Translation of Mela scheme part of Chaturdandiprakasika of Venkatamakhi

by M.Subramanian (available at http://carnatic2000.tripod.com/JSA/Chaturdandi.pdf)

I have attempted a translation of stanzas 1 to 92 of the 'Melaprakaranam' of Chaturdandiprakasika of Venkatamakhi which deals with the present 72 mela scheme used in Carnatic Music. When I started this many years ago the only book available was the Sanskrit version published by Music Acadamy, Madras. I was not aware of any English translation of Chaturdandiprakasika. However, I found that a full translation by the eminent musicologist Dr. R.Satyanarayna had been published in 2002 (Motilala Banarasi Das & IGNCA) and it also has commentaries in the second volume. No electronic version of the book seems to be available. I am making available this transaltion covering only the part of Melaprakaranam which explains the system as it is this part that is now relevant being the classification now followed in Carnatic music. I have tried to make the translation literal so that the reader can make his own interpretations. Interpretative translations are in square brackets '[' and ']'. At the end I have tried a summary of rest of the Mela chapater. The original texts have been retyped by me in Unicode from the version available (in a less common font) in http://musicresearchlibrary.net/omeka/items/show/2275

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चतुर्थं मेलप्रकरणम्

तृतीयास्मिन् प्रकरणे स्वरा सम्यङ् निरूपिताः |
अथ प्रकरणे तुर्ये कुर्वे मेलनिरूपणम् || १ ||
In the third chapter swaras were fully explained
In this fourth chapter (we) explain Mela

षड्जस्वरस्य पुरश्चत्वारः क्रमशः स्वराः |
रिषभाखानकाः केचिद्रान्धाराख्यानकाश्च ते || २ ||
In front of (forward of) Shadja four swaras in order
(are) named Rishabha and some (are) named Gandhaara

तत्राद्यौ नैव गांधारश्चतुर्थो रिषभो न हि |
∗रिषभावपि गांधारौ द्वितीयकतृतीयकौ || ३ ||
[∗ऋषभ]
There the first is not Gandhara and the fourth is not Rishabha
(two) Rishabhas and (two) Gandharas are the second and third.

द्वितीयं वा चतुर्थं वा व्यपेक्ष्य स्यात्तृतीयकः |

रिषभाख्यः स एव स्यात्गान्धारो ऽपेक्ष्य चादिमम् || ४ ||

The third Rishabha with reference to second or the fourth

and the same is Gandhara with reference to the previous

[The third is Rishabha but if there is a previous, it is Gandhara]

तृतीयो रिषभाख्यानश्चतुर्थापेक्षया भवेत् |

स हि व्यपेक्ष्य गान्धारः प्रथमं वा द्वितीयकम् || ५ ||

Third (is named) Rishabha with reference to the fourth

the same with reference to the first or second is Gandhara

[Third is Rishabha if 4th is there but it is Gandhaara if

 the first or second note is there]

एवं च सति निष्पन्नं द्वितीयकतृतीययोः |

गांधारत्वं च रिषभभूयमित्येव निर्णयः || ६ ||

Thus is the derivation of the second and the third.

Quality of Gandhara and Rishabha are thus determined

तस्मादाद्यद्वितीयौ च तृतीयश्चर्षभा मता |

तेष्वाद्यो गौलरिषभः श्रीरागरिषभः परः || ७ ||

Thus the first, second and the third are known as Rishabha

In them first is Gowla Rishabha, then Sriraga Rishabha

तृतीयो नाटरिषभ इति लक्ष्यविदां मतम् |

आद्यः: शुद्धर्षबः पञ्चश्रुतिकर्षभसंज्ञकः || ८ ||

द्वितीयश्च तृतीयः षट्श्रुतिकर्षभ उच्यते |

लक्षणज्ञैर्मयोक्तास्ते त्रयो ररिरुसंज्ञकाः || ९ ||

Third (is) Naata Rishabha - is the opinion of those who know

 'lakshya' [practice]

At the start Suddha Rishabha, Panchasruti Rishabha

(is) the second, and the third is termed Shadsruthi Rishabha

by grammarians. I denote the three with symbols ra, ri, ru

द्वितीयश्च तृतीयश्च चतुर्थश्च त्रयः स्वरा; |

सामन्यतः स्युर्गांधारास्तेष्वाद्यो लक्ष्यवेदिभिः || १० ||
प्रोक्तो मुखारिगांधारो द्वितीयो भैरवीयुतः |
गांधारोऽथ तृतीयस्तु गौलगांधार उच्यते || ११ ||

The second, third and fourth - three swaras
(are) generally Gaandhaara [Gaandhaara is common to the 3]
- among them 'lakshyavedi's [those who pay importance to practice]
mention first Mukhari Gandhara, second (associated with) Bhairavi
and the third is said to be Gaula Gandhara

लक्षणज्ञैस्तु तेष्वाद्यः शुद्धगांधार उच्यते |
साधारणाख्यगांधारो   द्वितीयः परिकीर्तितः || १२ ||
तृतीयोऽन्तरगांधार इत्यहं तु वदामि तान् |
क्रमाद्गिगिगुनाम्नस्त्रीन्मेलप्रस्तरसिद्धये | १३ |

Grammarians [theorists] say that in them first is SuddhaGandhara
second is Sadharana Gaandhara and the third Antara Gaandhara
I call them ga gi gu in that order to enable elaboration of Melas

एवं च षड्जात्पुरतो निवसस्तु चतुर्ष्वपि |
स्वरेषु प्रथमादित्रितयं रिषभनामकम् || १४ ||

Thus among the 4 swaras residing forward of Shadja
three starting from the first are named Rishabha

गांधाराख्यं द्वितीयादित्रयमित्येव निर्णयः |
चतुर्ष्वेतेषु जातस्य ररिर्वाख्यानशालिनः || १५ ||
गांधारस्त्रितयस्यापि पूर्वाङ्गाख्या मया कृता |
कथं द्वितीयो रिषभो गांधारः प्रथमो भवेत् || १६ ||

Gandhara name is settled on the three (notes) starting with the second.
ra ri ru names born in these four and the triad of Gaandhara
are in the 'poorvanga' made by me
How does second become Rishabha and first Gaandhara

कथं तृतीयो रिषभो गांधारः स्याद् द्वितीयकः |
विरुद्धत्वातुरङ्गगत्वगोत्वयोरिव सर्वथा || १७ ||

How is Rishabha third and Gandhara second
(always 'horse' and 'cow' qualities are contrary)

कथं स्याद्रिषभत्वेन गांधारत्वस्य संगति : |

किं च स्वरेषु चतुर्षु रिषभौ द्वौ परावुभौ || १८ ||

गांधाराविति युक्तं स्यात्तत्कथं रिषभास्त्रय: |

गांधारास्त्रय इत्युक्तमिति चेदत्र वच्म्यहम् || १९ ||

How can quality of Rishabha mix with that of Gandhara

In the four swaras it is said (that) 2 Rishabhas and

2 Gandharas reside together. How is it said that 3 Rishabhas

3 Gandharas exist. I shall explain.

विरुद्धे नर्षभत्वं च गांधारत्वमुभे इमे |

किं तु सापेक्षकौ धर्मौ स्यातामेकत्र तेन तौ || २० ||

There is no contradiction of Rishabha and Gandhara quality here

Because of the rule of dependance the two can be in one place.

यथा चत्वार एकस्य तनुजा: सर्व एव हि |

ज्येष्ठा अपि कनिष्ठा: स्युस्तत्र चाद्यस्थु नानुज: || २१ ||

Thus, if four are sons of one (father) (all togther) are

elder brothers and younger brothers,

but the first (eldest) is not a younger brother

न चतुर्थ: पूर्वज: स्याद् द्विरूपावितरावुभौ |

तृतीयं वा चतुर्थं वा व्यापेक्ष्य स्याद् द्वितीयक: || २२ ||

the fourth is not an elder brother, the other two have double character

With reference to the third or the fourth the second

पुत्रो ज्येष्ठ: स एव स्यात्कनिष्ठोऽपेक्ष्य चादिमम् |

द्वितीयो [?तृतीयो] ज्येष्ठतायुक्तश्चतुर्थापेक्षया भवेत् || २३ ||

is elder brother; he himself is younger brother with reference to the first

the second (? third) is eleder brother with reference to the fourth

स एवावरजोऽपेक्ष्य् प्रथमं च द्वितीयकम् |

प्रथमाद्यास्त्रयस्तस्माद्यथा ज्येष्ठा भवन्त्यमी || २४ ||

he himself is younger brother with reference to the first and the second

As the first three become elder brothers

द्वितीयाद्यास्त्रयः पुत्राः कनीयांसो यथाऽभवन् |
एवं त्रयोऽत्र रिषभ ज्येष्ठकल्पा भवन्त्यमी || २५ ||

the three from the second son become younger brothers
Thus here the three Rishabhas become elder

कनिष्ठ कल्पा गांधारास्त्रयोऽप्यत्र भवन्त्यमी |
चतुष्र्वेषु स्वरेष्वेतौ द्वितीयकतृतीयकौ || २६ ||

and the three Gandharas become younger brothers.
In the four Swaras these second and third

रिषभावपि गांधारौ स्यातां तस्मात्समञ्जसम् |
तदूर्वे पर्वणि भवन्पञ्चमे शुद्धमध्यमः || २७ ||

2 Rishabas and 2 Gaandharas are thus grouped.
Above this in 5th fret is Suddha Madhyama

मसंज्ञकोमया प्रोक्तस्तदूर्ध्वे पर्वणि स्थितः |
षष्ठे वरालीमध्यमस्य कुर्वणः प्रतिभासनम् || २८ ||

named 'Ma' by me. In the 6th fret above
Varali Madhyama is made to appear

द्वितीयो मध्यमः प्रोक्तो मिसंज्ञः स मया कृतः |
ससमे पर्वणि वसन्पञ्चमः स्यात्पसंज्ञकः || २९ ||

Second Madhyama is called by me with 'Mi' symbol
On the 7th fret resides Panchama with 'Pa' symbol

पञ्चमस्य पुरस्तात्स्युश्चत्वारः क्रमशः स्वराः |
धैवथाश्च निषादाश्च निषादस्तत्र नादिमः || ३० ||

Forward of Panchama are in order four swaras
Dhaivatas and Nishadas; there Nishada is not the first

न चतुर्थो धैवतः स्याद् द्विरूपावितरावुभौ |
धैवतौ च निषदौ च कथ्येते शास्त्रकोविदैः || ३१ ||

nor is Dhavata the fourth, the other two are
two Dhaivatas and two Nishadas - so said by those learned in Shastras

तृतीयं वा चतुर्थं वा व्यपेक्ष्य स्याद् द्वितीयकः |
धैवताख्यः स एव स्यान्निषादोऽपेक्ष्य चादिमम् || ३२ ||

With reference to the third or the fourth the second
is named Dhaivata and the same is Nishada with reference to the first

तृतीयो धैवताख्यानश्चतुर्थापेक्षया   भवेत् |
स एवायं द्वितीयं वा व्यपेक्ष्य स्यन्निषादकः || ३३ ||

Third is named Dhaivata with reference to the fourth
The same is Nishada with reference to the first or second

एवं च सति निष्पन्नं द्वितीयकतृतीययोः |
धैवतत्वं निषादत्वमुभयोरुबयोः पृथक् || ३४ ||

Thus the quality of Dhaivata and Nishada
mutually arise from the second and the third

तस्मादाद्यद्वितीयौ   च तृतीयश्चापि धैवताः |
गौलधैवत   आद्यः स्यात्परः श्रीरागधैवतः || ३५ ||

Thus first, second and third are Dhaivatas
Gaula Dhaivata is first, next is Sriraga Dhaivata

तृतीयस्तत्र नाटस्य धैवतो लक्ष्यविन्मते |
शुद्धधैवत आद्योऽन्यः पञ्चश्रुतिकधैवतः || ३६ ||

Third is Nata Dhaivata according to 'lakshya knowers'
First is Suddha Dhaivata, next Panchasruti Dhaivata

तृतीयो लक्षणज्ञैः षट्श्रुतिको धैवतः स्मृतः |
अस्मन्मते त्रयस्ते स्युः क्रमाद्धिधुसंज्ञकाः || ३७ ||

(and) third is considered Shadsruti Dhaivata by grammarians
In my system (they are) in that order given symbols da, di, du

द्वितीयश्च तृतीयश्च चतुर्थश्च स्वरास्त्रयः |
सामान्यतो निषादाः स्युस्तेष्वाद्यो लक्ष्यवेदिनाम् || ३८ ||

The 3 swaras, second, third and fourth
are all shared by Nishada-in them according to 'lakshya knowers'

मते मुखारि रागस्य निषादोऽथ द्वितीयकः |
प्रोक्तो निषादो भैरव्या गौलरागनिषादकः || ३९ ||
Nishada of Mukhari Raga is the second
(then) Nishada of Bhairavi and Gaula Raga Nishada

तृतीयो लक्षणज्ञानां मते तेषु प्रकीर्तितः |
आद्यः शुद्धनिषादोऽन्यः कैशिक्याख्यनिषादकः || ४० ||
is the third. According to Grammarians the
first is Suddha Nishada, next Kaisiki Nishada

स्यात्काकलीनिषादोऽन्यस्तृतीयः परिकीर्तितः |
एते त्रयो मयात्तूक्ताः क्रमन्ननिनु संज्ञकाः || ४१ ||
and the third is known as Kakali Nishada
I call these three with symbols na ni nu

एवं च पञ्चमाग्रेऽथ निवसस्तु चतुर्ष्वपि |
स्वरेषु प्रथमादित्रितयं धैवतनामकम् || ४२ ||
Similarly in the 4 Swaras residing in front of Panchama
the 3 starting from the first are named Dhaivata

निषादाख्यं द्वितीयादित्रयमित्येव निर्णयः |
चतुर्ष्वेषु जातस्य धधिध्वाख्यानशालिनः || ४३ ||
The 3 starting from the second are determined as Nishada.
Born from these 4 are named da di du

निषादत्रितयस्यापि ननिन्वाख्यानशालिनः |
उत्तराङ्गाभिधा प्रोक्ता मेलप्रस्तारसिद्धये || ४४ ||
and the Nishada triad named na ni nu
(are) denoted as 'uttharaanga' for elaborating the Mela(s)

शङ्का चैव समाधानमुभयं पूर्ववत्भवेत् |
मेलो नाम स को वेति प्रश्नस्योत्तरमुच्यते || ४५ ||
Doubts and clarifications will be as before.
I will answer the question what is called Mela

नियमेनैव संग्राह्यः षड्जस्तत्पुरतः क्रमात् |
विद्यमानेषु चतुर्षु स्वरेष्वन्यतरावुभौ || ४६ ||

By rule select in the 4 Swaras present in order in front of Shadja
two separate (Swaras)

तत्रर्षभः पूर्वभवो गांधारस्त्वनुजो भवेत् |
द्वयोर्मध्यमयोरेकः संग्राह्यो मध्यमो भवेत् || ४७ ||

There (let) Rishabha be the earlier and Gandhara be the latter
From the 2 Madhyamas select one - (let it) be Madhyama

नियमेन हि संग्राह्याः पञ्चमस्तत्पुरः स्थितः |
स्वराः क्रमेण चत्वारस्तेषु चान्यतरावुभौ || ४८ ||
संग्राह्यः पूर्वजातो(अ)त्र धैवतः परिकीर्तितः |
पश्चाद्भवो निषादः स्यदिति सप्त स्वराश्च ये || ४९ ||

By rule select the next one Panchama
In the 4 swaras following select 2 different
Swaras the earlier one in this is called Dhaivata
the one coming next is Nishada-thus occur 7 Swaras.

तेषां च मेलनं मेलो गीतविद्भिः प्रकीर्तितः |
भेदा द्विसप्ततिस्तस्य भवन्त्यस्माभिरीरितः || ५० ||

Their combination is known as Mela by those who know music
I postulate 72 varieties of these.

येनोपायेन मेलास्ते द्विसप्ततिरिति स्फुटाः |
तमुपायं प्रवक्ष्यामि लक्ष्यज्ञसुखबुद्धये || ५१ ||

I will explain the process by which I postulate 72
for the bneefit of grammarians

रगौ रगी रगू चैव रिगी रिगू रुगू तथा |
षड् भेदा इति पुर्वाङ्गे द्रष्टव्यं गीतकोविदैः || ५२ ||

ra ga, ra gi, ra gu, and ri gi, ri gu, ru gu
these 6 varieties are to be seen in Poorvanga by musicians

धनौ धनी धनू चैव धिनी धिनू धुनू तथा |
उत्तराङ्गेऽपि सद् भेदा द्रष्टव्या गीतकोविदैः || ५३ ||

da na, da ni, da nu, and di ni, di nu, du nu
are true varieties to be seen in Uttaranga by musicians

पूर्वाङ्गगगतषड्भेदाः षड्जाद्याः स्युः पृथक्पृथक् |
उत्तराङ्गस्य षड्भेदाः पञ्चमाद्याः पृथक्पृथक् || ५४ ||

In Purvanga there are 6 separate varieties starting with shadja
in Uttaranga there are 6 separate varieties starting with   panchama

आद्यः पूर्वाङ्गो भेद उत्तरङ्गस्थितैः क्रमात् |
योज्यते यदि षड्भेदैः षण्मेलाः संभवन्त्यतः || ५५ ||

The first Purvanga variety by joining with 6 varieties of
Uttaranga generates 6 Melas

पूर्वाङ्गस्य द्वितीयोऽपि भेदस्तेनैव वर्त्मना |
संयोज्यते यदि तदा षण्मेलाः संभवन्त्यतः || ५६ ||

If the second variety of Purvanga similarly
combines (with 6 uttaranga) six Melas are generated

एवं तृतीयो भेदोऽपि षण्मेलोत्पादको भवेत् |
चतुर्थोऽपि तथैव स्यात्पञ्चमोऽप्येवमेव हि || ५७ ||

Thus the third variety also creates six melas
the fourth and   fifth are also similar

एवं षष्ठोऽपि विजेयः षण्मेलोत्पत्तिकारणम् |
अतः पूर्वाङ्गभेदानां षण्णामपि पृथक्पृथक् || ५८ ||

Thus the sixth also becomes creator of six Melas
Then for the six varieties of Purvanga, separately

उत्तराङ्गस्थितैः षड्भिर्भेदैः संयोजने कृते |
षट्षण्मेलप्रकारेण मेलाः षट्त्रिंशदागताः || ५९ ||

combining with the six varieities in Uttaranga
six times six Mela arrangement leads to 36 Melas

षट्त्रिंशन्मेलकेष्वेषु प्रथिमेलं च मध्यमः |
मसंज्ञो यदि मध्ये स्यात्पूर्वमेलाभिधास्तदा || ६० ||

In each of these 36 Melas if madhyama denoted
by 'ma' is present they are known as Purvamelas

एतेष्वेव तु षट्त्रिंशन्मेलेषु प्रतिमेलकम् |
मसंज्ञमध्यमस्थाने मिसंज्ञो यदि मध्यमः || ६१ ||
निवेश्यते तदा तेषां भवेदुत्तरमेलता |
इत्यस्माभिः समुन्नीता जाता मेला द्विसप्ततिः || ६२ ||

In these same 36 Melas in each Mela
in place of madhyama with 'ma' symbol, madhyama with 'mi' symbol
is placed then they form Uttaramelas
Thus   by me Melas are increased to 72

ननु त्यक्त्वा मसंज्ञं तु केवलं मध्यमं पुनः |
मिसज्ञकस्य तत्स्थाने मध्यमस्य निवेशनात् || ६३ |

Indeed, dropping only the 'ma' symbol madhyama
and putting the 'mi' symbol madhyama in its place

त एव पूर्वमेलाः किं भवन्त्युत्तरमेलकाः |
इति चोक्ते सदृष्टान्तं परिहारं प्रचक्ष्महे || ६४ ||

how do the same Purvamelas become Uttaramelas
(to answer) I will give an example

कटाहसंभृतं क्षीरं केवलं दधिबिन्दुना |
यथा संयोगमासाद्य   दधिभावं प्रपद्यते || ६५ ||

Just as milk collected in a vessel attains
the quality of curd by reaching union with a drop of curd

तथैव पूर्वमेलास्ते मध्यमेन मिसंज्ञिना |
केवलेनापि संयुक्ता भजन्त्युत्तरमेलताम् || ६६ ||

(like that) Purvamelas by mere inclusion of madhyama
with 'mi' symbol become Uttaramelas

द्विसप्ततेश्च मेलानां प्रस्तारं लक्ष्येऽधुना |

षट पङ्क्तीर्विलिखेत्पूर्वं षण्मेलोत्पत्तिसिद्धये || ६७ ||

The elaboration of 72 melas is now be observed
First 6 lines may be drawn for creating 6 melas

एकैकस्यां पङ्क्तिकायां सप्त सप्त गृहाल्ँ लिखेत् |
चतुष्कमेकमेवं च सति निष्पद्यते पुनः || ६८ ||

In each 7 partitions may be made
and one rectangle may be put (covering them – 6 lines)

तथैवैकादशान्यानि चतुष्काणि लिखेत्क्रमात् |
चतुष्काणि तदेतानि जातानि द्वादश स्फुटम् || ६९ ||

Similarly 11 (sets of) rectangles may be written
Clearly 12 (sets of) rectangles are found

द्वादशस्वपि चैतेषु चतुष्केषु स्थिताः ग्रहाः |
सप्त सप्त हि तेष्वाद्यद्वितीयकतृतीयकाः || ७० ||

In these 12 (sets) of rectangles exist
7 houses each . In them 1st, 2nd, and 3rd

गृहाः पूर्वाङ्गसंयुक्ताः कर्तव्या इति निर्णयः |
पञ्चमा अथ षष्ठाश्च सप्तमाश्च गृहास्तथा || ७१ ||

houses are to be made Purvangas
5th, 6th and 7th houses are

उत्तराङ्गेण संयुक्ताः कर्तव्या इति निर्णयः |
चतुर्थाः पूर्वमेलेषु मसंज्ञेन युता गृहाः || ७२ ||

to be associated with Uttaranga.
4th is with 'ma' in Purvamelas

त एवोत्तरमेलेषु मिसंज्ञेन युता मताः |
ततश्च द्द्वादशस्वेषु चतुष्केषूक्तवर्त्मना || ७३ ||

That itself is associated with 'mi' in Uttaramelas
Thus in the 12 rectangles as the basis

जाताः प्रतिचतुष्कं च षट्षण्मेलप्रकारतः |
मेलाः द्विसप्ततिः श्रीमद्वेङ्कटाद्रि कल्पिताः || ७४ ||

arise in each rectangle six melas
72 melas are postulated by Venkatadhvari

तदेवमनया रीत्य मेलानां च द्विसप्ततिः |
स्फुटप्रबुद्ध्ये(अ)स्माभिः स्वरेषु द्वादशस्वपि || ७५ ||

Thus in the same manner for the Melas 72(numbers)
have been postulated by me. For the 12 swaras

रगौ रिगीत्येवमाद्यः संकेतः परिकल्पितः |
तत्संकेतप्रकारेण स्वरेषु द्वादशस्वपि || ७६ ||

the symbols ra ga ,ri gee were invented.
for arrangng the symbols for the 12 swaras

सस सस समादाय प्रतिमेलमपि स्वरान् |
विद्याद् द्विसप्ततिं मेलानुक्रप्रस्तारवर्त्मना || ७७ ||

(and) taking seven swaras for each Melam
72 Melams are elaborated

अथ विज्ञाय तत्वेन मेलान्द्व्यधिकसप्ततिम् |
तेषां प्रयोगसमये रगौ रितीति   मत्कृतः || ७८ ||

for understanding the principle of 72 melams.
In their application ra, ga, ri, gee, are not to be   used

संकेतो नैव संग्राह्यः किं तु पूर्वप्रसिद्धये |
व्यवहारः सरिगमपधनीत्येव संज्ञया || ७९ ||

(They) are to be taken as symbols. But the
names 'sa ri ga ma pa da ni' of traditional practice

द्विसप्ततेश्च   मेलानां कर्तव्य इति निर्णयः |

are to be used in the 72 melas

ननु द्विसप्ततिर्मेला भवता परिकल्पिताः || ८० ||

Now 72 melas have been postulated

प्रसिद्धाः पुनरेतेषु मेलाः कतिचिदेव हि |
दृश्यन्ते ननु सर्वे(अ) पि तेन तत्कल्पनं वृथा || ८१ ||

Again in these melas only some are well known.
No doubt all of them can be constructed(invented) easily

कल्पनागौरवन्यायादिति चेदिदमुच्यते |
अनन्ताः खलु देशास्तद्देशस्था अपि मानवाः || ८२ ||
[This is said for reverence to imagination]
Innumerable are the countries and the people in them

तेषु सांगीतकैरुच्चावचसंगीतकोविदैः |
ये कल्पयिष्यमाणाश्च कल्प्यमानाश्च कल्पिताः || ८३ ||
Among them by musicians of different calibre
these may be conceived of and composed (in future)

अस्मदादिभिरज्ञाता ये च शास्त्रैकगोचराः |
ये च देशीयरागास्तद्रागसामान्यमेलकाः || ८४ ||
These unknown (melas) are within the range of Shastra
and these are melas for desiya ragas

येन पन्तुवराल्याख्यकल्याणिप्रमुखा अपि |
नानादेशीयरागास्तद्रागसामान्यमेलकान् || ८५ ||
संग्रहीतुं समुन्नीता एते मेला द्विसप्ततिः |
ततश्चैतेषु   वैयर्थ्यशङ्का किंकारणं भवेत् || ८६ ||
By these also Panthuvarali, Kalyani and
many desiyaragas and their melas
can be acquired in these increased 72 melas
But in these where is the doubt of being useless

न हि संघटते वृत्तरत्नाकरनिरूपिते |
तत्र प्रस्तारलब्धानां वृत्तानां निकुरुम्बके || ८७ ||

अस्मदादिप्रसिध्दान्यवृत्तवैयर्थ्यशंसनम् |
न हि संघटते तालप्रस्तारजनिते पुनः || ८८ ||
[87 88 Even in Ratnakara multitude of Talas are described which are not in use]
तालजाले प्रसिद्धान्यतालवैयर्थ्यशंसनम् |
यदि कश्चिन्मदुन्नीतमेलेभ्यस्तद द्विसप्ततेः || ८९ ||

न्यूनंवाऽप्यधिकं वाऽपि प्रसिद्धैर्द्वादशस्वरैः |
कल्पयेन्मेलनं तर्हि ममायासो वृथा भवेत् || ९० ||

With the well known 12 notes, forming more or less melas
will be a useless effort [or my effort will be wasted]   [incomplete transaltion]

न हि तत्कल्पने फाललोचनो पि प्रगल्भते |
तस्माद्यथैकपञ्चाशद्वर्णाः स्युर्मातृकाभिधाः || ९१ ||

Even Siva is not capable of such formation (of more melas)
Just as (only) 51 varnas(letters) are known to experts

न हीयन्ते न वर्धन्ते तथा मेला द्विसप्ततिः
एवम् सामन्यतो मेलाः प्रोक्ता ह्यधिकसप्ततिः ||९२||

The 72 melas neither get reduced nor increase
Thus normally the melas are said to be more tha 70

* * * * *

After this Venkatamakhi goes on to describe the features of individual melas.
First he lists the mela names:
Mukhari, Samavarali, Bhupala, Hejjujji, Vasanthabhairavi, Gowla,
Bhairavi, Ahari, Sriraga, Kambhoji, Sankarabharana, Samantha,
Desakshi, Nata, Suddhavarali, Panthuvarali, Suddharamakriya,
Simharava (created by Venkatamakhi),Kalyani – thus 19 melas.

He also defines the sruthis of notes in each mela ensuring that the total is 22.
The sruthis mentioned by him for each mela is shown below (along with the positions arrived at by adding these sruthis cumulatively starting from ri keeping sa as 0)

Melam	Sruthis for each note (Number of sruthis from lower note)							Position in 12 note scale (added by translator)							
	स	रि	ग	म	प	ध	नि	(स)	रि	ग	म	प	ध	नि	स
Mukhari(All suddha)	4	3	2	4	4	3	2	0	3	5	9	13	16	18	22
Samavarali	1	3	2	4	4	3	5	0	3	5	9	13	16	21	22
Bhupala	3	3	3	3	4	3	3	0	3	6	9	13	16	19	22
Hejjujji	4	3	5	1	4	3	2	0	3	8	9	13	16	18	22
Vasanthabhairavi	3	3	5	1	4	3	3	0	3	8	9	13	16	19	22
Gowla	1	3	5	1	4	3	5	0	3	8	9	13	16	21	22
Bhairavi	3	5	1	3	4	3	3	0	5	6	9	13	16	19	22
Ahari	1	5	1	3	4	3	5	0	5	6	9	13	16	21	22
Sriraga	3	5	1	3	4	5	1	0	5	6	9	13	18	19	22
Kamboji	3	5	3	1	4	5	1	0	5	8	9	13	18	19	22
Sankarabharana	1	5	3	1	4	5	3	0	5	8	9	13	18	21	22
Samantha	1	5	3	1	4	6	2	0	5	8	9	13	19	21	22
Desakshi	1	6	2	1	4	5	3	0	6	8	9	13	18	21	22
Nata	1	6	2	1	4	6	2	0	6	8	9	13	19	21	22
Suddhavarali	1	3	2	7	1	3	5	0	3	5	12	13	16	21	22
Panthuvarali	1	3	3	6	1	3	5	0	3	6	12	13	16	21	22
Suddharamakriya	1	3	5	4	1	3	5	0	3	8	12	13	16	21	22
Simharava	3	5	1	6	1	5	1	0	5	6	12	13	18	19	22
Kalyani	1	5	3	4	1	5	3	0	5	8	12	13	18	21	22

Thus positions used in all Melams are only 12 i.e.   0,3,5,6,8,9,12,13,16,18,19,21 (22 Tara Sa)

These correspond to present day nomenclature as below:

Sruthi position of note in the octave	Name of note used by Venkatamakhi
0	Shadja
3	Suddha Rishabha
5	Suddha Gandhara / Panchasruthi Rishabha
6	Shadsruthi Rishabha/ Sadharana Gandhara
8	Anthara Gaandhara
9	Suddha Madhyama
12	Varali Madhyama
13	Panchama
16	Suddha Dhaivatha
18	Suddha Nishadha / Panchasruthi Dhaivatha
19	Shadsruthi Dhaivatha / Kaisiki Nishada
21	Kakali Nishada
22	Shadja (Thara)

Subsequently Govinda in Sangraha Chudamani, reduced the positions of Suddha Rishabha, Suddha Gaandhara (Panchasruthi Rishabha), Suddha Dhaivatha, Suddha Nishada (Panchasruthi Dhaivata) by one sruthi each and renamed Panchasruthi Rishabha and Dhaivatha as Chathusruthi which nomenclature is now being used.

Venkatamakhi's assignment of positions ensures that the 32 melas that may be arrived at by allowing only 2 variations for ri,ga,da,ma and ni do not have any pair of notes separated by 2 sruthis, which would be 'vivadi' according to older works. The other 40 would be vivadi melas. However, in the 19 melas described by Venkatamakhi 6 are vivadi !