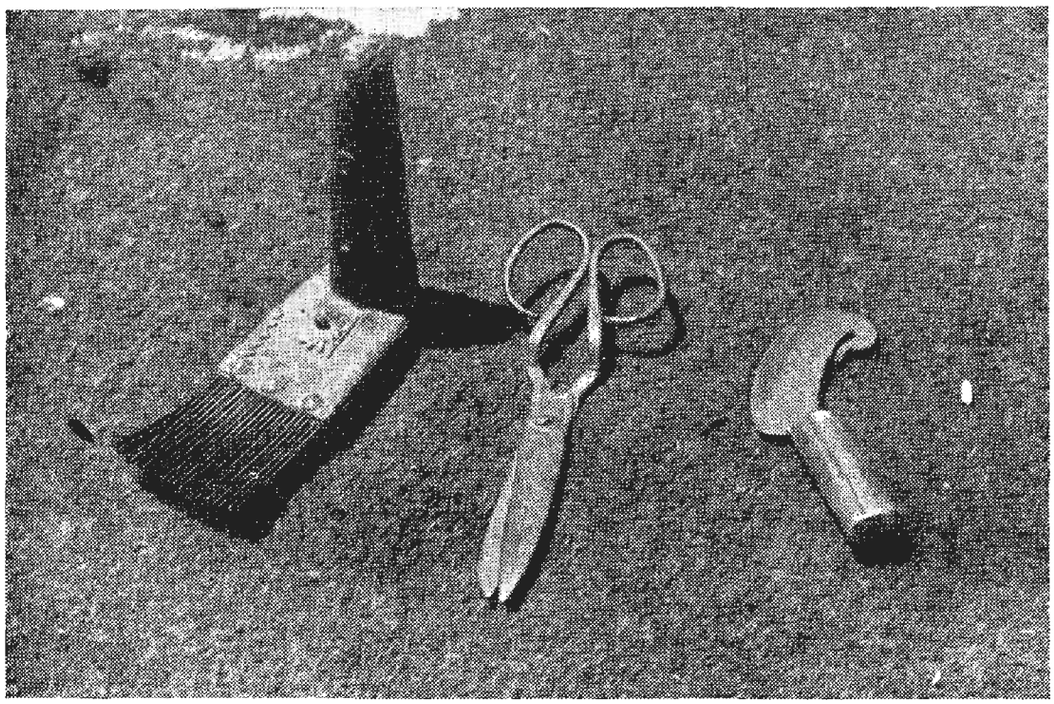


Plate 6. Some of the implements used.
Left to Right: Comb-beater; scissors; yarn cutting knife.

SECTION III

RAW MATERIALS AND IMPLEMENTS

17. The raw materials needed for woollen pile carpet manufacture are as follows:

1. Wool
2. Jute twine and cotton twine for binding (weft)
3. Cotton yarn No. 6 × 6 ply (for the warp)
4. Dyes –Chemical dyes obtainable in the bazaar. Only acid colours are required as wool takes these colours only.
5. Dyeing vats for dyeing wool
6. Stillages for drying dyed woollen yarn
7. Loom – which will be described later
8. (a) A special knife
   (b) Reed or comb beater
   (c) Scissors

Plate 6 illustrates some of the implements used.

18. For a carpet of size 6′ × 9′ the following will be the quantity of raw materials used:

Woollen yarn	..	31 Lbs. 10 ozs.
Cotton yarn (6 × 6)	..	2½ Lbs.
Jute twine (weft)	..	14 Lbs. 14 ozs.
Bafta or cotton yarn (weft)	..	2 Lbs. 14 ozs.

SECTION IV

PROCESSES OF MANUFACTURE

19. The manufacturing process of a pile carpet from the point of placing an order for a carpet till it is produced will be described hereunder.

Design

20. The customer wanting to purchase a carpet indicates the design of the carpet. There are a few traditional designs already named. The carpet production centre does not maintain a catalogue as such but it has an album showing a few designs. The carpet manufacturers can produce the carpet of any given design. Therefore, the consumers with individual tastes prefer to give their own design.

21. On a customer indicating his design, it is reduced on to a graph sheet to guide the weaver. This is the work of an expert designer. There appears to be only one person, Mohd. Khaja by name, who is 72 years old and is well versed in designing. It is a sad feature that no other person has been trained in expert designing as yet. While reducing the design on to a graph sheet the colours are also noted. A specimen of the graph sheet with the design marked is given in Plate 7. (The designer is paid by the Co-operative Centre at the rate of Rs. 1.50 per day.)

Woollen yarn and dyeing process

22. By examining the design and the colour scheme, and taking into consideration the size of the carpet and the texture, the quantity of woollen yarn needed and the colours into which it should be dyed are determined. Generally, the manufacturer would be storing adequate quantity of wool yarn dyed into different shades.

How woollen yarn is obtained

23. As had already been stated, raw wool is obtained in good quantities from the local market. Clipped wool from live sheep is preferred to wool got from tanneries after skinning. The clipped wool also referred to as 'live wool' is soft and has an oily lustrous appearance and takes the dye well. The raw wool that is purchased in bulk is then put through a carding process. There are some professional carders who attend to this in Warangal town. The carding helps the straightening of the fibre and facilitates the spinning of the yarn. Carding charges are paid at the rate of Re. 0.75 P. per maund.

24. The carded wool is then spun into yarn and wound round a spindle to form woollen cops (also called tops). This spinning is attended to generally by women. Plate 8 shows a girl spinning the woollen yarn. Spinning charges at the rate of Re. 0.31 P. per pound are paid. The woollen cops are then converted into hanks. The women labourers charge Re. 0.06 P. per pound.

Dyeing

25. Raw wool is obtained in four colours, namely, white, black, fawn and grey. These are spun into yarn. Hanks of white woollen yarn are used for obtaining all light colours by dyeing. White wool is not used for being dyed into darker colours as the cost of the white wool is much higher than the other three shades of natural wool. Fawn coloured wool is used for being dyed into maroon, green, brown, red or blue colours. Grey wool is used for being dyed into very dark colours such as dark red, dark green, etc. Sometimes a mixture of different shades of natural coloured wool, such as grey and white, is made and dyed to produce certain intermediate colours.

26. The Co-operative Centre has constructed a convenient dyeing shed with vats for the purpose of dyeing of woollen yarn. It consists of a high platform with two copper vats with furnaces below. There are also tubs provided by the side for holding fresh water. Please see Plate 9.

27. The individual master craftsmen who dye the woollen yarn required for their needs do not own any such built up vats for the purpose. Some use broad vessels (or pots also) big or small according to the quantity of yarn to be dyed. Ordinary fuel is used for heating. At Sri Ankus's house it is observed that the dyeing is done in vessels kept on kitchen oven itself on a very small scale.

28. The dyeing of wool is also a specialised process. As has been stated in an earlier paragraph, woollen yarn of certain basic natural colours is used for being dyed into certain required colours. The dyeing is done as follows: In the vat water is heated upto 150°F. About 6 Lbs. of water is used for every 2 Lbs. of yarn to be dyed. To this is added 1 Oz. of common salt and 1 Oz. of ammonium sulphate. Then the required dye is added at the rate of 2 tolas per 2 Lbs. of yarn. Only the chemical dyes available in the market obtained



Plate 7. A carpet design worked on a graph sheet.

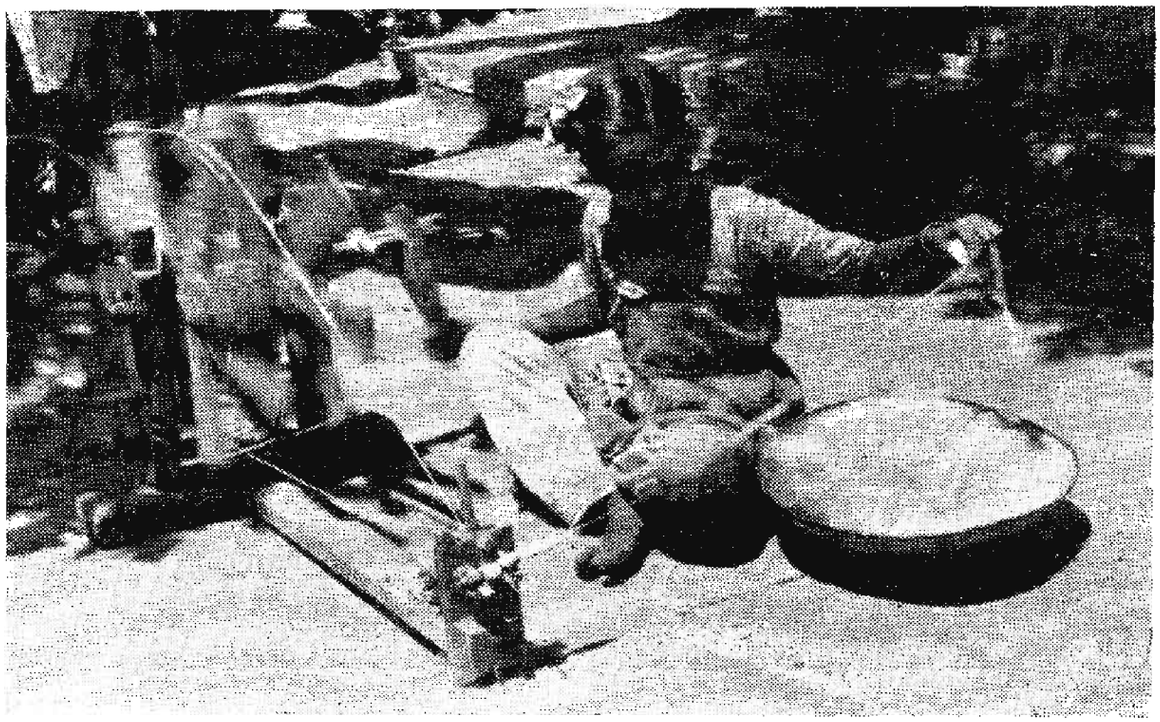


Plate 8. A girl spinning the woollen yarn.

DYEING VAT

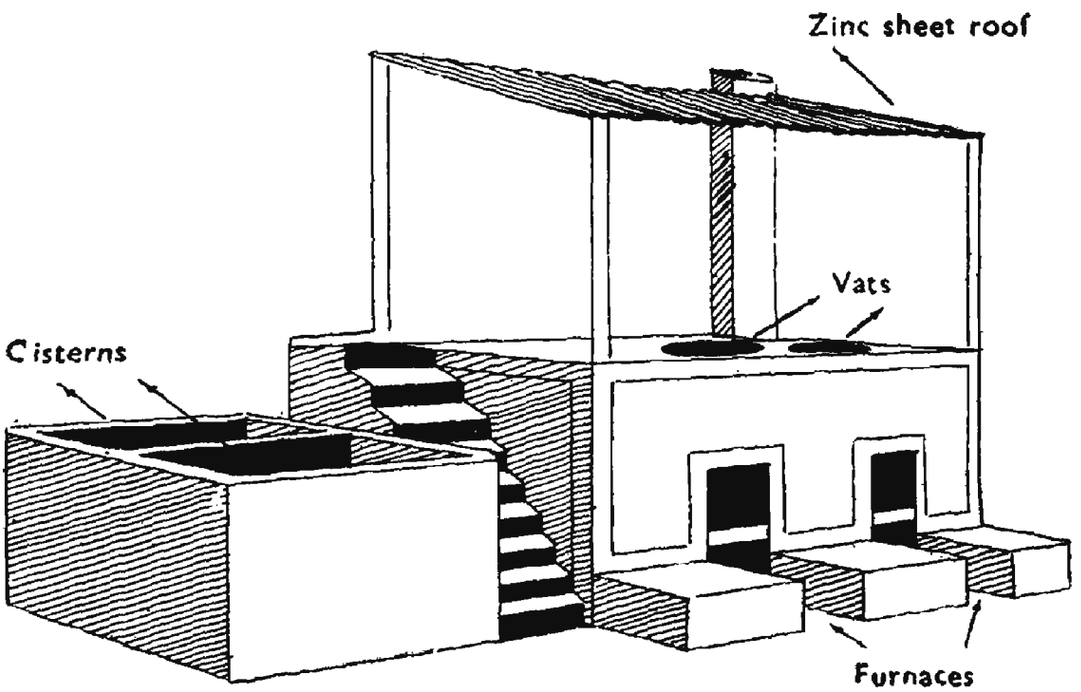


Plate 9.

at the rate of about Rs. 13.00 per pound are used for this purpose. One ounce of sulphuric acid is also added. The yarn is then put inside the vat and the heat increased to 190°F. This heat is maintained for about 2½ hours. *Shivapane* which is a balancing agent is added at the rate of 2 tolas per hank of yarn and the vat is boiled again for about half-an-hour to one hour to bring about uniformity of colour. The yarn is then taken out of the vat and cleaned in cold water. The yarn is ultimately kept on stillages, which are cot-like structures with loop steel strips on the top for about one to one and half hours so that all the water may drain off from the wet yarn. The dyed yarn is then allowed to dry under the sun for one day. The yarn is now ready for use. The dyed yarn is then stored away in a room. Chemical dyes are preferred because it is felt that when once the yarn takes the chemical dye it is free from moth attack. Even when hanks of woollen yarn in their natural colours are to be used, they are boiled in the vat with common salt, ammonium sulphate and sulphuric acid added without putting any dye, before it is used for the carpet manufacture.

Cotton and jute yarn

29. The other raw materials needed are cotton yarn for the warp, jute or hassen thread for the purpose of weft. Cotton yarn which is used mainly as the warp and also as the binding weft is secured at the rate of Rs. 10.00 per 10 Lbs. Jute thread is obtained at the rate of Rs. 15.00 per 10 Kg.

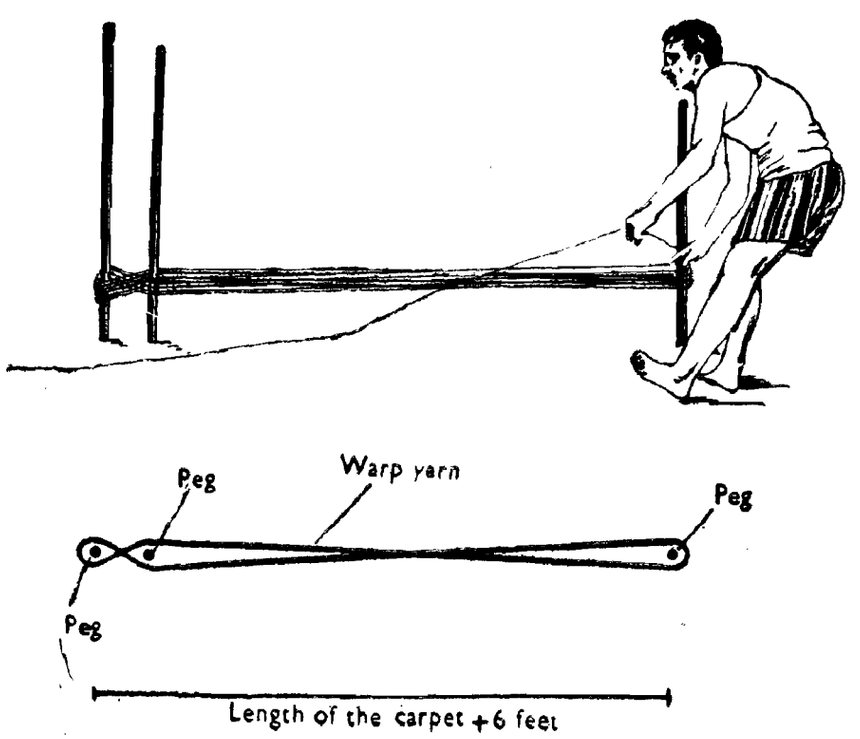
30. The requirement of the woollen yarn, the warp yarn and the weft binding thread is estimated as follows. One sq. yard carpet of six knots would require the following quantities of yarn: 5 Lbs. woollen yarn. The colouring depends upon the design. Half a pound of 6 count x 6 ply of cotton yarn for the warp. The jute weft thread is used as per requirements. No definite scale has been laid.

Tying of the warp

31. After finalising the design and securing the required quantity of woollen yarn of the requisite colours as also the cotton yarn and the jute weft thread, the first stage of manufacture consists of the tying of the required warp. For the purpose of the warp, strong cotton thread is necessary. Six count yarn is purchased and made into six ply. The wages of Rs. 1.50 per 10 Lbs. are paid for this purpose.

32. Three pegs of about 3′ height which may be ordinary iron crowbars are driven on to the ground in line. The distance between the first and the third peg should be the length of the carpet plus 6 feet. The cotton yarn is wound round these three pegs by taking it across the three pegs in an alternate fashion as indicated in the diagram below:

TYING OF THE WARP



33. After the thread is wound round the peg, long bamboos are inserted through the loops at either end. The length of the bamboos depends on the width of the carpet. The warp threads are spread over these bamboos. The warp is thus wound up rolling the bamboo from one end. Plate 10 illustrates this. The warp is then mounted on to the loom.

34. The above mentioned arrangement is to facilitate shedding. Shedding indicates the step of separating the warp threads to make space between the two rows comprising the two sets of alternate threads. The purpose of the shedding is to introduce weft threads after each row of the piles of woollen yarn is beaten with the *panja*, as will be described later.

Loom

35. The pile carpet loom is an interesting contrivance constructed with indigenous materials. Please see the line drawing in Plate 11. The loom is erected alongside a long low trench of about 2′ deep and about 2′ wide. The length of the trench depends upon the size of the loom that is erected. They range from 4′ to 18′. On either end of the trench are erected two vertical strong wooden posts (P1 & P2 in the picture) of about 9″ diameter and 9′ high with a fork at the top. Babul or neem wooden posts are preferred as they will be heavy, strong and will not be easily affected by white ants. The 'Y' fork at the top supports a horizontal wooden roller. A wooden roller (R1) 9″ in diameter is put across the vertical posts on the top and another similar wooden roller (R2) is mounted across the vertical supports at the foot just above the trench. The top roller has a number of pegs for holding the warp when mounted. The bottom roller has a groove into which the bamboo carrying the warp can be fitted in. Both these horizontal rollers have tensioning levers (T) with the help of which the warp can be rolled or unrolled and the required tension of warp threads maintained. A loom of 9′ width is said to cost about Rs. 80/-.

36. When the warp is mounted on to the loom it will be vertical. The worker sits in front of the bottom roller of the loom with his feet inside the trench. He can thus conveniently handle the warp threads for knotting the woollen pile which will be described later.

Mounting of the warp on to the loom

37. The warp prepared as already described is mounted on to the loom, one end around the top roller of the loom and the other end fixed in the groove of the bottom roller. The threads of the warp are then adjusted and tied to form the required number of knots per inch. While preparing the warp we had noticed that the warp thread is wound round alternately across these pegs. This results in the criss-crossing of the warp threads and the formation of loops. This is done in order to help the leasing of the warp while weaving. After mounting the warp on the loom two thin bamboo strips (S1 & S2) are taken across the loops formed in the warp. There will be two sets of warp threads thus separated. One set of threads of the warp is tied to a horizontal bamboo pole and another set to another horizontal bamboo pole (C1 & C2) beneath it. These two horizontal poles are secured by means of a rope tied to a pair of short bent wooden pieces (X1 & X2) at one end which are put across a strong horizontal wooden pole just above the head of the worker. By moving the bent wooden pieces it will be possible to alternately lease the threads of the warp. Plate 11 illustrates the loom with the warp mounted.

Weaving of the carpet

38. Now the main process of weaving of the carpet starts. The worker sits in front of the mounted vertical loom with the woollen yarn of the required colours wound into spherical balls or tops which are hung along a horizontal rod behind him (Plate 11). If it is a narrow carpet of about 3′ or 4′ wide a single worker can handle the loom by himself. If it is a wider carpet to be prepared, then a number of workers work together sitting along the pit so that each has to attend to about 2′ or 3′ width of the carpet. When a team of workers attend to this work, there will be a head weaver who will be in charge of the design sheet and for each line he calls out the pattern. The members of the team weave accordingly. The calling out of the pattern by the head weaver forms a jargon of his own, which can be understood only by the pile carpet weavers. Plate 12 shows the workers at the loom.

39. It may not be quite right to say that this is a process of weaving as such. What happens is that the worker gets hold of the end of woollen yarn of the required colour from the balls of woollen yarn that are kept hanging behind him and takes it across the warp threads dextrously by winding it round the threads in an alternate fashion as indicated in the illustration below and forms a knot.

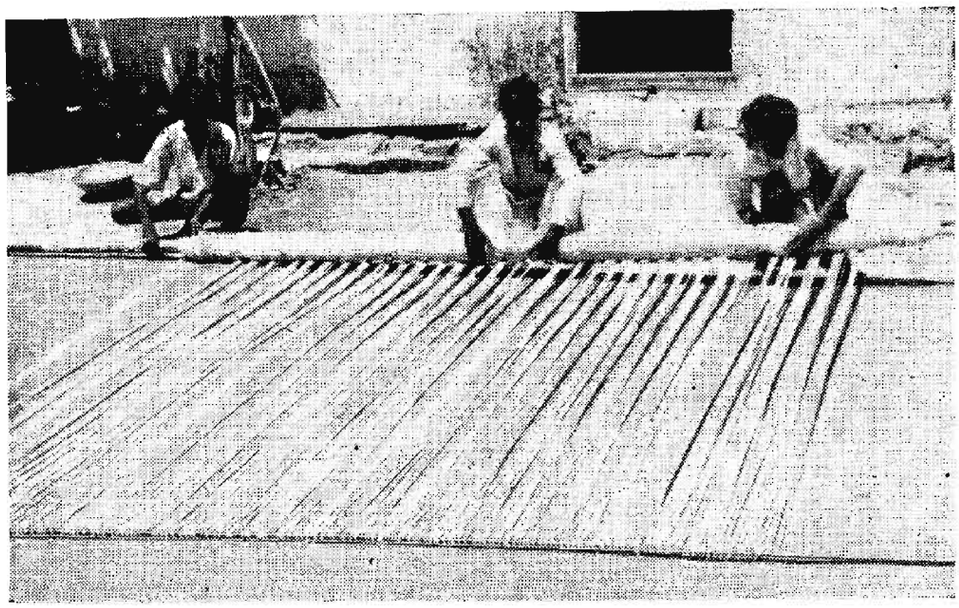


Plate 10. Warp wound up by rolling round a bamboo.

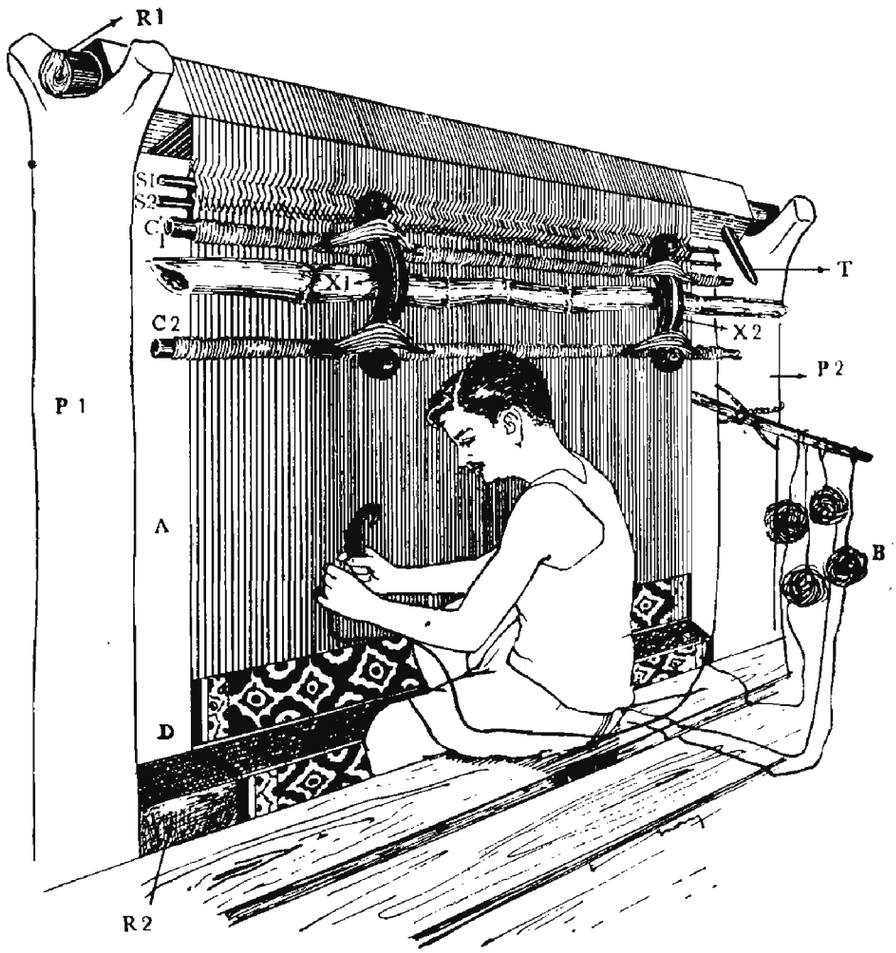


Plate 11. Loom with warp mounted.

A. Cotton warp.
B. Tops of woollen yarn.
D. Portion of carpet woven and wound to the bottom roller.
P1 & P2. Vertical wooden supports of the loom.
R1 & R2. Warp rollers.
T. Tensioning lever.
S1 & S2. Thin bamboo strips separating the warp threads.
C1 & C2. Bamboo poles to which alternate warp threads are tied for leasing.
X1 & X2. Wooden pieces for leasing of the warp.

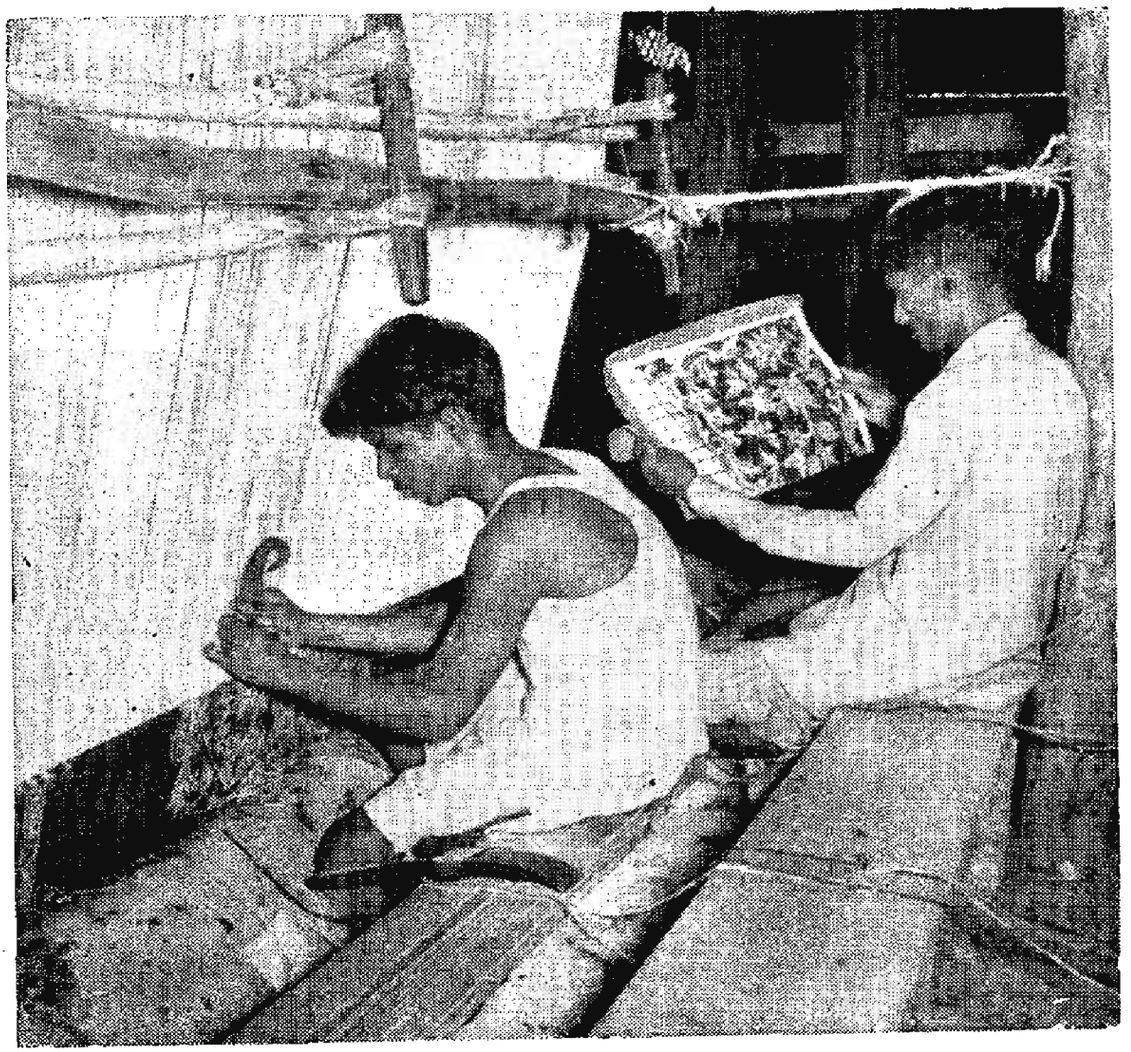
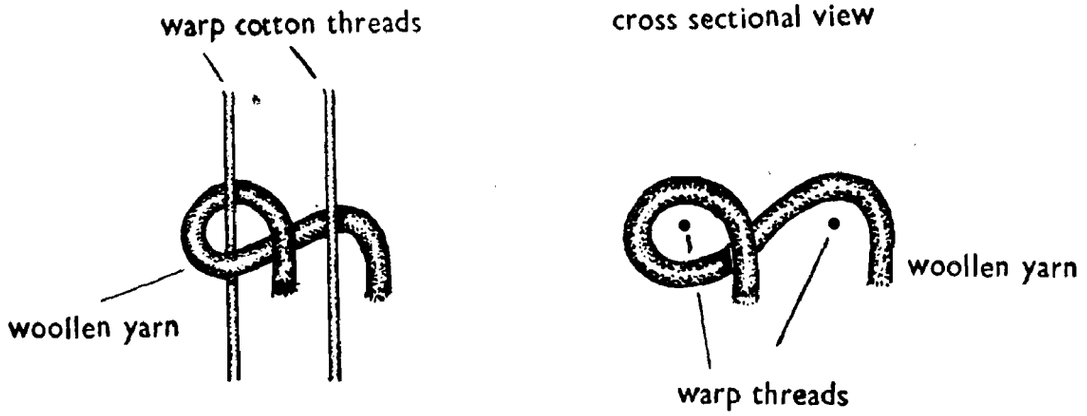


Plate 12. Weaving under progress.

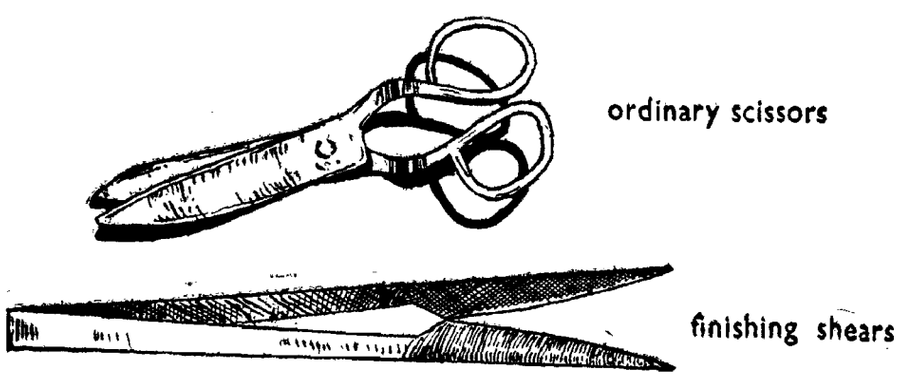
HOW THE KNOTS ARE TIED



40. Soon after the knot is so made, the worker cuts the ends of the woollen yarn with the special knife (*chhuri*) which he can conveniently handle in one hand even as he ties the knot and can cut the ends of the yarn immediately the knot is made. The knotted woollen yarn so cut forms the pile of the carpet. After the knotting of the yarn over the entire row is completed, the binding thread which will form the weft is passed through the warp. The warp threads are then leased by moving the bent wooden bits described earlier (X1 & X2 in Plate 11) just above the head of the worker. The binding jute yarn is once again passed through and the warp threads are again leased and then lastly the cotton binding thread called *bafa* is passed and the warp leased for the third time. The worker strikes down the pile and the binding threads together each time the binding weft is passed through the warp with a comb-like instrument called the 'reed' or *panja* or the 'comb-beater'. The pile ends are then cut uniformly by the worker with an ordinary scissors to maintain a common level. Thus a team of workers keep on weaving the carpet line by line by a process of knotting the pile, binding, leasing, and securing the pile firmly by beating down with the reed and finally cutting the pile till the entire length of the carpet is completed. As and when the carpet piling keeps making progress the bottom roller of the loom is wound with the woven carpet. It will be seen that the extra length of the 6′ provided for the warp will be necessary to enable the worker to knot the piles at the finishing end of the carpet and also the long free ends of the warp are needed for the leasing process and also for winding around the rollers. The edges of the carpet are then secured by weaving with the binding weft over $\frac{1}{2}$″ or so and the ends are tied up and the finished carpet dismounted from the loom.

Finishing

41. After the weaving of the carpet on the loom is completed and is dismounted from the loom, it is spread on the floor and the piles are given a final levelling up by shearing it with finishing scissors. The finishing scissors are illustrated below:



The ends of the carpet are knotted and the carpet given a general brushing. The carpet is now ready for the market. It needs no mention that a carpet is not washed at all, but only dry cleaned after use.

SECTION V

PRICE STRUCTURE OF THE PILE CARPETS

42. The price of the pile carpet depends upon the quality which is mainly governed by the number of knots per square inch of the carpet woven. The varieties may be broadly divided into four classes, namely, cheap: $3\frac{1}{2} \times 3\frac{1}{2}$ knots, medium: $4\frac{1}{2} \times 4\frac{1}{2}$ knots, medium special: 5×5 knots, best: 6×6 knots. The price structure of these varieties may be indicated as below:

Item	*Cheap*	*Medium*	*Medium special*	*Best*
	Rs. P.	Rs. P.	Rs. P.	Rs. P.
Woollen yarn (pile weft)	4.00	7.50	10.00	15.00
Cotton yarn (for the warp 6×6)	0.36	0.72	0.96	1.44
Jute twine (weft)	1.33	1.80	1.82	2.36
Bafa (cotton weft)	..	0.36	0.36	0.48
Dyeing charges	0.56	0.87	1.16	1.42
Wages (piece rate)	4.50	6.00	7.50	10.00
Overhead charges	0.73	1.00	1.25	1.50
Total price:	11.48	18.25	23.05	32.20

43. A copy of the job card given below illustrates the cost structure as also components that go to make up a carpet 6′×9′ of 5 knots.

Job Card

THE WARANGAL COTTAGE & SMALL SCALE INDUSTRIES CO-OPERATIVE SOCIETY LTD.

Regd. No. 20688, Warangal.

Weaver's name: Bashirulla Baig J. No. 502
Date of commencement: 23-8-'61 Date of completion: 4-9-'61

Cotton Durry **Woollen Pile Carpet** **Lbs.**
Size..... Size: 6′×9′ Wt. of carpet 40–1
Quality..... Quality: 5 knots
Quantity.... Quantity: one Waste.....11–0
Ground..... Ground: Green
Design No....

Sl. No.	*Particulars*	*Lbs.*	*Ozs.*	*Rate per Lb.* Rs. P.	*Amount* Rs. P.
1.	5/6 Cotton yarn (warp)	2	8	1.85	4.62
2.	6s Cotton yarn direct col. (weft)	2	14	1.90	5.46
3.	5 Ply sutly weft (waste)	14	14	0.20	2.97
4.	Woollen yarn white	3	10	2.50	9.31
5.	Woollen yarn maroon col. (fawn)	7	12	2.37	18.37
6.	Woollen yarn green col. (grey)	20	4	2.24	45.36
					86.09
	Wages @ Rs. 7.50 per sq. yard				45.00
	Cost of the carpet				131.09

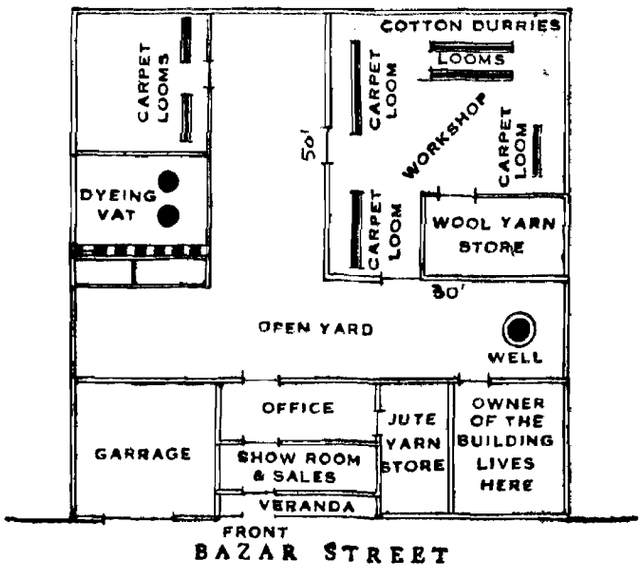
Store Keeper Secretary

SECTION VI

CONDITION OF THE WORKERS

44. From the history of the industry given in the introductory part of this monograph, it might be seen that even though this industry had at one time enjoyed considerable reputation and the workers had apparently been earning attractive wages, it suffered a great set-back about 30 years ago and the plight of the workers became pitiable. They had mostly taken up to alternate occupations. Despite the efforts made to revive the industry, the condition of the workers does not appear to be particularly satisfactory. My interviewing one or two typical workers gives the following picture. One Mohd. Baig, one of the traditional workers, earns an income of Rs. 45/– per mensem through the industry. He has seven members depending on him. He is now indebted to an extent of Rs. 1,100/–. He is not educated. He does not like his children taking up this industry. He has been educating his sons so that they may take up some alternate employment. One Mahbub Ali, aged 55, comes of a traditional carpet weaving family. He earns an income of Rs. 50/- to Rs. 60/-per mensem. He has two sons and a daughter. Neither he nor his children are educated. His 19 years old son has also taken to this industry. His second son, 14 years old, has taken to cycle repairing. He is indebted to an extent of Rs. 80/-. He has a small carpet loom at home but in disrepair. His house is a one roomed thatched hut. It is an ancestral house.

45. As has already been indicated, the industry is at present depending on the fortunes of the Co-operative Society formed in 1952. The Society received considerable assistance from the All India Handicrafts Board. A sum of Rs. 60,000/- was advanced towards the working capital at an interest of 3½% by the All India Handicrafts Board. A further sum of Rs. 15,700/- was sanctioned by the State Government as an outright grant, with the help of which the Society has constructed a dye house for wool dyeing, erected some extra looms and has constructed a model workshop. The illustration below shows the layout of the carpet manufacturing centre.



46. It is said that the Society had manufactured goods worth Rs. 353,160/- till the end of June, 1961. The following statement gives an idea of the production and sales of this Society for two years, 1958-59 and 1959-60:

1958-59	Production	Rs. 106, 679
	Sales	Rs. 118, 161
1959-60	Production	Rs. 50, 526
	Sales	Rs. 56, 024

47. The Secretary of the Society is one Shri A. Chandran, a Christian, who is a technician in textiles. He seems to be taking some active interest to promote the interests of the Society.

48. The following case study recorded by the Research Assistant of my Office is suggestive of the present day plight of the carpet workers and their points of view at Warangal.

Craftsman and his family

49. Sri Mohamad Ankus (40) is a master craftsman working in his own house, outside the purview of the Co-operative Society at Warangal. His house, a thatched one is situated in Chagrajgunta near Railway gate, Warangal. It is his ancestral house where his grandfather and father worked on carpets. Sri Ankus has a big family consisting of his wife, 5 sons and 3 daughters. The eldest is a daughter who has been married off. The other children are either at school or too young for schooling.

Workmanship

50. The craft of carpet weaving is a traditional heritage in the family of Sri Md. Ankus. His grandfather and father manufactured good carpets and himself learnt the craft at the age of 10 years. Since then he has been engaged in it and has gained experience of 3 decades as carpet weaver and has faced many vicissitudes in the carpet industry. In the past a full complement of 20 workers were working under him all through the day on his 4 looms including one of 12 feet width and another of 10 feet. Now only 2 looms of about 4′ width stand fixed and only 3 workers are employed by him now and then. Sri Ankus does dyeing of wool himself. His wife does spinning and hanking helped by his children. He can himself draw the designs on graph paper and guide his workers. Some of the names of designs of which he can weave beautiful carpets mentioned by him are: (i) Dalle Ka Hunnar, (ii) Bhaira, (iii) Teerandaz, and (iv) Mahbubkhani. But, the designs which are now-a-days liked most are those of flowers only. He narrates a woeful tale about the fall of demand for the Warangal carpets and its consequences resulting in utter lack of work for the carpet weavers of the place.

Hard conditions of the craft

51. According to him there are about 600 persons in Warangal town and the nearabouts who know the craft. Almost all of them were forced to give up the industry owing to lack of work to earn livelihood. Now, hardly 30-40 have stuck to the industry, but their economic condition is very poor indeed. No worker could earn more than Rs. 1.30 P to Rs. 2.00 per day; and it is scarcely possible to give his family a cheerful living or even provide mouthful ration in these days with such meagre earnings. Scores of carpet weavers have taken to rickshaw pulling, vegetables and fruits selling and to working as labour in oil mills and textile mills etc. At present there may be only 5-6 workers in the locality where the informant lives. Besides himself there are 2 master craftsmen there. They are Sri Md. Nabi and Sri Md. Nanhe who own one loom each and continue to work on them. The master craftsmen residing at Ursu also do not possess more than 2 looms each. Even though these people are faithful to their craft and trying to keep it alive in their hands and have been depending upon it for their sustenance in life, it is a deplorable state of affairs that there is hardly any production of carpets because there is no demand worth the name. He says that since 3 years there has been practically a showdown; and whatever orders were forthcoming, the Co-operative Society is there to grab them and entrust them to a handful of workers who have its patronage. Sri Ankus says that the main factor which wrought stoppage of foreign exports was the malpractices resorted to by some of the merchants in the carpet trade. They usually paid much lesser wages to the craftsmen than their due (sometimes only 50%). This caused the latter to pull down quality of the carpets either in the raw materials used, dyeing made or weaving done. Consequently, the Warangal carpets lost standard and thereby their reputation. Foreign demand fell down. Internal consumption was always little. Above all, there is another centre Eluru nearby, the goods at which maintain uniform standard.

Difficulties of the craftsman

52. Sri Irukula Krishna Murthy, Carpet Merchant at Warangal is the *shahukar* for whom Sri Ankus works now-a-days. But the orders received from him are scanty. As a result the plight of the informant is miserable. He is now working on one loom only and making *asans* or small carpets of 2′ × 2′ size. The materials used are his own and the designs are of his choice. He takes them on his head to the *bazar* at Warangal and sits at the door of some shop or other and sells them to the passers-by. In this way he has been able to make barely two rupees a day. It is hardly possible to imagine how this paltry amount keeps his family of 10 members going. That is why he confessed that he, his wife and children eat only once in a day and go without food in the nights. It is sad that a master craftsman who has carpet weaving as traditional industry in his home from the times of his ancestors should go without enough means to make both ends meet. It is remarkable that, in spite of this pitiable condition, Sri Ankus has not given up the craft and gone the way of most of the other weavers at Warangal. When posed with the question how this has not

happened so far, Sri Ankus says that the art of carpet making is his proud possession which he and his forefathers nurtured for several years. Even to this day he claims he is capable of employing 50 workers and get carpets of finest quality made, provided there is enough demand for the same. It is his view that by practising the handicraft he could make his living independently through the art and dexterity of his skill in a dignified manner. He could keep his head high in the society. It is his privilege to be able to do so. He maintains that if there is increase in the demand for Warangal goods and if the affairs of the local Co-operative Society are set right so as to see that work is provided to all its members without discrimination, then there would be better days for the craft and for the workers who knew the art and care to depend upon it for livelihood.

SECTION VII

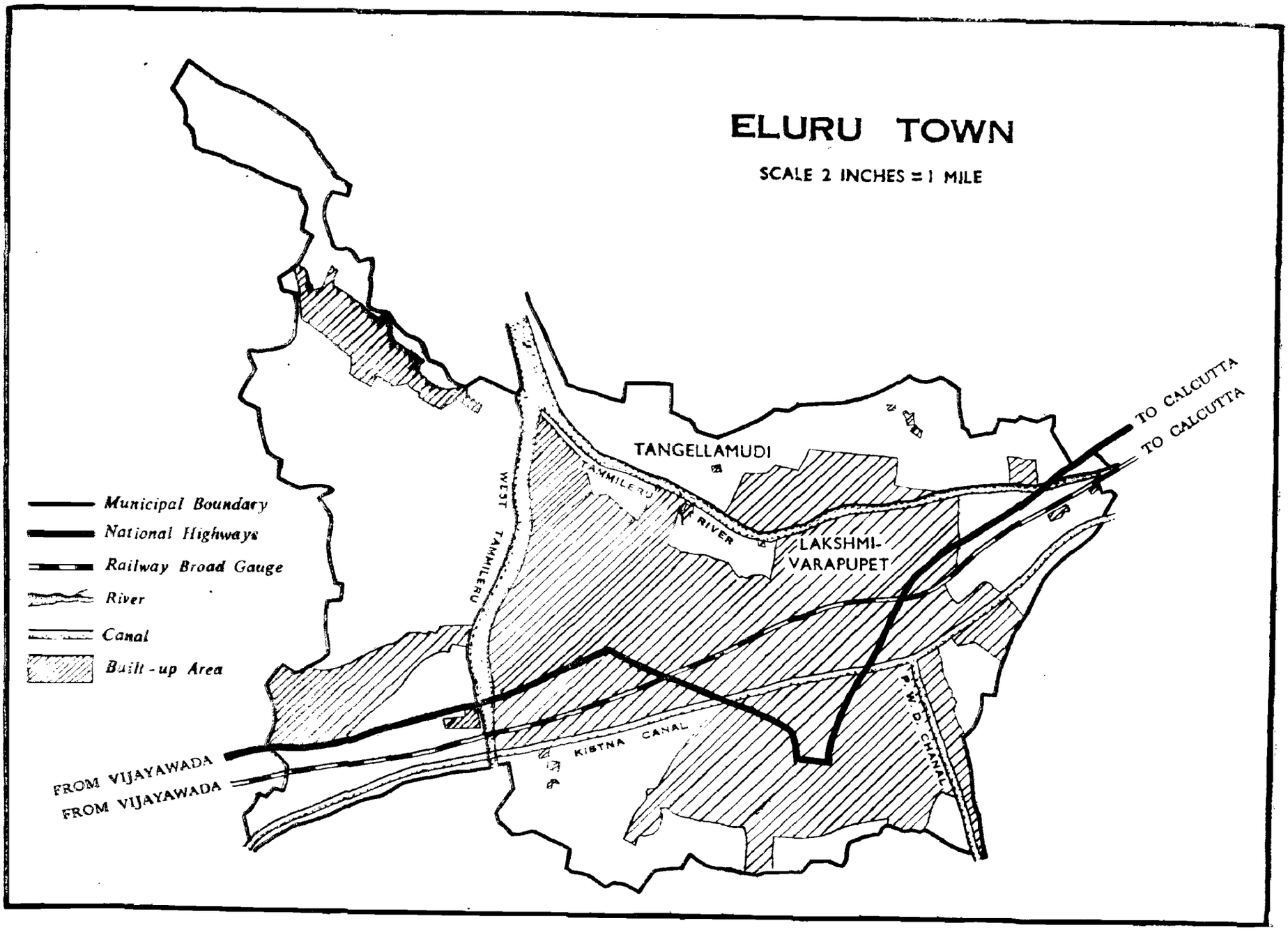
CONCLUSION

53. With the encouragement given by the All India Handicrafts Board and the Industries Department of the State Government the pile carpet industry of Warangal seems to be once again raising its head high. One cannot foresee if the industry will be able to recapture the glory of its past. Standardisation of designs, production of a catalogue and price list, adequate publicity and advertisement would go a long way to push up the demand for the articles produced. Hand in hand with the production of woollen pile carpets, Warangal also produces the cotton durries which are very strong and attractive, woven on vertical looms similar to the pile carpet looms. The weaving process is of course different as there is no pile in it. The durries are in wide demand and they may also help to improve the lot of the carpet weavers of Warangal.

54. I wish to thank the local Assistant Director of Industries, the Tahsildar and Shri Chandran, the Secretary of the Small Scale Industries Co-operative Society for helping me in the survey of the industry. I am thankful to the workers who demonstrated the manufacturing processes.

(v) WOOLLEN PILE CARPET INDUSTRY

B—ELURU


ELURU TOWN
SCALE 2 INCHES = 1 MILE
Municipal Boundary
National Highways
Railway Broad Gauge
River
Canal
Built-up Area
TANGELLAMUDI
TAMMILERU
RIVER
LAKSHMI-
VARAPUPET
WEST TAMMILERU
TO CALCUTTA
TO CALCUTTA
FROM VIJAYAWADA
FROM VIJAYAWADA
KISTNA CANAL
W.D. CHANAL

SECTION I

INTRODUCTION

1. Eluru, the district headquarters town of West Godavari District in Andhra Pradesh is renowned for its woollen pile carpet industry. The industry here seems to be quite thriving and certainly the decadence of the industry which was observed in Warangal is not found here. Even so the industry in this city also seems to have had its own ups and downs.

2. Eluru lies on the Madras—Calcutta railway line. It is about 40 miles to the north of Vijayawada city. The Grand Northern Trunk Road passes through Eluru town. Having recorded a population of 108,321 at the 1961 Census Eluru town acquires the status of a city in Census parlance.

3. Excerpts from the *Journal of Indian Art and Industry*, Volume XI, 1905-06 on 'Indian Carpets and Rugs' and 'Carpets' are reproduced in Appendices II and III. There is no recorded evidence about how and when the carpet industry came to be started in this city. It is obvious that this industry was not indigenous but introduced from outside. It is believed to be the result of the Mughal rule over this part of the country. The local workmen relate that about 500 years ago (the actual period seems to be somewhat of a guess-work; it might be even later) the Mughal army happened to encamp in the area over the ground close to the present Eluru railway station near Lakshmivarapupet, which is even now referred to as a military camping ground. It is said that a couple of Persians amongst the camping troops stayed back in Tangellamudi on the outskirts, which now forms part of the city, and they settled down there having married from amongst the local Muslim families. It seems that these two persons knew the art of Persians' carpet weaving. In the olden days, in this part of the country the local weavers and dyers were specialists in vegetable dyeing. This seemed to have encouraged the new settlers to start a pile carpet industry using the local dyes. There were also some shepherd families in the neighbourhood and apparently the wool was also readily available. Tangellamudi has come to be predominantly populated by people of Muslim community. These people ran tanneries too. Thus the environment and the availability of raw material seem to have proved propitious for the development of the pile carpet industry. Soon, most of the Muslim families in the area picked up this craft. Most of the individual families had small looms in their homes, and with the simple technique involved and the limited implements needed it was not found too difficult for the local workmen to develop a skill in the making of the pile carpets, which soon won a wide reputation. According to a note furnished by the Industries Department, there were as many as 545 skilled workers and 208 semi-skilled workers engaged in this industry in Eluru town. It is also estimated that about 100,000 square yards of pile carpets worth about Rs. 2,000,000/- are annually produced. All the pile carpet workers are invariably Muslims. The traders and entrepreneurs who run the industry are also Muslims with the rare exception of one, viz., Shri K. J. Moody who is a Christian who picked up the work himself and has now started a unit of his own. But, the workmen even in his workshop are Muslims.

Pile carpet manufacturing units of Eluru

4. The pile carpet producing units are mostly located in Tangellamudi area of Eluru town as also in Lakshmivarapupet. In both these localities there is a considerable population of Muslims. While there are a few recognised workshops, most of the individual craftsmen families seem to have looms of their own located inside their homes and they take up small orders from the main traders on contract basis. The more important pile carpet manufacturing units in Eluru town are listed below. The figures within brackets indicate the number of artisans employed by each unit.

1. Eluru Pile Carpet Weavers' Co-operative Purchase & Sales Society Ltd., Lakshmivarapupet,(38)
2. Sk. Imam Sahib & Sons, Tangellamudi, (15)
3. M. K. Niyaz Carpets, Tangellamudi, (35)
4. Md. Yusuff & Brothers, Tangellamudi, (56)
5. Md. Saleem & Co., Lakshmivarapupet, (17)
6. Moody Stores, Agraharam, (14)
7. Md. Ismail & Razack & Sons, Katheebee Street, (62)
8. Sk. Shamshuddin, (12)
9. Sk. Abdullah, Kummari Street, (8)
10. Md. Wahab, Tangellamudi, (9)
11. M. K. Hyder, Tangellamudi, (12)
12. Md. Suleman & Sons, Lakshmivarapupet, (34)

Workers — skilled and un-skilled

5. The skilled labour are those persons who know the work of erecting the looms, warp-making, dyeing, checking designs, examining knots etc. Unskilled labourers are mainly persons who mechanically proceed with the work of putting knots under the guidance of a skilled craftsman with the help of the design drawn out on graph paper. In fact more people engaged in the industry are skilled workers; and unskilled workers who are clever enough become skilled craftsmen through experience. The proportion of skilled craftsmen to unskilled is believed to be 5 to 4. Both categories of workers are dependent on the craft for their livelihood. Except for a few 25 or 30 persons who are employed during nights on easy jobs as watchmen etc., for all the workers the carpet industry is a primary source of livelihood. It is said that a person who works on the laborious task of carpet weaving finds himself tired and unable to seek any additional avenues of money earning.

Hours of work

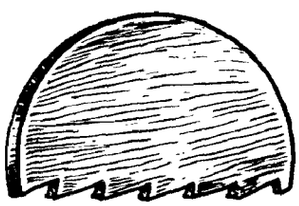
6. Usual hours of work are from 8 A.M. to 12 Noon and from 1 P.M. to 5 P.M. It is natural that craftsmen who have got looms at their homes are prone to work more hours a day. Even at the workshops of the Co-operative Society and elsewhere, some of the young and capable people work for more than the prescribed 8 hours in a day because the payments are based upon turn-over and not upon the number of man hours.

SECTION II

TECHNIQUES OF MANUFACTURE—COMPARISON WITH WARANGAL

7. The technique of manufacture, the type of looms and the implements used are almost identical to those employed at Warangal. However, after going round the various manufacturing centres in the city of Eluru, one does not fail to notice that the looms appear to be better maintained and the artisans and the craftsmen also appear to work in healthier surroundings. The Co-operative Society has a fine work-shed with stone walls and asbestos sheet roofing recently put up. One of the private manufacturers, namely, Mohd. Yusuff & Bros. also has put up a very fine *pucca* workshop, well ventilated, well lighted with a good flooring and a roof. Even in the smaller units the workshop consists of a square shed with *pucca* walls and tiled roof and the looms are well arranged. There is a general appearance of orderliness in the workshops.

8. As regards the implements, the simple implements of a knife, comb beater and a pair of scissors, which are used by the workmen while weaving the pile are there. The finishing shears is also identical to that noticed at Warangal. But two extra implements were observed at Eluru, viz., a 'D' shaped metal comb which is just a thin 'D' shaped metal sheet with saw like cuttings along the straight edge, which is used for combing the woven carpet to remove loose wool before applying finishing shears. There is also another small finishing scissors suitably shaped as to be convenient for cutting the edges of the carpet.



Metal comb



Finishing scissors for cutting edges

9. As regards the texture of the carpet, the Eluru manufacturers claim that they use thinner 3 ply jute thread as weft, whereas in Warangal they say that 4 ply jute weft thread is used which makes the carpets look coarser. To cover the thick weft threads they say that in Warangal the woollen pile threads are made longer. The Eluru workers also say that in the pile carpets of 6 knots quality manufactured at Eluru, two of the weft threads are of 3 ply and the third one is only a single ply. This is supposed to give necessary strength as well as enable close weaving in the higher quality of carpets. It may here be observed that the Warangal carpet workers had claimed that one of the weft threads they use is of cotton. The Eluru craftsmen, however, say that the cotton weft is used only for finer quality of carpets of 8 knots and above, as cotton weft will not be suitable for binding in carpets of lower texture.

10. While the art of weaving and the quality of designs seem to be better developed in Eluru, the preparation of the woollen yarn which is the chief raw material for the pile carpet is attended to largely in Warangal. The Eluru carpet weavers seem to obtain the woollen yarn mainly from Warangal. It is surprising that even though Warangal appears to be an important centre for the supply of woollen yarn, which is supplied even to other famous carpet centers in Northern India, the industry of pile carpet weaving itself had been dying down in Warangal, though it seems to be prospering in other centres. The Eluru manufacturers consider the Warangal woollen yarn as positively superior to that procurable locally. The yarn procured locally in Eluru is considerably coarser and is used in the poorer quality of carpets. The additional cost on account of the import of woollen yarn from Warangal seems to have rendered the cost of production of the Eluru carpets higher than that of the Warangal carpet. As already mentioned in Part A, the reason for the downfall of the pile carpet industry in Warangal was the substitution of an inferior fibre thread for the weft by the avaricious merchants in their quest for quicker profits which ultimately spelled doom on the industry.

11. A great drawback as represented by most of the carpet manufacturers at Eluru is that there is often a dearth of suitable wool to meet their requirements. There is no carding machine available at Eluru to prepare the woollen yarn and supply to the manufacturers.

The carding and the spinning of woollen yarn seems to be well developed in Warangal. Recently, a carding machine is said to have been acquired by the Pile Carpets Co-operative Society, Eluru, but not yet installed for want of accommodation.

Export of Eluru carpets

12. Several of the Eluru carpet producers seem to be doing a thriving export trade. The following figures will show the quantity and the value of the carpets actually exported during 1961-62 and 1962–63:

Name of the exporting society/company and (country to which exported)	*During the year 1961–62*		*During the year 1962–63*	
	Quantity Sq. yds.	*Value Rs. P.*	*Quantity Sq. yds.*	*Value Rs. P.*
1. Eluru Pile Carpet Weavers' Co-operative Society, (Holland & Canada)	210–0	8,085.00	35–0	1,347.50
2. M/s. Yusuff & Bros., (United Kingdom & Holland) ..	8,000–0	1,20,000.00	9,560–0	1,43,400.00
3. M/s. Salim & Sons, (United Kingdom & Holland) ..	4,600–0	69,000.00	5,400–0	81,000.00
4. M/s. Ismail & Rajak & Sons, (United Kingdom & U.S.A.)	9,350–0	1,40,000.00	10,031–0	1,50,465.00
5. M/s. Moody Stores, (Holland & U.S.A.) ..	290–0	4,350.00	170–0	2,550.00
6. M/s. Suleman & Sons, (United Kingdom & U.S.A.) ..	4,050–0	60,750.00	5,276–0	79,140.00

13. Some of the manufacturers in Eluru town have been producing the carpets purely for the purpose of exports and not for local consumption. But, it is somewhat disappointing to see that the carpets produced for the export were rather of a poor quality being of only 4 or 4½ knots and generally only one design called the Hashim Khani design is adopted for export (Plate 1). It is understood that the foreign importers had been asking for only this particular design. Most probably the cheapness of this poorer quality of carpet might have helped to create greater demand. It was monotonous to see a series of looms in all the workshops producing only this particular design of carpet. The craftsmen are so used to the design that they never referred to the design graph sheet and they will be automatically weaving the carpet by practice and the carpet design is produced. The Co-operative Society, however, has been producing a variety of fine carpets of various designs, but the export trade done by this Society is a little. Similarly, M/s. Moody Stores have also been producing different designs of carpets. It is understood that this firm has established markets in the U. S. A. and Holland. Most of the other manufacturers export their products mainly to the U. K.



Plate 1. Hashimkhani design.

SECTION III

DESIGNS

14. There is a great variety of traditional Persian and Mughal, as well as modern designs that have been adopted for the Eluru carpets. They are very attractive both in colour and design. The following are some of the well known designs.

Traditional designs

Ramachanderkhani	Kolakhani
Poshkhani	Fareshkhani
Lolakhani (Lovelock-khani)	Hashimkhani
Camel foot	Sherkhani
Gulabkhani	Mulke Shaw Nawaj-khani
Jaipur, Nurjehan, Taj-khani	Bhokhara, etc.

Reddi design seems to be a popular modern design.

15. It is seen that there are more named designs in vogue at Eluru than at Warangal. The reason commonly given out for the flourishing of more number of designs at Eluru is that there are by far larger number of working craftsmen at Eluru, who, by their ingenuity and interest, could produce several new models by the dexterous combination of parts from two or more existing designs. It is also stated that one Sri Bhonsle, who had worked as designer at the Co-operative Society at Eluru during the earlier years, was responsible for the creation of several new patterns on the basis of his knowledge of textile designs, in which he had had training at Madras. Besides this, the greater demand and a larger market created for Eluru Carpets should have encouraged the development of larger number of designs. Eluru has a regular foreign trade, whereas Warangal's export trade had almost died down.

16. The Pile Carpet Weavers' Co-operative Society has standardised these designs by allotting certain code numbers. Though the design as such is standardized, colour scheme seems to vary from one carpet to another and never fully agrees with the coloured catalogue produced by the Society. There seems to be need for greater standardisation of colours. Unless a customer himself chooses a change in colour, the manufacturer should produce a carpet of exactly same colour as advertised.

17. Generally, no symbolic significance is attached to the various designs of the carpets. Choice is dependent on how a particular carpet looks for the discerning taste of a particular customer. But a few types are associated with religious practices e. g., the carpets with Janiwaz design are taken by the Muslims for performing their daily prayers.

Quality marking scheme

18. A quality marking scheme under which the carpets produced are checked for texture, strength and colour dyeing to satisfy the I.S.I standards has been introduced recently. For this purpose a Superintendent and an Examiner are attached to the State Industries Department and they are expected to check 20% sample of each lot of the goods produced by the firms who have offered to take advantage of this scheme and stamp the carpets if they satisfy the standards. Only the Co-operative Society and two or three other private firms appear to have taken advantage of this scheme. The scheme as such is good, but there appears to be hardly any incentive for the manufacturers to get their goods checked and marked, for, irrespective of the quality mark, the goods are being exported. Some very inferior quality of carpets are at present being exported. Unless it is made compulsory that all carpets for export should carry the quality marking, there seems to be little possibility of this scheme proving useful. Again, it is desirable to put only those technically qualified in the field of textiles and dyes in-charge of the scheme. As it is, the Superintendent of the Quality Marking Scheme is a diploma holder in Mechanical and Electrical Engineering! The Examiner is, of course, Licenciate in Textile manufacture.

19. It is understood that in 1950 with the competition from the substitutes like linoleum floor coverings etc., the demand for the woollen pile carpets fell to a certain extent in foreign markets. This had hit the local industry hard. Some traditional carpet weavers who knew no other occupation are no doubt trying to stick to the craft. But several others, it is understood, have been slowly diverting the younger generations to other avenues of livelihood.

20. A detailed survey of the industry and case studies of a few craftsmen were made by the Research

Assistant of my office, Shri Ramachandramurthy. His report is presented in the following pages of this monograph. I wish to place on record the valuable assistance rendered by the Assistant Director of Industries, Eluru and the local Revenue Officials in making this survey possible.

SECTION IV

PROCESS OF MANUFACTURE

21. The stages of preparation of woollen pile carpets as observed at the workshop of the Eluru Pile Carpet Weavers' Co-operative Society are as follows.

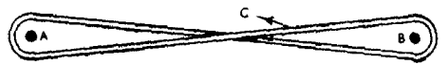
Woollen yarn

22. The spun wool in the form of balls is obtained from Warangal. It is purchased at Warangal from private agencies and transported by motor lorry to Eluru. There are no apparatus for carding the wool at Eluru, whereas it is reported that there are 3 carding machines at Warangal. Therefore, all the manufacturers at Eluru have to get the raw material, wool from Warangal or elsewhere. The wool of Warangal is of high quality and the Co-operative Society always purchases only from Warangal. Some private merchants obtain wool from Vaniambadi, Salem, and even locally from the Kurumas of the neighbouring villages. A carding machine has recently been acquired at a cost of about Rs. 2,000/- for the Common Facility Centre. But it has not yet been erected for working. The building of the workshop at Pension Lines is being extended for the purpose. After the machine is installed, raw wool can be carded here at Eluru itself and spun on *charkhas*. Besides meeting the needs of the Society, the spun yarn may be supplied to the private manufacturers also at Eluru.

Hanking

23. The woollen yarn, which is got in the form of balls is turned into hanks by the household women and children of the members of the Co-operative Society. They work at their respective homes. No implements are required for hanking; only the hands and feet of a person would do. The males of the families go over to the Society and take the yarn balls after weighing and entering in the register maintained for the purpose. After 2 or 3 days they return the yarn turned into hanks again weighing, and collect the wages. At the time of visit of the Research Assistant to the Society one Mohd. Mastan was taking 7 Kg. 258 gr. of yarn balls from the Society. He carried them in a bundle wrapped in cloth. The wage that would be paid for that quantity of wool was 0.44 P., and it would involve work of 1½ days for conversion into hanks by a single lady. Accounts are maintained for each member of the Society and payments are made weekly, calculated on the quantum of outturn for a week.

24. The yarn is suitable only in the form of hanks for dyeing. Otherwise the inner threads of the balls would not absorb the colour compound. The yarn (which is in the form of thick thread) is unwound from the balls by the women, and is turned between the two toes of the feet which are set 1½' apart to serve as two pegs on the ground. While turning round the two pegs, a cross is allowed in the middle of the space between them, so that it does not get itself entangled again. The form would be like this:



A, B. PEGS C WOOLLEN YARN

The yarn in this form would be convenient for dyeing, rinsing in water and drying in the sun.

Scouring

25. The next operation is scouring the woollen yarn. Soda ash and soap powder are thoroughly mixed in hot water. The hanks of the yarn are dipped in the copper vats containing the above water mixture and then boiled for about 30 minutes. The vats are always kept on the ordinary country furnaces for boiling purposes with firewood underneath. After boiling, the yarn is removed from the vats and squeezed. It is rinsed in fresh water, which is stored in big cement tubs nearby, and squeezed thoroughly. Then the hanks are dried in the sun. Arrangements made of wooden posts exist in front of the building of the Society to dry the hanks of yarn scoured or dyed, as the case may be. The process is intended to clean the wool of all dirt, grease and perspiration.

Dyeing

26. Dyeing is a very important process. It is locally believed that the standard of dyeing at Eluru comes only next to that of Kashmir in the whole of India. The beauty of the carpet depends upon the graceful colours the wool has and the fastness of the colours is a very significant factor in determining the quality of the carpet. White wool is used for light shades and grey and fawn wool for dark colours.

Dyeing shed

27. Each of the pile carpet manufacturing units has its own dyeing unit attached. The Co-operative Society

has a dyeing shed in the backyard of the office building. There are two copper vats placed on furnaces; one is used for boiling water and the other for storing cold water. There is also a big cement tub of square shape for storage of cold water. Between the vats and the tub there is a wooden plank (about 6'x3') fixed in an inclined position. This is used for rinsing the yarn in fresh water after it is boiled with water mixture for scouring or dyeing.

Process

28. For purpose of dyeing, the required dye stuff (acid colours only are used) in a specified quantity is mixed in water heated to a certain temperature and a little sulphuric acid is added. Then, the hanks of yarn are dipped in that vat and heated to a high temperature. Yarn is turned up and down in the vat while boiling. After the yarn completely becomes dyed in the course of heating, it is removed and washed well in ordinary cold water on the wooden plank. It is then squeezed of water and dried in sunshine. During the rainy season and also in winter the yarn does not get dried soon. Consequently, the pace of production is also affected now and then. All the dyeing process, which is also complicated sometimes, is under the charge of a dyeing *maistry* of the Co-operative Society. The dyer should be well versed in his subject about the composition of the various dyes etc. One skilled and two unskilled workers are employed in the dye-house, besides the *maistry*.

Weaving

29. Next comes weaving. The designs according to which the flowers or other motifs on the carpet have to be woven is prescribed by the Co-operative Society. The Society maintains albums showing the various designs which can be manufactured and supplied on order. The customer specifies his choice while placing his order. The dyeing *maistry*, who also works as designer to the Society, traces the selected design on a graph sheet for the guidance of the workers at the loom. They keep it beside them while working.

Carpet loom

30. The carpet loom is an elaborate device. Its length corresponds to the width of the carpet. The warp of cotton threads is mounted on the loom as per the required length and width of the carpet. The width of the warp stretches along the horizontal beams of the loom and the length is rolled round the upper horizontal beam (Plate 2). As the carpet goes on woven along the lengthwise of the warp upwards from the bottom, the completed portion is rolled round the lower horizontal beam of the loom. Preparing cotton warp and mounting it on the loom involves work for one day for 2 persons, and on that day no actual weaving can be attended to. It happens thus on one of the days in a week. The winding up of the completed portion of the carpet round the lower roller of the loom also requires the efforts of two persons to remove the fittings and turn the roller and to again fit it.

Cotton warp

31. The cotton thread of 10 counts is used for the preparation of the warp with 10 ply. The cotton threads required are estimated according to the quality of the carpet to be prepared, by multiplying the number of threads per inch with the width of the carpet. Supposing the quality is 5 knots and the width is 3 feet (36"); then, the total number of threads which form the warp is $5 \times 36 = 180$. The warp is tied between the two rollers with the help of bamboo sticks. Leaving a space of 4" from the bottom on the warp, a bandage of 1" width in plain weaving is made with cotton thread to form the edge of the carpet.

Workers and loom

32. The dyed wool is wound into cops which are called *gudeh* in Urdu. These cops of the required colours are hung in a row behind the weaver from a horizontal bamboo pole above his head. The weavers sit on short benches in front of the loom with their feet in the trench below the lower roller of the loom. If the width of the warp i.e., the width of the carpet to be woven is 3 feet or less, a single weaver can handle the loom. If it is a wider one, more workers sit together at the rate of one for every two feet.

33. In the main hall of the workshop which is of measurements 30'x25', there are 4 looms arranged along the walls (Plate 3). There is a big loom of length 21' along the wall on the right hand side. A carpet upto 18' width can be mounted on it. The loom facing the doorway is for 12' width and other two looms which are along the left hand side wall can take carpets of 11' and 9' width.

Tools

34. The tools and implements used for the carpet weaving are (i) knife, (ii) *panja* or comb beater, (iii) scissors (big), and (iv) scissors (small) (Plate 4). In addition a finishing metal comb and shears are also needed. The tools are not sold in market usually. They have to be got prepared from a blacksmith on order. Most of the workers at the centre use their own tools, a set of which lasts for generations in a family.

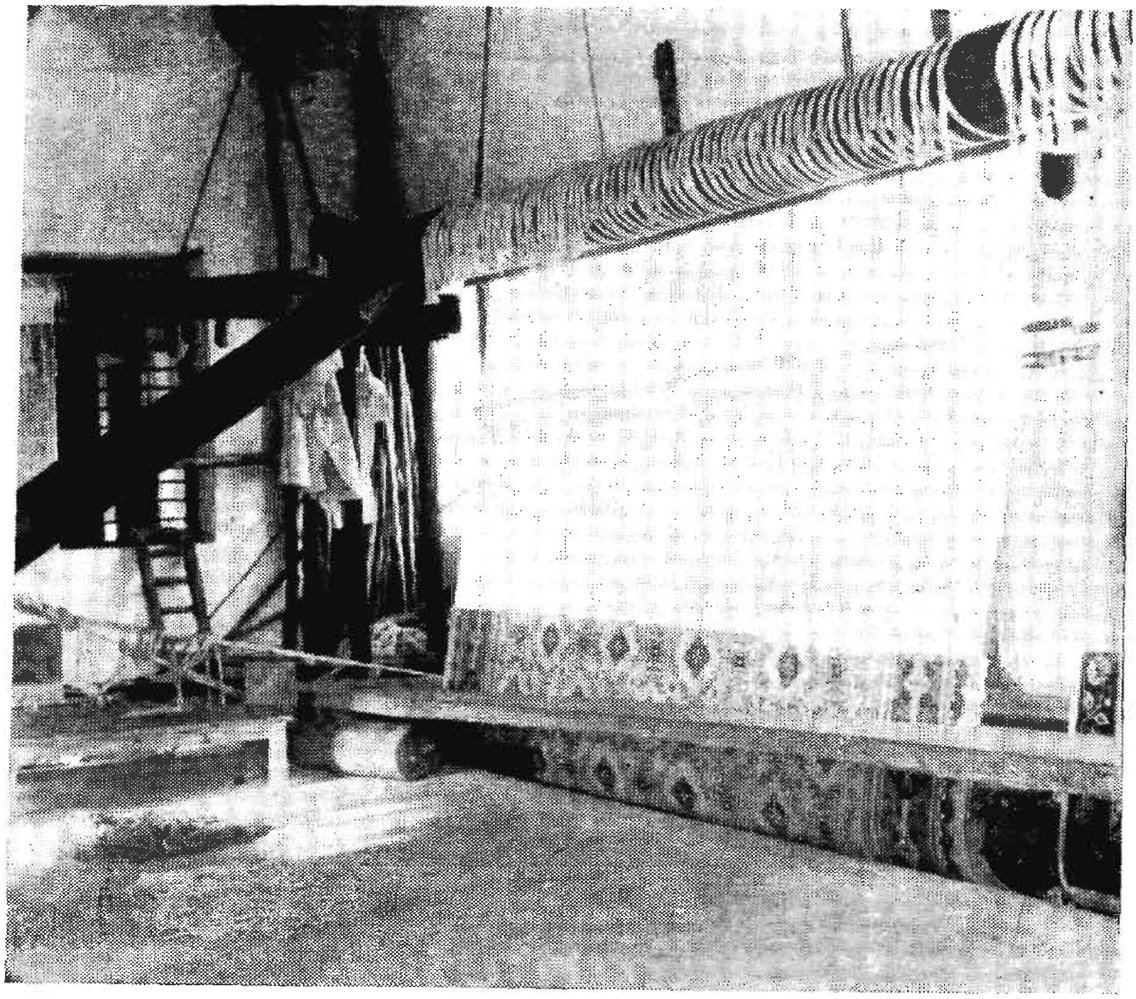


Plate 2. Pile carpet loom.

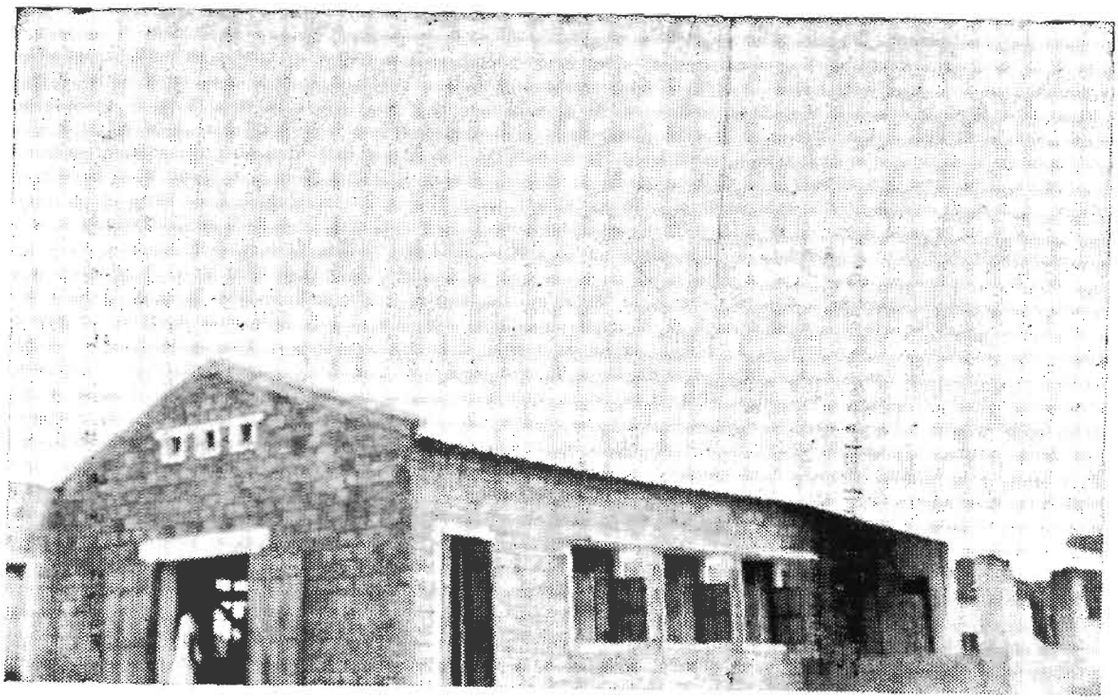


Plate 3. The main hall of the workshop of the Co-operative Carpet Weaving Centre, Eluru.

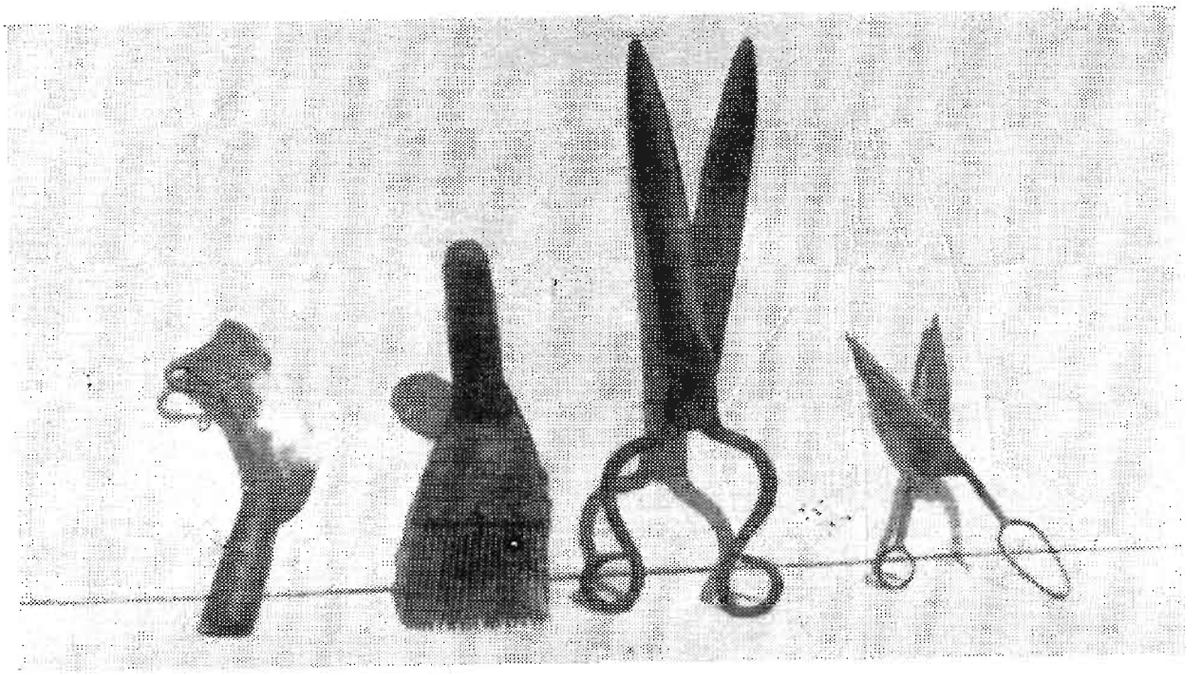


Plate 4. Tools and implements, from left to right: knife; *panja* or comb beater; cutting scissors; finishing scissors.

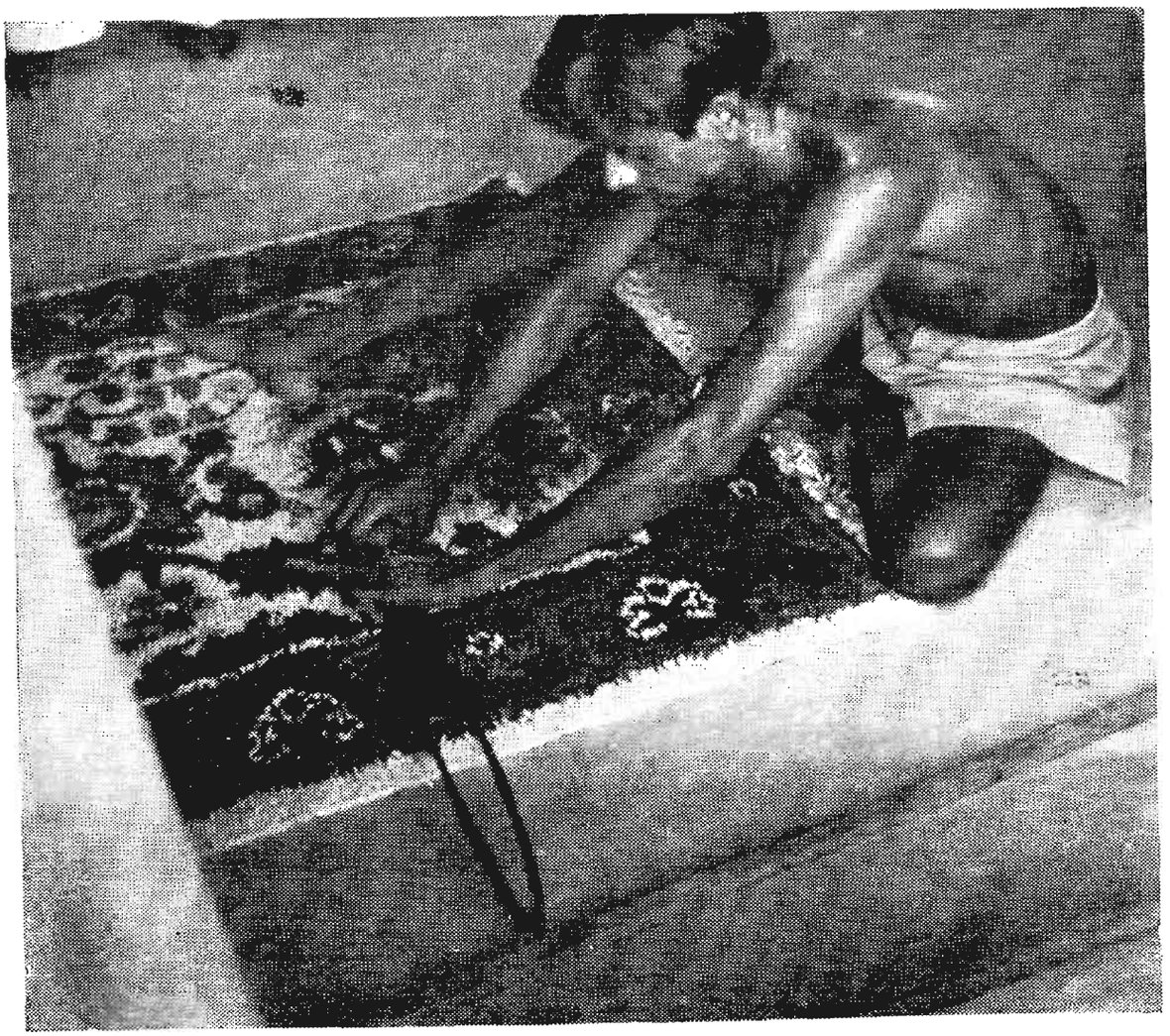
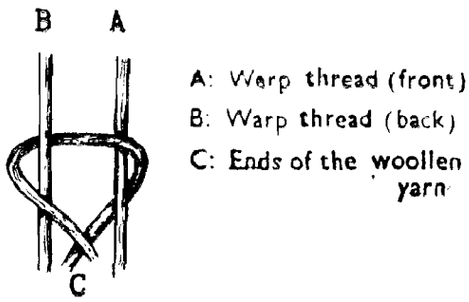


Plate 5. Carpet being cut to level with finishing shears.

Process of knots

35. Carpet weaving is but making knots with the woollen yarn around the threads of the cotton warp. A knot is made as follows. The worker takes in his left hand the end of the woollen yarn of the required colour from the cops hanging above his head, and turns it round each of the pair of warp threads successively. The yarn goes from behind the front warp thread, surrounds it and then goes behind the back thread and surrounds it.



Carpet making

36. When the knot is tightened, the front and back warp threads are brought together. The yarn is then cut off with the knife, after bringing both ends of it together. The knotted woollen yarn so cut forms the pile of the carpet. The process of knotting is continued for every pair of the warp threads in the row. If the quality of the carpet is 5 x 5, there will be 5 pairs of warp threads per inch width of the carpet and hence there will be 5 knots in an inch. After preparing the whole row of the knots, the worker beats down the completed row of the knots with the comb beater or the *panja* to compress that row with the lower one previously made. Then, a jute thread is passed through the warp three times, alternatively changing the position of the warp threads with the *healds* fixed at the backside of the weaver. Then, the worker again strikes down the pile and the jute weft with the comb beater. The pile ends are then cut uniformly with the big scissors to maintain a common level. Next row is done similarly and the process is repeated row by row upwards till the whole length of the carpet is completed. The completed portion is wound round the bottom roller of the loom as and when it becomes of considerable size. After the whole length is completed, a bandage of one inch width is again made in plain weaving with cotton yarn to serve as the binding edge of the carpet. The carpet is removed from the loom and the ends of the warp thread are tied up. Then, it is spread on ground and the level of the piles is cut to be uniform with the finishing shears (Plate 5). Finally, the carpet is brushed up. It is now ready for the market.

SECTION V

CASE STUDIES

37. Case studies of the working of some of the production units of the pile carpets at Eluru are presented in the succeeding paragraphs.

CO-OPERATIVE SOCIETY

Constitution

38. The Eluru Pile Carpet Weavers' Co-operative Purchase & Sale Society was registered in the year 1937. Some of the local merchants in carpets particularly Shri Mohd. Rahim Shareef are said to have been responsible for its formation. Out of the estimated number of 400 families, who have been traditionally connected with the craft of pile carpet making, there are 200 members in the fold of the Co-operative Society. The total number of the shares subscribed is 706 and their value Rs. 3,823.50. An ordinary share is of Rs. 5. There are 12 preferential share holders (of Rs. 25 each) who are sympathisers of the industry and not craftsmen. The Board of Directors consisted of 13 Directors–9 nominated from the ordinary members of the Society and 2 from the preferential shareholders, Assistant Director of Industries & Commerce and the Deputy Registrar of Co-operative Societies.

Workshops

39. The Society has two model workshops attached to it, one just by the side of the Society building at Pension Lines, and another at Sanivarapupeta, where many families of the carpet weavers reside. These workshops were originally sanctioned as part of Common Facility Centre under the control of the Industries Department of the State Government and later passed on to the Co-operative Society.

Number of workers

40. Owing to the limited demand on the goods manufactured by the Society, it is said that the Society is capable of providing work to only about 40 persons. Actually now 25 persons are working at both the workshops put together. The work at each of the workshops is in charge of a weaving *maistry*. The Co-operative Society generally manufactures carpets against orders received by it; sometimes of its own accord in order to provide work for its member-workers.

Financial assistance

41. In the year 1958, a working capital loan of Rs. 1 lakh was received from the Government of Andhra Pradesh for implementing the wool processing and dyeing scheme sanctioned in G.O.Ms.No. 1198, Industries, dated 28th September, 1957. The purpose of the scheme was to start the Common Facility Centre for spinning raw wool, dyeing it and supplying to the local manufacturers on common basis. But, it did not materialise in actual form. Private merchants did not take advantage of it. The Centre took to weaving of carpets on behalf of the Society alone. A sum of Rs. 20,000/– had been repaid by the Society in the year 1961–62. An amount of Rs. 16,000/– was sanctioned as non-recurring grant for purchase of equipment for the dye-house and another amount of Rs. 2,500/– in 1961-62. The Government also sanctioned funds towards managerial assistance for the Co-operative Society. Before the sanction of the improvement schemes and funds by the Government, the Society was running at a loss of about Rs. 10,000 a year. In the year 1959–60 there was a loss of Rs. 3,590.01 according to the audit report. The loss had gradually disappeared and in the year 1961–62, the Society had been able to make a net profit of Rs. 1,787.

Supercession of Board of Directors

42. Owing to some irregularities in the working of the Society, the Board of Directors and Office-bearers have all been superceded by Government in May, 1962 under Section 38 of Co-operative Societies Act, 1932, and a Special Officer has been appointed with full powers to manage the affairs of Society.

Quality marking scheme

43. The Government introduced a quality marking scheme in the year 1960–61 and appointed a trained Quality Marking Examiner for it. The scheme has been voluntary; and the articles manufactured at the Society and by other private merchants are examined for quality and marked with stamp.

Choice of designs

44. The designs of the carpets which can be produced on orders are classified into three types viz., Persian, Oriental and Mughal designs. The pattern and design of the ground of the carpet, the borders and the centre medallion are selected by the customers while placing orders, as well as the colour scheme. The albums maintained by the Society help the customers in this

regard. The albums are composed and brought up with latest trends as seen from the two professional magazines, 'Carpet Review' (Monthly) and 'Carpet Annual' published by British Continental Trade Press Limited, 222 Strand, London. The total number of designs is 70 to 80. It is said that of late plain designs with flowers in the corners are growing popular.

Range of quality

45. The quality of the carpet is determined by the number of threads of the warp per inch of its breadth; and the various categories which are produced are of 4, 4½, 5, 6, 7 and 8 threads. The qualities which are generally preferred are of 5 or 6 threads per inch. These would be beautiful to look at in all the designs. The qualities with lesser number of threads are not so impressive and those with more threads are very costly.

Sizes of carpets

46. The approximate sizes of the carpets usually produced by the Society are given below:

18"x18"; 20"x20" (chair pieces)
24"x24"; 30"x24" (for prayers and meditation)
6'x3'; 7'x5'; 9'x6'; 9'x12'; 15'x12' (floor covering)
15'x3' (for pathway in churches)

The size is always specified by the customer while placing order.

Total production in 1962-63

47. The total area of the pile carpets produced by the Society during the year 1962-63 was 1,355.6 sq. yards. The total cost of production was Rs. 45,266.29 P. The total sales during the same year amounted to 1,387.2 sq. yards at a cost of Rs. 51,196.98 P.

Prices of carpets

48. The price structure of the carpets depends upon the quality of the making i.e., the number of knots per square inch. The present sale prices (ex-godown at Eluru) are noted below:

Quality	*Rate per sq. yard* Rs. P.
4 x 4	21.58
4½ x 4½	25.30
5 x 5	31.35
6 x 6	38.50
7 x 7	50.60
8 x 8	64.00

Price is not dependent on the designs. However, if the carpet is a plain white one without designs the cost would be 12½% extra, because white wool is costlier than fawn or grey wool, which is used in coloured designs.

Disposal of goods

49. As has been mentioned elsewhere, there are two workshops attached to the Co-operative Society at present, whereat work is provided to less than 40 workers only out of the total 140 active members of the Society. Previously, there were 3 model workshops; but one was wound up due to lack of adequate demand. As the pile carpets are articles of luxury, it is difficult to secure sufficient orders to sustain many workers on the rolls. Even now about 25% of the total products are manufactured only through office orders to provide work for the members. And, therefore it is a common feature that stocks are accumulated undisposed of at the Society. Naphthalene balls are freely used to prevent moths attack.

Wages of workers

50. The workers of the dyeing section and the *maistries* are monthly paid; and the workers in the weaving sections are paid on the basis of quantum of outturn by individuals. These rates vary according to the quality of the carpet. The present wages are as follows:

Quality	*Rate per Sq. yard.* Rs. P.
4 x 4	4.00
4½ x 4½	5.50
5 x 5	7.50
6 x 6	10.00
7 x 7	15.00
8 x 8	23.00
10 x 10	36.00

The two last mentioned types are rarely asked for. A fine carpet of 8 x 8 knots was made in March, 1963 and the 10 x 10 quality was made only 2 years back. It is estimated that each of the workers earns about Rs. 2 to 2.50 on average per day. Payments are made by the Society on weekly basis.

Supply of tools to workers

51. There is provision to supply the tools and implements required for weaving to the workers at the workshop. But, it is observed that most of them use their own tools, probably because they would have been more accustomed to handling them with ease. The tools

are not available readymade in the market. They have to be got made from carpenters or blacksmiths locally.

Cost of tools

52. Their cost approximately is as follows:

(a) Cutting knife Re. 1/– (b) Cutting scissors Rs. 5/– (c) *Panja* or comb beater Rs. 7/- (d) Finishing scissors Rs. 3/–.

A set of tools once obtained lasts for several years.

Activities of the Society

53. The activities of the Co-operative Society comprise the following:

(i) Obtaining spun woollen yarn from Warangal at private agencies;

(ii) Getting converted the woollen yarn into hanks;

(iii) Scouring the woollen yarn;

(iv) Dyeing the yarn;

(v) Weaving the woollen yarn into carpets;

(vi) Supplying the finished goods to the emporia in the State or outside, selling at the Society premises and exporting against requisitions.

54. The goods are supplied to the Government Handicrafts Emporia at Visakhapatnam, Vijayawada and Hyderabad. They are also supplied against orders to

(i) All India Co-operative Union, New Delhi;

(ii) All India Handloom Fabrics Co-operative Marketing Society, Bombay; and

(iii) Indian Handicrafts Development Corporation Limited, Madras.

They are sometimes exported to foreign countries also by the Society. A carpet was despatched to Canada just 2 months back before the study. The cost of the goods is collected through the bankers of the Society on the site before delivery.

Need for publicity

55. It is felt that lack of adequate publicity for the Eluru carpets in the foreign countries has been a drawback in the trade prospects. It seems the Industries Department of the State Government has undertaken to publish a folder including some beautiful photographs of the carpets. This may possibly help to attract more orders for the Eluru carpets.

Co-operative Society verses private merchants

56. It is understood that the private manufacturers of carpets are antagonistic to the interests of the Society. Naturally, they are anxious to snatch away the demand for their own products. But, the quality of their products is generally believed to be inferior, except in the case of one or two, to those manufactured by the Co-operative Society. Owing to the competition in the market, they have to undersell the goods and therefore have to go in for lesser production costs at the sacrifice of quality. The private manufacturers sometimes take away good workers from the Society, by offering better wages and also temporary advances, thus depriving the Society of their valuable services.

Private manufacturers-cum-traders

57. Most of the private manufacturers of the woollen pile carpets are themselves dealers or exporters to foreign countries. As and when they receive orders for the carpets they get them manufactured in their own workshop, if they have their workshops or otherwise through independent craftsmen on piece rate contract basis. The following are the noted private manufacturers of the woollen pile carpets at Eluru:

(i) M/s. Moody Stores, Agraharam

(ii) M/s. Shaik Imam Saheb & Sons, Tangellamudi

(iii) M/s. M.K. Niyaz Carpets, Tangellamudi

(iv) M/s. Md. Yousuf & Bros., Tangellamudi

(v) M/s. F.E. Burdar & Bros., Lakshmivarapupet

(vi) M/s. Md. Sulaiman & Sons, Lakshmivarapupet

(vii) M/s. Salim & Sons, Lakshmivarapupet

(viii) M/s. Ismail & Razaq & Sons, Kathcebee Street

Except item (v), all the traders in the list above are manufacturers as well with own workshops. And it is observed that items (i) and (v) are the only non-Muslims in the trade. No. (v) have since closed down their trade. It is understood that out of the above eight private manufacturers only four viz., items (ii) to (iv) and (viii) have joined the Quality Marking Scheme sponsored by the Government of Andhra Pradesh.

Private manufacturers and individual carftsmen

58. Whenever any manufacturer receives demand for goods more than the capacity of his workshop, he resorts to production through individual craftsmen, who undertake work on petty contract basis. For example, before the time of the Christmas there would be more production and all the workshops of traders work to full

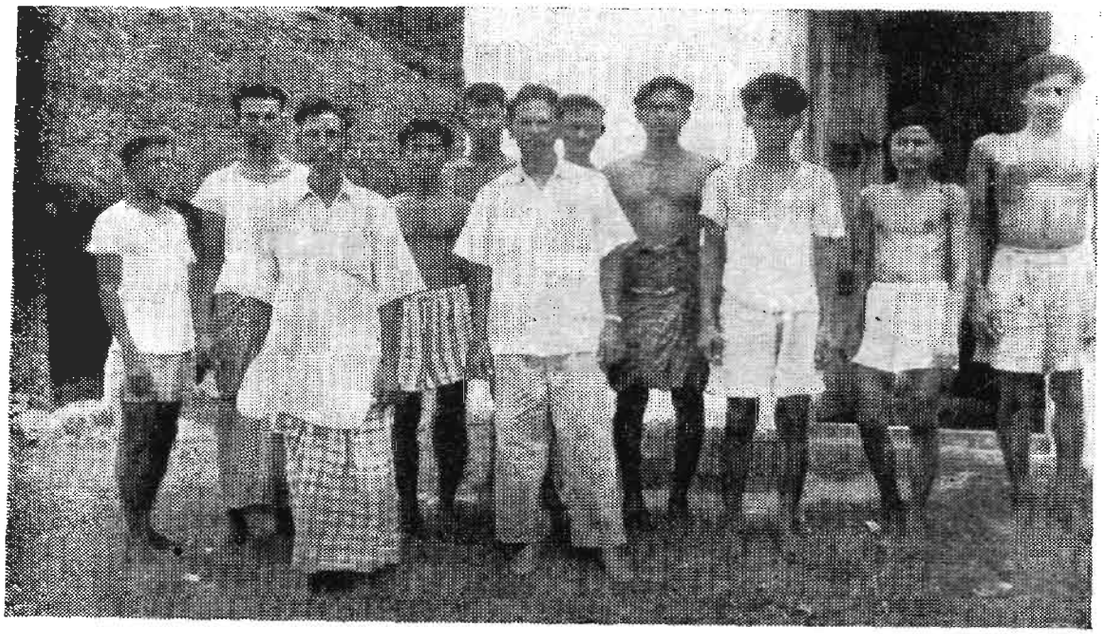


Plate 6. Shri Moody and his team of workers.



Plate 7. An exquisite carpet manufactured by M/s. Moody Stores, Eluru. Size : 9′×6′ Quality : 4½×4½ Design : Jaipur (Persian) Back ground: White Border: Red Motifs: Pink, light yellow, rose etc. Price: Rs. 165.24

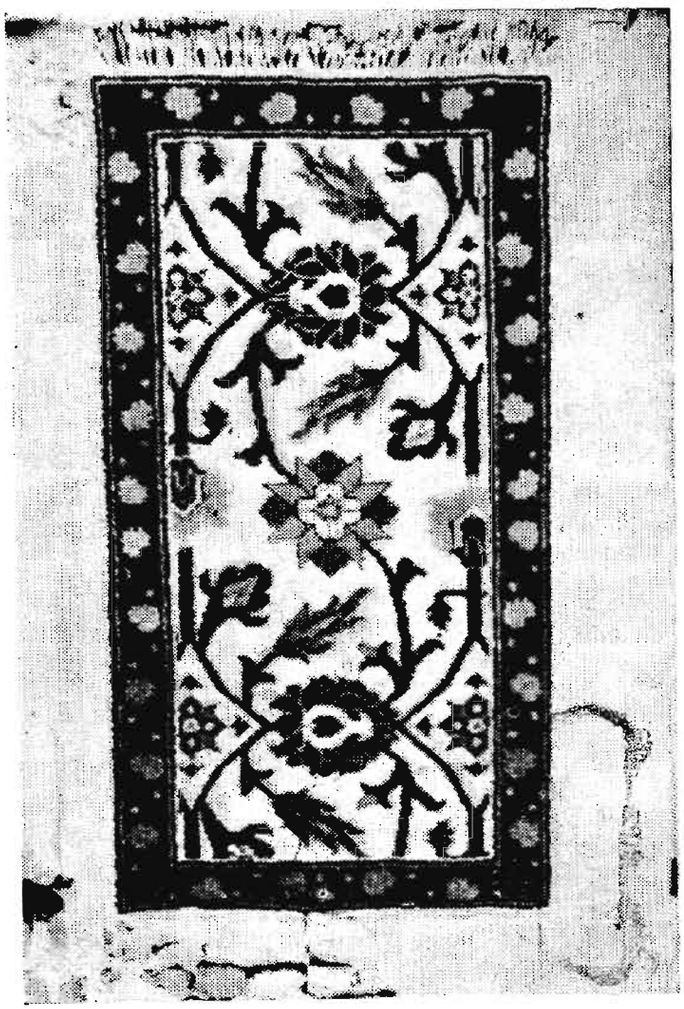


Plate 8. A carpet manufactured by M/s. Moody Stores, Eluru.
Size : 6′ × 3′ Quality : 4½ × 4½
Design : Bokhara (Mughal) Background : White
Border : Red Price : Rs. 55.08



Plate 9. A carpet manufactured by M/s. Moody Stores, Eluru.
Size: 6′ × 3′ Quality: 4½ × 4½
Design: Sherwani (Persian) Background: White
Border: Red Price: Rs. 55.08



Plate 10. House-cum-workshop of Shri Mahmood Zeelani, Adivarpet, Eluru.

capacity; and outside carftsmen also receive many orders to weave in their own homes. There are two methods in this system—viz., (i) supplying all raw materials and chemicals required for the manufacture and paying only labour charges at about Rs. 4.75 or Rs. 5.00 per sq. yard; (ii) the craftsman himself procuring raw materials etc., and delivering finished goods at about Rs. 13.50 or Rs. 14.00 per sq. yard. Again, during slack season the workers do not find sufficient employment. At that time they engage themselves with production of somewhat cheaper quality carpets, of which the dyeing would be of poor standard and knots would seldom be correct.

How raw materials are supplied

59. The raw materials are given by the merchants to the carpet weavers normally on credit basis. Orders are placed at a time for manufacturing carpets of 50 or even 100 square yards according to the exigencies of the demand. The necessary raw materials, mainly the woollen yarn, are supplied along with the order to the craftsman. A proportion of the estimated wages is also paid in advance to him. The craftsman has to work on his own looms at home and deliver the goods on the agreed dates. Usually, a single individual can safely deliver goods of 10 square yards in a month's time. The equivalent cost of the raw materials given to the craftsman is noted against his name along with the amount of advance paid to him. At the time of delivery of the finished goods, the cost of the materials is set against the carpet by weight, seeing whether the materials have been fully utilised by the weaver; and the advance paid is deducted from the wages to which the craftsman becomes entitled and the balance is paid. The same procedure continues each time when orders are placed against that particular craftsman.

M/S. MOODY STORES

60. Of the private traders of Eluru, M/s. Moody Stores, though a small unit have been trying to produce carpets of quality, comparable with those made at the local Co-operative Society. Shri K. J. Moody, the proprietor of the concern is himself a craftsman who, though not belonging to a traditional carpet making family or community, learnt the art through own efforts gradually. He belongs to Christian community and this profession was new to the family. Shri Moody has won several testimonials for quality of his goods exhibited or sold in foreign countries also on behalf of India. He maintains the standards prescribed by the I.S.I. And, he is a co-opted member of "Panel for Woollen Carpets and Woollen Rugs (floor coverings) such as made in Andhra". Plate 6 shows Sri Moody and his team of workers. The three Plates 7 to 9 show the carpets produced at the workshop of this concern.

Workshop

61. The workshop of M/s. Moody Stores is situated on Guntur Road near the railway station. It consists of one tiled house, one thatched shed (of four walls) and one shed with roof of zinc sheets. The last mentioned shed is used for furnace and vats of dyeing process and the other two contain looms of carpet weaving. There are altogether 8 workers and 1 *maistry*. There is a well and a little tank nearby from where the water is used for dyeing and washing purposes. There exist arrangements for drying washed wool in the sun in the vacant space around the workshop sheds.

Process of production

62. The processes of scouring, dyeing and weaving as practised at this workshop are exactly the same as those followed by the Co-operative Society, which have already been described. Efforts are always made to keep up the standard in the dyeing and knotting aspects of the carpets produced here and wool of good quality is obtained from Warangal or elsewhere.

Total production and disposal

63. It is stated that the total quantity of carpets produced during the year 1962-63 by M/s. Moody Stores was 801 sq. yards. Their total value is estimated to be Rs. 24,000/- at an average rate of Rs. 30/- per sq. yard. About 75% of the total production was sold against orders of individual customers and nearly 25% exported abroad. The carpets are exported to business agents in Holland and direct to individual buyers in England, Canada etc. Costlier types are preferred in hard currency areas and cheaper ones in soft currency countries. Usually, London market goes in for cheaper or commercial varieties, because they could be easily thrown off whenever there is yearly change in furnishings. In contrast to this, a carpet once purchased by an Indian home has to last for several years!

64. Because the workshop and equipment of M/s. Moody Stores are large enough to meet existing demand, which is somewhat limited, the method of getting the carpets manufactured from individual craftsmen at their respective homes is not resorted to by this firm. The wages paid by the concern for hanking and weaving compare favourably with those paid at the Society.

65. As has been indicated elsewhere, fastness of colour is of supreme importance in the carpet industry.

Once the colour is lost, the carpet loses its value. M/s. Moody Stores undertake re-dyeing of old carpets also which process, of course, does not restore the original lustre to the carpet. According to Shri Moody, the names of designs which find more preference in the U. K. are Hashimkhani, Ramachanderkhani and the Lovelockkhani. It is the view of Shri Moody that Government have not been doing anything to encourage the private manufacturers in the industry who, by themselves, could produce very good carpets. Financial assistance is limited only to the Co-operative Society, and the industry as such is not much benefited by it.

MAHMOOD ZEELANI - PRACTISING ARTISAN

Artisan and family

66. Shri Mahmood Zeelani is a master weaver of pile carpets. His residence is at Adivarpet, Eluru. It is his home-cum-workshop and consists of two thatched (palm leaves) huts side by side. His workshop is a family unit and all processes of production are done here itself. Shri Zeelani and his 3 cousin brothers work together; and 2 persons are employed on wages. He has not put his sons in this industry nor does he intend to do so, because it is seen to be not a remunerative occupation. Shri Zeelani is a member of the Pile Carpet Weavers' Co-operative Purchase & Sale Society and previously was on its Board of Directors for some time. He says that the carpet business was dull since the year 1951, and that there has been increased demand only from December, 1962.

Workshop and production

67. Shri Zeelani's workshop contains two looms, one of 11 feet width and the other of 9 feet. Plate 10 shows the workshop. He works on piece-rate contract basis. All the raw materials wool, cotton, jute and dye stuffs are obtained from the employer-merchants M/s. Ismail & Razaaq & Sons, Eluru and finished carpets are delivered back at the agreed rates. The present rate is Rs. 5/-per square yard. This is the rate demanded by the National Carpet Mazdoor Union, of which Shri Zeelani is a Director. Shri Zeelani asys that at the time of giving the raw materials, the company charges more than the market rate from the workers. About a rupee or two are collected extra, thus depriving the workers of their reasonable profits. The Company have got their own workshop; and in addition to the goods manufactured there, they get them produced on contract basis from some other craftsmen besides Shri Zeelani. This type of production activity obviates the need to keep many people on employment rolls and also saves accommodation.

Process of production

68. The wool received from the Company is made into hanks by the lady members of the family. Then, it is scoured and dyed with the dye stuffs and chemicals supplied by the Company. There are vats and furnace in the backyard of the hut for these processes. The two looms are used for weaving. At the time of the visit of the investigator, only Shri Zeelani was at the loom. An ordinary weaver can operate the loom covering a width of 3 feet at a time. Shri Zeelani being somewhat advanced in age, was covering only a width of $1\frac{1}{2}$ feet at that time and he would have to complete the remaining portion afterwards by changing his seat. A carpet of 1 sq. yard takes two days for weaving apart from the processes of hanking, scouring and dyeing. It is said that the tools and implements purchased long back have been useful till now. All the six people work collectively in one operation or other. The two coolies are paid off daily wages. And the owner and his 3 cousins share among themselves the remuneration they get from the merchants.

Financial condition

69. The financial condition of the family is very poor. Shri Zeelani has been able to just make both ends meet. His average monthly earning is Rs. 60/- and he has to support a family consisting of self, his wife and 3 male children. He has to work daily; and on the days he does not he has to starve. Sometimes, he will have to repay over a long time from the wages advances taken from the Company in connection with festivals etc.

Contract method in carpet weaving

70. This type of carpet weaving on contract basis is more convenient than the master craftsman himself being employed as weaver at the workshop of a company. The whole family (including women and children at hanking) can work jointly. They can stay at home and work indoors. If they work more briskly and for more time a day they could have a little more income. There is also a sort of satisfaction that the master craftsman is doing an independent job for himself. He could derive some additional income from the waste wool turned out during the production processes. It is learnt that there are about 100 families, who work on similar lines at Tangellamudi area of Eluru.

Reputation of Eluru carpets

71. Shri Zeelani says that Kashmir carpets stand first in quality of both dyeing and weaving in the whole of India. Next comes Mirzapur in dyeing. Eluru stands second in the standard for weaving and third in dyeing.

WORKSHOP OF MD. UMAR, TANGELLAMUDI

Workshop and family

72. There are 8 persons who are working on the looms here. Some of them attend to the work of scouring and dyeing the wool. There is provision for these processes in the backyard of the workshop. All workers are Muslims. The owner is the master craftsman and his three sons know the craft well. One son Shaik Bahadur works at weaving at the Common Facility Centre attached to the Co-operative Society, where he had worked as weaving *maistry* for some time. Other two sons have been at this workshop and the other family members do the job of hanking woollen yarn at home.

Production wages

73. Shri Mohd. Umar gets work for weaving pile carpets on contract basis from the merchants at Eluru. He obtains raw materials for himself. The rates at which he delivers finished goods to the merchants are Rs. 13.50 and Rs. 14/- per sq. yard of 4×4 and 5×5 threads respectively. It is learnt that there have been more orders since December, 1962 and that the export trade has increased recently. It is the view of the owner that the *shaukars* (the traders) get more profits and the actual craftsmen who work hard at production get very much less than their due share.

WORKSHOP OF SHAIK IMAM SAHEB, TANGELLAMUDI

Workshop

74. It is a large unit. There are 3 looms, one of which is so big as to weave a carpet of 19 feet width. The owner is a master craftsman as well as an independent trader. There are altogether 25 persons working at the workshop. The carpets are manufactured here against orders. Usually supplies are made to the private shops at Hyderabad, Visakhapatnam and Vijayawada and also to exporters for London market. The rates at which supply is to be made are agreed to at the time of receiving order. The spun wool is obtained from Warangal. Sometimes loose wool is also got from Salem, Vaniambadi, Coimbatore, Bellary etc., and is got spun at Eluru. The workers are paid at piece rate on the basis of turn over by the individuals. The present rate is Rs. 4.75 per sq. yard of the finished carpet.

Casual worker

75. One of the workers here, Shri Mohd. Ibrahim is found to be working only off and on. He says that he would go and work as lorry or taxi driver whenever there is not sufficient work at the workshop. This case goes to show that the workers are not employed by the manufacturers on regular basis and that the former are forced to pursue other occupation, whenever there is not enough work in the carpet industry.

Opinion about Government regulation

76. The proprietor is of the view that insistence by the Government to declare a weekly holiday on Friday is causing hindrance to work, because at any rate all the workers remain idle on one day a week by turn when the warp is mounted on the loom on which they work.

COST STRUCTURE

77. The cost prices of the main and subsidiary raw materials required for the carpet manufacture have been as follows:

Name of the raw material	*From where obtained*	*Form/Unit*	*Price Rs. P.*	*Remarks*
(1)	(2)	(3)	(4)	(5)
Wool yarn White	A. Warangal	Balls of yarn (unit of 160 tolas)	11.50	Private merchants at Warangal supply wool *e.g.*, Kusuma Lokanadham & Sons, Cumbly & Wool Merchants, Warangal. The prices are increased from April 1963 due to larger needs for emergency defence purposes.
Fawn	,,	,,	10.00	
Grey	,,	,,	9.75	
White I	B. Local Suburbs	,,	7.50	Kurumas in the neighbouring villages spin it. It is coarse and of short staple.
,, II	,,	,,	4.50	
Fawn, Grey, Black	,,	,,	3.25	
Cotton thread 10 counts	Locally from merchants	Bundles of 10 Lbs. (10 counts)	21.00	This includes separate charges of Rs. 1.50 for carding.
Jute thread	,,	Bundles of 12 Kg. (3 ply & 1 ply)	15.00	
Dye stuffs (Acid colours)	Local market (I.C.I., Ciba & Geigy)	Tins of 1/2 Kg.	6.95 to 19.27	The prices range from Rs. 6.95 to Rs. 19.27 as per the different colours (red, blue etc.).
Soda ash	Local	1 Viss (120 tolas)	1.00	The bag of 8 Mds. costs Rs. 58/- in lump.
Sulphuric acid	,,	Jars of 40 lbs	17.50	
Soap powder	,,	..	Not available	

Non-avilability of carding facilities at Eluru causes extra charges as compared with the cost of raw material at Warangal. Scarcity of imported dyes is a difficulty which the industry faces now and then.

78. The production costs work out as follows:

Production cost and sale price of pile carpets

Unit : 1 Sq. yard Raw material and other charges (1)	*Quality* $4\frac{1}{2} \times 4\frac{1}{2}$		*Quality* 5×5		*Quality* 6×6	
	Quantity (2)	*Cost (Approximate)* (3)	*Quantity* (4)	*Cost (Approximate)* (5)	*Quantity* (6)	*Cost (Approximate)* (7)
	Lb. Oz.	Rs. P.	Lb. Oz.	Rs. P.	Lb. Oz.	Rs. P.
Woollen yarn (obtained from Warangal)	5–00	13.50	6–00	16.00	7–08	17.75
Cotton warp thread	0–08	0.52	0–10	1.05	0–11	1.22
Jute thread	1–08	0.87	1–10	0.95	1–04	0.74
Hanking wages	..	0.31	..	0.37	..	0.47
Dyeing charges (at Co-operative Society)	..	3.75	..	4.50	..	5.62
Weaving charges (at Co-operative Society)	..	5.50	..	7.50	..	10.00
Transport (wool from Warangal)	..	0.08	..	0.10	..	0.12
Overhead charges—Miscellaneous	..	0.27	..	0.33	..	0.43
Total		24.80		30.80		36.35
Sale Price						
At Co-operative Society		25.30		31.35		38.50
At private dealers (M/s. Moody Stores)		27.54		33.57		40.77

The table above sets out at a glance the cost of production of one square yard of the woollen pile carpet, worked out on the basis of the present rates of the raw materials. The sale prices of the unit as obtained at the Co-operative Society and a private manufacturer, M/s. Moody Stores are also given.

CRAFTSMEN

79. The following are the names of a few reputed craftsmen at Eluru:

1. Sri Shaik Imam (60) } Tangellamudi
2. „ Shaik Shamsuddin (60) } Tangellamudi
3. „ Abdul Khader (55) } Tangellamudi
4. „ Syed Yakub (50) — Lakshmivarapupet
5. „ Mahmood Zeelani (45) — Adivarpet
6. „ Syed Ibrahim (45) — Adivarpet

A complete list of craftsmen is given in Appendix I The case studies of a few craftsmen will be presented in the following pages.

CASE STUDY OF A DESIGNER CRAFTSMAN

Workmanship

80. Sri Syed Ibrahim (45) of Koudipeer Street, Adivarpet, Eluru is a reputed designer of woollen pile carpets. Sri Syed Ibrahim is the son of a military sepoy at Berhampur and he came down to Eluru at the age of 10 years. He learnt the craft for one or two years at 12 years of age from his maternal grandfather. Since then, that is for a long period of 3 decades, Sri Syed Ibrahim has been actively engaged in the craft. He had adequate training in dyeing and designing in 1944 under

such qualified technicians as Sri Bhonsle and Sri Laxman who were then employed at the Co-operative Society. He worked as designer for the Society from 1944 to 1950 on a salary of Rs. 75/- per month. He claims that he had reduced many new designs on to graph paper and put them into actual weaving in those days, which from that time had come into vogue. The colour combination is of paramount importance in carpet weaving to give a pleasing effect to the eye, and Sri Syed Ibrahim is said to be an expert in colour combination and is reputed to be adept in giving suitable instructions to the workmen at the looms. Now Sri Ibrahim is working at his home on a single loom on piece contract basis. M/s. Yousuff & Brothers and M/s. Niyaz Carpets are the traders for whom he works usually. Himself and his brother work together with the assistance of one hired labourer. The total output is about 45 square yards a month, and the income is divided between the brothers after paying off the expenses.

Family interest

81. Sri Syed Ibrahim has his wife, one son and one daughter. The daughter has been married off to a tailor at Telaprolu. The son is now at school and the informant desires to put his son in the craft after giving him adequate training. His wife also has interest in this craft and she helps him by hanking woollen yarn. Dyeing is done at home. On the day of the visit there was a Hashimkhani design of quality $4\times4\frac{1}{2}$ knots on the loom. It was being made on order from M/s. Niyaz Carpets.

Hashimkhani design

82. Sri Ibrahim concurs with the general view that foreign exports particularly to the U. K. are confined to Hashimkhani design of quality $4\times4\frac{1}{2}$. It is said by the informant that the Hashimkhani was named after a great patriot of Iran, Hashim Khan, and that in the Salarjung Museum at Hyderabad there is a fine carpet of Hashimkhani design, manufactured somewhere about 400 years ago. Even though Sri Syed Ibrahim can produce carpets of any design, his output now-a-days comprises only Hashimkhani as per the demand.

Poor income

83. Albeit this craftsman possesses much skill and ingenuity which are recognised by one and all (he is known in the locality as Designer Ibrahim only), it is a pity that his present income is meagre. He says that he earns only about Rs 600/- per annum which is hardly sufficient for the bare necessities of his family.

CASE STUDY OF A CRAFTSMAN WORKER AT THE CO-OPERATIVE SOCIETY

Household particulars

84. Sri Mahmood Saleh is a carpet weaver. He is working at the workshop of the Common Facility Centre attached to the Co-operative Society. His age is 50 years, and mother tongue is Urdu. He knows Telugu as all the Muslims at Eluru do. He lives at Tangellamudi. He learnt the craft from his childhood and has been engaged in it for 35 years till now. Even though his father himself was a craftsman, Mr. Saleh was made to undergo training with the neighbours, so that he might be studious in habits and keen at work. He has his wife (43), a son (22), and a daughter (19). Daughter has been married to a silversmith at Vijayawada. The son is trained in the craft, and is now working at the same workshop as a carpet weaver. The hours of work are from 8 A.M. to 12 Noon and again from 1 P.M. to 5 P.M. daily. The wife of Mr. Saleh has knowledge of the craft upto the stage of dyeing, but she is not engaged in any job work at present, except attending to the household affairs.

Weaving at the workshop

85. Shri Saleh is able to weave the carpets of any design and quality. The weaving *maistry* of the Co-operative Society is having control over the workshop and the workers follow his instructions. The dyeing *maistry* of the Society is the designer and he supplies the details of designs to be woven (which would have been selected by the customers of the Society) reduced on to a graph sheet. No colours are applied on the graph sheet and the workers are expected to be fully aware of the colour scheme for any given design; and the two *maistries* are there to guide the workers, wherever necessary. Since the payment is based on the quantum of outturn of the individuals, the workers are apt to sit tight at work throughout the day. They do not waste time in gossip or wandering about. And, occasionally some of the workers sit at the looms for a few hours more than the fixed time in order to finish any work on hand early. Wages are received weekly from the Society. Shri Saleh says that on an average his income would be Rs. 60/- p.m. and that of his son also nearabout the same. He estimates that his total output during the year 1962-63 would have been 120 sq. yards.

Family budget

86. The financial condition of the family is poor. Only income the family gets is out of the craft, and it is

estimated to be Rs. 1,440/- approximately per year. Against this, the expenditure comprises Rs. 500/- on cereal and Rs. 300/- on non-cereal food items, Rs. 70/- on drinks like coffee and tea, Rs. 100/- on fuel and lighting, Rs. 200/- on clothing, and the rest on other items and miscellaneous. Shri Saleh is indebted to a private creditor to an extent of Rs. 500/- borrowed for the marriage of his daughter in 1962 and it is repaid at a rate of Rs. 90/- a year from out of savings of the income. The earnings are therefore just enough to have the bare necessities of life. Nevertheless, Shri Saleh is a happy type of man and appears to be content with his lot.

CASE STUDY OF A NON-PRACTISING CRAFTSMAN

Particulars about self

87. Shri Mahmood Naseeruddin is a non-practising craftsman of the woollen pile carpet industry. He is aged 58 years. He is a native of Lakshmivarapupet, Eluru. Shri Naseeruddin learnt the craft of carpet weaving from the age of 10 years from his father. He practised it for a long period of 30 years and gave it up in 1951. Shri Naseeruddin has been working now as night watchman in the State Bank of India, Eluru and his duty there is from 6 P.M. to 7 A.M. His present salary is Rs. 96/- p. m. Eventhough he had been in this job since 1943, Shri Naseeruddin was working as carpet weaver during day time till the year 1951.

Interest in carpet industry

88. The reason for his abandonment of the craft is said to be lack of sufficient work for him owing to the fall of demand for the goods. Because there has been a recent increase in the exports of the carpets, the craftsman desires to resume the work as a carpet weaver after his retirement at the age of 60 years from the employment as watchman. He has still preserved with him the tools and implements. He had acted as President of the local Co-operative Society during 1947–48. Afterwards, he worked also for some time in the workshop of M/s. Moody Stores, Eluru as a master weaver and did a lot for improvement of the quality of weaving there by gathering good workers. At the time when he gave up the craft he was able to make Rs. 40/- p. m. on the carpet weaving in addition to his salary of about Rs. 50/- as watchman at the Bank.

Members of family

89. Shri Naseeruddin has two sons who are both married. His wife, sons, and daughters-in-law know the craft of the pile carpet weaving. The first son, Abdul Lateef is working as weaving *maistry* in the workshop of the Common Facility Centre attached to the Co-operative Society. His salary is Rs. 60/- p.m. The second son is now working as Price Reporter at Eluru for the Marketing Federation, Vijayawada on a salary of Rs. 140/- p.m. The wife of Shri Naseerudin and the first daughter-in-law do the job of hanking spun wool for the Co-operative Society and earn Rs. 15/- each per mensem on average.

90. As described in a preceding paragraph Shri Naseeruddin's is a family which is traditionally familiar with the craft of pile carpet weaving. But, the head of the family, even though he retained full liking for it, has not been able to thrive on this craft and therefore had to give up its practice.

APPENDIX I

List of Craftsmen in the Woollen Pile Carpet Industry at Eluru

Sl. No.	*Name of the worker*	*Address*	*Age in years*	*Approx. No. of years spent in the craft*	*Average monthly income*
(1)	(2)	(3)	(4)	(5)	(6)
					Rs.
1.	Abdul Azeedh, s/o. Md. Haneef	Tangellamudi	54	30	60
2.	Md. Ibrahim, s/o. Md. Khasim	,,	59	30	60
3.	Md. Ismail, s/o. Md. Khasim	,,	56	35	65
4.	Mohammed, s/o. Basheer Ahmed	,,	63	40	60
5.	Sk. Abdullah, s/o. Sk. Abbas	,,	70	60	60
6.	Md. Ismail, s/o. Abdul Kareem	Adivarpet	70	60	50
7.	Madar Baig, s/o. Ahmed Baig	Gun Bazar	67	50	60
8.	Sk. Madar, s/o. Md. Pathab	Tangellamudi	54	30	60
9.	Sk. Darvesh, s/o. Silar Saheb	,,	45	30	60
10.	Sk. Anwar, s/o. Sk. Sachamadar	,,	50	30	55
11.	Sk. Silar	,,	48	40	60
12.	Md. Saheb, s/o. Mian Saheb	,,	52	40	60
13.	Md. Haneef, s/o. Abdul Majeed	,,	36	25	50
14.	Jakeer Saheb, s/o. Patheb Ahmed	,,	60	40	60
15.	Md. Suleman, s/o. Abdul Hameed	,,	40	30	70
16.	Syed Rahmtulla, s/o. Ziyauddin	,,	47	35	60
17.	Md. Saleha, s/o. Sk. Meerah	,,	47	38	80
18.	Md. Azzam, s/o. Md. Haneef	,,	47	38	80
19.	Md. Ali, s/o. Md. Haneef	,,	41	30	60
20.	Md. Ibrahim, s/o. Ahmed	,,	35	25	60
21.	Md. Mastan, s/o. Galab	,,	34	20	60
22.	Md. Usman Sheriff, s/o. Md. Dawood	,,	52	30	50
23.	Md. Ali, s/o. Basheer Ahmed	,,	24	15	60
24.	Sk. Babu, s/o. Abdul Ahmed	,,	36	20	60
25.	Sk. Janny, s/o. Sk. Dada	,,	46	30	60
26.	Md. Mastan, s/o. Abdul Khadar	,,	36	25	55
27.	Md. Abdul Sattar, s/o. Abdul Rahman	,,	35	20	50
28.	Abdul Kareem, s/o. Sk. Silar	,,	61	40	50
29.	Md. Khammam Saheb, s/o. Khasim	,,	55	30	45
30.	Md. Basha, s/o. Abdul Azeez	,,	30	15	60
31.	Md. Abdul Salam, s/o. Md. Ismail	Adivarpet	43	20	50
32.	Md. Ali Saheb, s/o. Md. Akbar	Tangellamudi	60	40	60
33.	Md. Abdul Hai, s/o. Md. Akbar	,,	56	40	60
34.	Md. Mazeharaj Zaman Saheb, s/o. Md. Khasim Saheb	,,	40	20	60
35.	Sk. Dada, s/o. Sk. Rasool	Gun Bazar	43	20	50
36.	Sk. Adam, s/o. Syed Mutthoza	Tangellamudi	32	10	60
37.	Yusufkhan, s/o. Lal Khan Saheb	,,	45	30	60
38.	Md. Suleman, s/o. Md. Ismail	,,	37	20	50
39.	Abdul Rahman, s/o. Md. Hussain	,,	30	20	60
40.	Md. Wahab, s/o. Md. Hussain	,,	33	20	60
41.	Abdul Gani, s/o. Sk. Ibrahim	,,	41	25	60

(1)	(2)	(3)	(4)	(5)	(6)
42.	Md. Khadar Bhasha, s/o. Ahmed	Tangellamudi	56	40	70
43.	M. M. Ziamullamuddin, s/o. Sk. Mohiddin	,,	50	30	60
44.	Sk. Samdani, s/o. Abdul Khadar	Khateef Street	40	30	60
45.	Md. Galab, s/o. Nabi Saheb	Sanivarpet	60	40	60
46.	Adambaig, s/o. Moula Baig	,,	40	30	60
47.	Syed Khareem, s/o. Syed Jafar	,,	40	20	50
48.	Abdul Ajeez, s/o. Abdul Khadar	,,	40	15	60
49.	Sk. Dawood, s/o. Sk. Ahmed	,,	65	40	60
50.	Md. Bajee, s/o. Abdul Ahmed	Tangellamudi	40	20	50
51.	Sk. Mirza Ghalib, s/o. Sk. Imam	Sanivarpet	32	20	60
52.	Rahimkhan, s/o. Ahmed Khan	,,	35	28	55
53.	Md. Salcha, s/o. Sk. Mohmad Saheb	,,	35	25	60
54.	Md. Ali, s/o. Sk. Ibrahim	,,	34	20	60
55.	Sk. Mohiuddin, s/o. Sk. Meera	Tangellamudi	32	20	60
56.	M. A. Sajjad, s/o. Md. Ismail	Adivarpet	35	25	60
57.	Sk. Bahadur, s/o. Md. Umar	Tangellamudi	38	25	80
58.	Md. Ibrahim, s/o. Sk. Jamal	,,	35	20	60
59.	Sk. Mehboob, s/o. Sk. Ibrahim	Sanivarpet	35	20	60
60.	Md. Zamal Ahmed, s/o. Md. Saleha	Tangellamudi	25	15	60
61.	Sk. Bajee, s/o. Sk. Mastan	Gun Bazar	24	15	60
62.	Md. Nazeer, s/o. Md. Issack	Tangellamudi	25	15	60
63.	Sk. Abdul Azeez, s/o. Mastan Sheriff	Pension Lines	60	40	40
64.	Taharali, s/o. Abdul Khayam	Tangellamudi	38	30	60
65.	Sk. Ibrahim, s/o. Mehboob	Sanivarpet	42	30	60
66.	Abdul Raheem, s/o. Ali	,,	30	20	60
67.	Md. Yunus, s/o. Md. Yusuf	Tangellamudi	25	15	60
68.	Abdul Rahim, s/o. Abdul Khader	Khateef Street	23	10	60
69.	Abdul Gani, s/o. Abdul Ali	Sanivarpet	25	15	60
70.	Sk. Imam, s/o. Md. Galab	,,	43	30	60
71.	Sk. Bazani, s/o. Abdul Khadar	,,	38	20	60
72.	Md. Yusuf, s/o. Khadra Baig	Khateef Street	25	15	50
73.	Md. Ali, s/o. Sohabuddin	Tangellamudi	31	20	60
74.	Md. Mastan, s/o. Md. Fazal	,,	23	15	60
75.	Sk. Peera, s/o. Sk. Silar	,,	40	30	60
76.	Sk. Wazir, s/o. Ameer	,,	25	15	60
77.	Abdul Khader, s/o. Md. Galab	Adivarpet	52	40	60
78.	Sk. Dawood, s/o. Mohiuddin	Khateef Street	53	40	70
79.	Abdul Nabi, s/o. Sk. Mehboob	Sanivarpet	35	25	60
80.	Sk. Basha, s/o. Ameer	Tangellamudi	50	35	60
81.	Sk. Ibrahim, s/o. Thaherali	,,	50	40	60
82.	Sk. Shamshuddin, s/o. Khader	,,	55	40	200
83.	Sk. Imam, s/o. Ahmed	Sanivarpet	58	40	60
84.	Abdul Razack, s/o. Mukhim Saheb	,,	58	40	60
85.	Md. Haneef, s/o. Sk. Karim	,,	62	50	60
86.	Abdul Wahab, s/o. Khader	Tangellamudi	30	20	100
87.	Akbar Ali, s/o. Sk. Muthuja	Pension Lines	40	20	60
88.	Abdul Sheriff, s/o. Rahim Sheriff	,,	40	30	60
89.	Khasim Sheriff, s/o. Adam Sheriff	Gun Bazar	40	30	50
90.	Abdul Hafiz, s/o. Khader	Tangellamudi	40	30	60
91.	Abdul Rahim, s/o. Khader	,,	25	10	80
92.	Abdul Jafar, s/o. Rahim	,,	40	20	60

(1)	(2)	(3)	(4)	(5)	(6)
93.	Ahmed Khan, s/o. Hasan Khan	Sanivarpet	42	30	60
94.	Md. Akbar, s/o. Badesaheb	Laxmivarapupet	55	40	80
95.	Badesaheb, s/o. Sk. Ibrahim	Sanivarpet	40	30	60
96.	Abdul Khadar, s/o. Mohiuddin	Tangellamudi	30	15	70
97.	Badesaheb, s/o. Sk. Ibrahim	Sanivarpet	40	30	50
98.	Md. Hayat, s/o. Hussain	Tangellamudi	44	30	70
99.	Abdul Nabi, s/o. Abdul Khader	,,	45	35	60
100.	Md. Nazeerudin, s/o. Abdul Rahaman	Laxmivarapupet	60	40	100
101.	Abdul Lateef, s/o. Md. Nazeeruddin	,,	25	10	80
102.	Ibrahim Baig	Gun Bazar	40	30	60
103.	Syed Ibrahim	Tangellamudi	30	20	80
104.	Md. Sharaff	Adivarpet	40	30	60
105.	Syed Haffiz, s/o. Hussain	,,	25	15	60
106.	Syed Hussain	,,	50	40	60
107.	Jamal Ahmed, s/o. Darvesh	Sanivarpet	40	20	50
108.	Md. Akbar, s/o. Sk. Mehboob	,,	47	30	50
109.	Sk. Bazee, s/o. Sk. Bikari	,,	22	10	55
110.	Sk. Bajee, s/o. Abdul Khader	,,	25	12	55
111.	Sk. Ismail, s/o. Bikari	,,	35	20	60
112.	Sk. Moosa, s/o. Bikari	,,	35	20	80
113.	Peer Khan, s/o. Ismail Khan	,,	40	20	50
114.	Alipeera, s/o. Kareemullah	,,	50	30	60
115.	Shaik Ibrahim, s/o. Abdul Khader	,,	23	15	50
116.	Sk. Dada, s/o. Sk. Dadoo	,,	35	20	55
117.	Sk. Ibrahim, s/o. Sk. Habeebullah	,,	30	20	50
118.	Sk. Shukur, s/o. Ghouse Sheriff	,,	20	10	50
119.	Sk. Ahmed, s/o. Dawood	,,	35	25	60
120.	Sk. Chan, s/o. Jaffar	,,	15	8	60
121.	Sk. Kareemulla, s/o. Mastan	,,	18	10	45
122.	Md. Khasim, s/o. Sk. Madar	,,	40	20	50
123.	Jayaram	,,	50	30	60
124.	Ramarao	Tangellamudi	50	30	60
125.	Sk. Mastan, s/o. Gulanabbi	Sanivarpet	50	30	50
126.	Sk. Saleem, s/o. Sk. Ahmed	,,	60	45	60
127.	Sk. Ismail, s/o. Rahman	,,	35	28	80
128.	Sk. Kareemulla, s/o. Rahman	,,	20	10	60
129.	Sk. Ibram, s/o. Sk. Dadan	,,	40	25	60
130.	Sk. Ameer, s/o. Sk. Jhani	,,	18	10	40
131.	Sk. Razack, s/o. Maqdoom Saheb	,,	50	35	55
132.	Dawood Sheriff, s/o. Bagoosheriff	,,	35	25	60
133.	Abdul Azeez, s/o. Madeenabaig	,,	50	35	55
134.	Chand Basha, s/o. Shaik Ali	,,	18	10	60
135.	Shaik Mahaboob, s/o. Shaik Akber	,,	15	9	40
136.	Shaik Baji Khan, s/o. Peru Khan	,,	20	13	55
137.	Shaik Hussain, s/o. Mahaboob	,,	30	20	60
138.	Mohmad Kasim, s/o. Shaik Mohamad Shaib	,,	28	17	55
139.	Shaik Babulal, s/o. Shaik Syed	,,	45	35	70
140.	Shaik Ahmed, s/o. Mohmad Ibrahim	Tangellamudi	19	10	50
141.	Sk. Shafiulla, s/o. Alicha	,,	19	10	60
142.	Sk. Ibrahim, s/o. Sk. Ismail	,,	33	20	60
143.	Sk. Karim, s/o. Taj Ahmed	,,	17	10	55

(1)	(2)	(3)	(4)	(5)	(6)
144.	Md. Moosa, s/o. Khurdush	Tangellamudi	35	20	60
145.	Hussain Basha, s/o. Bademiah	,,	38	20	70
146.	Sk. Imam, s/o. Md. Galab	,,	22	10	60
147.	Sk. Rahimtulla, s/o. Sk. Jamal	,,	35	20	65
148.	Sk. Mastan, s/o. Sk. Nazir	,,	20	10	60
149.	Sk. Alichar, s/o. Sk. Astam Ali	,,	40	30	55
150.	Sk. Bazee, s/o. Babu	,,	18	10	50
151.	Habeeb Khan, s/o. Nazeer Khan	,,	19	10	60
152.	Syed Goharuddin, s/o. Syed Yakub	,,	20	12	50
153.	Sk. Madar, s/o. Mohammad	,,	35	25	60
154.	Md. Galab, s/o. Shaik Imam	,,	40	30	70
155.	Md. Yakub, s/o. Syed Razack	,,	42	35	70
156.	Md. Sadiq, s/o. Md. Pasha	,,	25	18	50
157.	Md. Tahar, s/o. Saleha	,,	30	20	65
158.	Md. Sheriff, s/o. Md. Baji	,,	40	30	55
159.	Md. Bashu, s/o. Salahauddin	,,	25	15	60
160.	Md. Bikari Saheb, s/o. Md. Galab	,,	65	50	60
161.	Abdul Rashid, s/o. Md. Ismail	,,	60	50	55
162.	Md. Mastan, s/o. Md. Galab	,,	35	28	60
163.	Md. Nazeem, s/o. Md. Hyder	,,	26	16	50
164.	Md. Jeelani, s/o. Md. Ismail	,,	18	10	65
165.	Sk. Mohiauddin	,,	22	15	60
166.	Sk. Daruga	,,	20	15	60
167.	Syed Rahmtulla, s/o. Syed Ziauddin	,,	40	25	70
168.	Md. Ibrahim, s/o. Md. Suleman	,,	20	8	50
169.	Abdul Razack, s/o. Shamshuddin	,,	23	12	55
170.	Md. Ibrahim, s/o. Md. Khasim	,,	25	15	50
171.	Md. Azam, s/o. Md. Haneef	,,	50	25	70
172.	Md. Gazal, s/o. Md. Adam	,,	25	10	55
173.	Md. Moulana, s/o. Md. Yusuff	,,	30	15	60
174.	Syed Adam, s/o. Syed Muthoja	,,	30	20	55
175.	Md. Sheriff, s/o. Md. Kairullah	,,	30	15	60
176.	Syed Bazee, s/o. Syed Hussain	,,	30	10	60
177.	Md. Ali, s/o Shamshuddin	,,	35	25	50
178.	Khadar Basha, s/o. Abdul Azeez	,,	30	15	60
179.	Md. Hassan, s/o. Meerasaheb	,,	35	20	60
180.	Md. Mehboob, s/o. Suleman	,,	35	20	60
181.	Md. Bajee, s/o. Md. Yusiff	,,	30	12	55
182.	Sk. Mastan, s/o. Md. Ibrahim	,,	35	22	50
183.	Sk. Mohiauddin, s/o. Sk. Meera	,,	50	35	60
184.	Md. Samiulla, s/o. Md. Ibrahim	,,	40	25	65
185.	Md. Bazee	,,	20	8	55
186.	Md. Khasim, s/o. Abdul Mazeed	,,	70	55	65
187.	Md. Hussain, s/o. Abdul Rahiman	,,	75	60	60
188.	Sk. Shamidani, s/o. Abdul Khadar	,,	38	20	60
189.	Syed Jalal	,,	30	15	60
190.	Syed Irbahim	Adivarpet	40	20	60
191.	Md. Hussain	Tangellamudi	25	15	60
192.	Md. Jeelani, s/o. Hussain	,,	45	30	60
193.	Md. Yusuff, s/o. Md. Hasiraff	,,	65	50	60
194.	Sk. Vazir, s/o. Sk. Ameer	,,	50	30	55

(1)	(2)	(3)	(4)	(5)	(6)
195.	Md. Ibrahim, s/o. Md. Jamal	Tangellamudi	25	15	50
196.	Abdul Kareem, s/o. Shaik Vajeer	,,	20	10	50
197.	Md. Nazeer, s/o. Izack	,,	22	15	60
198.	Md. Jalani, s/o. Md. Yakub	,,	24	10	55
199.	Md. Yakub, s/o. Sk. Dawood	,,	45	30	60
200.	Md. Ismail, s/o. Md. Yakub	,,	25	15	60
201.	Sk. Mastan, s/o. Md. Pasha	,,	45	30	60
202.	Pakeer Ahmed, s/o. Md. Yakub	,,	20	5	55
203.	Sk. Jani, s/o. Sk. Kareem	,,	20	10	50
204.	Syed Suleman, s/o. Syed Khassim	,,	22	5	60
205.	Galeb Sheriff, s/o. Abi Sheriff	,,	25	10	60
206.	Sk. Mastan, s/o. Sk. Mahaboob	,,	20	10	50
207.	Karimulla Sheriff, s/o. Kasim Sheriff	,,	18	10	50
208.	Md. Ghouse, s/o. Md. Sarwar	,,	20	10	60
209.	Sd. Bajee, s/o. Ibrahim	,,	24	15	65
210.	Sk. Jameer, s/o. Md. Nazeer	,,	24	15	50
211.	Md. Razack, s/o. Md. Nannu	,,	18	10	55
212.	Sk. Mastan, s/o. Ibrahim	,,	22	15	50
213.	Md. Jamal, s/o. Md. Nanne Saheb	,,	25	15	50
214.	Abdul Rajack, s/o. Mohiddin	,,	50	40	60
215.	Abdul Wahab, s/o. Sk. Mohiddin	,,	30	20	60
216.	Syed Mastan, s/o. Syed Hussain	,,	40	20	60
217.	Abdul Sattar, s/o. Sk. Pakruddin	,,	24	10	50
218.	Sk. Pakruddin, s/o. Sk. Hussain	,,	70	55	60
219.	Allabaksh, s/o. Bademiah	,,	25	15	55
220.	Md. Murad, s/o. Md. Khasim	,,	25	15	50
221.	Syed Meerjan, s/o. Syed Ibrahim	,,	30	20	60
222.	Sk. Baber, s/o. Fareed	,,	16	6	40
223.	Syed Abdul Ajeed, s/o. Syed Rasood	,,	34	25	60
224.	Syed Ismail, s/o. Syed Rasool	,,	75	60	60
225.	Md. Sheriff, s/o. Sk. Ismail	,,	55	40	50
226.	Md. Salha, s/o. Khannamsaheb	,,	40	25	65
227.	Ahmed Khan, s/o. Abdulla Khan	,,	35	25	60
228.	Ibrahim Khan, s/o. Hameed Khan	,,	23	15	50
229.	Sk. Ansar, s/o. Sk. Fakruddin	,,	40	25	60
230.	Md. Jakria, s/o. Md. Hussain	,,	50	40	50
231.	Md. Subhan, s/o. Md. Yussuf	,,	40	30	50
232.	Md. Haneef, s/o. Shamshuddin	Adivarpet	50	40	50
233.	Shaik Ibrahim, s/o. Yakub	Sanivarpet	40	25	50
234.	Sk. Basha, s/o. Sk. Ahmed	Tangellamudi	30	15	50
235.	Sk. Havaldar, s/o. Shaik Ahmad	,,	40	30	60
236.	Sk. Jamal Ahmad, s/o. Sk. Pakeer	Adivarpet	30	15	60
237.	Sk. Ibrahim, s/o. Abdul Khader	Sanivarpet	25	10	50
238.	Md. Yusuff, s/o. Khadar Baig	Khateef Street	25	15	60
239.	Abdul Raheem, s/o. Abdul Khadar	Tangellamudi	25	15	60
240.	Sk. Peer Saheb, s/o. Sk. Silar	,,	50	40	60
241.	Sk. Bajee, s/o. Sk. Abdul Rahiman	,,	27	15	60
242.	Md. Jani, s/o. Md. Yusuff	,,	35	25	60
243.	Md. Yusuff, s/o. Sk. Imam	,,	32	20	60
244.	Md. Babjee, s/o. Khadar Mohiddin	,,	30	20	50
245.	Syed Yakub, s/o. Syed Abdul Razack	,,	40	30	50

(1)	(2)	(3)	(4)	(5)	(6)
246.	Ahmed Sheriff, s/o. Dawood Sheriff	Tangellamudi	50	40	65
247.	Babu Saheb, s/o. Mohiddin	,,	48	35	60
248.	Sk. Ahmed, s/o. Abdul Sheriff	,,	45	35	60
249.	Md. Sheriff, s/o. Sk. Nazir	,,	42	30	60
250.	Mahaboob Basha, s/o. Abdul Azeed	,,	26	15	60
251.	Sk. Shamshuddin, s/o. Sk. Mohiddin	,,	60	50	80
252.	Hussain Ahmed, s/o. Md. Isack	,,	20	8	80
253.	Sk. Dawood, s/o. Sk. Hussain	,,	20	8	50
254.	Sk. Ahmed, s/o. Sk. Hussain	,,	28	15	60
255.	Sk. Suleman, s/o. Abdul Karim	,,	34	25	60
256.	Sk. Jaffar, s/o. Sk. Silar	,,	60	50	60
257.	Sk. Abdul Zafar, s/o. Sk. Shamshuddin	,,	30	15	55
258.	Sk. Mastan, s/o. Madar Saheb	,,	34	25	50
259.	Sk. Bude Saheb, s/o. Sk. Jani	,,	45	30	60
260.	Sk. Jani, s/o. Syed Hussain	,,	15	5	40
261.	Sk. Bude Saheb, s/o. Hussain	,,	18	10	45
262.	Sk. Nannesaheb	,,	26	15	60
263.	Sk. Mastan, s/o. Sk. Abdulla	,,	29	20	50
264.	Md. Basha	,,	28	15	60
265.	Md. Jamal	,,	28	20	60
266.	Sk. Ismail	,,	60	50	60
267.	Md. Hussain	,,	50	35	60
268.	Abdul Suban	,,	25	15	60
269.	Sk. Khader Basha	,,	23	13	50
270.	Ahmed Ali, s/o. Hussain	,,	30	20	60
271.	Md. Umar	,,	50	40	60
272.	Shaik Mastan, s/o. Hussain	,,	40	25	50
273.	Md. Sheriff, s/o. Ahmed Sheriff	,,	24	15	60
274.	Sk. Bajee, s/o. Syed Ibrahim	,,	22	10	60
275.	Sk. Dada, s/o. Meera	,,	23	15	60
276.	Syed Bajee, s/o. Syed Kasim	,,	29	20	50
277.	Sk. Hussain, s/o. Abdul Khadar	Khateef Street	30	15	60
278.	Sk. Mahaboob, s/o. Sk. Galib Saheb	Tangellamudi	20	8	60
279.	Sk. Mohammad Ali, s/o. Sk. Ibrahim	,,	20	10	50
280.	Sk. Shamshuddin, s/o. Abdul Khadar	Adivarpet	28	15	60
281.	Abdulla Baig, s/o. Mirza Baig	Pension Lines	40	15	60
282.	Syed Abdul Khader, s/o. Syed Kharim	,,	36	25	60
283.	Md. Ismail, s/o. Md. Khurdush	Tangellamudi	25	15	50
284.	Abdulla Shariff, s/o. Rahim Sheriff	Pension Lines	35	20	60
285.	Akbar Ali, s/o. Sk. Muktuja	,,	45	25	60
286.	Raffik Sheriff, s/o. Rahim Sheriff	Tangellamudi	37	25	60
287.	Madar Baig, s/o. Ahmed Baig	Gun Bazar	70	50	60
288.	Sk. Ali, s/o. Mohammad Gali	Adivarpet	48	30	60
289.	Abdul Saleem, s/o. Sk. Ali	,,	24	15	60
290.	Syed Yacob, s/o. Syed Jaffar	Gun Bazar	46	30	60
291.	Sk. Vali, s/o. Kasim	Tangellamudi	25	15	50
292.	Syed Khasim, s/o. Fakruddin	,,	40	20	55
293.	Sk. Vazir, s/o. Sk. Ameer	,,	22	10	50
294.	Sk. Dawood, s/o. Sk. Dada	,,	27	15	50
295.	Sk. Jamal, s/o. Kasim	Khateef Street	35	25	60
296.	Md. Ibrahim, s/o. Md. Kasim	Tangellamudi	30	20	60

(1)	(2)	(3)	(4)	(5)	(6)
297.	Syed Mahaboob, s/o. Jamal	Tangellamudi	32	20	60
298.	Sk. Baji, s/o. Mastan	,,	24	10	50
299.	Sk. Abdul Azeez, s/o. Sk. Hussain	Pension Lines	60	40	60
300.	Abdul Raheem, s/o. Abdul Ali	Sanivarpet	30	20	60
301.	Abdul Gani, s/o. Abdul Ali	,,	25	15	60
302.	Sk. Imam, s/o. Md. Galab	,,	43	30	60
303.	Abdul Khadar	Khateef Street	22	10	50
304.	Sk. Yusuff, s/o. Karim	,,	40	20	50
305.	Md. Ali, s/o. Rahim	Gun Bazar	18	10	45
306.	Md. Mastan, s/o. Kasim	Pension Lines	25	15	50
307.	Sk. Dawood, s/o. Sk. Mohiuddin	Tangellamudi	53	40	60

APPENDIX II

EXCERPTS FROM THE JOURNAL OF INDIAN ART AND INDUSTRY, VOLUME XI, 1905-06

Indian Carpets and Rugs by F.H. Andrews, Esq.

1. Many able writers, in recording the results of their close reading and scholarly research among the works of ancient historians, have amply satisfied us that the art of weaving is of great antiquity.

2. In those favoured places where the remains of ancient civilizations have been found lying in rich strata one upon the other, as they have successively grown, flourished and sunk to decay, it has frequently been observed that the higher level of development in Art rests in the lower strata of these cumulative documents. As in the case of all the arts of civilization, we must turn to Egypt for the earliest available information on the subject of weaving; and the facts afforded us show that the art was thoroughly understood and was practised with great technical skill and fine artistic restraint, at a very early period. As time progressed, patterns became more florid, and critical examination of the woven and embroidered textiles contributed by the Copt, Saracen, Persian, Indian, Turk and Venetian indicates a general course of decadence in design, if not always in execution.

3. It is an undoubted fact that practically all our woven and embroidered fabrics, from the earliest examples down to those of the present time, are more or less weak imitations and adaptations of Oriental originals. The early Italian brocades were direct copies of examples imported from the East, and in the mediaeval German fabrics are replicas of old Coptic embroideries. In the most gorgeous times of mediaeval Italy and Spain, the weavers seem all to have been doing their utmost to imitate Oriental fabrics without any serious attempt at originality; in fact, many of the great cities along the European coasts of the Mediterranean became centres of Oriental manufacture, with thousands of Moorish and Saracen craftsmen working in a state of absolute or semi-slavery for European masters. The perpetual conflicts between the maritime powers of southern Europe on the one side, and the Turks and Corsairs on the other, with the constant interchange of captives, was, perhaps, a greater factor in the westward advance of Eastern luxuriousness than were the trade treaties entered into from time to time while the rival forces were recovering from the pummelling each had suffered at the hands of the other.

4. But ages before the time of the bold Corsairs the intercourse between East and West was, though slight, sufficiently frequent for the recognition of regular trade routes by land. Strabo states, "upon the authority of aristobolus, that it (the Oxus) was one of the largest rivers of Asia, that it was navigable, and that by it much valuable merchandise was conveyed to the Hyrcanian Sea, and thence distributed to Asia Minor, or conveyed to the Black Sea for transport to the country on its borders. So Pliny affirms that it was ascertained at the time when Pompey was carrying on hostilities in the East against Mithridates, that a journey of seven days from the frontiers of India brought the traveller to the Icarus, which flowed into the Oxus; the voyage continued along that river into the Caspian, and across it to the Cyrus, from which a journey of no more than five days carried Indian merchandise to Phasis in Pontus."

5. The few and interesting records preserved of the journeys of European merchants and travellers show how eagerly articles of Oriental luxury were sought and what dangers and inconvenience were endured in seeking them. The Italian, Flemish and German painters, from the thirteenth century onwards were fond of introducing pieces of Oriental tapestry into their frescoes and pictures as perhaps being at the time something rare and distinguished besides contributing rich harmonious colour; and Lessing says that frequently the same carpets are reproduced by different Masters, which would suggest that they were carefully preserved either in public buildings or in private collections. In some of Holbein's pictures the reproductions are so carefully painted that the number of stitches may be counted and good working drawings obtained from them. Most of these examples have the geometric and rectilinear in character which we associate with the Caucasian looms.

6. It seems, then, to have been for ages recognised that the East held all that was precious in Art; and it is this Art which has spread all over Europe, and to which we repeat, all our textile designs are due, and it is instructive to note how the most ancient of patterns are still doing duty with designers and manufactures throughout the world; and that as a rule, the

success of design in textiles is in inverse proportion to the deviation from the original models.

7. Just as India and Persia had trading routes to the West, so were there important highways stretching out to the Far East; and the peoples of Asia had considerable commercial intercourse from quite early times, despite the difficulties of travel.

8. At this brilliant period in Persian history it is recorded that artists were imported from Greece and Byzantium; while among the extraordinary embroidered and woven textiles produced by the Copts in Egypt may be found the horseman with hawk so typical of later Persian tiles, subjects from Roman mythology drawn with all the characteristics of the Roman style, floral designs springing from vases executed in a style resembling the sozni embroidery of Bokhara of the present day, and borders and trimmings for garments almost precisely similar to such work done in Kach and some of the more arid districts of the Punjab. The well-known Cocus or Butha or Cone so familiar in modern Kashmiri and in earlier Persian weaving, and concerning the origin of which many theories have been propounded, may be easily referred back to a somewhat more simple form in the tapestries of the first century of our era in Egypt, and doubtless much earlier.

9. In the more recent Art of Persia and India, with which this paper has more particularly to deal, the influence of China is one of the most striking features. It is extremely difficult to determine how much each country is indebted to the other for its inspiration. Both were quick to adopt anything new and each to some extent modified and gave to foreign elements of design a native impress, and in this respect China more completely assimilated borrowed matter than did Persia. We have said that China took its conventions of Buddhist art from India, and these are maintained wherever Buddhist shrines are raised; but it is very doubtful how much more China borrowed. The fact of the adoption by China of the Indian religion connotes an admiration for India and things Indian; and this view is strengthened by the appreciative accounts of their travels written by some of the Chinese pilgrims in the fourth and seventh centuries. Dr. Stein has shewn, in the interesting account of his excavations in Eastern Turkestan, certain evidence that Chinese and Indian culture were present side by side in that wild region in the third century, and in describing some of the unique wooden documents, which formed so important a feature of his discoveries he says: "The particular interest attaching to some petty records is well illustrated by an oblong (wooden) tablet, dated in the ninth year of King Jitroghavarshman, which relates a transaction by a certain Buddhagosha, slave of the Sramana or Buddhist monk Anandasena, concerning some household goods, pawned perhaps or taken over on mortgage. The articles are enumerated in detail and their value indicated in a currency that we may yet succeed in determining. It is curious to find that this list, besides sheep, vessels, wool-weaving appliances and some other implements enumerates also 'Namadis'. We may well recognise here the earliest mention of the felt rugs or 'Numdahs' so familiar to Anglo-Indian use, which to this day form a special product of Khotan home industry and of which large consignments are annually exported to Ladak and Kashmir." Fragments of silken fabrics, from the finest plains weaving to the most complex thick and many coloured brocades of Chinese origin, were found with the well-known cotton or woollen Indian darri; and interesting paintings on panels of wood and upon the walls of buildings were unearthed, which show clearly enough that, whoever the artists may have been, some at least, had an unmistakable Chinese style, while others exhibit a decided Persian manner.

10. A great deal of the worsted used for Persian carpets is spun from the wool of Kirman, Khorassan, and Kurudestan sheep. This wool is peculiarly soft and lustrous and the shade varies so much, naturally, that a design could be worked out without the use of dyes. A great quantity of wool is collected in Kashmir by agents of the loom proprietors in the Punjab. These agents collect their supplies from the small goat farmers who wander about the beautiful slopes of the Kashmir hills with their graceful herds. It is the finest of this wool—the pashm, soft and lustrous as silk, growing close to the skin and protected by the long and coarser wool—which is used for the beautiful soft shawls and pashmina for which Kashmir and the neighbourhood are famous. "The best pashm is said to be that produced in the semi-Chinese province of Rurfan Kichar and exported *via* Yarkand to Kashmir." The coarser wool is used for the cheaper rugs.

11. The varieties of carpets and rugs made in India are the cotton darri—a smooth, hard fabric, usually in two or three colours in simple stripes running from side to side, or broken into rectilinear sections or simple patterns. (This is probably the earliest form of carpet and retains its original patterns. They make most effective and cool floor coverings placed over grass matting, and in the finer qualities are very artistic). The long loop pile carpet, made in some of the more remote districts; and the pile carpets, which may be entirely of cotton such as those produced in the Multan District; of cotton, or cotton and wool with wollen pile; of wool with silk

pile and the rare ones having silk warp and fine woollen pile. These last occur occasionally among the best of the old Mogul examples.

12. The miscellaneous collection of carpets and rugs contained in the present and the last five parts of the Journal of Indian Art is gathered together from various sources and belongs to various periods; the majority, however, to the eighteenth and nineteenth centuries. All the examples illustrated are pile carpets; that is to say, the upper surface or "face" presents the ends brought together of short pieces of cotton, wool or silk yarn knotted by hand to the warp and trimmed with shears to a uniform length. The date of introduction of this method of weaving is quite uncertain. Sir George Birdwood says: "The manufacture of pile carpets probably first introduced into India by the Saracens." He also says "a small woollen pile carpet of the Greek period has been discovered in Egypt." I have not had the good fortune to see this example; but in Roman times a loop-pile somewhat resembling "Turkish towelling," was commonly made, and of this a good many examples are to be found in museums. In the fifteenth century we find pile carpets in perfection of workmanship, but the writer knows of no example earlier than that, although there are certain references in the early historians, which seem to indicate this method of manufacture.

13. The styles of the examples here reproduced may be broadly classified as floral and geometrical, but at the same time recognising that between the extremes of each class the styles mix and overlap in endless modifications. The extreme of the floral class will be found in the earliest examples of "Mogul" carpets, variously called Indian and Persian. Of the place of origin of these one can assert nothing unreservedly, since the same class of carpet was produced in various centres. The weaver who worked in Herat one season might find himself transferred to Lahore the next.

14. One of the earliest Mogul carpets, said to be of the sixteenth century, and in point of everything but size, perhaps the finest Persian example in England, is in the India Museum at South Kensington. The stitch is extremely fine, the colouring rich and soft and the design, somewhat Turkish, exceedingly free and graceful. The border is a boldly drawn *madhakel* or reversing cusped meander, the spaces contained on the inner side of the curve being blue and those on the outer, red. On each blue segment is a delicate and garceful floral design into which is introduced with great skill a typical Chinese dragon of Darkness breathing unutterable ferociousness at the terrified long-tailed bird of Light, which with outspread wings is fluttering wildly. In the red segments similar unequal contrasts are in progress between, alternately, a leopard and a cow, and a leopard and a deer, the fiercer animal having in each case made sure of the quarry by his deadly bite on the back of the neck. The field of the carpet is a magnificent red—a red found only in these early carpets, with the depth of an atmosphere—and on this are placed flowers and friut trees—a garden wherein do roam and hunt the lion, the tiger and the leopard. In a centre cartouch are fish and water weeds; and on each side of this is a pear-shaped vase, supported by dragons upheld by lions. In eight smaller cartouches disposed symmetrically upon the field, a flying duck appears on a blue background, on which floats the Chinese cloud. So we have the complete picture, beloved of the Oriental. A beautiful garden teeming with game and surrounded by a *madhakel* battlement and furnished with a well-stocked fish pool. In the blue sky floats the wild duck, sailing among the fleecy clouds; and typified by the roc and dragon, the Day perpetually struggles with the Night. Someone, writing of Oriental design, has said recently, that the craftsman now uses conventional elements without regard to their meaning: but the experience of the writer, who has spent some years among the craftsmen of India, is, that they still have poetry in them and can still see in their designs the opening flowers, the gliding fish, and hear the twittering birds; and can feel that they are walking under the curling clouds that arch over the interlacing branches of the richly laden fruit trees. True, it is this feeling that is being killed by those who would push the trade in Indian carpets, and by those others who would force upon the craftsman foreign ideals to which his artistic feelings can never respond: but it still survives and should be protected.

15. The Ardebil carpet has been so often and fully described that it needs only a passing mention here. Its date (1535 A.D.) is probably later than that just referred to. Its size, 34 feet 6 inches by 17 feet 6 inches, and exquisite finish of workmanship (380 knots to the square inch) made it of very great interest, but in design it is Museum. The prevailing colour is the soft deep red produced by a dye made from kermes, long since displaced by the more convenient cochineal.

16. Another type is the so called Herati kind, to which several of those in the accompanying plates belong. These perhaps, had their origin in Herat, but have long been produced in Northern India, notably in Lahore, Delhi and Agra; and in 1863, according to Balfour, upon the carpet industry of Herat being temporarily suspended, most of the weavers emigrated to

Birjand. The earliest examples are remarkable for the boldness of the curving stems and the soft, cool harmony of the colour, in which is found a good deal of a fine green and deep blue. The border consists, usually, of a broad band separated from the centre and edged on the outer side by one or two very narrow bands. On the broad band, bold and highly conventional flowers alternate with long serrated leaves carried on delicate and gracefully undulating stems. The most striking feature in all these early carpets is the appreciation for the ground and the proper restraint in the "quantity" of the pattern. There is something imperial in the great curves and bold touch of the designers, one of the most striking features of these Herati designs is the extremely skilful choice and use of outlining colours. To instance a few examples—on a deep red ground a rose pink will be outlined delicately with white; a dull yellow, with dull green or pale blue; a dull green with white and a deep indigo with dull yellow. On a dark blue ground we find light blue outlined with dull yellow, red with white; dull yellow with salmon pink, and so on. A few, a very few, modern carpets made in India after the old patterns, approach in quality the early ones; but, as a rule, the weaver of to-day is too timid and has not the large conception of his ancestors. His patterns lack repose—even in the use of the old designs he somehow misses the spirit of the early work. The pattern looks huddled and too assertive. It seems to suggest bustle and commerce—London, Paris and New York—that it belongs to a consignment for a smart firm. Or it is too geometrical in its arrangement, as in the silken pile carpets of Warangal and other places in the Deccan. Then, there is no doubt that the quality of the material used to-day is not equal to that of the past. The pressure of trade forces mixed wools into the work, and there is not time or inclination for that careful selection which was observed formerly. The processes of dyeing have been a good deal modified by Western influence, and we know how great is the evil wrought by imported dyes. The old Persian test of dropping a piece of live charcoal on to the pile to see if any traces of the injury remained after brushing away the signed top, is one we should hesitate to apply to a modern carpet.

17. There is a style of carpet, variously called Mogul, Persian, and other names, which seems at least to have been largely produced in Khorassan in the sixteenth century and is one of the most frequent patterns to-day. The details are small, unimpressive and safe, forming a rich diaper which keeps its place on the floor and does not invite analysis. The skeleton of the design of the field is based upon the diamond or lozenge, the repeat being quite small. The most prominent features is, usually, an elliptical eight-petalled flower with, from right and left of it, two long serrated leaves curling in opposite directions; giving something of an S shape, the flower being across the middle of the S. This feature occurs at the four corners of an oblong enclosing the lozenge, the angles of the oblong falling in the centres of the carpet is usually a large lozenge-shape cartouche, obtained by giving to the ground a lighter colour in this place. The same diaper pattern continues on the cartouche, but in slightly modified colouring to suit the change of ground. In the centre of this again is a smaller lozenge shape with sides parallel to the larger, but turned into an eight-pointed figure by the addition of a concentric oblong with sides parallel to the diagonals of the lozenge and cutting well out through its borders. This eight-pointed figure recurs usually about midway between the centre cartouche and the inner borders of the ends; and corners are formed by cutting the whole central arrangement into four equal parts along its diagonals, and placing a fourth at each inner angle of the border, the centre flower being placed exactly on the angular point. This pattern has probably been more often reproduced than any other, on account of its simplicity in working and easy adaptation to any size. There are three or four examples of it among our plates. The borders vary considerably but one often sees the Mogul *madhakel* used, and in two of the examples illustrated two borders of this description occur, separated by a border of the Cone or Butha. The general colouring is a fairly equal distribution of deep red and deep blue; the other colours introduced in small quantities, but well distributed, are—light blue, light green, dull yellow and dull white.

18. The diaper arrangement of small naturalistic features belongs to a very large class of carpets made by the Aryan peoples of the East. The naturalistic units become more "conventional" in appearance as the wool (and consequently the stitch of the carpet) becomes coarser; and the angularity thus acquired becomes still further pronounced at the hands of the non-Aryan. As we have said, the styles overlap so imperceptibly that one can do no more than indicate the general lines of difference. No sharp boundary divides the "Persian" from the "Indian" and "Rukoman" designs: it is a matter of gradual modification. In the case of Yarkand rugs we find frequently a diaper filling, and meander border, strongly reminiscent of the Khorassan pattern just described, but with a distinct flavour of its own; and other borders, clearly indicative of the Mongol. On these rugs we frequently find the Tree of Life

of the Assyrians—or the Persians or the Indians—and the Swastica, with curled instead of angular members; a curious and rather unexpected modification; the Greek and the Chinese frets; the Trisula; in fact, they are often composed of odds and ends of more or less archaic symbols such as one might expect to find adhering to the sides of this part of our disused Churn. In one of the examples in our plates, the rug is divided into two equal panels, and in each is an eight-pointed figure composed of a diamond and a concentric rectangle. The Trisula is in each of the ends of the diamond. The borders are very rich and well balanced and the whole has the appearance of great antiquity. Its actual period of manufacture is the nineteenth century. The general tone of the colouring is snuff brown, but the colours used include two blues, bright red, yellow and several shades of brown-grey-possibly 'natural' wools. Another of these "Yarkand" rugs illustrated is divided into three *khanas* or panels with an angular, stepped arch at the top of each. A fine and a quite Assyrian Tree of Life occupies the centre; but the side panels are less successfully filled.

19. The rugs of Beluchistan are essentially geometric, and are usually of the "prayer carpet" type, having a shaped mihrab at one end; and those of Afghanistan are very similar but of finer quality, and with occasional flower forms introduced. The pile of both these is very short.

20. Southern Indian carpets and rugs appear to suffer from a want of feeling. The designs are seldom, or never, indigenous, and what is borrowed is not understood. The coloured plate from a Mirzapur carpet will explain to the initiated what is meant. These craftsmen may use the finest materials and put into their work the most minute care, yet they fail to move us. There is something about the most insignificant saddle-bag woven in the north that tells of the daily life of the maker. It seems to be part of him and his family. He bought the wool, or grew it, or otherwise acquired it; his women-folk spun it and perhaps dyed it, or he exchanged the good offices of some village dyer for some commodity brought along on his travels. Each time camp was struck this little treasure of yarn was folded up in his bed, and as regularly when camp was pitched it was unrolled, the simple loom was set up and he or his added some more stitches to the work. Piece by piece it grew, and as it developed his delight in it increased; and when it became big enough, it joined the family circle, being probably the *asan* of the lord and master. The pattern was not much thought about perhaps. A richly coloured mihrab arching over a deep blue expanse. He had often seen such a mihrab in the great old cities where the masterpieces of the Mogul architects lift their glorious sky on clear nights in the valleys of the Himavat; and so on. Is it not Professor Vambery who describes the old Turkoman woman designing the carpet with a stick in the sand outside the tent, and doling out the proper quantity of coloured yarn to the women and girls of the little encampment? It is all in the same key. The wanderer's life and imperfectly understood thoughts playing as a feeble light in his mind from the far distant past, seem to be woven into the little piece of work for those to read who can. But to read it aright you must have seen the Land and the People; and that is why factors can find buyers for the productions of European twentieth century looms (and those subsidised looms in certain parts of India and the East are little better); and why we, who have seen, know the hopelessness of trying to kindle the light in the souls of those who are steeped in the outer darkness.

APPENDIX III

EXCERPTS FROM THE JOURNAL OF INDIAN ART AND INDUSTRY, VOLUME XI, 1905–06

Carpets By F. H. Andrews, Esq.

1. We have no certain evidence of the earliest use of carpets, and for a very long historical period we can only form conjectures as to what they were like. In the present collection of illustrations of carpet designs, no attempt has been made to give examples earlier than the last few centuries, and these designs, again, are confined to carpets made in India, or possibly in countries bordering on India, and exhibiting very largely the influence of Persian art.

2. For our present purpose, it is not necessary to go further back than the 16th century, when the great Mogul Emperor, Akbar, introduced Persian weavers into Lahore; from the imperial workshop of this city came the woollen pile carpet belonging to the Girllers Company, and presented to them by Mr. Robert Bell, the Master in 1634.

3. It would be interesting, if it were possible, to scientifically compare the make of this carpet with those belonging to H. H. the Maharaja of Jaipur, who has most generously allowed the reproduction of his carpets, with full size designs in colour, for the use of students.

4. The carpets of which illustrations are here given are nearly all known or believed to have been made in India, some most certainly under Persian influence: although some of them are styled Yarkand, Cabul, Baluchistan, etc., there is no proof that they were actually made at these places; they were collected in India and received from India, so may be regarded as good types of those districts, even if not actually made in those places. In all countries where it is the custom to sit on the floor, carpets and rugs are in universal use, especially in mosques and palaces, and in the houses of the rich. Carpets and rugs made in India may be divided into five kinds, the cheapest having the warp and woof of cotton, with blue, red and white stripes; these are known as *suttringes*, are made all over the country, and are very durable. As examples of these cotton carpets, a few beautiful designs will be given, though they are generally considered hard, as cotton, when driven home with the wooden comb used, forms a hard, unyielding body, still they have the advantage of making the pattern stand out sharp and decided. Another kind is made with the warp of cotton and the woof of wool. The loom employed in weaving these two kinds is horizontal, without either treadles or reeds. Another kind is made of cotton warp and woof, with a short pile of cotton worked into it. This necessitates a different kind of loom; the warp is placed vertically and the various colours employed to form the pattern hang down from bobbins between the warp and the workman; the woof is passed by the hand and then driven home by the comb. The fourth group is that in general use, with the pile of wool the warp and woof being either flax, wool or cotton. The fifth is of silk pile, with flax or wool for warp and woof. These have a richness of their own, and cannot be equalled by any other textile; they are usually made for show purposes and for use on State occasions. As a large number of the designs arranged to be given are not yet photographed, the suggested grouping of the plates will be given in a latter number of the Journal; for the same reason the Plates are not numbered.

5. Sir George Birdwood, who has entered deeply and learnedly into all phases of Indian Art, and who is our best guide in all that pertains to the subject, referring to the Afghan, Kashmir, Warangal, Tanjore, and other carpets, writes: "In all these carpets the first thing to observe is the complete subordination of the decoration to the surface. A carpet presents of course, a flat surface, and the decoration in these Indian carpets, it will be seen, is never allowed to disturb the impression of their flatness. This effect is obtained by representing the ornamentation on them in a strictly conventional manner, and without shadow. The next thing to observe is the skill with which the ornamentation is distributed, nearly always in a symmetrical manner, and with such perfect balance that even where it is most crowded there is no effect of overcrowding. Then, it is interesting to notice the wonderful variation of the same ornamental forms in all these carpets. No two of them present in the details of their decoration actual repeats of each other, yet in most of them it consists of the knop and flower pattern, that is, of the lotus bud and lotus flower, which has been the universal form among the Asiatic Aryans from the beginning of their art history."

6. Hitherto, the efforts of British commerce have been directed towards making Great Britain the centre of distribution for the trade in Indian carpets, but the time has now come when we can no longer wrap ourselves up in the self-satisfaction of the past, relying on what we have already achieved. It is this that has brought upon us the restrictions of our trade. It is the series of unconsidered deficiencies and negligencies that makes collective failures, and in these days of keen international competition a serious misfortune to us can only with the greatest difficulty be retrieved. In the matter of business capacity and organisation the British are said to be inferior to their confreres of the Continent. These deficiencies are not inherent, but simply the result of neglected technical education, and must be overcome, in view of the temperate honest, cautious, laborious, and well-informed industrial population of the Continent of Europe, and we must be on the alert if we are still to retain our old pre-eminence as manufacturers and distributors. As the various imitative nations of the tropics assume the clothing and comforts of the West, the result of their extended export trade, so will new markets be opened up, to the advantage of India and Britain. We have been ousted out of much of this trade during the past few years, but successful efforts are now in progress for its recovery. This can be done by the walking up of artizans and manufacturers to improve the character and quality of their goods. The semi-savage population of Africa, and the countries bordering on the Indian Ocean, possess, in common, at once a keen determination to have full worth for their money, and an instinctive taste for ornament, particularly that of bright but harmonious colouring, such as is seen in India. They want the brilliantly but harmoniously dyed goods that are made in India, which India can supply when encouraged by British orders.

7. It need scarcely be said that the traditional handicraft work of the Hindus and Persians represents the highest perfection of art in its application to the decoration of manufactures. It provides examples of absolute perfection, for the inspiration of that general elevation of thought and feeling, which all true students receive from the contemplation of the masterpieces of art and invention, without which it is impossible to excel in any human undertaking.

ANNEXURE

Office of the Superintendent of Census Operations,
Andhra Pradesh—Khusro Manzil, A. C. Guards Area,
Hyderabad—Dated 6th July, 1961.

From

Sri A. CHANDRA SEKHAR, I. A. S.,
Superintendent of Census Operations,
Andhra Pradesh.

To

Sri.....

.....

.....

Sir,

The aim of the Census of 1961 has been not merely to count the people but also to give a picture of their life and culture. Therefore different investigations and surveys have been undertaken this time—(i) survey of people in different parts of the Country, (ii) their fairs and festivals, and (iii) their arts and crafts reflecting their culture. First two surveys are well on their way. I must here express my grateful thanks to thousands of teachers and others who worked as Census enumerators and who have sent us valuable information from different villages on temples and the local fairs and festivals. Encouraged by the happy response, I thought I could depend on the enlightened section of the Country to throw some light on the village arts and crafts for which our Country was once world famous. I am confident that my call to the teachers and other literate gentlemen of the State will not go without adequate response, and that they will serve the Nation by sending the information.

The first aspect, which is an important part of the survey consists in obtaining statistics about industries in the enclosed questionnaire. The second is to collect in respect of all the village industries and crafts as many photographs as possible of artisans at work, photographs or pencil line drawings of the specific designs used by them, particulars relating to the tools and implements employed by them, the raw materials and colours etc., and the final shapes and forms of the finished goods. Collecting first hand information about all the village arts and crafts throughout the State is undoubtedly a stupendous task which cannot be accomplished without the enthusiastic and valuable co-operation from you.

It is important for our purpose to obtain as full an account as possible of unique regional design differentiations, as they sometimes reflect not only the very cultural patterns of our country but the persistent inventive faculties of our living craftsmen. It is necessary to take the shapes, designs and forms of the articles of domestic use also as being pieces of information that show off the cultural pattern and traditional skill of the concerned people. Again, some of the crafts or the goods produced by the expert artisans and craftsmen may not be really popular and may remain to be only rare or costly specimens of artistry and talented skill. It may not be possible for these valuable things to have gained popularity or seen the limelight of the world just because they are not of every day use or within the easy reach of the common man though they are really precious in themselves. Only a comprehensive survey of the kind undertaken by us can achieve for them the right place they deserve.

I trust you will appreciate the need for the data in this regard to be as reliable and exact as possible and I believe you will not hesitate to spare a part of your time to help me by attempting to enquire and give all the information available with you and in your village about the artisan communities and the goods produced by them. The particulars may be furnished in respect of all the arts, crafts and industries practised in your village. I shall gratefully acknowledge your honorary labour by printing the information permanently recorded under your name as the correspondent, and shall be obliged if you will be good enough to send me your reply at your earliest convenience by post, the postage for which will be paid at this end.

Yours sincerely,

A. CHANDRA SEKHAR
Superintendent of Census Operations,
Andhra Pradesh

VILLAGE SCHEDULE OF INDUSTRIES AND CRAFTS

District :

Taluk/Tahsil : N.E.S. Block (if any) :

Town/Village : No.

PART-A

GENERAL DESCRIPTION OF VILLAGE

Describe briefly—

i. Area of village in acres

ii. Population

iii. Approximate number of families

iv. Various sections in the village corresponding to communities and their names and the approximate number of households

Name of community	No. of households	Name of community	No. of households
(*a*)		(*e*)	
(*b*)		(*f*)	
(*c*)		(*g*)	
(*d*)		(*h*)	

v. Distance from nearest Railway station (miles) (give the name of the Railway station also)

vi. Distance from nearest main road (give the name of the road)

vii. Distance from Tahsil/Taluk headquarters

PART-B

ARTISAN COMMUNITIES IN THE VILLAGE (TRIBAL & NON-TRIBAL)

1. Name of caste or community engaged in a handicraft		2. Approximate No. of families of the community engaged in the handicraft	3. Total No. of adult workers		4. No. of families working under co-operation	5. No. of families working in own houses or in work-shops set up by their employers	6. Names of articles produced. Describe the articles and mention approximate sizes and heights
Name of the community	What handicraft		Males	Females			
1.							
2.							
3.							
4.							
5.							

7. Main material used	8. Subsidiary material	9. Whether raw material is imported and if so from where? What are the main ingredients?	10. Who gives the designs	11. Give the names of the designs. Indicate whether they are traditional or made to suit modern requirements. (Give photographs or sketches of the typical designs and forms)	12. Describe colours used. How are the colours obtained?
1.					
2.					
3.					
4.					
5.					

13. Tools used. (Describe tools. Give pencil sketches and photographs separately)	14. Who make these tools and from where are they imported?	15. General description of workshop (use separate sheet of paper if necessary). Kind of power used etc.	16. When did the artisan community come to this village? Who were the patrons? How old is this craft in this village?	17. Describe legends or myths current on the origin of the artisan community and of the craft
1.				
2.				
3.				
4.				
5.				

18. Are there any villages in the neighbourhood where branches of these artisan communities live? If so, give name of village(s) and community.

19. Do the communities produce for their own use entirely? Describe whether for domestic or ceremonial purposes.

20. Whether they produce entirely for others in exchange for money or kind. If so, who are the customers and to which communities do they belong?
    (i) Are they for domestic use?
    (ii) Are they for ceremonial or ritualistic purposes? If so, for which ceremony or ritual.

21. Whether the communities produce for themselves and for sale ?
    (i) Describe types of objects for own domestic or ceremonial use. Mention heights and sizes of objects.
    (ii) Describe types of objects for sale. Mention heights and sizes of objects.

22. Do the communities produce for sale in open markets, fairs & festivals ? Mention the markets, festivals or melas and the occasions.
    (i) Do they make to the order of middlemen who advance money and undertake marketing facilities ?
    (ii) If they make on their own without orders from middlemen, how do they meet their capital requirements? What is their capital investment ?
    (iii) Do they have any marketing difficulties?
    (iv) Do they get any government aid?

23. If there is a co-operative society are there members in it who belong to different castes?

24. Give the names of the designs and myths or stories behind the names, explanation of what the design stands for and the shape or decoration of objects.

25. Describe production.
    (Please describe stage by stage and take photographs wherever possible. Photographs should be supplemented by pencil sketches of surface forms, designs, shapes, colours and processes of paper if necessary for sketches of stages). (If the reporter himself is not capable of making a good pencil sketch he may take the assistance of some local artist).
    (i) First stage
    (ii) Second stage
    (iii) Third stage
    (iv) Final and finishing stage

25. (*a*)—
    (i) Price at which raw material is available
    (ii) Cost of conversion into finished products
    (iii) The usual sale price of finished goods
    (iv) Wages earned

26. Give a list of very skilled craftsmen of each community engaged in handicrafts. (Their names and addresses).

PART-C

ADDITIONAL QUESTIONS FOR TRIBAL COMMUNITIES

27. Is this a tribe where every household produces things for its own use of the community?

28. Is this a tribe of which only particular sections produce particular things? If so, which sections produce which things. Mention names.

Name of section of Tribe	Name of article produced

29. Is this a semi-tribal community and does it produce articles for neighbouring tribes? If so, mention the names of the tribes for which they produce and the names of articles.

Name of neighbouring Tribe	Name of article produced for them

30. Does this tribe produce articles for non-tribal or advanced communities? If so, mention names of these communities and the names of articles. Do they produce articles to reduce debts from *sowcars*?

Names of non-tribal or advanced communities	Names of articles produced for them

31. *General*: Any other useful information about the craft or the community engaged in the craft—historical, cultural or economic.

జనాభాలెక్కల సూపరింటెండెంటు కార్యాలయము
ఆంధ్ర ప్రదేశ్

శ్రీ ఏ. చంద్రశేఖర్, ఐ.ఎ.ఎస్.,
జనాభాలెక్కల సూపరింటెండెంటు,
ఆంధ్ర ప్రదేశ్.

ఖైరతాబాదు, తేది 6-7-61.

శ్రీ.....

.....

.....

ఆర్యా,

ఈ సంవత్సరపు జనాభాలెక్కల లక్ష్యము కేవలము ఎంత మంది ప్రజలున్నారో లెక్కించుటయే గాక, వారి జీవిత పరిస్థితులు, సంస్కృతి సమాచారము సమగ్ర రూపములో చిత్రించుట కూడ. అందుకని యీ సారి — (i) దేశంలోని వివిధ ప్రాంతములందలి ప్రజల అంచనా, (ii) వారి పండుగలు మరియు ఉత్సవముల రూపము, మరియు, (iii) వారి సంస్కృతిని ప్రతిబింబించు కళలు, చేతి పనులు మొదలగు విషయములు గురించి పరిశీలన నిర్వహించడం జరిగింది. (వీనిలో మొదటి రెండు అంశములు చురుకుగా కొనసాగుచున్నవి). జనాభా గణకులుగా పనిచేసినట్టియు, మరియు వివిధ గ్రామములనుండి అచ్చటి దేవాలయములు, స్థానిక ఉత్సవాలు, పండుగలు గురించి మాకు అమూల్యమైన సమాచారము పంపినట్టియు, వేలకొలది ఉపాధ్యాయులకు, తదితరులకు నా కృతజ్ఞతాభి వందనములు తెలియ జేయుచున్నాను. వారి సహాయ సహకారములు నూతనోత్సాహాన్ని పురికొల్పినవి. మన దేశమునకొకనాడు ప్రపంచఖ్యాతి నార్జించిన గ్రామ పరిశ్రమలు, చేతి పనులు, కళలు మొదలగు వాటికి సంబంధించిన సమాచారముగూడ విద్యా వికాసం మూర్తీభవించిన యిటువంటి సేవా తత్పరుల ద్వారా లభించ గలదనే అభిప్రాయము కలిగినది. రాష్ట్రములోని ఉపాధ్యాయులు, యితర విద్యావంతులగు వ్యక్తులకు నేను చేయు యీ విజ్ఞప్తి నిష్ఫలంకాదనీ, మరియు యీ సమాచారము పంపుట ద్వారా వారు భారత జాతికి సేవ చేయుదురనీ నా విశ్వాసము.

దీనితో జతపరుచబడిన ప్రశ్నావళి పత్రములో పరిశ్రమలకు సంబంధించిన సంఖ్యావివరాలు సేకరించుట యీ పరిశీలనలోని మొదటి భాగము. ఇక రెండవది—గ్రామ పరిశ్రమలన్నిటికీ సంబంధించిన, చేతి వృత్తులలో నిమగ్నులై పనిచేయుచున్న కళాకారుల ఫోటోలు, వారుపయోగించు సమూనాల యొక్క ఛాయాచిత్రములు లేక రేఖాచిత్రములు, వారు వినియోగించు పరికరములు, పనిముట్లు, ముడి పదార్థములు, రంగుల వివరములు మరియు తయారైన వస్తువుల యొక్క తుదిరూపురేఖా విలాసములు సాధ్యమైనన్ని ఎక్కువగా సేకరించుట. రాష్ట్రమంతటా గ్రామ సీమలలోని కళలు, చేతి వృత్తులకు సంబంధించిన వివరములు ప్రత్యక్షముగా చూచిన వారినుండి గ్రహించుట మిక్కిలి కష్టసాధ్యమైన పని యనుట నిస్సందేహము. ఇది మీయొక్క ఉత్సాహపూరితమైన మరియు విలువగల సహకారం లభిస్తేనే జయప్రదము కాగలదు.

ప్రత్యేక వ్యక్తిత్వము కలిగి, ప్రాంతీయ వస్తు కళా నైపుణ్యం పుట్టిపడే డిజైనులనుగురించి వీలైనంత సమగ్రమైన వివరములు సేకరించుట మాకు ముఖ్యము. ఎందుకంటే యీ ప్రాంతీయ కళా రూపాలు భారతీయ సంస్కృతి వివిధ శాఖలకు ప్రతిబింబములుగా వుండుటయేగాక, నూతన కళాఖండాల సృష్టిలో మన పనివారల బుద్ధి కౌశలానికీ, భావనారీతులకు ప్రతినిధులుగా వుంటాయి. మామూలుగా యింటి పనులలో వినియోగించుకొనే వివిధవస్తువులకు సంబంధించిన నమూనాలు, రూపవైఖరులుకూడ గమనించుట అవసరము. వీనివలన ఆయాప్రజల సంస్కృతీ విధానము సాంప్రదాయ ప్రవృత్తి గోచరమగును. కొన్ని వస్తుకళలు, మరియు కొందరు వృత్తి విద్యా నిపుణులు తయారుచేసిన వస్తువులు ప్రజా బాహుళ్యములో ప్రచారము పొందలేక, అరుదుగాను లేక మిగుల ఖరీదుతోమాత్రమే దొరుకుచూ కళాకారుని నైపుణ్యానికి నిదర్శనాలుగా మాత్రమే ఉండిపోవచ్చును. ప్రశంసనీయమైన వస్తువులే అయినప్పటికీ, నిత్యజీవితములో వాడుకకు వీలులేనందువల్లనేమి, లేదా సామాన్యప్రజల కందుబాటులో లేనందువల్లనేమి యివి వెలుగులోనికి రాజాలకపోయి వుండవచ్చును. ఇప్పుడు మనము ప్రారంభించినటువంటి సమగ్ర పరిశీలన వల్లనే యిట్టికళాఖండాలకు సముచితమైన స్థానము లభించగలదు.

ఈ విషయములో సేకరించే వివరాలు సాధ్యమగునంత సరియైనవిగాను, విశ్వసనీయమైనవిగాను వుండవలెనను అవశ్యకతను మీరు గుర్తించెదరని ఆశించుచున్నాను. మీ మీగ్రామములలోని వృత్తికళాకారులు, వారు తయారుచేసే వస్తువులను గురించి మీ వద్దను, మీ గ్రామములోను లభ్యమగు వివరములు విచారించి తెలియజేయుట ద్వారా నాకు దోడ్పడుటకై మీ యొక్క అమూల్యకాలములో కొంత వెచ్చించుటకు వెనుకాడరని నమ్ముచున్నాను. మీ గ్రామములోవుండే కళలు, వృత్తులు, పరిశ్రమలనన్నిటి గూర్చిన వివరములు తెలుపగోరెదను.

మీరు పంపునట్టి సమాచారము శాశ్వతముగా మీ పేరున వివేఖరిగా ముద్రింపించి యుంచుట ద్వారా మీకు ధన్యవాదములు తెల్పెదను. సాధ్యమయినంత త్వరలో మీ సమాధానము పోస్టులో (యిందుతో జతపరచిన కవరులో) సంపినచో కృతజ్ఞుడను. పోస్టేజి కగు ఖర్చులు మీరు భరించవలదు. యీకార్యాలయమే భరిస్తుంది.

మీ ఆత్మీయ,

ఎ. చంద్రశేఖర్

జనాభా లెక్కల సూపరింటెండెంటు.

గ్రామ పరిశ్రమలు మరియు చేతిపనుల పట్టిక.

జిల్లా :

తాలూకా/తహశీలు :

పట్టణం/గ్రామం :

జాతీయ విస్తరణ సేవా
కేంద్రము (ఏదైనావుంటే):

సంఖ్య:

భాగము: 1.

గ్రామం గురించి సాధారణ వివరణ.

క్లుప్తముగా వివరించునది.

i. గ్రామ విస్తీర్ణము(ఎకరములలో)

ii. జనాభా.

iii. కుటుంబముల సంఖ్య (సుమారుగా)

iv. గ్రామములో నుండు వివిధ కుల/వర్ణముల పేర్లు, ఒక్కొక్క వర్ణ మునకు సంబంధించిన కుటుంబముల సంఖ్య (సుమారుగా)

	కుల/వర్ణము	కుటుంబముల సంఖ్య
1.		
2.		
3.		
4.		

v. అతి సమీపములో నున్న రైల్వే స్టేషను ఏది?
అది ఎంత దూరమున్నది?

vi. దగ్గరలో నున్న ముఖ్య రహదారి పేరు, ఎంత దూరములో నున్నది తెలిపేది.

vii. తాలుకా/తహశీలు ముఖ్య పట్టణమునుండి దూరము.

భాగము: 2.

గ్రామములోని చేతిపరిశ్రమలకు సంబంధించిన పనివాండ్ల వివరములు.

1. చేతి పరిశ్రమలో పని చేయు కులము/వర్ణము/సమాజపు పేరు.
కులము/వర్ణము పేరు.
ఆ కుల/వర్ణమునకు సంబంధించిన చేతిపరిశ్రమ పేరు.

2. చేతి పరిశ్రమలలో పొల్గొంటున్న కుటుంబముల సంఖ్య (సుమారుగా)

3. వయోజన కార్మికుల మొత్తపు సంఖ్య
పురుషులు
స్త్రీలు

4. సమిష్టిగా అనగా కోఆపరేటివు విధానముగా పనిచేయు కుటుం బముల సంఖ్య

5. స్వంత గృహములలో లేక యజమానుల కార్ఖానాలలో పని చేయు కుటుంబముల సంఖ్య.
స్వంత గృహములలో
కార్ఖానాలలో

6. తయారుచేయు వస్తువుల పేర్లు, వస్తువుల వర్ణన, పరిమాణము, ఎత్తుల వివరణ తెలిపేది.

7. తయారు చేయుటకు ఉపయోగింపబడే ముఖ్య పదార్థము.

8. సహాయ పదార్థములు.

9. ముడిపదార్థములు దిగుమతి చేయబడుచున్నవా? అయినచో ఎచ్చట నుంచి? అందులో చేర్చబడుముఖ్య వస్తువులు.

10. డిజయినులు (Designs) నమూనాలు సృష్టించువారి పేరు.

11. నమూనాల పేర్లను తెలుపుడు. ఈ నమూనాలు సాంప్రదాయాను సారంగా లేక ఆధునిక పరిస్థితుల దృష్ట్యా తయారయినవా? నమూనాల యొక్క ఛాయాచిత్రాలుగాని, లిఖిత చిత్రములు గాని వీలున్నచో జతపరుచవలయును.

12. వాడే రంగులు వివరించునది. రంగులు ఏవిధంగా సేకరింపబడు చున్నవి?

13. ఉపయోగింపబడు పనిముట్లు. (పనిముట్ల గురించి వివరణ. పనిముట్ల ఆకారాలు పెన్సిలుతో బొమ్మలు వేరే పేజీలో వ్రాసి చూపేది. లేక ఫోటోలు తీసి వుంచేది).

14. ఈ పనిముట్లు తయారు చేయువారెవరు? ఇవి ఎక్కడనుండి దిగుమతి చేయబడుచున్నవి?

15. కార్ఖానా (Workshop) గురించి సాధారణ వివరణ. (అవసరమైన ప్రత్యేక పుటలలో వ్రాయండి) కార్ఖానాలలో వాడేశక్తి (Power) ఏది?

16. ఈ పనివాండ్రు ఈ గ్రామమునకు ఎప్పుడు వచ్చినారు? పోషకులు ఎవరు? ఈ గ్రామంలో ఈ చేతి పని ఎంతకాలంనుంచి నిర్వహింప బడుచున్నది?

17. పనివాండ్ర కులము లేక సమూహము యొక్క, మరియు చేతిపని యొక్క పుట్టు పూర్వోత్తరాలు, వాటిని గురించి కథలు, గాథలు.

18. పనివాండ్ర కులముల విభాగములు నివసించు పరిసర ప్రాంతాలలో యేవేని గ్రామములు కలవా? అయినచో ఆ గ్రామముల పేర్లు మరియు కులము (సమూజము) పేరు.

19. ఆ సమాజములు ఉత్పత్తి చేసే పదార్థములు పూర్తిగా స్వంత ఉపయోగార్థమేనా? అవి నిత్యజీవితావసరాలకా లేక ప్రత్యేక పూజ, మొదలగు కార్యములకై ఉపయోగించుటకా తెలుపుడు.

20. ఈ వస్తువులను కేవలం విక్రయించుటకు గాని, వస్తు మార్పిడికి గాని ఉత్పత్తి చేస్తున్నారా? అయినచో ఆ కొనుగోలు దార్లెవరు? వారే సమాజమునకు, కులములకు చెందినవారు.

(i) ఇవి నిత్య జీవితావసరాలకు పనికి వచ్చే వస్తువులా?

(ii) ఇవి ప్రత్యేక కార్యములకు గాని, మత సంబంధీకమైన పూజ, పుణ్యకార్యములకు గాని తయారుచేసినవా? అయినచో ఆ కార్యము పేరును తెలుపుడు.

21. వారు తయారుచేసేవి స్వంత ఉపయోగార్థమునకే కాక అమ్మకానికి కూడానా?

(i) తమ స్వంత ఉపయోగార్థము తయారు చేసే వస్తువులు, ప్రత్యేక కార్యములకు తయారుచేసే వస్తువుల వివరణ తెలుపుడు. ఆ వస్తువుల ఎత్తు, పరిమాణములను వివరించునది.

(ii) అమ్మకమునకుగాను తయారుచేయబడు వస్తువులవివరణ, వాటి కొలతలు, పరిమాణములను వివరించునది.

22. బజారు, సంతలు మరియు ఉత్సవాలలో అమ్మకానికిగాను వస్తువులను ఈ పనివాడు తయారు చేయుచున్నారా? ఆ బజారు, సంతలు, మరియు ఉత్సవాలేవో తెలుపునది.

(i) పెట్టుబడిపెట్టి విక్రయపు సదుపాయములను చేసే మధ్యవర్తుల ఉత్తరువు (Order) ప్రకారము వస్తువులను తయారు చేసెదరా ?

(ii) ఏ మధ్యవర్తిలేకుండా తనకు తానై వస్తువులను తయారు చేస్తుంటే—అతడు ఏ విధముగా పెట్టుబడిని సమకూర్చుకొన గలుగుచున్నాడు? పెట్టుబడి ఎంత వున్నది?

(iii) వస్తువుల అమ్మకంలో వారికేమైన యిబ్బందులున్నవా?

(iv) వారేమైనా ప్రభుత్వ సహాయం పొందుచున్నారా?

23. గ్రామములో సహకార సంఘమున్నదా? వివిధ వర్గములవారు ఆ సంఘములో సభ్యులుగా వున్నారా?

24. నమూనాల పేర్లు, వాటి నామముంకు సంబంధించిన ప్రాచీన గాథలు, పురాణ కథలు వ్రాయునది. అనగా నమూనా యొక్క భావమేమి? అలంకారము లేక ఆకారము యొక్క వివరణ తెలిపేది.

(షరా:—అవశ్యమైతే వేరే పుట మీద వ్రాసేది)

25. ఉత్పత్తి వివరణ.

వస్తువు ఉత్పత్తి యొక్క వివిధ దశలను వివరించవలెను. దశల ఛాయా చిత్రములను తీయవలెను. ఛాయా చిత్రములతో బాటు వస్తువుల ఆకారము, నమూనా, రంగులు తెలిపే పెన్సిలు చిత్రములను కూడా వ్రాయునది. (లేఖకుడు బాగుగా పెన్సిలు చిత్రములు వ్రాయలేక పోయినచో, ఆ ప్రాంత మందలి చిత్రకారుని సహాయము పొందవలెను). వేరే పుటలో చిత్రములను వ్రాసేది.

(i) మొదటి దశ.

(ii) రెండవ దశ.

(iii) మూడవ దశ.

(iv) చివరి మరియు ముగింపు దశ.

25. (a) (i) ముడి పదార్థము దొరకు వెల.

(ii) తయారైన వస్తువులుగా మార్చుటకు అగు ఖర్చు.

(iii) తయారైన వస్తువుల మామూలు అమ్మకపు వెల.

(iv) పనివాడు సంపాదించెడి వేతనము లేక లాభము.

26. ప్రతి సమాజమునందు పరిశ్రమకు చెందిన అతి నిపుణులైన పనివాడ వట్టిక (ఆ పనివాడ పేర్లు మరియు చిరునామాలు).

భాగము: 3.

కొండజాతులకు అదనపు ప్రశ్నావళి.

27. ఇది ప్రతి కుటుంబము తము స్వంతమునకుగాని లేక సమాజ ఉపయోగమునకు గాని అన్ని వస్తువులు తయారు చేసుకొనే జాతియా?

28. ఇది కొన్ని ప్రత్యేకమైన శాఖలు, కొన్ని ప్రత్యేకమైన వస్తువులను మాత్రమే తయారు చేసే జాతియా? అయినచో ఆ యా శాఖలు తయారు చేసే వస్తువులేవి? వాటి పేర్లు తెలుపునది.

జాతిలోని శాఖ పేరు.

తయారు చేసెడి వస్తువు పేరు.

29. ఇది కొండ జాతులకు చెందీ—చెందనటువంటి (Semi-tribal) జాతియా? మరియు ఆ జాతి తయారు చేయు వస్తువులు, ఆ పరిసర ప్రాంతములలోనున్న తెగల గురించి తయారు చేయబడినవా? అట్లయితే ఏ తెగల కోసం చేస్తున్నదీ, ఆ వస్తువుల పేర్లు వివరించునది.

పరిసర జాతుల పేర్లు.

వాటి కోసం తయారు చేసే వస్తువుల పేర్లు.

30. ఈ జాతివారు కొండజాతులకు చెందనివారికి, మరియు పురోభివృద్ధిచెందిన సమాజములకు వస్తువులు తయారు చేయుచున్నారా? అయినచో ఆ జాతుల పేర్లు, వస్తువుల పేర్లు వివరించునది. షావుకార్ల దగ్గర పుచ్చుకొను అప్పులు తీర్చుటకు గాను వీరు వస్తువులు తయారు చేయుదురా?

కొండ జాతులు కాని సమాజము లేక పురోభివృద్ధి చెందిన సమాజముల పేర్లు.

వారికోసం తయారు చేసే వస్తువుల పేర్లు.

31. సాధారణము.

చేతి పనుల గురించి లేక చేతి పనివాండ్ర సమాజ విషయమై—చారిత్రక, సాంస్కృతిక లేక ఆర్థిక విషయములు—మరేమైన విలువయిన విషయాలుంటే వివరించునది.

గమనిక:—ఏ కాలములో నైనను జవాబు వ్రాయుటకు స్థలం చాలని యెడల వేరే పుట జతపరచి వ్రాయవలెను.