Chitra

PARAMPARYAM



Volume 9

Repository of Painting Techniques



STUDIO
PARAMPARYAM

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Title Page: 'Lotus' Pan-Indian Medley of Lotuses Purity, beauty, divinity, ethereality
Through Ajanta-Chittannavasal-Kalamkari-Miniature - through Rajasamudra - Pichwais
Wandering through these ethereal landscapes of "Nalini" in adibhanga, with the gentle breeze rustling tender leaves, which in turn sprinkle dew droplets that sparkle and play hide and seek in the sunlight; with white hamsas a-wing, while fishes cavort; the whole expounding the divine visual and aural harmony of nature: this is a perennial spring of creativity for artists through the ages, past and present, extending forward beyond time and space

List of Chapters

Prologue

Chapter I: Bhimbetka

Cave paintings are probably the antecedent of wall murals, with no adhesives only using the earth and vegetable colours.

Chapter II: Folk and Tribal

With the evolution of agrarian settlements, folk and tribal groups evolved with their own intuitive stylisations based on the climatic conditions and faith, using vegetable earth and mineral colours. The tools could be chewed up twigs, sharpened twigs, rag balls tied around a stick or hands. Mostly mud walls were coated with cow dung and background painted with rice flour paste or wheat flour paste or red earth and later with lime and sand plaster.

Chapter III: Murals Fresco and Tempera

Mural paintings, dealing with the decoration of walls and ceilings, is organically connected with architecture and demands efficient use of colour, design and thematic treatment by experienced artists.
Tempera and Fresco are the two mural painting techniques widely used in Indian wall paintings.

Chapter IV: Other Canvasses

Palm leaf, paper,silk, marble,Ivory,Sandalwood, Thanjavur, Mysore, Kalamkari etc.

Epilogue

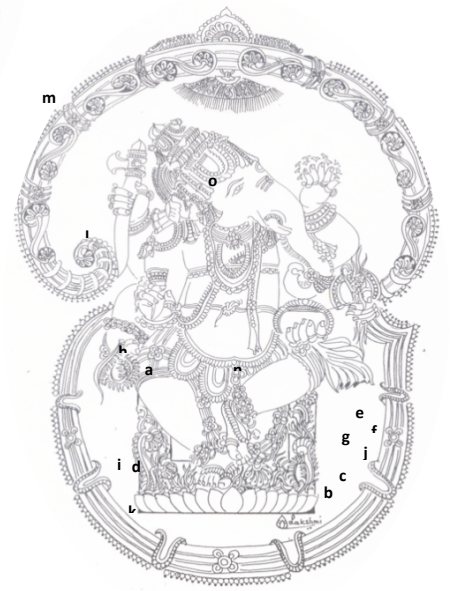
Introduction to approximate location of the areas under study, tools, styles and colours



Recorded History of Paintings

Folk and Tribal

1. Instinctive Bhimbetka
2. Interactive Warli
3. Intuitive Pithora
4. Introduction of iconographic expressions Phad and Chattisgarh
5. The flowering of other forms
   a. Andhra
   b. Bengal
   c. Bhil Tribes
   d. Bihar
   e. Chattisgarh
   f. Gujarath
   g. Himalayas
   h. Karnataka
   i. Kerala
   j. Maharashtra
   k. North Eastern States
   l. Orissa
   m. Rajsthan
   n. Tamil Nadu
   o. Uttarpradesh

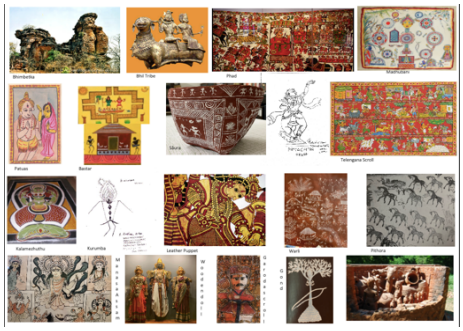


a. Ajanta, Badami, Bagh, Ellora
b. Pallava- Pandya- 7-9 AD
c. Chola
d. Hoysala Murals
e. Kakatiya
f. Vijayanagara 1336 - 1646
g. Nayak Murals
h. Maratha Murals (Jamoda Jaina)
i. Karnataka
j. Andhra
k. Kerala
l. Rajasthan Schools
m. Muslim influence
n. Bamini Sultanate
o. Moghul Murals
p. *Ladakh - Buddhist Paintings*





Tools and styles

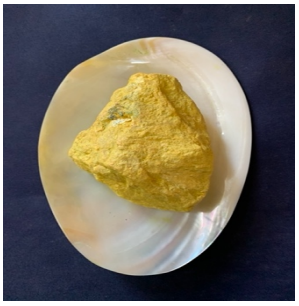


"An idle workman quarrels with his tools" Devaki Nandan Sharma









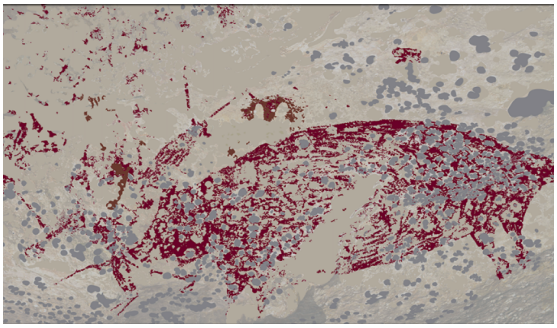

Sampler of Colours
1-All earth and mineral colours have to be soaked overnight in fresh water, top water removed and the process repeated thrice.
2-Pigments are ground with gum for temperas, while alkali friendly colours are used for frescoes without any additives

Prologue

To adorn was a natural desire.

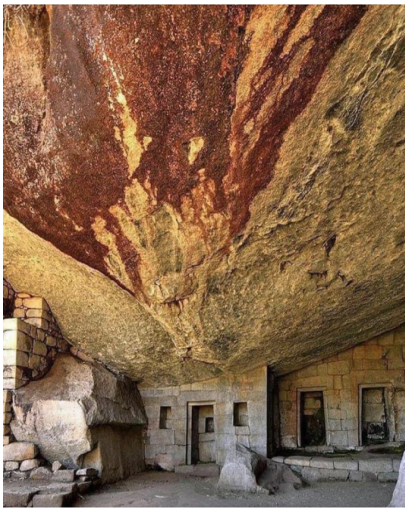
From prehistoric times till date, one can perceive a common thread linking the past and present continuously like a mitochondrial web.





Madya Pradesh, India Ref: Times Entertainment, March 15th 2019 and Sulawesi, Indonesia, Ref: The Hindu, 4th July 2024, World's oldest Paintings…

The Temple of Moon Machu Picchu, Peru approximately 1500 years old Ref: nationalgeographic.com- and Lomas Rishi cave, Barabar Hills, Gaya, Bihar, India, Maurya Empire (322 to 185 BCE)





The earth, mineral and vegetable colours vary according to the geographical conditions of the area.



Yellow ochre
mountain in Udaipur

Rainbow mountains of
China and Peru





The Egyptian Blue. Reference-Ancient Mysteries Post, FaceBook

Lapis Lazuli was expensive and the need for an alternative source required to portray royalty and divinity precipitated the making of blue artificial pigment, 5000 years ago in Egypt. Ground mixture of silica, lime and copper in alkaline base was heated up to 800-900 degrees Celsius to produce the Egyptian Blue. The technique is still being used. (First discovered in the painting of a tomb of the reign of ka-Sen, the last Pharaoh of the first dynasty).





Fifty different varieties of indigo plant, another source for blue, have been identified the world over, each producing a different tonal value of the same hue.

Necessity is the source of inspiration and curiosity helps fuel the fire to glow continuously.

Names and meanings of some common terms used in the compendium

- Mud walls – Clay, cow dung, some hay or broken twigs or rags and/or paper shreds are mixed together for application
- Gums/adhesives:

Vajralepa - could be from animal origin. Gelatinous glue from the skins of buffaloes (Mysore Paintings) or Camel (Rajasthan) prepared by boiling in water until creamy are dried in the sun and rolled into sticks. They are boiled with water whenever needed.

Niryasakalka – Could be sourced from babul, neem, bilva, wood apple, mahua, tender coconut water, alcohols and lac.

- Colours: The agrarian scenario of India has precipitated a highly sensitive colour coding and life style to suit the different climatic conditions. For example:

- Emerald green of Kerala infused white colour in their *dhoties* and *mundus,* while the art forms had a bright colour palette as could be seen in their *Kathakali* and murals
- Tamilnadu imbibed with the fragrance of *Kadambam (Assorted scented flowers strung together)* infused a subtler colour palette
- Karnataka with its hills and dales precipitated an *adibhanga* sensitivity to their art forms
- While Orissa with the stylised Icons used stylised pith and silver in their costumes and similar feelings in their fine arts
- Rajasthan devoid of colour went all out into bold colour rhapsody.

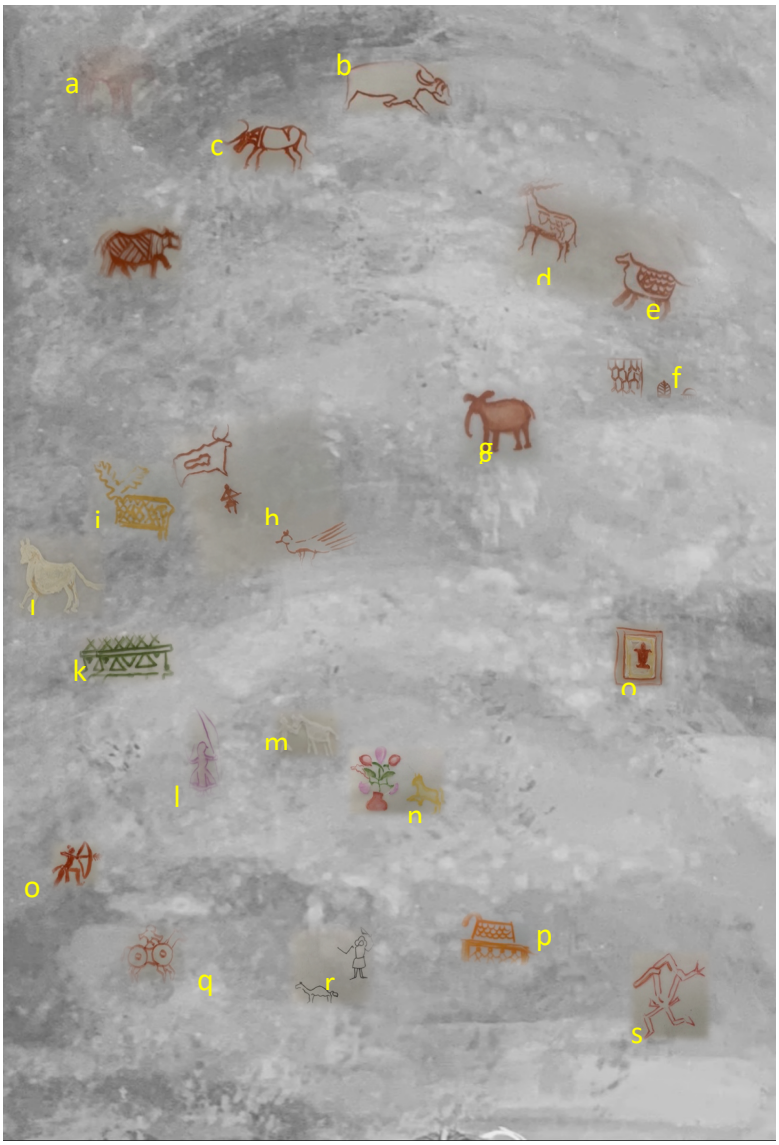
- Canvasses:

  Vasli: Two layers of handmade paper, cotton or *Tassur* silk stuck together using wheat or rice flour and the top surface polished with agate or smooth seeds.

Chapter I

Bhimbetka

They have all been executed on the rock surfaces, using earth colours - ochres of red and yellow, intuitively in protected areas like the underpart of an overhang or inside walls without any adhesive. Use of black after the discovery of fire. Lime stone was always there in use. With technological innovations more and more cave paintings are being discovered keeping us in *awe*.



8500 BCE to 1600 CE Cave Paintings – Different Treatmaents All on Rock Face.

Key:

a, b, c, d, e, f: Mesolithic 8000 to 2500 CE

g, h, i, j: Neolithic, Charcolithic and Early Iron 2500 to 3000CE

k: Early Historic, Mauryan and Sunga 3000 to 1000 CE

l, m: Kushan1000 to 300 CE

n, o: Gupta300 to 500 CE

p: Post Gupta 500 to 800 CE

q: Early Medieval 800 to 1300 CE precursor to Pithora!

r, s: Late Medieval 1300 to 1600 CE Double line precursor to Warli and later sculptures where the 2nd line is considered as *Jiva-Rekha* (Life giving line)!!!

Chapter II

Folk and Tribal Mud Walls and floors

Warli, Pithora, Chattisgarh, Madhubani, Kalamezhuthu (Rangolis or Kolam).

Folk painting and Sculptures: Started as wall paintings with religious intonations, evolved as pictorial narratives to suit the travelling bards.

Mud walls: Mud walls prepared were coated with a mixture of rice or wheat flour added with gum and then painted.

Quintessential Guidelines

- The force of line, Rekha, is the hallmark of Indian painting and symbolism its expression.
- They are written to fulfil the ritualistic, mythical and educational needs of the people and not for just art's sake.
- It is a collective endeavour of the community, intuitive and spontaneous, not an individualistic creation.

The materials used for the paintings were very fragile as most of the times may have had to be recreated for ritualistic purposes keeping the need and tradition alive. Necessity for portable canvasses both for educative and entertainment purposes precipitated many canvasses (would be discussed under chapter on Other Canvasses.

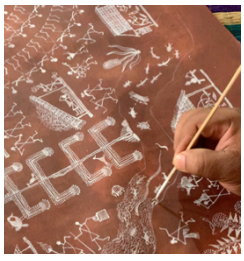
Warli

a. Red earth colour was applied as a background.

b. As an extension of Bhimbetka Paintings, simple geometric forms are used to narrate stories of nature, gods, and humans, with ritual and oral traditions in a continuous circular movement. They were drawn with rice flour using bamboo sticks rounded at the edges to suit varying thicknesses.

Simple delineation
for women - bouffant







- *Pithora*

On white background a stylised multicolour rainbow demarcates heaven and earth. *Pithori* Devi riding a horse, with her mother, husband and a retinue of soldiers are the highlights this school.

A cut out of horse body



is used to replicate the paintings.



White horses without mounts painted on a wall signify ancestral worship.



- *Kurumbas Tamil Nadu*

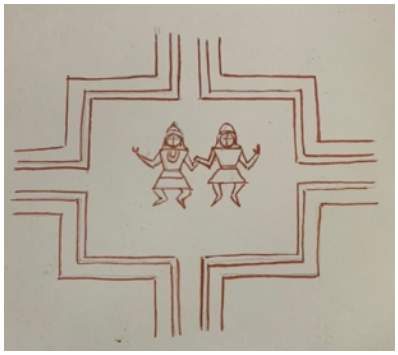
Portrayal of head as an electric bulb may be with an innate understanding of brain power! They would even use tea decoction to paint! (a recent painting shown below)





○ *Introduction of Iconographic Representation*

Chattisgarh: The paintings are done on sanctified floor space indicating the shift to the beginning of iconographic representations probably as four entrances like a mandala are drawn with stylised Raja and Rani (The local version of Lakshmi and Vishnu) in the middle. The painting begun as a mark



of thanking for good harvest as the procession leaves the house, has to be finished as it returns after 11 days, to be sanctified and worshipped.

Phad (dealt with in chapter IV, Canvasses)

○ *Madhubani Bihar Kayastha, Brahminical and Tattoo traditions*

Mud walls are coated with a white wash for all three schools.

The *Kayastha* tradition is characterised by the line works in red and black colours. A typical example is the *Kobharghar* paintings. The pictograph executed by *suvasini* women (married women whose husbands are alive) represents the *Purna kalash* concept of fertility.

The symbolism-



The lotus - *The female Khobar*

The groom - *The bans or bamboo groom*

The crisscross lines - Prolific growth

Lalpatia suga -A pair of parrots*, Nag-nagin*- entwined cobras, *tortoises, fishes, sun and moon- Fertility*

Bidh bidhata - Birds of destiny

Naina Jogin- Goddesses with magical powers *(they are painted on the four corners of the bedchamber to ward off evil spirits.*

- ## *The Brahmin Tradition*

Access to and awareness of iconography and mythology from mother to daughter has brought about an intrinsic expression of tantric and religious intonation into their colourful paintings. Probably the earlier Janakan rule has imbibed all the knowledge system genetically!!

A painting of *Dasavatar* for instance painted with colour coordinated iconographic details makes one wonder, who is the scholar, the urban graduate or the so-called tribal artist!



- ## *Tattoo Tradition*

The legend of *Raja Salesh* created by a serial replication of stylised images with the colours of the *Brahmin* tradition and the delicate lines of the *Kayastha tradition* is the hallmark of the *Tattoo Tradition.* Fig – The retinue of *Raja Salesh Probably the beginning of Block Printing!*



Chapter III

Murals: Fresco and Tempera

In Tempera, the pigments are either ground in a medium miscible with water like gum or with egg white or yolk,casein etc. where the paintings have their distinctive qualities as are emulsions (admixture of water based pigments and gum and oil from egg) which work like the modern day acrylic colours in that it gets fixed once dry.

Fresco is a method of painting on freshly applied, wet, lime plastered walls with chosen earth and mineral colours (alkali friendly) ground with fresh water. The colours dry and set with plaster and become a permanent part of the wall (Fresco Buono or True Fresco). In Fresco Secco the colours are applied on lime plastered walls without any adhesive. In both, the ground consists of two plasters, the rough plaster consisting of well slaked lime and sand or marble powder and the fine plaster is of well slaked lime. The ground appears smooth and the highly polished surface is of great advantage in the dust laden atmosphere.

Preparation of lime for frescoes (Ref- W.B.Sarsfield Taylor, London, Chapman and Hall -186.Strand 1843).

To make it whiter- Place the slaked white lime reduced to fine powderin a large tub, mix well with water. As the lime settles, decant and add fresh water again. Repeat the process for 8 days.

Divide it into cakes, dry to store. When needed,can be improved by adding water.

It could be stored for years buried in earth, covered with enough water on top to keep it buttery as it ages becoming less caustic.

The lyricism in the Ajanta paintings continued till the Chola frescoes in Brahadeeswarar temple. Painting scenario came back in highly stylised form during Vijayanagara-Nayak period, to transform with the focus on the main subject being portrayed bigger than the other during Maratha Period.



Ajantha –Badami – Chola – Vjayanagar/Nayak -Maratha

Kerala Mural Tempera



Highlights

- The only technique using bio degradable tender coconut (freshly plucked) water instead of gum to fix the lime against the normal procedures of using inert sand or marble powder.
- Each colour may need 25-30 washes, but dries spontaneously to enhance speed.
- Only spot shadings are used for shading.
- The vibrant colours reflecting Kathakali and other art forms are vibrant.

Wall Preparation Materials required

1 - Sieved sand

2 - Slaked Lime: Preparation

Shells are mixed with coal and cooked at 300 degrees Celsius. Sand and dirt are removed. The pure white shells are powdered, sieved through no.40 mesh sieve and stored in dust free atmosphere.

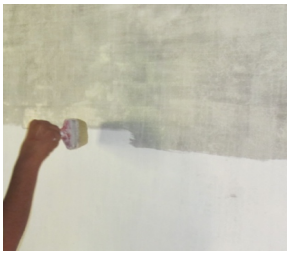
The lime is prepared to a buttery consistency by adding water as and when required. (Caution - The Mixture will be very hot)

3 – Jaggery or Kadukkai soaked in water the previous night to ferment is filtered to remove dirt.

4- Cotton

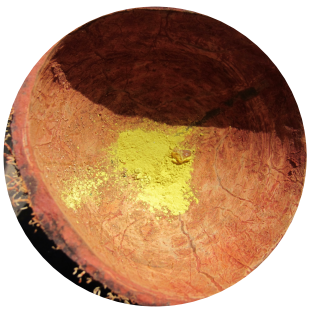
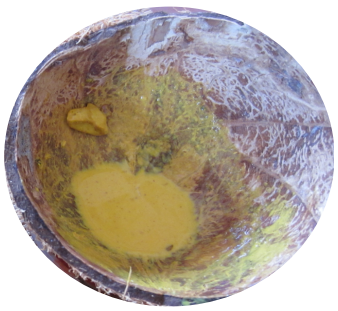






The Process

- The wall plastering is removed to expose the bricklayer.
- To two parts of sand one part of the freshly prepared lime and the jaggery water (one ball of jaggery) added are mixed thoroughly to required consistency.
- This mixture is applied on the wall to make a Base Coat.
- 100 grams of cotton mixed to two parts of sand and one part of lime and ground to a buttery consistency is applied over the base coat to tamarind leaf thickness. - Second Coat
- Fresh coconut water from freshly plucked tender coconuts added to the buttery slaked lime to a milky consistency is applied over the second coat at least 25 times to get the required whiteness. Sugar is added to the last three coats Once the tender coconut water and lime are mixed the mixture has to be used within a few hours as it would turn yellow otherwise.) The wall is ready to sketch with yellow ochre.


Earth, Vegetable and Mineral Colours used for the Murals

Colour	Name	Binder
Red Ochre	Laterite (*VettuKallu*)	Neem Gum
Yellow Ochre	Laterite (*VettuKallu*)	Neem Gum
Tomato Red	Chayilyam (Hingloo from Rajasthan, Mineral (Sulphate of Mercury)	Neem Gum
Lemon Yellow	Maniyola (Red Arsenic)	Neem Gum
Dark Green	Neelamri (Indigo Ferra)	Neem Gum
Greenish Black	Anjanakkal used for Kathakali make up (Antimony Sulphate)	Neem gum
Golden Yellow	Eruvikkara	Neem Gum
Brown	Padimuham barks are boiled to a kashayam and dried	No additive required
Black	Enna Kari (Lamp Black)	
Yellow	Adakya (Betel Nut)	
Blue from Indonesia, China	Pooneelam	Neem Gum
Copper Sulphate blue	Copper Sulphate Blue (Chemical)	No additive required

The Ochre colours soaked in water to remove the impurities, are ground with water, sieved, dried and stored.

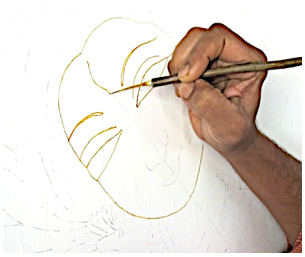


The colours are then prepared by rubbing neem gum crystal and the powdered and /or the stony colour sources in dried cleaned coconut shells with a little water a smooth cream consistency.

The Brushes

The Brushes are made from arrow grasses (*Eyampul)* which are soaked in hot water for half an hour and dipped in milk or *Kadukka* water for strengthening. The chosen feathery tips are dipped in water and tapped on a flat surface to get even bottom line and are strung together with cotton thread. The handle is made from bamboo stems which are sharpened in the middle to look like a nail. The prepared brush is inserted and fixed with cotton thread to be used for drawing the outlines.















A wonderful medium for water colours, enhancing both transparent and translucent build up for washes as each stroke dries spontaneously.









In all the other temperas, the additive alone changes as in Ajanta, Vijayanagar-Nayak etc.

Fresco, Tempera and allied Techniques.

Both Chola and Jaipur frescoes use same techniques

Only difference is the use of sand instead of marble and only ochres and black colours in Chola Frescoes.



Jaipur style

Wall Preparation

Knock down plaster gradually with a stone, remove debris, sprinkle water with a homemade brush.

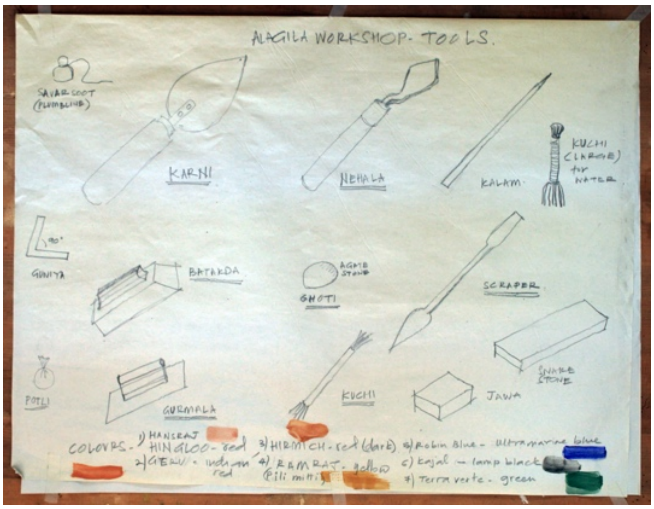
Masala

- Make plaster with chunam and sand 1:3, or chunam and *Khor* (brick powder) to give a light pink finish.
- Three parts marble powder to one-part slaked chunam, are ground to a smooth paste with water from chunam.

Nuances learnt

Pink city plastering done with chunam and brick powder and maintained by painting with Indian red and chunam.




ALAKILA WORKSHOP- TOOLS.
KARNI
KALAM
GUNIYA
BATARDA
GHOTI
SCRAPER
KUCHI
JAWA
COLORS-
1) HANGRAJ
HINGLOO- red
2) GERU - indian red
3) HIRMICH - red (dark)
4) RAMRAJ - yellow
Pili mitti
a) Robin Blue - Ultramarine blue
c) Kajal - lamp black
d) Terra verte - green



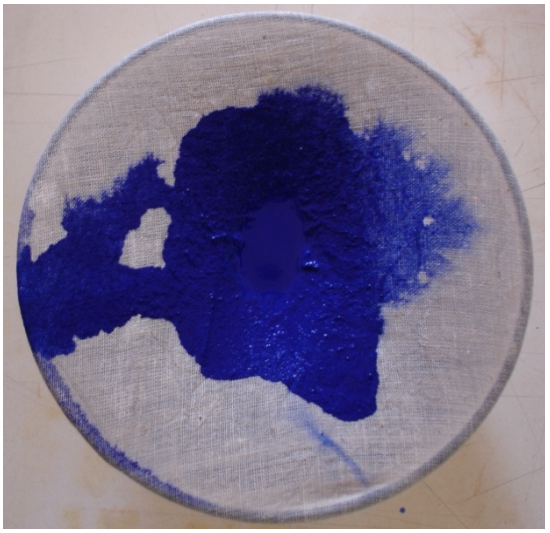














Only red, yellow, terraverte (green) are alkali friendly.

Vermillion, blue and black need to be mixed with terraverte or either one of ochres for clearer tones or with chunam (less bright) before application.

To note-as terraverte sources have almost depleted, chrome green used for ceramics is used instead.

The Colours

Ramraj-light (Yellow ochre)

Ramraj-dark (Yellow ochre)

Hirmich-dark (indian-red)

Hirmich-light indian-red)

Terraverte- green

Sinduri- Hanuman colour (Orange)

Neel- Robin blue

Kala or Kajal –black (lamp black+charcoal).

Jaipur Tiles

Sieved sand-3parts

Cement -1part

Mix thoroughly with just enough water to get a smooth consistency. Mark the required size on a paper. and place four ½ inch reapers to form a rectangle.

Pour the cement mixture to a little above the ½ mark of the reaper.

Place four ¼-inch rods just inside of the rectangle. Wait for a few minutes. Pour the marble chunam masala till the top. Wait for a few minutes. Remove the reapers and finish the sides with the masala to smoothen and straighten the sides. The top should be flat and the sides at 90 degrees to each other.

Tempera Tiles

Preparation of saras (glue prepared from camel skin):

Put it in water and keep out in the sun or boil.

While mixing gum, do not rub on sides of mutka or earthenware, as the clay will come off.

use porcelain for all purposes. Can use earth and chemical colours mixed with gum.

Alternatively, instead of khor even marble powder could be used depending on the surface needed. On the prepared cement base as before, apply a mixture of 3 parts Brick powder to 1part of Saras. Then apply of 3 coats of bosco kadia (lime with alumina giving it a porcelain sheen) with gum.

Plastering

- Sand + Chunam – Country side
- Khor + Chunam – Towards desert

Polishing-

Wall: Rub down with marble slab (flat) to get a uniform surface. Wet the area with brush (hay) nicely.

1part chunam sieved in cloth

1part marble powder

Mix thoroughly

Apply with flat brush vertically and horizontally, alternatively.

Smooth out with a smooth marble slab 2"x 2". Repeat 3-4 times. Any niches in the surface apply the masala and clean and wait after every step.

Apply chunam also the same way 3-4 times.

Polish with the agate till the entire surface is covered. When needed apply chunam only.

For a crack in the surface, apply chunam and marble masala.

If the surface is uneven, use chunam masala.

No water is applied after this.

With plumbline, mark the edge. Cut away the extras with instrument ¼ width.

Use *guniya* to correct edges.

After correcting edges, use agate to clean and polish edges.

Do not put water near the polished area. Use tools carefully. Do not get chunam on hand or on cord part of the brush.

Clean with soft cloth.

Colours

After applying 3 coats of chunam, apply 3 coats of colour and then polish with agate.

When polishing 3 colours at a time:

1. Do we first finish apply one coat of colour to all? Yes, while you wait for one to dry.
2. Do we finish the second and third coats for the first colour polish and then proceed to the second coat of second colour? Yes.
3. How else to do it before drying? No other way, except the amount of water you apply before starting the work counts (one hour minimum).
4. What stage in the marble masala or chunam can the work be stopped to resume without spoiling the finish? Small gaps like ten minutes and no more. 3 hours should be enough for the work.

Black

Charcoal powder 1 part

Kajal (Lamp black prepared from burning a wick in gingelly oil or groundnut oil and the soot collected) 1 part

Grind the above two with stone.

Colours should be placed in a bigger vessel of water.

Important: Never use black, blue and sindhoor without using chunam. To begin with green, yellow and red (pure colours) should be used.

After finishing polishing, leave aside for one day.

Smear foamy oily cream from copra onto palms. Wait a while and dust off particles, jab onto coloured surface slowly, spread and finish with agate.

Design

Onto finished surface, trace the design. Outline can be done with Indian ink or waterproof inks. Either using *nulla* or *akik*, press colour onto base and finish.

Finishing Tiles

1. Clean the edges by scraping with stone.
2. Spread sieved marble powder on the floor just about 1/4th inch and just a little outside the tile.
3. Place the tile on top.
4. Sprinkle with water with *Gucchi* only twice.
5. With smooth marble stone rub to smooth out both top and sides.
6. Wait.
7. Apply three coats of marble and chunam masala waiting in between, sprinkling water, levelling, and smoothing out surface and sides.
8. Wait.
9. Repeat same procedure with chunam masala on both top and sides.
10. Polish with agate.

To Note

- Nicks could be repaired with marble masala and chunam fill up. Wait, with *nulla* even out colour and proceed
- For white areas one more coat of thin chunam and polish to get a better finish. Repairs possible.
- Colours not mixed with chunam get beautiful polish
- Can paint a tile with water colours

- To fix blue, vermillion and black instead of chunam earth colours could be used. Flat tones get better polished. More effective.
- Finishing tiles should always be done after the flat colours are fixed. Otherwise, can get smudged.
- Black lines last.
- To keep moisture intact, spread a polythene sheet underneath, place a wet towel. Sprinkle marble powder and then make the tile and work.
- Cover in between, If needed a break, with polythene and place wights around.

Making Chunam

Add cold water into chunam stone. Add one table spoon of jaggery. When it cools, add equal amount of water and store in a mud pot. Replace the top water thrice. Add a little curd to chunam. Chunam has to be prepared six months to a year in advance. Only then can it be used.

Fixing Stones

1. Before chunam, masala is applied on to the rough surface.
2. After polishing, make a small hole and fix it with lime and plaster of paris.

Relief work

1. Using *gadiya*, chunam and gum, make a thin paste and apply.
2. Brush it lightly with chunam water for glazing and waterproofing.
3. Use only chunam and gum for relief. It is the same material as the base, so it has better resistance to water.

Making Small Utility Articles

- Take a required shape and size earthenware.
- Cover with marble powder and chunam plus white cement. Apply a uniform coating.
- When it is dry, details can be added or it can be finished with chunam masala which gives colour and full glaze.

Handle for Agate

Bees wax

Lac

Lacquer

700gm water

35gm *suhaga* (naturally occurring borax stone), which is used in melting gold

Boil water slowly. Mix the *suhaga* powder and boil for two to three minutes.

125gm of lacquer crystals will dissolve slowly in five to ten minutes. Remove from fire and store in a glass after filtering with cloth.

This water could be used for polishing for lac painting-Nirmal works also.

This water is used for dissolving black crystals and for mixing with colours.

Ajanta, Ellora

Ajanta colours are the same but with mud plasters.

In Ellora, lime is used.

Italian Tile

On a cement base, three parts marble powder and one part of chunam is mixed together and applied. Watercolours are painted on top to get transparency.

Total wash to keep it wet. White colour is not used but base white is retained just like in water colour. Then a glass tumbler or any smooth material is rolled over to press the pigments in.

Papier Mache

Tear waste paper like press cuttings into small pieces and dip in water. Change the water every two days. Do this for around eight to ten days. This is for the pulp.

See that the paper is soft. Repeat more times if necessary.

Squeeze out the moisture. Hammer it nicely to get a pure paper pulp.

Use it with:

Gum

Saras or

Any media which one likes

Pulp with clay

1 kg pulp and 2 kg white chalk powder. Mix with gum. Hammer properly for use.

Prepare any shape. For detailed work, hammer it nicely so that no particles are seen.

For the colouring, first *kadia (Lime)* is mixed with water (Bosco *Kadia* available in Rajasthan has more Alumina content giving it a ceramic sheen when polished with silk).

Chapter **IV**

Other Canvasses

a. Palm Leaves and Birch barks

b. Paper- Handmade from Kashmir, Deccan, China, and. Other Paper producing Centres - Ahmedabad, Daulatabad , Junnar , Kalpi , Kasmir, Sanganer and Sialkot. Persia- A few layers are stuck together to get the required thicknesses and the top layer burnished- Miniatures and Mysore

c. Silk (*Tussar* or fine silk) and cotton : Two layers stuck together and the top layer burnished with agate or any other smooth stone could also be applied with a thin layer of rice gruel and then polished.

d. Wood – Travelling Temples, Thanjavur Paintings and Paintings on Sandalwood and teakwood. (Surface has to be smoothened and used)

e. Ivory, Marble and granite – Surface need to be smooth and the paintings are done with *vartanas* or stripling.

f. Reverse Glass Painting and Mica

g. Leather – softened and painted with natural colours leather is mainly used for puppetry

h. Kalamkari

i. Some of the other Techniques learnt

Palm Leaves and Birch barks

All the manuscripts of Jainism and later Hinduism were all executed on palm leaves mainly and Buddhism on (Bhoj) Birch barks.Methodology-(References- Painted Manuscripts of Sarasvati Mahal Library, by Nandita Krishna, Photograph by V.K.Rajamani, Published by Director, the Thanjavur Maharaja Serfoji's Library,1994,Thanjavur,Tamil Nadu.

Palm leaves (Tada patra, tala patra or panna)

- Palm leaves cut to size are punched with two holes.
- Boiled or steamed in hot water are dried and buried under wet sand to soften it to write upon.
- Polished with conch shells and covered with two wooden covers are ready for inscribing/writing.
- If inscribed, they are covered with a mixture of charcoal and vegetable juice, wiped with a moistened cloth to make the letters visible.
- Wooden or bamboo pen dipped in ink was used to write.
- For preservation they were either hung over the smoking stoves in the kitchen or coated with vegetable juices or *margosa* (neem - insecticide) leaves.



Birch Barks *Bhoj Patra* are used for writing Buddhist Manuscripts.

- Barks are incised vertically through a thin layer of the green bark and then horizontally for required size.
- Dried peeled off bark are polished with oil. Two layers can be stuck together with gum to give body.
- Manuscripts written with Indian ink are sewn together on one side with two wooden covers on either side.

Tempera

All the following water based techniques are Temperas as they all use some additive to fix the colours

.

Paper

Paper has been the medium for :

- Folk arts - Narrative *Patas and Kalighats* of Bengal, *Cheriyal* scrolls of Andhra, *Chitrakathis* of Maharashtra , *Patas* of Mharashtra etc. and more, all with similar technique but themes and style varying to suit the local faith.
- *Patachitras* of Orissa, Miniatures of Rajasthan, Kishangarh, Punjab, Kashmir, Pahari Hills, Deccan, Muslim and Moghul schools.
- Mysore Paintings.

Handmade papers were used either independently (mostly for folk expressions) or as *vaslis* for others. Stylisation and themes vary but were all using mostly natural colours. Stylisations of some schools are highlighted.

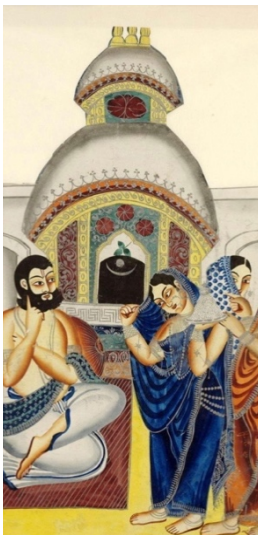
Patas of Bengal



Vertical individual sheets are placed one behind the other, marked by a floral border. The patas are predominantly yellow, orange, blue and green colours. Figures are shown with three quarter view of the face, front shoulders and torso and puffy chest with capriciously attached arms and legs.

Kalighat

As the name signifies is one of the venerated *Sakthi Peetas* (one of 51Holy shrines dedicated to Sakthi worship). Situated on the banks of river Ganges in Hubli, *Patuas* started creating souvenir paintings in small formats for the visitors instead of long narrative ones and set the mood for the evolution of Kalighat Paintings.





Cheriyal scrolls

The exclusiveness of Andhra school continues in their scroll paintings with the delineations akin to Vijayanagar-Nayak school. There are specific scroll/scrolls for enacting, by specific group, on specific occasions. (Refer Vijayanagar-Nayak Mural technique for stylisation)



Chitrakathi's of Maharashtra.





The *Paithan* painters are nomads of Maratha origin. Their chief occupation is in exhibiting pictures of gods

and heroes and narrating their stories in song and verse. The majority of these paintings are laid out horizontally.

Geometrical visual partitions - use of a diagonal line to interpret anger, circular enclosures to freeze the moment, horizontal lines to enhance movement - to impart the mood of the narrative is characteristic to this school.

These paintings are again made in sets to illustrate different puranas, using different colour schemes for each set. Portrayal of the eyes which continues in leather puppets of Karnataka is the hallmark of this style.

Patas

Similar to *Patuas* of Bengal or *Patachitras* of Orissa*, Patas* of Maharashtra are also executed on paper based on local legends using bright greens and cobalt blue.

Patachitras of Orissa (Paper, Palm Leaf and Silk)



The use of beautiful brush strokes, elaborate border designs and white highlights stand them apart from other schools. *Vaslis* are used.

- Primed with chalk powder and gum, cotton and silk are used for *Patachitra* paintings.

  Use of *ansara patas* for worship, when the idols are supposed to be resting after the rath-yathra, has precipitated exclusive set of Puri Jagannath *Patas* which are painted with veneration in bold colours, contour lines of different thicknesses, abstraction and front facing. Multiple rows of borders are painted.



- Sacred red colour is used for background.
- Most contemporary installation from time immemorial, till today and forever and ever may be! (Ref Facebook-Ministry of Culture)













Miniatures (Paper, Silk, Ivory and Marble)

- *Vasilis* are always prepared despite the canvasses being silk or paper.
- Preliminary coating is optional.
- Sometimes cartoons are prepared by puncing holes after the sketch is drawn.
- Yellow ochre pigment tied inside a small bundle of cheese cloth is tapped over the cartoon placed on the canvas, dots are joined to form an outline.
- Colours used were always natural pigments ground with gum in proportions of 3:1 or 6:1 as needed in a shell - economical use of resources.
- The natural colours -

  Ramraj - light (Yellow ochre)

  Ramraj - dark

  Hirmich - dark (Indian red)

  Hirmich - light

  Terreverte - green

  Sinduri - Hanuman colour (orange)

  Neel - Robin blue/China blue

  Kala - Kajal – black (lamp black+ charcoal)

  Peori - lemon yellow pigment prepared from the urine of cow fed only on mango leaves.

  Hingloo - Sulphate of mercury
- Awareness, availability and accessibility of Kerala mural colours from vegetable sources has opened up the colour palette.
- A few chosen basic colours in different tints and shades and combinations have always been used in miniatures. 'Less was more'.
- A whole spectrum of colours and canvasses to suit varied mediums are available off the shelf.
- Sketching is in yellow ochre.



- Colours are then filled in and worked in opaque water colours, building up transparent layers. (Painting only to show the transparent layers 3rd one is a part of old Miniature Painting and 4th Moghul miniature)







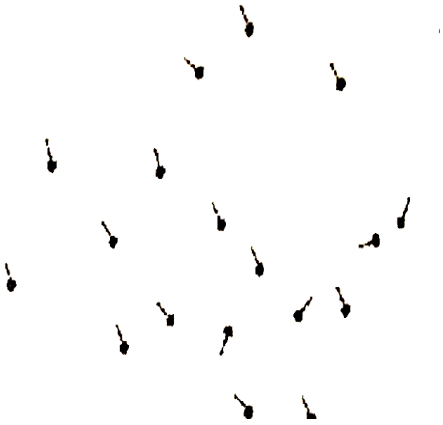
- Polishing with agate is done in between layering or after finishing the painting.
- Ideally after finishing, the art work is placed upside down on a bed of multiple layers of evenly spread cotton/silk/paper and polished. Painting will have a beautiful soft feel with the colours embedded within.
- Moghul miniatures always have an elaborate floral/designed borders and the impact of calligraphy can be perceived.

Bengal Washes

Reminiscence from Abanindranath Tagore



During late 19th century, an awakening to paint Indian themes in Indian style precipitated the Bengal School. Kakuzo Okakura and Abanindranath Tagore were the main proponents of Indianizing education in art. Two Japanese artists, Yokoyama Taikan (A great artist) and Hishido Shunso (interested in natural colours and vegetable dyes), sent by Kakuzo Okakura and skilled in brush and ink works and watercolour washes, shared their expertise with Abanindranath Tagore. Scattering of *Shiyuli* flowers (Parijatham) midway over the painting as though a blessing from heaven and painting them as a study in those areas created an individualistic artistry. This intuitive ecstatic creativity is the genesis for expressiveness.





Tagore



Abanindranath Tagore



Silk (Tussar or fine silk) and cotton

Two layers of tussar or cotton are stuck together and the top layer burnished with agate or any other smooth stone. Thin layer of rice gruel could also be applied over and then polished.

Phad Paintings of Rajasthan (Cotton)

In the twilight of understanding/presentation mythological scenario, the great epics are modified to suit the local legends of Pabuji and Devnarayanji.







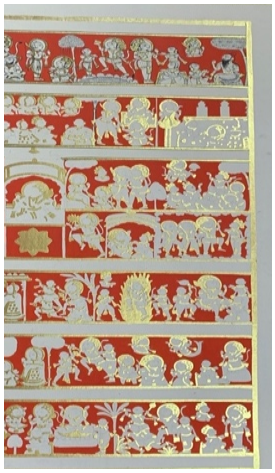




Segments of the big narrative panels are rendered in miniature style with gilding in creative newer versions







Mysore Painting

Handmade papers were pasted on a wooden base.

The dry cool climate enhanced the use of gold *varaks* (a fine filigree leaves of gold) as backing, against the gold foils for Thanjavur paintings.





Materials required

Earth, mineral and vegetable colours.

Brushes from squirrel hair.

Safeda (white lead), gum Arabic.

Gelatinous glue from the hooves of buffaloes.

Coconut oil.

The gesso was made of mixing safeda (white lead) – 3 spoon, *makhi* gamboge (yellow), taken from the juice of a tree (*Revana Chinni Halu)* - 1 spoon with boiled animal glue to a creamy consistency.

In Mysore, the paintings were executed on paper with slight relief. Mirrors and stones were not used for embellishments. Gilding is done after painting.

The jewellery and dress reflect the contemporary ornament of the royalty of Mysore and the throne is a replica of the famous Vijayanagara throne which later became the Mysore throne. The architecture reflects the 17th and 18th century architecture of Mysore. The tapering fluted columns and the cusped arches of the pavilion resemble those in the old palace of Mysore, Tipu Sultan's palace at Bangalore and Daria Daulat at Srirangapatna.

Use of Tri-banga (where the body is shown with three bends) and Adi-banga (multiple bends) in the portrayals of figures lend a rhythmic posture. The landscape is highly conventionalized as in the Thanjavur School.

Vermillion, cobalt blue, yellow ochre and crimson are mixed to get Indian skin colour.





Icon, Portrait, Narrative and Authors





Silk Egg White Tempera

- Silk can be stretched or pasted on a board.
- Two layers of available length of silk are pasted together, surface polished, rolled up and kept for cutting into required sizes as and when required.
- Can use either natural colours ground with gum or wide spectrum of water colours available.









Same concept but the first one is in egg tempera and the second in oil on silk.

Nuance learnt - spreading the prewashed black blanket under the silk helps in preventing colours from spreading along the warp and weft! Medium does not matter for creativity!

“An idle workman quarrels with his tools”, Devaki Nandan Sharma.



Egg Yolk Tempera

(Sourced from Studio Chalkboard in 1992)

Egg yolk is used as the binder for this type of painting. The yolk of the egg contains albumen, which when applied to a surface creates a strong permanent transparent layer.

The process of preparing the egg yolk for use as a painting binder:

- Separate the yolk from egg white using a separator.
- Remove the excess white using tissue paper while retaining the yolk.
- Puncture the yolk into a clean container with a lid.
- Add the dry pigment till it becomes translucent. Drops of water can be added at this stage if needed to make it liquid.
- Care should be taken in the addition of water as too little or too much can create problems like cracking.
- Repeat the process for all colours needed individually and store in closed containers.
- Normally solid wood panels were used but Masonite or water-proof ply wood can be used after application of acrylic gesso in recent times.
- Whole session must be done quickly.

Wood , Sandalwood and Teakwood

- Need to remove polish, if any.
- Sandpaper lightly with used fine grained paper.
- Can be primed for brighter painting or without priming to get the translucent wash finish as shown in the illustrations below.
- Could be engraved and painted.







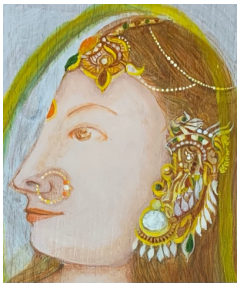
Not primed sepia alone, multicoloured in Miniature format and Manuscript format in watercolour washes

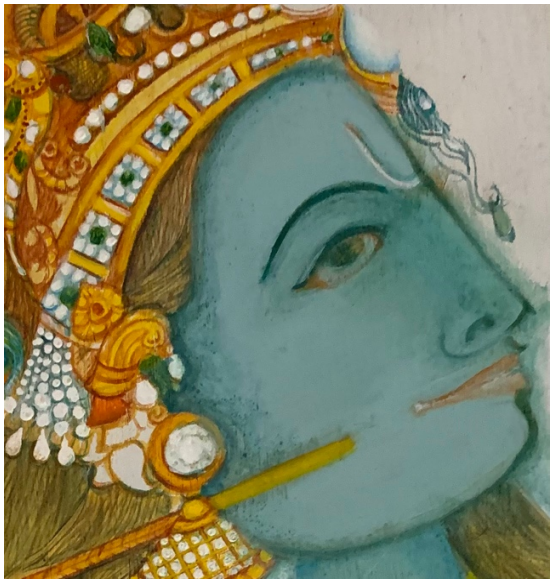


Engraved and painted.



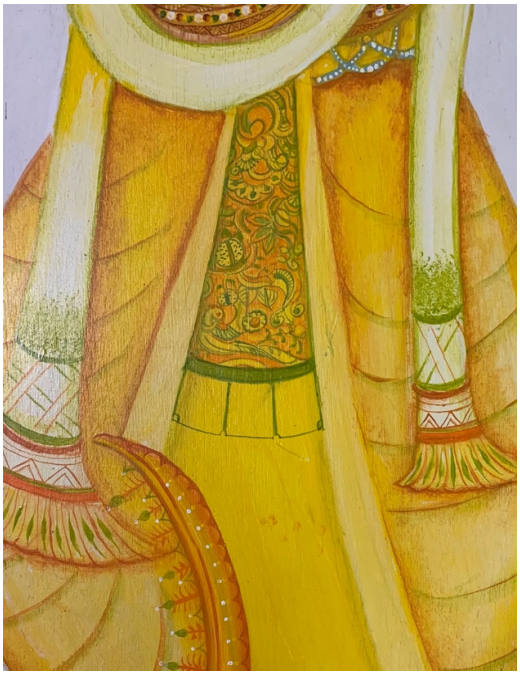












Teak wood - *Gesso* applied and painted in layers of washes

Travelling Temples and Thanjavur Paintings

Travelling temples of Tirupati are the precursors to Thanjavur Paintings (Ref. Jaya Appasamy). Icon paintings created to meet the demands for *Kathakalakshebam* (discourses) evolved into almost 12’ x 10’ or more in size, portraying almost the entire panorama of deities of Hinduism. Beauty is that even the folk painters of Kavaad from Rajasthan had created portable, easy-to-assemble-and-dissemble shrines to narrate stories of the epics. (Odisha also has Travelling Temples as shown below)





Part of a Travelling Temple – Thanjavur and Kavaad – Rajasthan Colours initially natural colours on
wood and varnished.





Travelling Temple from Puri Jagannath © Viswamber

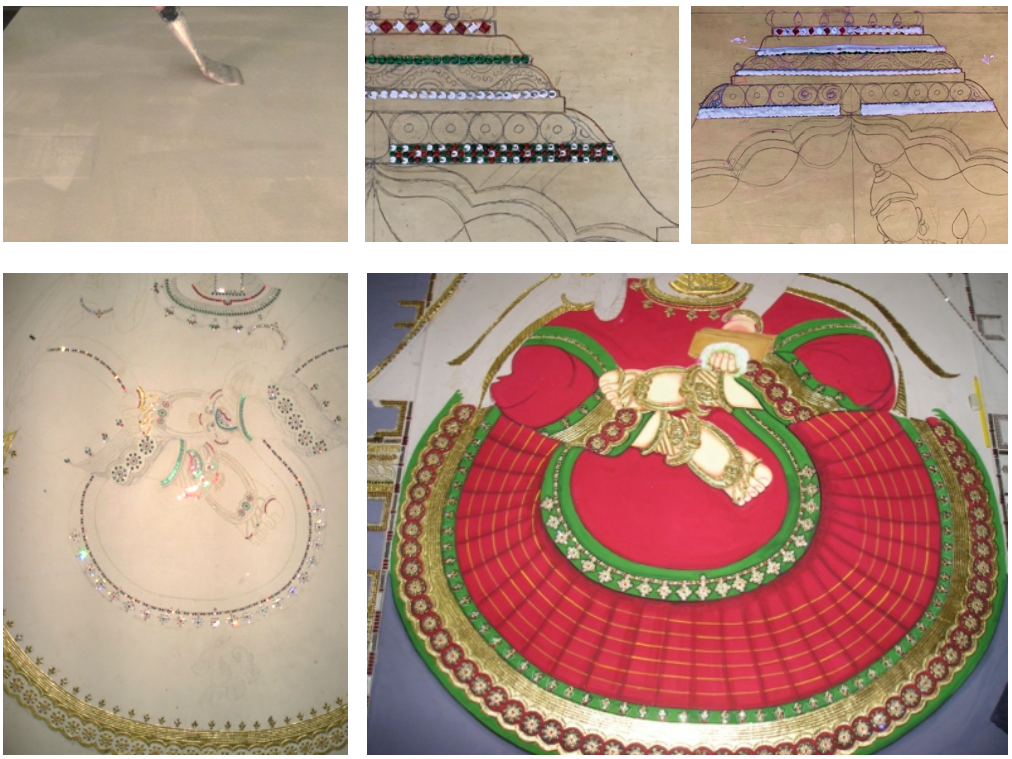
Thanjavour Painting

Refer (Volume - 5 Other Canvasses)

Materials and Techniques:

- Seasoned Jack wood (old times), Waterproof Plywood now – required size
- Acid free paper- Cut to the size of the plywood plus 1.5 inches on all four sides to cover the edges
- Unbleached cotton pre-soaked for 6 hours and dried. Cut to the size of the plywood plus 1.5 inches on all four sides to cover the edges.
- Maida pastes to stick.
- Plywood edges are sandpapered and the paper is stuck with maida paste avoiding air bubbles and the extra length and breadth folded back and stuck.
- Same process is repeated with the cloth.
- Chalk powder - 3 parts to 1 part of gum (100 grams of Arabic gum crystals powdered and soaked overnight in 450 ml of boiling water to dissolve) are mixed to idly batter consistency.
- Once the board is dry, this paste is applied three times, sandpapering after each coat is dry as shown in the picture.
- Surface should be smooth but not polished.
- Outline of the required painting is either drawn with yellow ochre or traced using yellow carbon.
- Outlines are worked with ochre paint to consolidate and as an exercise as well.
- Chalk powder - 3 parts to 1 part of gum (100 grams of Arabic gum crystals powdered and soaked in 450 ml of boiling water to dissolve) are mixed to creamy consistency (like mehendi).
- This mixture – *Makku* - could be applied with a brush or by using a cone (faster) wherever relief work is needed.
- Stones have to be fixed with Fevicol, covered with makku to fill gaps, cleaned with a moist soft cloth and again outlined like in a jeweller's setting.
- Gold foil is cut to size and shape to neatly cover the areas needed.

- Single punching machines are available in 3 sizes. Small moons like nail clippings are cut and kept separately. They are used to fix curved areas.
- Painting of the body colour, dresses and ornamentation/garlands are all painted with natural colours or poster colours in opaque water colour technique. The quality of painting varies with artistry of the individual.
- Black thin lines are drawn to confirm/segregate ornamentation details.
- Use of tints and shades, renderings to washes, then sky is the limit to paint!
- 0.5 inch of border should be left free on all 4 sides to allow for either a mount or frame.
- From the top of the board 1/3 distance on the vertical centre line has to be marked and nose has to sit there for effective presentation.
- Colours should be gradually built up from light to dark and black is applied only after the picture is totally finished.





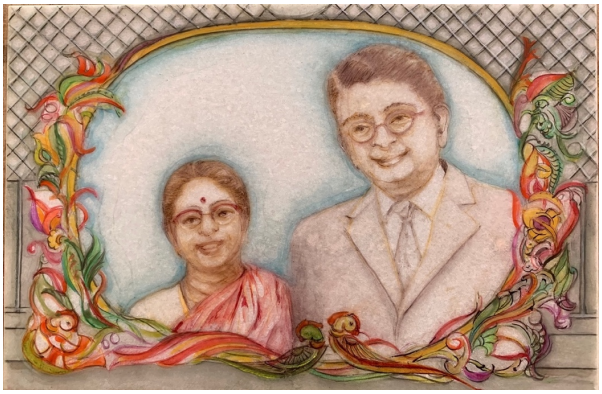


Ivory, Marble and Granite

- Surface needs to be exposed.
- Polish if any has to be removed.
- Surface has to be sandpapered.
- Can be primed with a layer of paint for opacity or directly for translucency.







Ivory, Marble and Granite



Reverse Glass paintings



Along with Thanjavur paintings, a separate though related tradition of painting on glass, mica, ivory, marble, sandalwood, silk, leather, playing cards and wooden shrines (Travelling Temples of Tirupathi, Andhra) were introduced for the first time in South India. All of them had similar theme and presented an overall impact similar to that of Thanjavur paintings but the technique varied to suit the medium. Glass paintings served as less expensive icon paintings while others were considered as minor arts executed mainly for European markets.



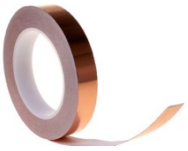
Glass paintings were supposed to have been introduced by Chinese painters in Tipu Sultan's court for the first time with the introduction of use of charcoal sticks.

Probably the portrayal of small feet has also sprung from this influence. Local artists in Thanjavur, Karnataka and Andhra adopted this technique for creating inexpensive devotional paintings. As the sequence of steps was reversed (after the picture was drawn, it was shaded and decorated with gold leaf), often the picture had a flat single dimensional effect with a folk-art quality.

Stages in glass painting done in layers and superimposed ©Lakshmi Krishnamurthy








The use of silver-plated copper strips to infuse stone effect and anchoring it with *vajram* (animal glue) to coincide with opaque lines making the painting innovative.

As in Thanjavur paintings, secular themes such as, highly stylized women and portraiture with some effort to infuse reality along with icon and narrative pictures were executed. Colour scheme was minimal as natural colours were used.



Thanjavur painting in natural colours with real gems superimposed with glass painting using real gold foil. 10”x12” Author’s work.

Mica

The translucent nature of mica has lent itself to reverse glass technique to create newer canvasses.

Woman cutting vegetables - Vocational from Chitra Kala Parishad, Karnataka from



Vayu from Chennai Museum



Leather softened and painted with natural colours

Even though it evolved from Andhra, is prevalent almost all over India with different variants in style, technique, colour scheme etc.

Leather is mainly used for puppetry



Goat skins are cleaned and soaked in water for a few hours. Hair is removed and skins are cleaned in hot water to disinfect and soften. Basic sketches are drawn with bamboo nibs and painted with natural colours (acrylic colours are used now). Figure drawn is cut to get limbs and head separate. They are either stitched together or fixed with metal loops. Special tools are used for designs and mobility. (Picture enclosed for reference). Translucency of leather and transparent washes add value to the shadow puppetry. Themes are mostly from epics with regional interpretations and variations. Style is akin to Lepakshi school.

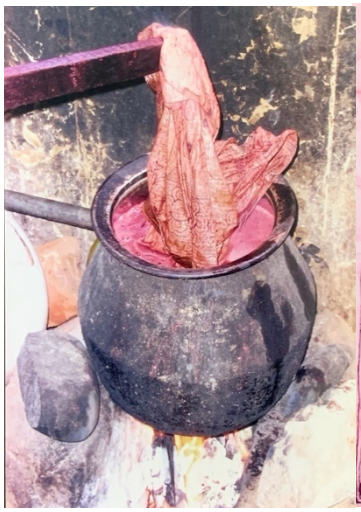
Kalamkari



Tools



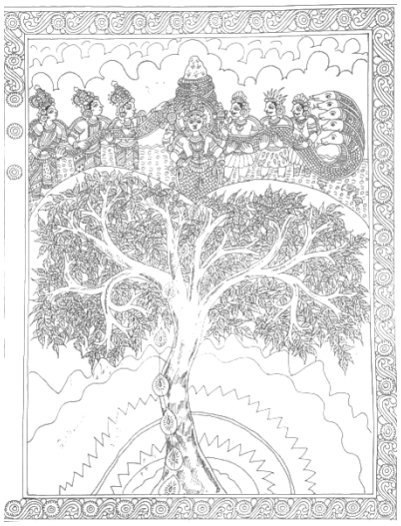
Raw Materials for Colors



Red Color Making



Red



Black



Black



Yellow & Blue

Adakkan (Painting using Kalam) and Rathapani (Block Printing) of Kalamkari

As the technique is very elaborate, has been dealt with in detail.

Black

Colour	Materials Required	Quantity	Method	Dos and Don'ts
Black A	a. *Kasim Karam* (Jaggery)	100 gms	Mix a, b, c and d to get a juicy consistency -1	Mixture 1 can be stored only for 10 days in summer and 15 days in winter - 4. Otherwise, it will start to damage the fabric.
	b. Panai Vellam (Palm Sugar)	50 gms		
	c. Water	5 litres		
	d. Pahu Vellam (Jaggery)	2 kg	Add the iron bits to -1- mixture -2	
	e. Rusted Iron			
B *Kadukka* Treatment	f. Gada/ Unbleached Cotton cloth of medium weight - Soak it in water for 24 hours to remove starch.	5 metres	Soak *pinju kadukka*-g-in one litre of water for 24 hours and grind to a paste. Mix with milk -3 Soak -f- in 3 for 15-20 minutes and dry -4.	4 is the mordant to fix black. It could be diluted to get grays. Drawing with a brush or using a kalam or a block the black outlines are done.
	g. Pinju Kadukka	¼ kg		
	h. Buffalo Milk	3 litres		

Red

Colour	Materials required	Quantity	Method	Dos and Don'ts
Red	A – Powdered Alum	100 gms	Mix powdered alum with water and apply only where red is needed on the prepared cloth -5	Alum is used only with Kalam as it has to seep through the fabric.
	Water	1 litre		
	B – Powdered Cheval Kodi	¼ kg	Mix both powdered cheval kodi and surulpatti in water in a big vessel and bring to boil. Boil the cloth -5 for 20 minutes -6	
	Powdered Surul Patti	¼ kg		
	Water	25 litres		
	C – Bleaching - Cow dung	1.5 kgs	Mix the cow dung in water, soak 6 in this mixture, squeeze and leave it overnight. Rinse it nicely in running water, beating and washing repeatedly. Dry it on sand for 2 days with the design facing down and on 3rd day upwards. Soak in milk, squeeze and dry.-7	When there is no river nearby, a tank with controlled inflow and outflow needs to be installed.
	Water	10 Litres		
	Milk	2 Litres		

Yellow

Kadukka poo (Myrobalan Flowers) – 100 gms

Alum - 10 gms

Water 1 litre

Boil water

Remove from fire

Add kadukka poo and leave it overnight.

Wherever yellow or green is needed apply directly.

Wash after 24 hours.

Dry -9

Blue

Colour	Materials required	Quantity	Method	Dos and Don'ts
Blue	A-China Blue		Mix with water and use directly	
	B -Indigo - Ushaman Vessel		Fill up the Ushaman Vessel (Has a few holes at the bottom) with few stones. Let 5 litres of water drip though slowly -1	
	Water	5 litres		
	Thagara Vidhai	250 gms	Soak in water for 24 hours, boil and mash.2	
	Indigo	250 gms	Add 1 and 2 to Indigo - 3	
	Lime (Chunam)	250 gms		
	Water	2 litres	Dissolve lime in water. Add ½ chunam water every day to 3 for four days – 4 The blue colour is ready to paint wherever needed and over yellow if green is needed.	

Kodalikaruppu




Courtesy – Sri. K. Dakshinamurthy

During the Maratha rule in Thanjavur, there was a special kind of material called *KodaliKaruppu* woven in the village with the same name on the banks of Kaveri near Kumbakonam.

Jamdani brocade woven was treated with special Kalamkari technique to embellish for use of the royal family only.

The beauty was that after the brocade was woven, designs were made either by *Adakkan* or *Rathapani* style to accommodate the gold work.
This technique has been revived under the auspices of Weaver's Service Centre and Kalakshetra Foundation and is available for artists to explore.

Some of the Assortments of Learned Techniques

Nirmal Painting

Materials needed

- Aval arakku
- Spirit
- Black oxide powder
- Varnish
- Sea foam
- Silk cloth

Method

- Soak *aval arakku* (lac) in spirit. Grind black oxide with the mixture. Mix with spirit. Apply like varnish with cloth.
- Rub gently with sea foam and water. Paint with water colour. Then apply clear varnish.
- Polish with silk cloth to finish.

Making of oil paper

Materials required

- 2/3 Camel texture white
- 1/3 Fevicol (blue coloured box)
- Equal water

Method

- Give coatings of this mixture with a flat brush on a handmade sheet until a shiny surface is obtained and let dry.

Batik

Materials Needed:

- A.S.G. + T.R. oil – 1 ½ tsp. each in a mortar.
- Caustic Soda (Mix with little water in a bowl) - 1 ½ tsp.
- Mix 1 & 2 in a beaker and heat.

Base

- Yellow G.C. base and water in a mortar. Make it into a paste by adding enough water.
- Take 2 cups of water. In one add 1 ½ tsp. of HCl and in the other add 1 ½ tsp. of nitrate.
- Pour both the mixtures into the beaker with yellow base simultaneously.
- Take 2 more cups of water. Into one add 1 ½ tsp. of sodium acetate and another 4 tsp. of sodium sulphate. Pour both simultaneously into the beaker.

Naphtols

- A.S.G.
- A.S.T.R.
- A.S.L.B.
- A.S.B.O.
- A.S.B.S.

Bases

- Yellow G.C. Base
- Red B. Base.
- Blue B Base
- Garnet G.B. Base
- Scarlet G.B. Base
- Orange G.B. Base

The Colours

- A.S.G. + Yellow G. C. Base = Lemon Yellow.
- A.S.T.R. + Orange G.C. Base = Orange
- A.S.L.B. + Garnet G.B.C. = Brown
- A.S.B.O + BLUE B. Base = Base
- A.S.B.S. + RED B. Base = Maroon. (Never Mix A.S.G. and Blue B.Base as wax cannot be removed then.)

Vat Dyes

- Colour + Caustic Soda + Hydrase = 1:2:3.
- Mix colour with a little hot water in a beaker, add caustic soda and then hydrolyse.
- All shades are available.
- The mixture and the wet colours are not the same as the resulting colour.
  E.g., of colour - green vat, blue vat etc.

Batik

- Mix resin with wax for cracks.
- More cracks little resin, less cracks more resin
- Betel leaf crystals plus copper sulphate should be boiled slowly to get a brown colour.
- Wood red

Epilogue

Author's – Ajanta-Chittannavasal-Kalamkari-Miniature - through Rajasamudra - Pichwais.

A Pan-Indian Medley of Lotuses

'Purity, beauty, divinity, ethereality'



Wandering through these ethereal landscapes of "Nalini" in adibhanga, with the gentle breeze rustling tender leaves, which in turn sprinkle dew droplets that sparkle and play hide and seek in the sunlight; with white hamsas a-wing, while fishes cavort; the whole expounding the divine visual and aural harmony of nature: this is a perennial spring of creativity for artists through the ages, past and present, extending forward beyond time and space.