THE
MELAKARTA JANYA-RAGA SCHEME
WITH AN
EXPLANATORY CHART
AND TWO APPENDICES

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PREFACE

In the following pages, I have attempted an explanation of Venkatamakhi's Melakarta Scheme as understood by music scholars since his time. Here and there a few musicians have been questioning the soundness of the scheme on very trivial grounds. But there is no denying the statement that the Scheme of the 72 Melakartas is both a mathematical and a musical fact, based as it is on the 12 notes of the gamut. The scheme has definitely contributed to the systematic classification of ragas from a scientific stand-point. Venkatamakhi's own nomenclature for the 72 Melakarta ragas has not however, displaced the already existing one. Music scholars since his time have systematically construed his Panchasruti Rishabha and Panchasruti Dhaivata as being equivalent to the modern Chatusruti Rishabha and Chatusruti Dhaivata respectively. In the section on Janya ragas, a detailed classification of the same has been presented from various stand-points. The Principles of Repetition given on pp. 22—26 are entirely the fruits of my own investigation in this direction.

In Appendix I, the arohana and avarohana of all the 483 Non-vakra janya ragas are given at length, just to give a clear idea to the reader about the formation of one class of janya ragas. Appendix II contains the arohana and avarohana of 226 janya ragas.

The notation used in this book is the well-known *sa ri ga ma notation*, which consists in representing the sapta swaras, Shadja, Rishabha, Gandhara, Madhyama, Panchama, Dhaivata and Nishada by their initial letters: s r g m p d n. The small swara-letters s r g m p d n correspond to the hrasva or the short letters of the Indian Scripts and represent by themselves swaras of duration of unit time. The capital swara-letters S R G M P D N correspond to the dirgha or long letters of the Indian Scripts and represent by themselves swaras of duration of 2 units time. The tara sthayi and the mandra sthayi swaras are represented by dots above and below the swara letters respectively.

It was originally intended to issue a detailed account of forty ragas, as a supplement to this book; but this will now be issued as a separate book entitled *The Ragas of Carnatic Music.*

In the preparation of this book, I have consulted the two volumes of the Sangita Sampradaya Pradarsini of Subbarama Dikshitar of Ettyapuram, the musical works of Tachur Singaracharlu, the Pallavi Swara Kalpa Valli of Tiruvotiyur Tyagayyar, Tiruvayar Subramanya Iyer's unpublished work Sangita Kaumudi, Pazhamaneri Swaminatha Iyer's Raga Vibhodhini, Pallavi Seshayyar's MSS on Raga Lakshana, Annaswami Sastri's MSS on the Melakarta Scheme, A. M. Chinnaswami Mudaliar's Oriental Music in European Notation and numerous other works.

In conclusion, I wish to tender my thanks to Mr. T. V. Subba Rao, for his kindness in reading through the MSS and offering various valuable criticisms and suggestions.

I will thankfully welcome any suggestion towards the improvement of this little book.

" Sangeetashrama "
Chetput, *Madras*.

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The Scheme of 72 Melakarta-ragas

The modern classification of ragas in South Indian Music into Melakarta-ragas and Janya-ragas is highly scientific and is the best system of raga-classification that human genius can conceive of. This system of classification which is only a few centuries old is based on the genus-specie system. The Rag-Ragini-Putra System is older and still survives in Northern India. Attempts are however being made there now by distinguished music-scholars to classify the ragas under various *thats* (corresponding to the melakartas). Although the idea of a melakarta had been previously in vogue, Venkatamakhi was the first to formulate the scheme of 72 melakartas in his epoch-making work *Chatur dandi-prakasika* (1660 A.D.). This valuable grantha which is as yet unpublished in complete form is the most authoritative work, for modern South Indian Music. It deals exhaustively with the veena, the srutis, the swaras, the melas, the ragas, alapa, taya, gita prabandha and tala and contains mnemonics to signify the particular chakra and mela, the names of the mela-ragas and their derivatives (janya-ragas). Venkatamakhi made a close analytical study of the lakshana (i.e., characteristics) of the swaras used in the different ragas of his time and formulated a scheme of arrangement for those ragas. The melakarta-scheme includes within it not only the sampoorna ragas current in his time but also the possible number of melakarta-ragas that could be evolved on the basis of the 12 notes of the gamut. Hence it is that his scheme is complete by itself. It is interesting to note that his own *nomenclature for the 72 melakartas is however different from the one in currency at the present day. Venkatamakhi has by his work placed South Indian Music on a firm theoretical basis.

*See at the bottom of the Chart for his nomenclature for the 72 melakarta-ragas.

Melakarta-ragas are ragas which possess the full complement of the sapta swaras, sa, ri, ga, ma, pa, dha, ni, in both the arohana and the avarohana in their *krama* or order.* They are for this reason called as *sampoorna ragas.* Melakarta-ragas are also called by various names as: fundamental-ragas, primary-ragas, root-ragas, raganga-ragas, parent-ragas and janaka-ragas; sometimes also simply as mela-ragas. The individual swaras in both the arohana and the avarohana of every melakarta raga are the same. That is to say, within a melakarta-raga the notes ri, ga, ma, dha and ni, are not of one kind in the arohana and of a different kind in the avarohana. Be it remembered that the notes sa and pa are immutable and do not admit of varieties. The 72 melakarta ragas are arranged in a regular serial order and are grouped under 12 chakras, each chakra including within it six melakarta ragas. The names of the 12 chakras in their serial order are as follows:—

I	Indu इन्दु	VII	Rishi ऋषि
II	Netra नेत्र	VIII	Vasu वसु
III	Agni अग्नि	IX	Brahma ब्रह्म
IV	Veda वेद	X	Disi दिशि
V	Bana बाण	XI	Rudra रुद्र
VI	Rutu ऋतु	XII	Aditya आदित्य

Melakarta-ragas Nos. 1—36 included under Chakras I—VI take the suddha madhyama (F Natural) and melakarta-ragas Nos. 37—72 included under Chakaras VII—XII take the prati madhyama (F Sharp). For this reason the first 36 melakartas are called as the *Suddha madhyama melakartas* and the second 36 melakartas as the *Prati madhyama melakartas.* The suddha madhyama melakartas are known as the *Poorva melakartas* and the prati madhyama melakartas as the *Uttara melakartas.* The order of arrangement of the melakarta ragas in the second half of the scheme (the uttara group) is exactly the same as that in the first half (poorva group) except that the prati madhyama

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* Note that the arohana and the avarohana of melakarta-ragas invariably include the octave sa, i.e., the tarasthayi shadja.

takes the place of the suddha madhyama. Every suddha madhyama melakarta therefore has its corresponding prati madhyama variety and the note ma is thus the *bisecting-point* in the whole melakarta scheme. It will therefore suffice for our purposes to examine the arrangement of the melakartas in the poorva group.

The poorvanga notes or the notes of the lower tetrachord sa, ri, ga, ma.

The initial and terminal notes of the lower tetrachord* of the first six †chakras i.e. shadja and suddha madhyama remain constant throughout. The varying notes are rishabha and gandhara. The four principal varieties of these two notes are suddha rishabha, chatusruti rishabha, sadharana gandhara and antara gandhara. Bearing in mind the principle of *arohana-krama i.e.* that the rishabha and gandhara varieties should succeed one another in the ascending order of their pitch, the following six are the only possible combinations :—

1) Suddha Rishabha—Chatusruti Rishabha.

2)   ,,   ,,   Sadharana Gandhara.

3)   ,.   ,,   Antara   ,,

4) Chatusruti Rishabha—Sadharana Gandhara.

5)   ,,   ,,   Antara   ,,

6) Sadharana Gandhara ,,   ,,

One of the principles observed in the formation of the melakarta-ragas is that every one of the sapta swaras should be represented in both the arohana and the avarohana and that not one of them should repeat in either place. Of the six combinations mentioned above, combinations 1 and 6 have the two varieties of the same note *viz* :—2 kinds of rishabha and 2 kinds of gandhara. Being too important combinations to be lightly ignored, Venkatamakhi got over the difficulty by calling the

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    * Tetrachord means a group of four notes. See South Indian Music Series Primer P. 10.

    † In the second six chakras, the initial and terminal notes of the lower tetrachord viz:— the shadja and the prati madhyama, remain constant.

chatusruti rishabha in the first combination as a variety of ga, and the sadharana gandhara in the sixth combination as a variety of ri. He called the chatusruti rishabha and the sadharana gandhara in the first and the sixth combinations as *suddha gandhara* and *shatsruti rishabha* respectively for this purpose. Of course this is the only intelligent and possible way of getting out of the difficulty without offending the principle mentioned above. Therefore the chatusruti rishabha came to be called as suddha gandhara and sadharana gandhara as shatsruti rishabha under those special circumstances. To make his scheme easy of comprehension, Venkatamakhi struck out a new line of denoting the notes by giving a *vowel change* to the swara-letters. Sa and Pa were left alone because they were immutable and formed the constant factors in all the melakarta-ragas.

The initial consonant denoting the note was combined with the vowels a, e, u. Thus the three different varieties of the notes ri, ga, dha and ni were represented as:—ra, ri, ru: ga, gi, gu: dha, dhi, dhu and na, ni, nu. (The note rishabha no doubt begins with the vowel अ but the consonant r was used in the case of that note). The two varieties of the note ma were denoted as ma and mi. The inventor of this ingenious device is Venkatamakhi's father Govinda Dikshitar.[*]

Thus Venkatamakhi adopted the following nomenclature for the Rishabha-Gandhara varieties :—

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[*] It is quite possible that Govinda Dikshitar might have got the clue for his vowel change in the swara letters from the Kudimiya-malai Inscription (Pudukota State in Southern India) belonging to the 7th century A. D. This inscription is of special importance in as much as it gives us an insight into the music of the period intervening Bharata's Natya Sastra (4th cent. A. D.) and Sarngadeva's Sangita Ratnakara (written between 1210 and 1247 A. D.). In that inscription the different varieties of each swara are expressed by a combination of the initial consonant in the name of the swara with the vowels a i u or e *e.g.* we have sa, si, su, se: ra, ri. ru, re and so on. Although the inscription came to the notice of the Epigraphy Department only in the year 1904, it is quite possible that Govinda Dikshitar, the Prime Minister of Achutappa Naik the then ruler of Tanjore (1572-1614) might have seen the inscription and got the idea of denoting the different varieties of the swaras by means of the *vowel change*.

Suddha rishabha	...	*ra*
Chatusruti ,,	...	*ri*
Shatsruti ,,	...	*ru*
Suddha gandhara	...	*ga*
Sadharana ,,	...	*gi*
Antara ,,	...	*gu*

The notes *ra*, *ri* and *ru* are in the ascending order of their pitch; likewise the notes *ga*, *gi* and *gu*. (Note that the notes *ri* and *ga* are practically the same; likewise the notes *ru* and *gi*).

The six combinations of the rishabha-gandhara varieties mentioned on p. 3 might now be represented as follows :—

1) Suddha rishabha—Suddha gandhara or *ra-ga*.
2) ,, ,, Sadharana ,, or *ra-gi*.
3) ,, ,, Antara ,, or *ra-gu*.
4) Chatusruti ,, Sadharana ,, or *ri-gi*.
5) ,, ,, Antara ,, or *ri-gu*.
6) Shatsruti ,, ,, ,, or *ru-gu*.

The uttaranga notes or notes of the higher tetrachord pa dha ni sa

Here again the initial and terminal notes *viz.*, panchama and the tara sthayi shadja remain constant throughout the first six chakras. (They remain constant also in the second six chakras.) The varying notes are only the dhaivata and the nishada. All the considerations and arguments applied above to the rishabha-gandhara combinations apply *mutatis mutandis* to the dhaivata-nishada combinations. We get as a result the suddha dhaivata, (*dha*) chatusruti dhaivata (*dhi*) and shatsruti dhaivata (*dhu*) corresponding to the suddha rishabha (*ra*) chatusruti rishabha (*ri*) and shatsruti rishabha (*ru*) of the poorvanga. Likewise we get the suddha nishada (*na*) kaisiki nishada (*ni*) and kakali nishada (*nu*) corresponding to the suddha gandhara (*ga*) sadharana gandhara (*gi*) and antara gandhara (*gu*) of the poorvanga. The notes *dha*, *dhi* and *dhu* are in the ascending order of their pitch; likewise the notes *na*, *ni* and *nu*. (Note that the notes *dhi* and *na* are practically the same; likewise the notes *dhu* and *ni*.)

The six admissible combinations of the dhaivata-nishada varieties are therefore as follows :—

(1) Suddha dhaivata-Suddha nishada   or   *dha-na*.
            (Chatusruti dhaivata)
(2) ,,   ,,   Kaisiki niṣhada   or   *dha-ni*.
(3) ,,   ,,   Kakali   ,,   or   *dha-nu*.
(4) Chatusruti ,,   Kaisiki   ,,   or   *dhi-ni*.
(5) ,,   ,,   Kakali   ,,   or   *dhi-nu*.
(6) Shatsruti dhaivata- ,,   ,,   or   *dhu-nu*.
       (Kaisiki nishada).

Thus by giving additional names to the four notes, chatusruti rishabha, sadharana gandhara, chatusruti dhaivata and kaisiki nishada, Venkatamakhi has expanded the 12 notes of the gamut into 16 and formulated the melakarta-scheme.

The following table illustrates these points :—

Table I.

No.	Name of the swaras.	Venkata-makhi's Nomen-clature.	Western music.	Hindustani music.
1	Shadja	Sa	C	Shadja.
2	Suddha Rishabha	Ra	D flat	Ri Komal.
3	{ Chatusruti ,,	Ri }	D	Ri Tivra.
	Suddha Gandhara	Ga }		
4	{ Sadharana Gandhara	Gi }	E flat	Ga komal.
	Shatsruti Rishabha	Ru }		
5	Antara Gandhara	Gu	E	Ga Tivra.
6	Suddha Madhyama	Ma	F	Ma komal.
7	Prati	Mi	F sharp	Ma Tivra.
8	Panchama	Pa		Panchama.
9	Suddha Dhaivata	Dha	G	Dha komal
10	{ Chatusruti ,,	Dhi }	A flat	
	Suddha Nishada	Na }	A	Dha Tivra,
11	{ Kaisiki Nishada	Ni }	B flat	Ni komal.
	Shatsruti dhaivata	dhu }		
12	Kakali Nishada	Nu	B	Ni Tivra.

The arrangement of the melakarta-ragas

Now that the lakshana of the various notes employed in the formation of the melakarta-ragas has been explained, it will now be easy to understand the scheme of arrangement of the melakarta-ragas.

Within every chakra the poorvanga notes are kept constant. That is, the character of the rishabha and gandhara notes remains the same for all the six melakartas within the chakra. The changing notes within each chakra are therefore only the dhaivata and the nishada. Note that the swara suddha madhyama is constant for the first six chakras and the swara prati madhyama for the second six chakras. The rishabha-gandhara group of notes changes its character from chakra to chakra but retains its identical character within the same chakra. The lakshana of the rishabha and gandhara notes in the first six chakras in their serial order is as follows :—

I	Chakra	Suddha Rishabha	Suddha Gandhara
II	,,	,,	Sadharana ,,
III	,,	,,	Antara ,,
IV	,,	Chatusruti Rishabha	Sadharana ,,
V	,,	,,	Antara ,,
VI	,,	Shatsruti Rishabha	,, ,,

The six chakras might also be usefully termed the *ra-ga* chakra, *ra-gi* chakra, *ra-gu* chakra, *ri-gi* chakra, *ri-gu* chakra and *ru-gu* chakra.

Within a chakra, the dhaivata-nishada group of notes changes its character from melakarta to melakarta. The lakshana of the notes dha and ni of the six melakarta ragas within each chakra is as follows :—

1st	Melakarta	Suddha dhaivata—Suddha nishada.			
2nd	,,	,,	,,	Kaisiki	,,
3rd	,,	,,	,,	Kakali	,,
4th	,,	Chatusruti	,,	Kaisiki	,,
5th	,,	,,	,,	Kakali	,,
6th	,,	Shatsruti	,,	,,	,,

These six melakarta ragas in their serial order might also be usefully termed as the *dha-na* melakarta, *dha-ni* melakarta, *dha-nu* melakarta, *dhi-ni* melakarta, *dhi-nu* melakarta and *dhu-nu* melakarta.

Thus the *rank* of the melakarta-raga within the chakra determines the lakshana of its dhaivata and nishada swaras.

The changing order of the dhaivata-nishada group of notes mentioned above is repeated in exactly the same way in the six melakartas of each chakra. Thus when the six varieties of the dhaivata-nishada group are repeated with each of the six varieties of the rishaba-gandhara group, we get $6 \times 6 = 36$ combinations. These 36 combinations with the suddha madhynma (F Natural) and the same with the prati madhyama (F sharp) give rise to the 72 melakarta-ragas.

The following table illustrates these points:—

Table II.

Poorvanga (Lower tetrachord notes belonging to Melakartas 1—36	Uttaranga (Upper tetrachord) notes.						Poorvanga (Lower tetra-chord notes belonging to Melakartas 37—72
	प^l pa dha na sa	श्री pa dha ni sa	गो pa dha nu sa	भू pa dhi ni sa	मा pa dhi nu sa	ष pa dhu nu sa	
I sa ra ga ma	1 37	2 38	3 39	4 40	5 41	6 42	sa ra ga mi VII
II sa ra gi ma	7 43	8 44	9 45	10 46	11 47	12 48	sa ra gi mi VIII
III sa ra gu ma	13 49	14 50	15 51	16 52	17 53	18 54	sa ra gu mi IX

Poorvanga (Lower tetrachord notes belonging to Melakartas 1—36	Uttaranga (Upper tetrachord) notes.						Poorvanga (Lower tetra-chord notes belonging to Melakartas 37—72
	पा	श्री	गो	भृ	मा	ष	
	pa dha na sa	pa dha ni sa	pa dha nu sa	pa dhi ni sa	pa dhi nu sa	pa dhu nu sa	
IV sa ri gi ma	19 55	20 56	21 57	22 58	23 59	24 60	sa ri gi mi X
V sa ri gu ma	25 61	26 62	27 63	28 64	29 65	30 66	sa ri gu mi XI
VI sa ru gu ma	31 67	32 68	33 69	34 70	35 71	36 72	sa ru gu mi XII

N. B.—Roman figures denote the serial numbers of the chakras and the Arabic figures, the serial numbers of the melakarta-ragas.

Suppose for the purpose of easier understanding, the three varieties of the rishabha, gandhara, dhaivata and nishada swaras are denoted by suffixing the numerals 1, 2, 3 to them respectively as shown in column 2 of the following table :—

Table III

1	r_1	Suddha Rishabha	ra
2	r	Chatusruti ,,	ri
3	r_3	Shatsruti ,,	ru
4	g_1	Suddha Gandhara	ga
5	g_2	Sadharana ,,	gi
6	g_3	Antara ,,	gu
7	d_1	Suddha Dhaivata	dha
8	d_2	Chatusruti ,,	dhi
9	d_3	Shatsruti ,,	dhu
10	n_1	Suddha Nishada	na
11	n_2	Kaisiki ,,	ni
12	n_3	Kakali ,,	nu

2

Then the six combinations of the Rishabha-Gandhara group mentioned on P. 5 are as follows :—

(A)	r_1	g^1
(B)	r_1	g_2
(C)	r_1	g_3
(D)	r_2	g_2
(E)	r_2	g_3
(F)	r_3	g_3

The corresponding six combinations of the Dhaivata-Nishada group mentioned on P. 6 are as follows :—

(a)	d_1	n_1
(b)	d_1	n
(c)	d_1	n_3
(d)	d_2	n
(e)	d_2	n_3
(f)	d_3	n_3

By repeating each of the Dhaivata-Nishada combinations with each of the Rishabha-Gandhara combinations we get $6 \times 6 = 36$ resultant combinations. Now, if the two varieties of the madhyama note be denoted as m_1 and m_2, the above 36 combinations with m_1 and the same 36 combinations with m_2 give rise to the 72 melakarta-ragas.

(Note that the swaras r_2 and g_1 here are practically the same. Likewise, the swaras r_3 and g_2 ; d_2 and n_1 ; d_3 and n_2).

So great was Venkatamakhi's joy when he formulated the scheme, that he declared in his immortal work that even Lord Paramasiva could not devise a scheme containing one more or one less than the 72 melakartas. But as he himself admitted in his work, only 19 of these 72 melakarta-ragas seem to have attained great popularity in his time. He called these 19 as *prasiddha* melakartas and also as *kalpita melakartas*, i. e., melakartas already made and in currency. He classified the remaining 53 melakartas under

'*kalpyamana*,' *i. e.*, in the process of making and '*kalpish-yamana*' *i. e.*, to be made hereafter. Happily for us, after the advent of master composers like Tyagaraja, Muthuswamy Dikshitar, Syama Sastri and others, more and more of these *non-prasiddha* melakartas of Venkatamakhi's time have become popular and are at present living ragas.

It will be of interest to note that in the poorva group the following melakarta-ragas have become very popular :—

1st	Melakarta of the	I Chakra	Kanakangi
2nd	,,	II	,,	Hanumatodi
3rd	,,	III	,,	Mayamalavagaula
4th	,,	IV	,,	Kharaharapriya
5th	,,	V	,,	Dhira Sankara-bharana
6th	,,	VI	,,	Chalanata

The first six chakras therefore might with profit be called as the Kanakangi Chakra, Hanumatodi Chakra, Mayamalavagaula Chakra, Kharaharapriya Chakra, Dhira Sankarabharana Chakra and Chalanata Chakra respectively.

Deductions :—

(1) All the melakarta-ragas have the sapta swaras sa ri ga ma pa dha ni and the octave sa in both the arohana and the avarohana. Of these the sa and pa swaras are immutable and are constant in all the melakarta-ragas.

(2) Of the remaining five swaras ri ga ma dha and ni, mela-karta ragas Nos. 1—36 take the suddha madhyama and melakarta ragas 37—72 take the prati madhyama; *i.e.*, the melakarta-scheme is *bifurcated* into two parts : *Poorva-part* wherein the melakarta-ragas take the suddha madhyama (F Natural) for their fourth and the *Uttara-part* wherein the melakarta-ragas take the prati madhyama (F Sharp) for their fourth.

(3) Melakarta-ragas 1—18 and their corresponding prati-madhyama varieties 37—54 (comprised within chakras 1, 2, 3, 7, 8 and 9) take the suddha rishabha.

(4) Melakarta-ragas 19—30 and their corresponding prati-madhyama varieties 55—66 (comprised within chakras 4, 5, 10 and 11) take the chatusruti rishabha.

(5) Melakarta-ragas 31—36 and their corresponding prati-madhyama varieties 67-72 (comprised under chakras 6 and 12) take the shatsruti rishabha.

(6) Melakarta-ragas 1-6 and their corresponding prati-madhyama varieties 37-42 (comprised under chakras 1 and 7) take the suddha gandhara.

(7) Melakarta-rages 7-12, 19-24 and their corresponding prati madhyama varieties 43-48 and 55-60 (comprised under chakras 2, 4, 8 and 10 take the sadharana-gandhara.

(8) Melakarta-ragas 13-18 and 25-36 and their corresponding prati-madhyama varieties 49-54 and 61-72 (comprised under chakras 3, 5, 6 and 9, 11 and 12) take the antara gandhara.

(9) Within each chakra, whether in the poorva group or the uttara group, melakarta-ragas of the 1st, 2nd and 3rd rank take the suddha dhaivata ; melakarta-ragas of the 4th and 5th rank take the chatusruti dhaivata and the melakarta-raga of the 6th rank takes the shatsruti dhaivata.

(10) Within each chakra, whether in the poorva or the uttara group, the melakarta-raga of the 1st rank takes the suddha nishada, melakarta-ragas of the 2nd and the 4th rank take the kaisiki nishada and melakarta-ragas of the 3rd, 5th and 6th rank take the kakali nishada.

Thus it will be found that the variations of the rishabha-gandhara group of notes and the dhaivata-nishada group of notes are quite symmetrical. While the variations of the rishabha-gandhara group belong to the different chakras, the variations of the dhaivata-nishada group belong to the individual melakartas of each chakra.

Utility of the Scheme.

The great use of the scheme consists in the fact that once the number of a melakarta-raga is known, its lakshnaa (*i.e.*, the characteristics of its swaras) can be told at the next second. Suppose the lakshana of the swaras of the melakarta-raga No. 26 is to be determined. Then proceed as follows:—

(1) Insert the swaras sa, pa and the octave sa in their appropriate places leaving blank spaces for the remaining swaras as follows:—

    sa . . . pa . . ṡa

(2) Notice whether the given number belongs to the poorva group or the uttara group. Since the given number is *26*, it belongs to the poorva group and hence is a *suddha madhyama* melakarta. Now insert *ma* in its appropriate place in the line as follows:—

    sa . . *ma* pa . . ṡa

(3) Next, in order to determine the notes of the poorvanga, ascertain to what chakra the given number belongs. The number 26 belongs to the 5th chakra (comprising melakarta-ragas Nos. 25-30) and hence *ri* (chatusruti rishabha) and *gu* (antara gandhara) are the notes it takes. Now insert *ri* and *gu* in their proper places as follows:—

    sa *ri* *gu* *ma* pa . . ṡa

(4) Now, to determine the notes of the uttaranga, find out the rank of the given melakarta within the chakra. The number 26 occupies the 2nd rank; hence *dha* (suddha dhaivata) and *ni* (kaisiki nishada) are the notes

it takes. Now insert *dha* and *ni* in the line as follows :—

sā ri gu ma pa dha ni śa.

Thus the melakarta raga No. 26 takes the Shadja, Chatusruti Rishabha, Antara Gandhara, Suddha Madhyama, Panchama, Suddha Dhaivata and Kaisiki Nishada.

This is the melakarta-raga known as *Charukesi*.

In cases where the given number belongs to the uttara group (comprising melakartas 37-72) it is useful to subtract 36 from the given number and the resulting figure gives the number of the corresponding suddha madhyama melakarta-raga. Determine the lakshana of this suddha madhyama melakarta-raga by adopting the process just now mentioned and by substituting prati madhyama for the suddha madhyama, the lakshana of the swaras of the melakarta-raga of the given number is obtained.

Thus when the serial number of a melakarta-raga is given or is known, it is easy to give its lakshana. But how is the serial number of a melakarta-raga to be determined ? This is done by the application of a formula known as the *ka ta pa ya di* sankhya,* which is summed up in the four phrases: *Kadinava, Tadinava, Padipancha, Yadyashta.*

KATAPAYADI Sankhya.

The first two syllables of the name of each melakarta-raga have been so ingeniously and dexterously fitted in as to make them subserve the purposes of this formula. This formula is based on the principal letters of the Sanskrit alphabet. The letters of the alphabet are divided off into compartments as shown in Table IV on the next page and for the purpose of this formula, each letter takes the number under which it falls. In the column next to 9 the figure zero is placed instead of ten.

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* It is interesting to note that this formula is made use of in several other Indian arts and sciences.

Table IV

Katapayadi formula.	1	2	3	4	5	6	7	8	9	0
Kadi nava (a series of 9 letters from ka)	K क	KH ख	G ग	GH घ	NG ङ	CH च	CHH छ	J ज	JH झ	GN ञ
Tadinava (a series of 9 letters from ta).	T ट	TH ठ	D ड	DH ढ	N ण	TH त	THH थ	DH द	DHH ध	N न
Padipancha (a series of 5 letters from pa).	P प	PPH फ	B ब	BH भ	M म					
Yadyashta (a series of 8 letters from ya).	Y य	R र	L ल	V व	S' श	SH ष	S स	H ह		

Application.—Take the first two syllables from the name of the given melakarta-raga whose serial number is to be determined. Ascertain under what corresponding numbers in the above table the initial letters of *the two syllables* fall and write down the two numbers in order. Now reverse this number of two digits and the resulting figure gives the serial number of the given melakarta-raga.

Example I.

The name of the given melakarta-raga whose serial number is to be determined is *Mayamalavagaula*.

In this raga, the first two syllables are *ma* and *ya* ; *ma* or *m* occurs in column 5 and *ya* or *y* in column 1 ; the resulting figure is 51. Now reverse this number. The result is 15. 15 is the serial number of the *Mayamalavagaula* melakarta-raga.

Example II.

Navanitam is the name of the given melakarta-raga. The first two syllables here are *na* and *va* and their initial letters *n* and *v*, which give the figure 04. By reversing this we get 40.

40 is the serial number of the melakarta-raga known as *Navanitam*.

Other examples are to be worked out in the same way.

In the case of the following melakarta-ragas : Ratnangi, Chakravakam, Sooryakantam, Shadvidamargini, Divyamani, Visvambari, Simhendramadhyamam and Chitrambari, on account of the presence of samyukta aksharas (conjunct consonants) the first two syllables have to be taken in the following manner, in order that the application of the *Katapayadi* formula might hold good.

			Number.		Number after reversal.
R at	nan	gi	2	0	02 or 2
Cha	kra	vaka	6	1	16
Soor	ya	kantam	7	1	17
Shad	vi	damargini	6	4	46
Di	vya	mani	8	4	48
Vi	svam	bari	4	5	54
Si	mhendramadhyamam	7	5	57
Chi	tram	bari	6	6	66

The katapayadi formula does not apply to the names of the janya ragas,

In the formation of the melakarta ragas, all possible combinations of notes (tones and semitones) which a *refined ear* can *tolerate* and *easily distinguish* have been included. The melakarta-scheme is the rocky foundation upon which South Indian Music firmly rests to-day. Viewed in the light of mere permutations and combinations, the scheme might appear at first sight as an artificial and dry arithmetical process. But 'the Charm and Beauty of music lie deep in the Theory of Numbers' and every musical sound and interval has its exact number of vibrations and ratios. The melakarta-scheme is highly comprehensive and systematic and includes within its fold all the modes used in ancient as well as modern systems of music of the different parts of the world. It is a complete and exhaustive scheme evolved by the simple and natural combinations already explained. To the question, whether the mere substitution of the prati madhyama in the place of the suddha madhyama of the poorva group of melakartas, gives rise to a totally different set of melakartas, Venkatamakhi answers by saying that even as a drop of butter-milk converts the entire milk of a vessel into curd the substitution of the prati madhyama *does effect* such a radical change and gives rise to an entirely new set of melakarta-ragas.

Some musicians are of opinion that the notes chatusruti rishabha and suddha gandhara are entirely different notes, *i. e.*, that those notes differ in pitch or frequency; they also maintain that the two swaras in each of the following groups: 1) sadharana gandhara and shatsruti rishabha; 2) chatusruti dhaivata and suddha nishada; 3) kaisiki nishada and shatsruti dhaivata differ from one another in pitch. A good deal of controversy has been going on this point. It will suffice here however to say, that for the purpose of the melakarta-scheme Venkatamakhi *intended* and *meant* that the two notes of each of the above mentioned four groups were *practically the same*. In his *Chaturdandi Prakasika*, he has admitted in unambiguous terms that he had built the 72 melas on the basis of the 12* swaras. All great music scholars since his time have only endorsed his view. It will be useful to note in this connection that the two swaras of each of the above groups are played by placing the fingers on one and the same sthana (fret) of the Veena.

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*There is no denying the fact however, that more notes than these 12 are made use of in the alapana of ragas and also in the musical compositions of the great composers. A piece of real useful work will be to *isolate* such notes, *ascertain* their frequencies and *determine* the several ragas and compositions in which they occur.

Janya Ragas

A janya-raga is a raga whose swaras are of the same kind as the corresponding swaras of the melakarta-raga from which it is *born* or *derived*. Janya-ragas are formed by the omission of one or two swaras either in the arohana or the avarohana or both. Janya ragas are also called by various names as *varja ragas** derivative ragas* and *secondary ragas*. From each melakarta-raga are derived a number of janya ragas. The scheme of janya-ragas is evolved on the principle that not even an iota out of the enormously rich store-house provided by nature, for creating emotional effects should be left unutilised. In the palmy days of Indian Music, certain musicians specialised in particular ragas and made them the subject of their exclusive and intensive study. To distinguish them, the names of the ragas they specialised in, were prefixed to their names as a mark of recognition. Todi Sitaramayya (who sang the Todi raga for eight days and broke all previous records) Narayanagaula Kuppayya (the renowned composer of tana varnas and a disciple of Tyagaraja) Sankarabharana Narasayya, Darbar Sitaramayya, Atana Appayya, Begada Subramanyayyar (Patnam Subramanyayyar) Bhairavi Sankarayyar, Saveri Doraisami Iyer are all glorious names which Posterity will for ever remember with pride and zeal.

Their Classification.

I

From the point of view of the number of swaras present in the arohana and the avarohana, janya ragas are classified under eight heads. The terms *sampoorna* (all the seven swaras

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* *Varja* means absent. Varja ragas are those janya-ragas in which one, two or sometimes even three swaras are absent in either the arohana or the avarohana or both. There are however some janya ragas (both of the vakra and the non-vakra type—see *post*) which take all the sapta swaras in both the arohana and the avarohana. But these are only exceptions to the general rule.

present) *shadava* (six swaras present *i. e.,* one swara being varja) and *audava* (five swaras present, *i. e.,* two swaras being varja) are used in this connection to describe the arohana and the avarohana of janya ragas.* The tara sthayi shadja is excluded in calculating the number of swaras present in the arohana and the avarohana of janya ragas.

The eight † kinds of janya ragas are :—

    (1) Shadava—Sampoorna

    (2) Audava—Sampoorna

    (3) Sampoorna—Shadava

    (4)   ,,   —Audava

    (5) Shadava—Shadava

    (6)   ,, —Audava

    (7) Audava—Shadava

    (8) Audava—Audava

The table given on the next page gives these eight kinds of janya-ragas with illustrative examples of prasiddha ragas under each group :—

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* Even as a minimum of three straight lines is required to enclose a space, a minimum of five swaras is required to constitute a melody-mould and give a distinct entity (swaroopa) to the raga. In the case of ragas like Navarasakannada (s g m p 's—'s n d m g r s- -Parent scale: Harikambhoji)and Vivardhani s r m p 's—'s n d p m g r s-Parent scale: Harikambhoji) which have only four notes in the arohana, the avarohana supplies the deficiency with six and seven swaras respectively. It might be of interest in this connection to note that in the ancient literature on music, mention is made of ragas which had fewer than five notes. Scales of one note were called as *Arcika*; scales of two notes as *Gathika*; scales of three notes as *Samika*; and scales of four notes as *Swarantara*. The difficulty of assigning proper ragas to several of the numerous interesting and beautiful folk songs and popular reels and jigs of our country is due to the fact that their musical range is within four notes.

† Note that every one of the 72 melakarta-ragas admits of these 8 varieties of janya ragas.

Table V.

No.	Kind of Janya-raga:	No. of swaras in arohana and avarohana.		Example	Its arohana and avarohana.	Name and number of the parent melakarta-raga
1	Shadava-Sampoorna	6	7	Kambhoji.	s r g m p d ś / ś n d p m g r s	Harikambhoji 28.
2	Audava-Sampoorna	5	7	Bilahari.	s r g p d ś / ś n d p m g r s	Dhira Sankarabharana 29.
3	Sampoorna-Shadava	7	6	Bhairavam.	s r g m p d n ś / ś d p m g r s	Sooryakantam 17.
4	Sampoorna-Audava	7	5	Garudadhwani.	s r g m p d n ś / ś d p g r s	Dhira Sankarabharana 29.
5	Shadava-Shadava	6	6	Malayamarutam.	s r g p d n ś / ś n d p g r s	Chakravakam 16.
6	Shadava-Audava	6	5	Natakuranji.	s r g m d n ś / ś n d m g s	Harikambhoji 28.
7	Audava-Shadava	5	6	Malahari.	s r m p d ś / ś d p m g r s	Mayamalavagaula 15.
8	Audava-Audava	5	5	Madhyamavati.	s r m p n ś / ś n p m r s	Kharaharapriya 22.

There are a few janya-ragas like Huṣeni and Maaji which take all the saptaswaras and the tarasthayi shadja in both the arohana and the avarohana and such ragas might with profit be termed as *sampoorna janya ragas* or *non-varja janya ragas* The janya-ragas in such cases differ from their parent melakarta-ragas on account of their (the janya-ragas') characteristic raga-ranjaka swara combinations (*pidippus* as they are called) and chaya-swara groups which lend life, flesh, blood and swaroopa to them.

Now, the Shadava-Sampoorna combinations possible in a melakarta raga are only the following six :—

```
1.  s r g m p d   ś    ś n d p m g r s
2.  s r g m p   n ś              ,,
3.  s r g m   d n ś             ,,
4.  s r g   p d n ś            ,,
5.  s r   m p d n ś           ,,
6.  s   g m p d n ś          ,,          6
```

Likewise the Sampoorna-Shadava combinations (the converse) are only   ...   6

The Audava-Sampoorna combinations are   ...   15
and their converse, the Sampoorna-Audava combi-
nations are likewise   15

The Shadava-Shadava combinations are   ...   36

The Audava-Shadava combinations are   ...   90
and their converse, the Shadava-Audava combi-
nations give another   ...   90

The total number of Audava-Audava combinations is   225

Thus the total number of janya-ragas according to

this scheme of computation is   ...   483
                                                                      ——

The arohana and avarohana of these 483 possible janya-ragas are given in full in **Appendix I**

Since each melakarta-raga admits of all these 483 varieties, the total number * of janya ragas derivable from the 72 melakartas comes to $483 \times 72 = 34,776$.

† Some Errors.

In calculating the total number of possible janya-ragas according to the scheme of computation mentioned above there are some errors. Take for instance any two contiguous melakarta-ragas like Harikambhoji (No. 28) and Dhira Sankarabharana (No. 29) which are different from one another only in the note nishada; the former taking the Kaisiki Nishada and the latter the Kakali Nishada. From these two melakarta ragas, are derived several janya ragas which do not take the note ni. For instance ragas with the following arohana and avarohana,

(a) s r g p d ṡ—ṡ d p g r s

(b) s r m p d ṡ—ṡ d p m r s

(c) s g m p d ṡ—ṡ d p m g s

(d) s r m p d ṡ—ṡ d p m g r s,

all of which take the chatusruti rishabha antara gandhara, suddha madhyama, panchama, and chatusruti dhaivata, might be said to be derived either from the Harikambhoji scale or from the Dhira Sankarabharana scale. In either case there is a repetition, since in the 483 ragas of the Harikambhoji group and the 483 ragas of the Dhira Sankarabharana group the above 4 ragas are included. It will be of interest to note that the raga (a) is also repeated in the 64th melakarta (Vachaspati) and in the 65th melakarta (Mechakalyani). The raga (b) is repeated in the 22nd melakarta (Kharaharapriya) and in the 23rd melakarta (Gaurimanohari). Examples of such repeating ragas are numerous and from a careful study of them I have deduced the following *14 Principles of Repetition* :—

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* Note that this total number does not include the numerous Vakra ragas (see pp 27-29) and the sampoorna janya ragas (see p. 21).
† Omit for first reading.

Principles of Repetition:

(1) When the arohana or the avarohana is sampoorna there is no repetition. Thus shadava-sampoorna, sampoorna-shadava, audava-sampoorna and sampoorna-audava ragas do not repeat and hence these ragas might be termed as the *non-repeating* janya-ragas for the purposes of this topic. The *repeating* janya ragas are only the shadava-shadava, shadava-audava, audava-shadava and the audava-audava varieties. †

(2) When in the arohana and the avarohana put together, all the sapta swaras are represented as in the following instances :

    (*a*) s r m p d ṡ—ṡ n p m g s

    (*b*) s r g m p d ṡ—ṡ n d p m g s,
            there is no repetition.

(3) A suddha madhyama janya raga does not repeat in the prati madhyama group and *vice versa*.

(4) As many suddha-madhyama janya ragas as are repeated in the poorva melakartas are also repeated in the uttara melakartas with the prati madhyama instead.

    For instance the raga s r m p n ṡ—ṡ n p m r s taking the chatusruti rishabha, suddha madhyama, panchama and kaisiki nishada occurs in the melakartas 20 (Nata Bhairavi) 22 (Kharaharapriya) 26 (Charukesi) and 28 (Harikambhoji).

    The same raga with the prati madhyama instead occurs in the corresponding prati madhyama melakartas 56 (Shanmukha priya) 58 (Hemavati) 62 (Rishabnapriya) and 64 (Vachaspati).

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*All these principles are based upon theoretical considerations.
†Even here there are some *non-repeating* janya ragas, as for instance ragas where the varja swaras of the arohana are found in the avarohana and *vice versa* (see Principle 2).

(5) All the Madhyama-varja janya ragas (*i.e.*, janya ragas wherein the note ma is *varja* or absent) of the shadava or audava type, derived from the melakarta ragas of the poorva group are repeated in the derivative ragas of the corresponding melakartas of the uttara group and *vice versa*.

Thus a raga having the following arohana and avarohana :— s r g p n s̊ — s̊ n p g r s belonging to the Dhira Sankarabharana melakarta is repeated in the list of derivative ragas under the Mechakalyani group:

(6) A Gandhara-varja janya-raga (*i.e.*, a janya-raga wherein the note ga is *varja* or absent) of the shadava or audava type, derived from a melakarta is repeated in any other melakarta, provided the difference between the two melakartas lies in the varja (absent) swara or swaras of the janya-raga.

Thus a raga having the following arohana and avarohana, s r m p d s̊ — s̊ d p m r s belonging to the Dhira Sankarabharana melakarta is repeated in the janya ragas of the melakarta ragas, Kharaharapriya Gaurimnohari, and Harikambhoji, the difference between these three melakartas and the Dhira Sankarabharana melakarta lying in the character of the varja swaras) ga and ni of the janya-raga.

(7) A Rishaba-varja janya-raga (*i.e.*, a janya-raga wherein the note ri is varja or absent) of the audava or shadava type, derived from a melakarta is repeated in any other melakarta provided the difference between the two melakartas lies only in the varja (absent) swara or swaras of the janya-raga.

Thus a janya-raga having the following arohana and avarohana s g m p d s̊ — s̊ d p m g s belonging to the Dhira Sankarabharana melakarta is repeated in the janya-ragas of the melakarta-ragas Chakravakam, Sooryakantam and Harikambhojii the difference

between these various melakartas lying in the character of the varja swaras (*i. e.*, ri and ni) of the janya-raga.

(8) A Dhaivata-varja janya-raga (*i.e.* a janya-raga wherein the note dha is varja or absent) of the audava or shadava type, derived from a melakarta is repeated in any other melakarta provided the difference between the two melakartas lies in the varja (absent) swara or swaras of the janya-raga.

Thus a janya-raga with the following arohana and avarohana s r g m n ṡ—ṡ n m g r s, belonging to the Mayamalavagaula melakarta is repeated in the janya-ragas of the melakarta Sooryakantam, the difference between these two melakartas lying in the character of the varja swara dha of the janya-raga.

(9) A Nishada-varja janya-raga (*i e.*, a janya-raga wherein the note ni is varja or absent) of the audava or shadava type, derived from a melakarta is repeated in any other melakarta provided the difference between the melakartas lies in the varja (absent) swara or swaras of the janya-raga.

Thus a janya-raga with the following arohana and avarohana s r g m d ṡ—ṡ d m g r s belonging to the Kharaharapriya melakarta is repeated in the Gaurimanohari melakarta, the difference between these two melakartas lying in the character of the varja swara ni of the janya-raga.

(10) A janya-raga of a melakarta is repeated in the janya-ragas of any other melakarta only when the varja swara or swaras of the janya-raga admit of varieties.

Thus a janya-raga with the following arohana and avarohana s r g m d n ṡ—ṡ n d m g r s belonging to the Kharaharapriya melakarta is not repeated in any other melakarta, since the varja swara of this janya-raga *viz.*, pa does not admit of varieties

From this, two axioms follow :—

(a) A Panchama-varja Shadava or Shadava-Audava or Audava-Shadava raga of a melakarta-raga is not repeated in any other melakarta.

(b) A Panchama-varja Audava raga of any mela-karta raga is repeated only in one other melakarta.

(11) Subject to the above-mentioned axioms, a shadava, shadava-audava or audava shadava raga of any mela-karta raga is repeated only once in another melakarta.

(12) Subject to the above axioms, an audava raga of any melakarta is repeated only in three other melakartas.

(13) When in a janya-raga of the repeating group, all the poorvanga notes (*viz.*, s r g m) are present, then the janya-raga can possibiy repeat only in the melakartas of the same chakra.

(14) When in a janya-raga of the repeating group, all the uttaranga notes (*viz.*, p d n ṡ) are present, the janya-raga can possibly repeat only in the melakartas of the same rank but belonging to the different chakras.

Applying these 14 principles it is found by actual calculation that of the 34776 janya-ragas as many as 6144 (roughly over $\frac{1}{5}$ of the total number) are repeated.

In giving illustrative examples of ragas for explaining the above principles, I have specifically refrained from giving their names and for obvious reasons.

In the case of many of the janya-ragas of the repeating group, music-scholars have held that such ragas are to be deemed to be *born* or *derived* only from a particular melakarta and not from any other melakarta, for very correct and sound reasons. For instance, the raga Mohana is a derivative of only the Hari-kanibhoji melakarta and not either of Dhira Sankarabharana or Vachaspati or Mechakalyani melakartas. Likewise the raga

Madhyamayati is only a derivative of the Kharaharapriya mela-
karta and not that of Nattabhairavi, Charukesi or Harikambhoji
melakartas. It will be of interest to note in this connection that
the late Mr. Tiruvayar Subramanya Iyer, a great music-scholar
grouped each repeating janya-raga under the earliest melakarta in
the 72 Series. For instance he grouped Madhyamavati under the
Nattabhairavi melakarta (*vide* his *Sangita Kaumudi* P. 211).

II. Vakra Ragas.

From the point of view of the course taken by the swaras
in the arohana and the avarohana, janya ragas are classified into
Vakra ragas and *Non-Vakra ragas*. Vakra ragas are those
wherein, the swaras, either in the arohana or the avarohana or both
take a *crooked* or *zig-zag* course as in the following cases :—

 (1) Anandabhairavi (s g r g m p d p n ṡ—
           ṡ n d p m g r s).

 (2) Asaveri (s r m p d ṡ—ṡ n ṡ p d m p r G r s).

 (3) Sahana (s r g m p m D n ṡ—ṡ n d p m G m R g r s)

Graphically represented, the arohana and avarohana of vakra
ragas present many indentations but the graphs of non-vakra
ragas are regularly ascending and descending straight lines or
curves. In non-vakra ragas the swaras in both the arohana and
the avarohana take a straight continuous ascent and descent. The
483 possible janya-ragas derivable from each melakarta (see Ap-
pendix I) are all non-vakra ragas. Vakra ragas are *only a species*
of janya ragas. From each melakarta raga are derived a number
of vakra ragas.

Their Classification.

Vakra ragas of the 1st type are those vakra ragas whose
arohana as well as avarohana are vakra. There are nine kinds
under this type :—

 (1) Sampoorna—Sampoorna

 (2) Sampoorna—Shadava

 (3) ,, —Audava

 (4) Shadava—Sampoorna

(5) Audava — Sampoorna

(6) Shadava — Shadava

(7) Shadava — Audava

(8) Audava — Shadava

(9) Audava — Audava

Vakra ragas of the 2nd type are those vakra ragas whose arohana alone is vakra. There are nine kinds under this type also :—

(1) Sampoorna — Sampoorna

(2)   ,,   — Shadava

(3)   ,,   — Audava

(4) Shadava — Sampoorna

(5) Audava —   ,,

(6) Shadava — Shadava

(7)   ,, — Audava

(8) Audava — Shadava

(9)   ,, — Audava

Vakra ragas of the 3rd type are those vakra ragas whose avarohana alone is vakra. There are nine kinds under this type too :—

(1) Sampoorna — Sampoorna

(2)   ,,   — Shadava

(3)   ,,   — Audava

(4) Shadava — Sampoorna

(5) Audava —   ,,

(6) Shadava — Shadava

(7)   ,, — Audava

(8) Audava — Shadava

(9)   ,, — Audava

Thus there are 27 kinds of vakra ragas. Here, the term *sampoorna* means all the sapta swaras are represented: *shadava* means, one of the sapta swaras is not represented (*i.e.*

absent) : *audava* means, two of the sapta swaras are not represented (*i.e.*, absent).

Although in theory there exist several lakhs of these vakra ragas, yet only a few of them have been recognised and named and are in currency at the present day. Within recent memory Patnam Subramanya Iyer has enriched our stock of ragas by the addition of a vakra raga which he named as *Katanakutoohalam* कतन कुतूहलम्.) This raga has the following arohana and avarohana: s r m D n g p ṡ—ṡ n d p m g r s. He has immortalised this raga in his famous kriti *Raghuvamsa sudhambudhi Chandra Sri.*

III

Janya ragas are also classified into :—

    (1) Upanga ragas and

    (2) Bhashanga ragas.

This is a very useful system of classification of janya-ragas and is based upon the presence or absence of foreign notes (anya swaras) or accidentals.

Upanga rayas are those janya ragas whose notes are faithful to the notes of their parent melakarta-raga. That is, the swaras of the janya ragas of the Upanga variety are of the same kind as the swaras of the melakarta-ragas from which they are born or derived. Ragas like Dhanyasi and Arabhi for instance take swaras which are of the same kind as those of their respective parent melakarta-ragas.

Bhashanga ragas are those janya-ragas which, in addition to the notes pertaining to the raga, admit of one, two or sometimes even three foreign notes as visitors. These visiting notes greatly enrich the beauty of the raga. In the raga Bilahari, the note Kaisiki Nishada, and in the raga Bhairavi the note Chatusruti Dhaivata, are visitors.

IV

There are some janya-ragas which do not take the tara sthayi shadja and their range is within a portion of the mandra sthayi and the madhya sthayi. Such ragas are classified into :—

(1) *Nishadantya*—When the highest note touched in the raga is the ni swara of the madhya sthayi.

(2) *Dhaivadantya*—When the highest note touched in the raga is the dha swara of the madhya sthayi.

(3) *Panchamantya*—When the highest note touched in the raga is the pa swara of the madhya sthayi.

Nadanamakriya (s r g m p d n—n d p m g r s ṇ)

(Parent Scale : Mayamalavagaula)

Kuranji (s ṇ s r g m p d—d p m g r s ṇ s) and

(Parent Scale : Dhira Sankarabharana)

Navaroj (p ḍ ṇ s r g m p—m g r s ṇ ḍ p)

(Parent Scale : Dhira Sankarabharana)

are respectively typical instances of the above three kinds of ragas.

APPENDIX I.

Showing the Arohana and Avarohana of the 483 Non-Vakra Janya ragas derived from each melakarta-raga.

N.B.:—In the column under examples in this Appendix only examples of well-known janya ragas with the corresponding arohana and avarohana are given, along with the serial number of the melakarta-raga from which such ragas are derived.

I—Sampoorna-Shadava Series

No.	Arohana.	Avarohana.	Examples.	
1	s r g m p d n ṡ	ṡ d p m g r s	{ Ardradesi	15
			{ Bhairavam	17
2	,,	ṡ n p m g r s	{ Dundubhipriya	48
			{ Kaikavasi	60
3	,,	ṡ n d m g r s		
4	,,	ṡ n d p g r s		
5	,,	ṡ n d p m r s		
6	,,	ṡ n d p m g s	Margahindolam	20

II—Shadava-Sampoorna Series.

No.	Arohana.	Avarohana.	Examples.	
7	s r g m p d ṡ	ṡ n d p m g r s	{ Kambhoji	28
			{ Bhooshavali	64
8	s r g m p n ṡ	,,		
9	s r g m d n ṡ	,,		
10	s r g p d n ṡ	,,		
11	s r m p d n ṡ	,,	Kapinarayani	28
12	s g m p d n ṡ	,,	Bhinnapanchamam	3

III—Sampoorna-Audava Series.

No.	Arohana.	Avarohana.	Examples.	
13	s r g m p d n ṡ	ṡ p m g r s		
14	,,	ṡ d m g r s		
15	,,	ṡ d p g r s	Garudadhwani	29
16	,,	ṡ d p m r s		
17	,,	ṡ d p m g s		
18	,,	ṡ n m g r s		
19	,,	ṡ n p g r s		
20	,,	ṡ n p m r s		
21	,,	ṡ n p m g s		
22	,,	ṡ n d g r s		

23	s r g m p d n ṡ	. ṡ n d m r s		
24	,,	ṡ n d m g s	Saramati	20
25	,,	ṡ n d p r s		
26	,,	ṡ n d p g s		
27	,,	ṡ n d p m s		

IV—Audava-Sampoorna Series.

28	s r g m p ṡ	ṡ n d p m g r s		
29	s r g m d ṡ	,,		
30	s r g p d ṡ	,,	Bilahari	29
31	s r m p d ṡ	,,	Arabhi	29
			Saveri	15
			Yadukulakambhoji	28
32	s g m p d ṡ	,,		
33	s r g m n ṡ	,,		
34	s r g p n ṡ	,,		
35	s r m p n ṡ	,,	Kedaragaula	28
			Gauri	15
36	s g m p n ṡ	,,	Dhanyasi	8
			Abheri	20
37	s r g d n ṡ	,,		
38	s r m d n ṡ	,,		
39	s g m d n ṡ	,,		
40	s r p d n ṡ	,,		
41	s g p d n ṡ	,,		
42	s m p d n ṡ	,,		

V—Shadava-Shadava Series.

43	s r g m p d ṡ	ṡ d p m g r s	Suddhasimantini	8
			Chandrajyoti	41
44	,,	ṡ n p m g r s		
45	,,	ṡ n d m g r s		
46	,,	ṡ n d p g r s		
47	,,	ṡ n d p m r s		
48	,,	ṡ n d p m g s		
49	s r g m p n ṡ	ṡ d p m g r s		
50	,,	ṡ n p m g r s	Krishnaveni	15
			Pushpalaṭika	22
			Mandari	51
51	,,	ṡ n d m g r s		
52	,,	ṡ n d p g r s		

53	s r g m p n ṡ	ṡ n d p m r s		
54	,,	ṡ n d p m g s	Kannadagaula	22
55	s r g m d n ṡ	ṡ d p m g r s		
56	,,	ṡ n p m g r s		
57	,,	ṡ n d m g r s	Todi / Lalita / Sriranjani	8 / 17 / 22
58	,,	ṡ n d p g r s		
59	,,	ṡ n d p m r s		
60	,,	ṡ n d p m g s		
61	s r g p d n ṡ	ṡ d p m g r s		
62	,,	ṡ n p m g r s		
63	,,	ṡ n d m g r s		
64	,,	ṡ n d p g r s	Malayamarutam	16
65	,,	ṡ n d p m r s		
66	,,	ṡ n d p m g s		
67	s r m p d n ṡ	ṡ d p m g r s		
68	,,	ṡ n p m g r s		
69	,,	ṡ n d m g r s	Amrutavahini	20
70	,,	ṡ n d p g r s		
71	,,	ṡ n d p m r s		
72	,,	ṡ n d p m g s		
73	s g m p d n ṡ	ṡ d p m g r s		
74	,,	ṡ n p m g r s		
75	,,	ṡ n d m g r s		
76	,,	ṡ n d p g r s		
77	,,	ṡ n d p m r s	Swarabhooshani	22
78	,,	ṡ n d p m g s		

VI—Shadava-Audava Series.

79	s r g m p d ṡ	ṡ p m g r s		
80	,,	ṡ d m g r s		
81	,,	ṡ d p g r s		
82	,,	ṡ d p m r s		
83	,,	ṡ d p m g s		
84	,,	ṡ n m m g r s		
85	,,	ṡ n p g r s		
86	,,	ṡ n p m r s		
87	,,	ṡ n p m g s		

5

88	s r g m p d ṡ ·	ṡ n d	g r s	
89	,,	ṡ n d	m r s	
90	,,	ṡ n d	m g s	
91	,,	ṡ n d p	r s	
92	,,	ṡ n d p	g s	
93	,,	ṡ n d p m	s	
94	s r g m p n ṡ	ṡ	p m g r s	
95	,,	ṡ d	m g r s	
96	,,	ṡ d p	g r s	
97	,,	ṡ d p m	r s	
98	,,	ṡ d p m g	s	
99	,,	ṡ n	m g r s	
100	,,	ṡ n p	g r s	
101	,,	ṡ n p m	r s	
102	,,	ṡ n p m g	s	
103	,,	ṡ n d	g r s	
104	,,	ṡ n d	m r s	
105	,,	ṡ n d	m g s	
106	,,	ṡ n d p	r s	
107	,,	ṡ n d p	g s	
108	,,	ṡ n d p m	s	
109	s r g m d n ṡ	ṡ	p m g r s	
110	,,	ṡ d	m g r s	
111	,,	ṡ d p	g r s	
112	,,	ṡ d p m	r s	
113	,,	ṡ d p m g	s	
114	,,	ṡ n	m g r s	
115	,,	ṡ n p	g r s	
116	,,	ṡ n p m	r s	
117	,,	ṡ n p m g	s	
118	,,	ṡ n d	g r s	
119	,,	ṡ n d	m r s	
120	,,	ṡ n d	m g s	Natakuranji 28
121	,,	ṡ n d p	r s	
122	,,	ṡ n d p	g s	
123	,,	ṡ n l d p m	s	
124	s r g p d n ṡ	ṡ	p m g r s	
125	,,	ṡ d	m g r s	

126	s r g p d n ṡ	ṡ d p g r s	.
127	,,	ṡ d p m r s	
128	,,	ṡ d p m g s	
129	,,	ṡ n m g r s	
130	,,	ṡ n p g r s	
131	,,	ṡ n p m r s	
132	,,	ṡ n p m g s	
133	,,	ṡ n d g r s	
134	,,	ṡ n d m r s	
135	,,	ṡ n d m g s	
136	,,	ṡ n d p r s	
137	,,	ṡ n d p g s	
138	,,	ṡ n d p m s	
139	s r m p d n ṡ	ṡ p m g r s	
140	,,	ṡ d m g r s	
141	,,	ṡ d p g r s	
142	,,	ṡ d p m r s	Rasavali 4
143	,,	ṡ d p m g s	
144	,,	ṡ n m g r s	
145	,,	ṡ n p g r s	
146	,,	ṡ n p m r s	
147	,,	ṡ n p m g s	
148	,,	ṡ n d g r s	
149	,,	ṡ n d m r s	
150	,,	ṡ n d m g s	
151	,,	ṡ n d p r s	
152	,,	ṡ n d p g s	
153	,,	ṡ n d p m s	
154	s g m p d n ṡ	ṡ p m g r s	
155	,,	ṡ d m g r s	
156	,,	ṡ d p g r s	
157	,,	ṡ d p m r s	
158	,,	ṡ d p m g s	
159	,,	ṡ n m g r s	
160	,,	ṡ n p g r s	
161	,,	ṡ n p m r s	
162	,,	ṡ n p m g s	
163	,,	ṡ n d g r s	
164	,,	ṡ n d m r s	

165	s gmpdnṡ	ṡnd mg s		
166	,,	ṡndp rs		
167	,,	ṡndp g s		
168	,,	ṡndpm s		

VII—Audava-Shadava Series.

169	srgmp ṡ	ṡ dpmgrs		
170	,,	ṡn pmgrs		
171	,,	ṡnd mgrs		
172	,,	ṡndp grs		
173	,,	ṡndpm rs		
174	,,	ṡndpmg s		
175	srgm d ṡ	ṡ dpmgrs		
176	,,	ṡn pmgrs		
177	,,	ṡnd mgrs	Jayamanohari	22
178	,,	ṡndp grs		
179	,,	ṡndpm rs		
180	,,	ṡndpmg s		
181	srg pd ṡ	ṡ dpmgrs		
182	,,	ṡn pmgrs		
183	,,	ṡnd mgrs		
184	,,	ṡndp grs	{ Srimani	2
			{ Bauli	15
185	,,	ṡndpm rs		
186	,,	ṡndpmg s		
187	sr mpd ṡ	ṡ dpmgrs	{ Malahari	15
			{ Sama	28
188	,,	ṡn pmgrs		
189	,,	ṡnd mgrs		
190	,,	ṡndp grs		
191	,,	ṡndpm rs	{ Narayani	28
			{ Saraswati	64
192	,,	ṡndpmg s		
193	s gmpd ṡ	ṡ dpmgrs		
194	,,	ṡn pmgrs		
195	,,	ṡnd mgrs		
196	,,	ṡndp grs		
197	,,	ṡndpm rs		
198	,,	ṡndpmg s	Jayantasena	22

199	s r g m n ṡ	ṡ d p m g r s .		
200	,, .	ṡ n p m g r s	Rudrapriya	22
201	,,	ṡ n d m g r s		
202	,,	ṡ n d p g r s		
203	,,	ṡ n d p m r s		
204	,,	ṡ n d p m g s		
205	s r g p n ṡ	ṡ d p m g r s		
206	,,	ṡ n p m g r s		
207	,,	ṡ n d m g r s		
208	,,	ṡ n d p g r s		
209	,,	ṡ n d p m r s		
210	,,	ṡ n d p m g s		
211	s r m p n ṡ	ṡ d p m g r s		
212	,,	ṡ n p m g r s		
213	,,	ṡ n d m g r s		
214	,,	ṡ n d p g r s		
215	,,	ṡ n d p m r s		
216	,,	ṡ n d p m g s		
217	s g m p n ṡ	ṡ d p m g r s		
218	,,	ṡ n p m g r s	Jaganmohini	15
219	,,	ṡ n d m g r s		
220	,,	ṡ n d p g r s		
221	,,	ṡ n d p m r s		
222	,,	ṡ n d p m g s	Kamalamanohari	27
223	s r g d n ṡ	ṡ d p m g r s		
224	,,	ṡ n p m g r s		
225	,,	ṡ n d m g r s		
226	,,	ṡ n d p g r s		
227	,,	ṡ n d p m r s		
228	,,	ṡ n d p m g s		
229	s r m d n ṡ	ṡ d p m g r s		
230	,,	ṡ n p m g r s		
231	,,	ṡ n d m g r s		
232	,,	ṡ n d p g r s		
233	,,	ṡ n d p m r s		
234	,,	ṡ n d p m g s		
235	s g m d n ṡ	ṡ d p m g r s		
236	,,	ṡ n p m g r s		

237	s gm dn ś	ś n d m g r s	Vasanta	17
238	,,	ś n d p g r s		
239	,,	ś n d p m r s		
240	,,	ś n d p m g s		
241	s r pd n ś	ś d p m g r s		
242	,,	ś n p m g r s		
243	,,	ś n d m g r s		
244	,,	ś n d p g r s		
245	,,	ś n d p m r s		
246	,,	ś n d p m g s		
247	s g pd n ś	ś d p m g r s		
248	,,	ś n p m g r s		
249	,,	ś n d m g r s		
250	,,	ś n d p g r s		
251	,,	ś n d p m r s		
252	,.	ś n d p m g s		
253	s mp d n ś	ś d p m g r s		
254	,,	ś n p m g r s		
255	,,	ś n d m g r s		
256	,,	ś n d p g r s		
257	,,	ś n d p m r s		
258	,,	ś n d p m g s		

VIII. Audava—Audava Series.

259	s r g m p ś	ś p m g r s
260	,,	ś d m g r s
261	,,	ś d p g r s
262	,,	ś d p m r s
263	,,	ś d p m g s
264	,,	ś n m g r s
265	,,	ś n p g r s
266	,,	ś n p m r s
267	,,	ś n p m g s
268	,,	ś n d g r s
269	,,	ś n d m r s
270	,,	ś n d m g s
271	,,	ś n d p r s
272	,,	ś n d p g s
273	,,	ś n d p m s

274	s r g m d ṡ	ṡ p m g r s	
275	,,	ṡ d m g r s	Abhogi 22
276	,,	ṡ d p g r s	
277	,,	ṡ d p m r s	
278	,,	ṡ d p m g s	
279	,,	ṡ n m g r s	
280	,,	ṡ n p g r s	
281	,,	ṡ n p m r s	
282	,,	ṡ n p m g s	
283	,,	ṡ n d g r s	
284	,,	ṡ n d m r s	
285	,,	ṡ n d m g s	
286	,,	ṡ n d p r s	
287	,,	ṡ n d p g s	
288	,,	ṡ n d p m s	
289	s r g p d ṡ	ṡ p m g r s	
290	,,	ṡ d m g r s	Bhoopalam 8
291	,,	ṡ d p g r s	Revagupti 15
			Mohana 28
292	,,	ṡ d p m r s	
293	,,	ṡ d p m g s	
294	,,	ṡ n m g r s	
295	,,	ṡ n p g r s	
296	,,	ṡ n p m r s	
297	,,	ṡ n p m g s	
298	,,	ṡ n d g r s	
299	,,	ṡ n d m r s	
300	,,	ṡ n d m g s	
301	,,	ṡ n d p r s	
302	,,	ṡ n d p g s	
303	,,	ṡ n d p m s	
304	s r m p d ṡ	ṡ p m g r s	
305	,,	ṡ d m g r s	
306	,,	ṡ d p g r s	
307	,,	ṡ d p m r s	Suddha Saveri 29
308	,,	ṡ d p m g s	
309	,,	ṡ n m g r s	
310	,,	ṡ n p g r s	

311	s r m p d ṡ	ṡ n p m r s		
312	,,	ṡ n p m g s		
313	,,	ṡ n d g r s		
314	,,	ṡ n d m r s		
315	,.	ṡ n d m g s		
316	,,	ṡ n d p r s		
317	,,	ṡ n d p g s		
318	,,	ṡ n d p m s		
319	s g m p d ṡ	ṡ p m g r s		
320	,,	ṡ d m g r s		
321	,,	ṡ d p g r s		
322	,,	ṡ d p m r s		
323	,,	ṡ d p m g s	Nagaswaravali	29
324	,,	ṡ n m g r s		
325	,,	ṡ n p g r s		
326	,,	ṡ n p m r s		
327	,,	ṡ n p m g s		
328	,.	ṡ n d g r s		
329	,,	ṡ n d m r s		
330	,,	ṡ n d m g s		
331	,,	ṡ n d p r s		
332	,,	ṡ n d p g s		
333	,,	ṡ n d p m s		
334	s r g m n ṡ	ṡ p m g r s		
335	,,	ṡ d m g r s		
336	,,	ṡ d p g r s		
337	,,	ṡ d p m r s		
338	,,	ṡ d p m g s		
339	,,	ṡ n m g r s	Megharanji	15
340	,,	ṡ n p g r s		
341	,,	ṡ n p m r s		
342	,,	ṡ n p m g s		
343	,,	ṡ n d g r s		
344	,,	ṡ n d m r s		
345	,,	ṡ n d m g s o		
346	,,	ṡ n d p r s		
347	.,	ṡ n d p g s		
348	,,	ṡ n d p m s		

349	s r g p n ṡ	ṡ p m g r s .		
350	,,	ṡ d m g r s		
351	,,	ṡ d p g r s		
352	,,	ṡ d p m r s		
353	,,	ṡ d p m g s		
354	,,	ṡ n m g r s		
355	,,	ṡ n p g r s	Hamsadhwani	29
356	,,	ṡ n p m r s		
357	,,	ṡ n p m g s		
358	,,	ṡ n d g r s		
359	,,	ṡ n d m r s		
360	,,	ṡ n d m g s		
361	,,	ṡ n d p r s		
362	,,	ṡ n d p g s		
363	,,	ṡ n d p m s		
364	s r m p n ṡ	ṡ p m g r s		
365	,,	ṡ d m g r s		
366	,,	ṡ d p g r s		
367	,,	ṡ d p m r s		
368	,,	ṡ d p m g s		
369	,,	ṡ n m g r s		
370	,,	ṡ n p g r s		
371	,,	ṡ n p m r s	Madhyamavati	22
372	,,	ṡ n p m g s		
373	,,	ṡ n d g r s		
374	,,	ṡ n d m r s	Andolika	28
375	,,	ṡ n d m g s		
376	,,	ṡ n d p r s		
377	,,	ṡ n d p g s		
378	,,	ṡ n d p m s		
379	s g m p u ṡ	ṡ p m g r s		
380	,,	ṡ d m g r s		
381	,,	ṡ d p g r s		
382	,,	ṡ d p m r s		
383	,,	ṡ d p m g s		
384	,,	ṡ n m g r s		
385	,,	ṡ n p g r s		
386	,,	ṡ n p m r s		

387	s gmp nṡ	ṡn pmg s
388	,,	ṡnd grs
389	,,	ṡnd m rs
390	,,	ṡnd mg s
391	,,	ṡndp rs
392	,,	ṡndp g s
393	,,	ṡndpm s
394	srg dnṡ	ṡ pmgrs
395	,,	ṡ d mgrs
396	,,	ṡ dp grs
397	,,	ṡ dpm rs
398	,,	ṡ dpmg s
399	,,	ṡn mgrs
400	,,	ṡn p grs
401	,,	ṡn pm rs
402	,,	ṡn pmg s
403	,,	ṡnd grs
404	,,	ṡnd m rs
405	,,	ṡnd mg s
406	,,	ṡndp rs
407	,,	ṡndp g s
408	,,	ṡndpm s
409	sr m dnṡ	ṡ pmgrs
410	,,	ṡ d mgrs
411	,,	ṡ dp grs
412	,,	ṡ dpm rs
413	,,	ṡ dpmg s
414	,,	ṡn mgrs
415	,,	ṡn p grs
416	,,	ṡn pm rs
417	,,	ṡn pmg s
418	,,	ṡnd grs
419	,,	ṡnd m rs
420	,,	ṡnd mg s
421	,,	ṡndp rs
422	,,	ṡndp g s
423	,,	ṡndpm s

424	s gm dnś	ś pmgrs	.
425	,, .	ś d mgrs	
426	,,	ś dp grs	
427	,,	ś dpm rs	
428	,,	ś dpmg s	
429	,,	śn mgrs	
430	,,	śn p grs	
431	,,	śn pm rs	
432	,,	śn pmg s	
433	,,	śnd grs	
434	,,	śnd m rs	
435	,,	śnd mg s	
436	,,	śndp rs	
437	,,	śndp g s	
438	,,	śndpm s	
439	s r pdnś	ś pmgrs	
440	,,	ś d mgrs	
441	,,	ś dp grs	
442	,,	ś dpm rs	
443	,,	ś dpmg s	
444	,,	śn mgrs	
445	,,	śn p grs	
446	,,	śn pm rs	
447	,,	śn pmg s	
448	,,	śnd grs	
449	,,	śnd m rs	
450	,,	śnd mg s	
451	,,	śndp rs	
452	,,	śndp g s	
453	,,	śndpm s	
454	s g pdnś	ś pmgrs	
455	,,	ś d mgrs	
456	,,	ś dp grs	
457	,,	ś dpm rs	
458	,,	ś dpmg s	
459	,,	śn mgrs	
460	,,	śn p grs	
461	,,	śn pm rs	

462	s	g	p d d s	ṡ n	p m g	s					
463			,,	ṡ n d	g r s						
464			,,	ṡ n d	m r s						
465			,,	ṡ n d	m g s						
466			,,	ṡ n d p	r s						
467			,,	ṡ n d p	g s						
468			,,	ṡ n d p m	s						
469	s		m p d n ṡ	ṡ	p m g r s						
470			.,	ṡ	d m g r s						
471			,,	ṡ	d p g r s						
472			,,	ṡ	d p m r s						
473			,,	ṡ	d p m g s						
474			,,	ṡ n	m g r s						
475			,,	ṡ n	p g r s						
476			,,	ṡ n	p m r s						
477			,,	ṡ n	p m g s		Vijayavasanta	54			
478			,,	ṡ n d	g r s						
479			,,	ṡ n d	m r s						
480			,,	ṡ n d	m g s						
481			,,	ṡ n d p	r s						
482			,,	ṡ n d p	g s						
483			,,	ṡ n d p m	s						

———

APPENDIX II.

—

*Janya ragas.

—

No.	Name of the Janya ragas.	No. of the parent melakarta-raga.	Arohana—Avarohana.

A

1	Abheri	20	s g₂ m₁ p n₂ ṡ—ṡ n₂ d p m₁ g₂ r₂ s
2	Abhogi	22	s r g m d ṡ—ṡ d m g r s
3	Ahiri	8	s r s g m p d n ṡ—ṡ n D p m g r s
4	Amrutavahini	20	s r m p d n ṡ—ṡ n d m g r s
5	Anandabhairavi	20	s g r g m p d p n ṡ—ṡ n d p m g r s
6	Andhali	28	s r m p n ṡ—ṡ n p m r g m r s
7	Andolika	28	s r m p n ṡ—ṡ n d m r s
8	Arabhi	29	s r m p d ṡ—ṡ n d p m g r s
9	Asaveri	8	s r m p d ṡ—ṡ n ṡ p d m p r G r s
10	Atana	29	s r m p n ṡ—ṡ n D p m p G r s
11	Ardradesi	15	s r g m p d n ṡ—ṡ d p m g r s

B

12	Bahudari	28	{ s g m d p d n ṡ—ṡ n p m g s { s g m p d n ṡ— ,,
13	Balahamsa	28	s r m p d ṡ—ṡ n d p m r m g s
14	Bangala	29	s r g m p m r p ṡ—ṡ n p m r g r s
15	Begada	29	s g r g m p d N d p ṡ — ṡ N d p M [g r s
16 { Behag Byag	29	s g m p n d n ṡ—ṡ n d p m G r s

—

*A separate booklet containing the Arohana and Avarohana of more than 3000 janya-ragas will be issued later. The Arohana and Avarohana of only the more prominent janya-ragas are given in this Appendix.

No.	Name of the Janya ragas.	No. of the parent melakarta-raga	Arohana—Avarohana
17	Bhairavam	17	s r g m p d n ṡ—ṡ D p m g r s
18	Bhairavi	20	s r g m p d n ṡ—ṡ n d p m g r s
19	Bhinnapanchamam	3	s g m p d n ṡ—ṡ n d p m g r s
20	Bhinnashadjam	9	s r g r p m p n ṡ—ṡ d p m g r s
21	Bhogi	7	s g m p d n d ṡ—ṡ n d p m g s
22	Bhoopalam	8	s r g p d ṡ—ṡ d p g r s
23	Bhooshavali	64	s r g m p d ṡ—ṡ n d p m g r s
24	Bilahari	29	s r g p d ṡ—ṡ n d p m g r s
25	Bindumalini	16	s g r m p d n p n ṡ—ṡ p n d p G r s
26	Bauli	15	s r g p d ṡ—ṡ n d p g r s
27	*Brundavanasaranga	22	s g r m p n ṡ—ṡ n p m r g s

C

28	Chandrajyoti	41	s r g m p d ṡ—ṡ d p m g r s
29	Chayagaula	3	s r g r m p d n ṡ—ṡ d n p m g r s
30	Chayanata	34	s r g m p m p ṡ—ṡ n d n p m r s
31	Chayatarangini	28	s r m g m ṗ n ṡ—ṡ n d p m g r s
32	Chittaranjani	19	s r g r g m p d—n d p m r g r s

D

33	Desyakhamas	28	s m g m p d n ṡ—ṡ n d p m g s
34	Darbar	22	s r m p d n ṡ—ṡ N d p m r g G r s
35	Desakshi	29	s r g p d ṡ—ṡ n d p m g r s
36	Desyatodi	8	s g m p d n ṡ—ṡ n d p g m r s
37	Devagandhari	29	s r m p d ṡ—ṡ n D p M g R s
38	**Devakriya	20	s r g m n d n—p d m g r s ṇ
39	Devamanohari	22	s r m p d n ṡ—ṡ n d n p m r s
40	Devamrutavarshini	22	s r g m n d n ṡ—ṡ n d p m g r s
41	Dhanyasi	8	s g m p n ṡ—ṡ n d p m g r s
42	Dilipakam	22	s r g r m p n d n p d n ṡ—ṡ n d p ⌊m g r s

*Same as Brundavani

**The Devakriya raga of the Dikshitar School, is the same as the modern Suddhasaveri raga.

No.	Name of the Janya ragas.	No. of the parent melakarta-raga.	Arohana—Avarohana
43	Dundubhipriya	48	s r g m p d n ṡ — ṡ n p m g r s
44	Dvijavanti	28	s r m g m p d n ṡ — ṡ n d p m g r g s

E

| 45 | Easamanohari | 28 | s r g m p d n ṡ — ṡ n d p m r m g r s |

G

46	Gamakakriya	53	s r g m p d ṡ — ṡ n d p m g m R s
47	Gamanakriya	53	s r m p d n ṡ — ṡ n d p m g m r s
48	Gambhiranata	36	s g m p n ṡ — ṡ n p m g s
49	Ganavaridhi	35	s m r g m p d n ṡ — ṡ d n p m r s
50	Garudadhwani	29	s r g m p d n ṡ — ṡ d p g r s
51	Gaula	15	s r g m r m p n ṡ — ṡ n p m g m r s r m p n ṡ — ṡ n p m g m r g m r s
52	Gaulipantu	15	s r g r m p d p n ṡ — ṡ n d p m g r s s r m p n ṡ — ṡ n d p m d m g r s
53	Gauri	15	s r m p n ṡ — ṡ n d p m g r s
54	Ghurjari / Gujjari	15	s r g m p d n ṡ — ṡ d n p m g r s
55	Ghanta	8	s r g m p d N — d p m g r s ṇ D p N s
56	Gopikavasantam	20	s m p n d n d ṡ — ṡ n d p m g s
57	Gummakambhoji	15	s r g p d n d ṡ — ṡ n d p m g r s
58	Gundakriya	15	s r m p n ṡ — ṡ n p d p m g r s

H

59	Hamirkalyani	65	s p m p d n ṡ — ṡ n d p g m g r s s r g m p d n p d p ṡ — ,,
60	Hamsadhwani	29	s r g p n ṡ — ṡ n p g r s
61	Hamsanadam	60	s r m p d n ṡ — ṡ n d n p m r s
62	Hindolam	20	s m g m d n ṡ — ṡ n d m g s
63	Hindolavasanta	20	s g m p d n d ṡ — ṡ n d p m g d m g s
64	Huseni	22	s R G m p n d n ṡ — ṡ n d p M g r s
65	Hindustani Kapi	22	s r m p n ṡ — ṡ n d n p m g r s

No.	Name of the Janya ragas	No. of the parent melakarta raga.	Arohana—Avarohana

J

66	Jaganmohini	15	s g m p n ṡ—ṡ n p m G r s
67	Janaranjani	29	s r g m p d p n ṡ—ṡ d p m r s
68	Janjhooti	28	ḍ s r g m p d n — d p m g r s ṇ ḍ
			[p ḍ s
69	Jayamanohari	22	ṡ r g m d ṡ—ṡ n d m g r s
70	Jayanarayani	22	s r G m p d ṡ—ṡ n d p m g r s
71	Jayantasena	22	s g m p d ṡ—ṡ n d p m g s
72	Jayantasri	20	s g m d n ṡ—ṡ n d m p m g s
73	Jingla	20	s r g m p d n d p ṡ—ṡ n d p m g r s
74	*Jujahuli	28	s m g m p d n ṡ—ṡ d n d p m g s

K

75	Kaikavasi	60	s r g m p d n ṡ—ṡ n p m g r s
76	Kalagada	13	s r g p d n ṡ—ṡ n d p g r s
77	Kalakanti	13	s r m p d n ṡ—⎧ ṡ n d p m r s
			⎩ ṡ n d p m r m g s
78	Kalanidhi	22	s r g m s p m d n ṡ—ṡ n d p m g r s
79	Kalavati	16	s r m p d ṡ—ṡ d p m g s r s
80	Kalyani	65	s r g m p d n ṡ—ṡ n d p m g r s
81	Kamalamanohari	27	s g m p n ṡ—ṡ n d p m g s
82	Kambhoji	28	s r g m p d ṡ—ṡ n d p m g r s
83	Kanada	22	g r s r g m p m D n ṡ—ṡ n ṡ d p m
			[p g m r
84	Kanakavasantam	20	s g m p n d ṡ—ṡ n d p m g s
85	Kannada	29	s m g m d n ṡ—ṡ D p m g m r s
86	Kannadabangala	15	s r m g m d p d ṡ—ṡ d p m g r s
87	Kannadagaula	22	s r g m p n ṡ—ṡ n d p m g s
88	Kapi	22	s r G m r p m p d n ṡ—ṡ n d p m
			[g r s

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*The parent-scale for this raga is given as the 13th melakarta-raga *Gayakapriya* by earlier writers. But the notes used in the only extant kirtana of Tyagaraja in this raga, viz., *Parakujesina nikemi* are the Harikambhoji scale notes. Hence I have given the parent-scale for this raga as the 28th melakarta.

No.	Name of the Janya ragas.	No. of the parent melakarta-raga	Arohana—Avarohana
89	Kapinarayani	28	s r m p d n ṡ—ṡ n d p m g r s
90	Karnataka byag	28	s r g m p d n ṡ—ṡ n d n p d m g r [g s
91	Katanakutoohalam	29	s r m D n g p ṡ—ṡ n d p m g r s
92	Kedaragaula	28	s r m p n ṡ—ṡ n d p m g r s
93	Kedaram	29	s m g m p n $\begin{cases} \text{ṡ n p m g r s} \\ \text{ṡ n p d p m g r s} \end{cases}$
94	Khamas	28	s g m p d n ṡ—ṙ ṡ n d p m g s
95	Kiranavali	21	s r g m p d n ṡ—ṡ d p m g r s
96	Kokiladhwani	28	s r g m d n d ṡ—ṡ n d n p m g r s
97	Kokilavarali	28	s r m p d ṡ—ṡ n d m p m g r g s
98	Kolahalam	29	s p m g m p d n ṡ—ṡ n d p m g r s
99	Krishnaveni	15	s r g m p n ṡ—ṡ n p m g r s
100	Kuntalavarali	28	s m p d n d ṡ—ṡ n d p m s
101	Kuranji	29	s ṇ s r g m p d—d p m g r s ṇ s
102	Kutoohalam	29	s r m n d p n ṡ—ṡ n d p m g r s

L

| 103 | Lalita | 17 | s r g m d n ṡ—ṡ n d m g r s |

M

104	Madhavamanohari	57	s g r g m p n d n ṡ—ṡ n d m g r s
105	Madhyamavati	22	s r m p n ṡ—ṡ n p m r s
106	Mahuri	29	s r g r m p n—d p m g r s
107	Malahari	15	s r m p d ṡ—ṡ d p m g r s
108	Malavasri	22	s g m p n d n p d n ṡ — ṡ n d p m [g s
109	Malavi	28	s r g m p n m d n ṡ—ṡ n d n p m g [m r s
110	Malayamarutam	16	s r g p d n ṡ—ṡ n d p g r s
111	Mandari	51	s r g m p n ṡ—ṡ n p m g r s
112	Mangalakaisiki	15	s m g m p m d n ṡ—ṡ n d p m g r s
113	Manirangu	22	$\begin{cases} \text{s r m p n ṡ· —ṡ n p m G r s} \\ \text{s r m G m p n ṡ— ,,} \end{cases}$
114	Manjari	22	s g r g m p n d n ṡ—ṡ n d p m g r s

7

No.	Name of the Janya ragas	No. of the parent melakarta-raga	Arohana—Avarohana
115	Manji	20	s r g m p d n ṡ—ṡ n d p m g r s
116	Manohari	22	s g r g m p d ṡ—ṡ d p m g r s
117	Manoranjani	5	s r m p d n ṡ—ṡ n d p m g r s
118	Margadesi	15	s r g p d ṡ—ṡ d m p g r s
119	Margahindolam	20	s r g m p d n ṡ—ṡ n d p m g s
120	Maruva	15	s g m p d n d p ṡ—ṡ n d p m d m p [m g r s
121	Matthakokila	28	s r p d n d ṡ—ṡ d n d p m r s
122	Mechabauli	15	s r g p d ṡ—ṡ n d p m g r s
123	Mechakangi	53	s r g m p d p n ṡ—ṡ n p d p m g r s
124	Megharanji Megharanjani	15	s r g m n ṡ—ṡ n m g r s
125	Mohana	28	s r g p d ṡ—ṡ d p g r s
126	Mohananata	9	s g m p n ṡ—ṡ n p d p m g s
127	Mukhari	22	s r m p d n d ṡ—ṡ n d p m g r s

N

No.	Name of the Janya ragas	No. of the parent melakarta-raga	Arohana—Avarohana
128	Nabhomani	40	s r g r m p ṡ—ṡ n d p m g r s
129	Nadachintamani	22	s g m p n d n ṡ—ṡ n d p m g r g s
130	Nadanamakriya	15	s r g m p d n—n d p m g r s ṇ
131	Nagadhwani	29	s r s m g m p n d m p n d n ṡ— ṡ n d n p m g s
132	Nagaswaravali	29	s g m p d ṡ—ṡ d p m g s
133	Nalinakanti	27	s g r m p n ṡ—ṡ n p m g r s
134	Narayanagaula	28	s r m p n d n ṡ—ṡ n d p m g r g r s
135	Narayani	28	s r m p d ṡ—ṡ n d p m r s
136	Nata	36	s r g m p d n ṡ—ṡ n p m r s s r g m p d n p n ṡ— ,,
137	Natakuranji	28	s r g m d n ṡ—ṡ n d m g s
138	Navaroj	29	p d n s r g m p—m g r s ṇ d p
139	Navarasakalanidhi	28	s r m p ṡ n ṡ—ṡ N d p m g r s
140	Navarasakannada	28	s g m p ṡ—ṡ n d m g r s ṡ
141	Nayaki	22	s r m p d N d p ṡ—ṡ N d p m G r
142	Nilambari	29	s r g m p d p n ṡ—ṡ n p m g r g s

No.	Name of the Janya ragas.	No of the parent melakarta-raga	Arohana — Avarohana

P

No.	Name of the Janya ragas.	No of the parent melakarta raga	Arohana — Avarohana
143	Padi	15	s r m p n ṡ—ṡ n p d p m r s
144	Palamanjari	22	s g m d ṡ—ṡ n d p m G m r s
145	Panchamaraga	22	{ s r p d p n ṡ—ṡ n d p m g r s { s r d p n ṡ— ,,
146	*Pantuvarali	51	s r g m p d n ṡ—ṡ n d p m g r s
147	Paraju	15	s G m p d n ṡ—ṡ n d p m g r s
148	Poornachandrika	29	s r g m p d p ṡ—ṡ n p d p m g m r s
149	Poornalalita	19	{ s r g m p ṡ—ṡ n d p m g r s { s r g r m p ṡ— ,,
150	**Poornashadjam	22	s r g m N ṡ—ṡ n p m G r s
151	{ Poorvakalyani { Poorikalyani	53	{ s r g m p d n d ṡ—ṡ n d p m g r s { s r g m p d n p d p ṡ— ,,
152	Poorvi	15	s r g m p d n d ṡ—ṡ n d p m d m g [r s
153	Pratapanata	28	s r g m d p d n ṡ—ṡ n d p m g s
154	Pratapavarali	28	{ s r m p ṡ—ṡ d p m g r s { s r m p d p ṡ— ,,
155	Pravalajodi	28	sˑ r m p d n ṡ—ṡ n d n p m g s
156	Punnagavarali	8	ṇ s r g m p d n—n d p m g r s ṇ
157	Pushpalatika	22	s r g m p n ṡ—ṡ n p m g r s

*The raga Pantuvarali as sung at the present day is only the same as the 51st melakarta raga Kamavardhani.

**The arohana and avarohana of this raga as given by Thachur Singaracharlu and followed by some writers is in my opinion not correct. I have with me an auto-manuscript copy of a kirtana of Pallavi Seshayyar in the Poornashadja raga, which conforms to the arohana and avarohana given here. Pallavi Seshayyar belonged to the school of Tyagaraja and learnt his music from his (Tyagaraja's) direct disciples. The raga of the song *Lavanya Rama Kanulara* is only Poornashadjam and *not* Rudrapriya as stated by another writer. In fact the late Narasimha Bhagavathar's Edition of Tyagaraja's kirtanas gives only Poornashadjam as the raga of this song.

No.	Name of the Janya ragas.	No. of the parent melakarta-raga	Arohana—Avarohana

R

158	Ragapanjaram	28	s r m p d n d ś—ś n d m r s
159	Ramakali	15	s r g m g r g p d ś—ś n d p m g r s
160	Ramamanohari	52	s r g m p d n d ś—ś n d p m g r s
161	Ranjani	59	s r g m d ś—ś n d m g s r s
162	Rasavali	4	s r m p d n ś—ś d p m r s
163	Ravichandrika	28	s r g m d n d ś—ś n d m g r s
164	Revagupti	15	s r g p d ś—ś d p g r s
165	Ritigaula	20	s g r g m n d m p n ś —ś n d m g [m p m g r s
166	Rudrapriya	22	s r g m n ś—ś n p m G r s

S

167	Sahana	28	s r g m p m D n ś—ś N d p m G m [R g r s
168	Saindavi	22	n d n s r g m p d N —d p m g r s [n d n s
169	Salagabhairavi	22	s r m p d ś—ś n d p m g r s
170	Salanganata	15	s r s m p d ś —ś d p ś n ś d p m g [r s
171	Sama	28	s r m p d ś—ś d p m g r s
172	Samantam	30	s r g m p d n ś—ś n d n p m g r s
173	Sankarabharanam	29	s r g m p d n ś—{ ś n d p m g r s / ś D p m g r s
174	Saramati	20	s r g m p d n ś—ś n d m g s
175	Saranga	65	s r g m´p d n ś —ś n d p m r g m [r s
176	Saranganata	15	s r m p d ś—ś n ś d p m g r s
177	Saraswati	64	s r m p d ś—ś n d p m r s
178	Saraswatimanohari	28	s r g m d ś—ś d n p m g r s
179	Saveri	15	s r m p d ś—ś n d p m g r s
180	Saurashtram	15	s r g m p d n ś—ś n D p m g m R s
181	Siddhasena	22	s g r g m p d ś—ś n d m p m r g r s
182	Simhavahini	27	s g m p d n ś—ś n d p m g R s
183	Sindhudhanyasi	22	s g m p n ś—{ ś n d p m r m g s / ś n d p m g r s

No.	Name of the Janya ragas.	No. of the parent melakarta- raga	Arohana—Avarohana
184	Sindhukannada	28	s m g m r g m p d p ś — ś n d p m [g r s
185	Sindhumandari	29	s r g m p ś—ś n d p g m d p m r s
186	Sindhuramakriya	15	s g m p d n ś—ś n p d p m g s
187	Srimani	2	s r g p d ś—ś n d p g r s
188	Sriragam	22	s r m p n ś—ś n p d n p m r g r s
189	Sriranjani	22	s r g m d n ś—ś n d m g r s
190	Srutiranjani	61	s r g m p d n—n d p m g s r s
191	Suddha bangala	22	s r m p d ś—ś d p m r g r s
192	Suddha bhairavi	22	s g m n d ś—ś n d m g r s
193	Suddha desi	20	s r m p d n ś—ś n d p m g r s
194	Suddha dhanyasi	22	s g m p n p ś—ś n p m g s s
195	Suddha mukhari	1	s r g m p d n ś—ś n d m g r s
196	Suddha ragam	57	s r g m p n ś—ś n p m g s r s
197	Suddha samantam	8	d s r m p d—d p m g r s
198	Suddha saveri	29	s r m p d ś—ś d p m r s
199	Suddha simantini	8	s r g m p d ś—ś d p m g r s
200	Sudha tarangini	28	s r g m r m p d n d ś—ś n d p m g [r s
201	Suposhini	28	s r s m p n d ś—ś d n p m r m s
202	Supradipam	17	s r m p d n ś—ś n d p m g m r s
203	Surati	28	s r m p n ś—ś n d p m g p m R s
204	Swarabhooshani	22	s g m p d n ś—ś n d p m r s
205	Swaravali	28	s m g m p n d n ś—ś n p d m g r s

T

206	Takka	9	s g m p m d n ś—ś n d p m g r s
207	Tarangini	26	s r m g r m p d n d ś—ś n d p m [g r s
208	Tivravahini	46	s r g m p d p n ś—ś n d p m g r g [m r s
209	Todi	8	s r g m d n ś—ś n d m g r s

U

| 210 | Udayaravichandrika | 20 | s g m p n ś—ś n p m g s |
| 211 | Umabharanam | 28 | s r g m p d n ś—ś n p m r g m r s |

No.	Name of the Janya ragas.	No. of the parent melakarta-raga.	Arohana — Avarohana
			V
212	Varali	39	s g r g m p d n ṡ—ṡ n d p m g r s
213	Vardhani	11	{ s g m p m d n ṡ—ṡ n p d p m g r s s g m p d n ṡ—ṡ n p d p m g s
214	Vasanta	17	s g m d n ṡ—ṡ n d M g r s
215	Vasantabhairavi	14	s r g m d n ṡ—ṡ n d m p m g r s
216	Vasantavarali	20	s r m p d n—{ n D p g r s ṇ n d p m g r s ṇ
217	Vedagoshapriya	28	ṇ ḍ ṇ s r g m—p m g r s ṇ ḍ ṇ p
218	Vegavahini	16	s r g m p d n d ṡ—ṡ n d p m g r s
219	*Vijayasri	41	s g r g m p n ṡ—ṡ n p m g r s
220	Vijayavasanta	54	s m p d n ṡ—ṡ n p m g s
221	Viravasantam	24	s g r m p ṡ—ṡ n d p m g r s
222	Vivardhani	28	s r m p ṡ—ṡ n d p m g r s
			Y
223	Yadukulakambhoji Erukulakambhoji	28	s r m p d ṡ—ṡ n d p m g r s
224	Yamunakalyani	65	g r g p m p d ṡ—ṡ d p m p g r s
225	Yauvani	31	s r g m p n d n ṡ—ṡ d p m r m g s
226	Yoganandi	52	s r g p m p d n ṡ—ṡ n d p m g s

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* It will be of interest to note that Pallavi Seshayyar in his MSS on Raga Lakshana gives s r g m p n ṡ—ṡ n p m g r s as the arohana and avarohana for this raga.

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Ma-Group (V. N.)		Poorva Melakartas or Suddha Madhyama Melakartas		F. Natural	F. Sharp	Uttara Melakartas or Prati Madhyama Melakartas		Mi Group (V. N.)

Left / Poorva Melakartas section

Number and Name of the Chakra	Serial number of the melakarta ragas	Names of the Melakarta Ragas.	Poorvanga / lower tetrachord	Uttaranga / higher tetrachord	Ri Ga Dha Ni (Popular)	Ri Ga Dha Ni (Venkatamakhi)
I Indu इन्दु ra-ga chakra	1	Kanakangi कनकांगि	$s\ r_1\ g_1\ m_1$	$p\ d_1\ n_1\ \dot{s}$	Suddha Suddha Suddha Suddha	ra ga dha na
	2	Ratnangi रत्नांगि	,,	$p\ d_1\ n_2\ \dot{s}$	,, ,, ,, Kaisiki	,, ,, ,, ni
	3	Ganamurti गानमूर्ति	,,	$p\ d_1\ n_3\ \dot{s}$	,, ,, ,, Kakali	,, ,, ,, nu
	4	Vanaspati वनस्पति	,,	$p\ d^2\ n_3\ \dot{s}$	,, ,, Chatusruti Kaisiki	,, ,, dhi ni
	5	Manavati मानवति	,,	$p\ d_3\ n_3\ \dot{s}$	,, ,, ,, Kakali	,, ,, ,, nu
	6	Tanaroopi तानरूपि	,,	$p\ d_3\ n_3\ \dot{s}$	,, ,, ,, Shatsruti	,, ,, dhu
II Netra नेत्र ra-gi chakra	7	Senavati सेनावति	$s\ r_1\ g_2\ m_1$	$p\ d_1\ n_1\ \dot{s}$	Suddha Sadharana Suddha Suddha	ra gi dha na
	8	Hanumatodi हनुमतोडि	,,	$p\ d_1\ n_2\ \dot{s}$	,, ,, ,, Kaisiki	,, ,, ,, ni
	9	Dhenuka धेनुक	,,	$p\ d_1\ n_3\ \dot{s}$	,, ,, ,, Kakali	,, ,, ,, nu
	10	Natakapriya नाटकप्रिय	,,	$p\ d_2\ n_3\ \dot{s}$	,, ,, Chatusruti Kaisiki	,, ,, dhi ni
	11	Kokilapriya कोकिलप्रिय	,,	$p\ d_2\ n_3\ \dot{s}$	,, ,, ,, Kakali	,, ,, ,, nu
	12	Roopavati रूपावति	,,	$p\ d_3\ n_3\ \dot{s}$	,, ,, ,, Shatsruti	,, ,, dhu
III Agni अग्नि ra-gu chakra	13	Gayakapriya गायकप्रिय	$s\ r_1\ g_3\ m_1$	$p\ d_1\ n_1\ \dot{s}$	Suddha Antara Suddha Suddha	ra gu dha na
	14	Vakulabharanam वकुलभरणम्	,,	$p\ d_1\ n_2\ \dot{s}$	,, ,, ,, Kaisiki	,, ,, ,, ni
	15	Mayamalavagaula मायामालवगौळ	,,	$p\ d_1\ n_3\ \dot{s}$	,, ,, ,, Kakali	,, ,, ,, nu
	16	Chakravakam चक्रवाकम्	,,	$p\ d_2\ n_3\ \dot{s}$	,, ,, Chatusruti Kaisiki	,, ,, dhi ni
	17	Sooryakantam सूर्यकान्तम्	,,	$p\ d_2\ n_3\ \dot{s}$	,, ,, ,, Kakali	,, ,, ,, nu
	18	Hatakambari हाटकांबरि	,,	$p\ d_3\ n_3\ \dot{s}$	,, ,, ,, Shatsruti	,, ,, dhu
IV Veda वेद ri-gi chakra	19	Jhankaradhvani झंकारध्वनि	$s\ r_2\ g_2\ m_1$	$p\ d_1\ n_1\ \dot{s}$	Chatusruti Sadharana Suddha Suddha	ri g dha na
	20	Natta bhairavi नाठभैरवी	,,	$p\ d_1\ n_2\ \dot{s}$	,, ,, ,, Kaisiki	,, ,, ,, ni
	21	Kiravani कीरवाणी	,,	$p\ d_1\ n_3\ \dot{s}$	,, ,, ,, Kakali	,, ,, ,, nu
	22	Kharaharapriya खरहरप्रिय	,,	$p\ d_2\ n_3\ \dot{s}$	,, ,, Chatusruti	,, ,, dhi ni
	23	Gowrimanohari गौरीमनोहरि	,,	$p\ d_2\ n_3\ \dot{s}$	,, ,, ,, [Kaisiki]	,, ,, ,, nu
	24	Varunapriya वरुणप्रि	,,	$p\ d_3\ n_3\ \dot{s}$	,, ,, ,, Kakali / Shatsruti	,, ,, dhu
V Bana बाण ri-gu chakra	25	Mararanjani माररंजनि	$s\ r_2\ g_3\ m_1$	$p\ d_1\ n_1\ \dot{s}$	Chatusruti Antara Suddha Sud-[dha]	ri gu dha na
	26	Charukesi चारुकेशि	,,	$p\ d_1\ n_2\ \dot{s}$	,, ,, ,, Kaisiki	,, ,, ,, ni
	27	Sarasangi सरसांगि	,,	$p\ d_1\ n_3\ \dot{s}$	,, ,, ,, Kakali	,, ,, ,, nu
	28	Harikambhoji हरिकांभोजि	,,	$p\ d_2\ n_3\ \dot{s}$	,, ,, Chatusruti	,, ,, dhi ni
	29	Dhirasankarabharanam धीरशंकराभरणम्	,,	$p\ d_2\ n_3\ \dot{s}$	,, ,, ,, [Kaisiki]	,, ,, ,, nu
	30	Naganandini नागानन्दिनि	,,	$p\ d_3\ n_3\ \dot{s}$	,, ,, ,, Kakali / Shatsruti	,, ,, dhu nu
VI Rutu ऋतु ru-gu chakra	31	Yagapriya यागप्रिय	$s\ r_3\ g_3\ m_1$	$p\ d_1\ n_1\ \dot{s}$	Shatsruti Antara Suddha Sud-[dha]	ru u dha na
	32	Ragavardhani रागवर्धनि	,,	$p\ d_1\ n_2\ \dot{s}$	,, ,, ,, ni	,, ,, ,, ni
	33	Gangeyabhooshani गांगेयभूषणि	,,	$p\ d_1\ n_3\ \dot{s}$	,, ,, ,, Kaisiki	,, ,, ,, nu
	34	Vagadheesvari वागधीश्वरि	,,	$p\ d^2\ n_3\ \dot{s}$	,, ,, Chatusruti Kaisiki	,, ,, dhi ni
	35	Soolini शूलिनि	,,	$p\ d_2\ n_3\ \dot{s}$	,, ,, ,, Kakali	,, ,, ,, nu
	36	Chalanata चलनाट	,,	$p\ d_3\ n_3\ \dot{s}$	,, ,, ,, Shatsruti	,, ,, dhu nu

Right / Uttara Melakartas section

Ri Ga Dha Ni (Venkatamakhi)	Poorvanga / lower tetrachord	Uttaranga / higher tetrachord	Names of the Melakarta Ragas.	Serial Number of the Melakarta Ragas.	Number and name of the Chakram.
ra ga dha na (Suddha Suddha Suddha Sudha)	$s\ r_1\ g_1\ m_2$	$p\ d_1\ n_1\ \dot{s}$	Salagam सालगम	37	**VII Rishi** ऋषि ra-ga chakra
,, ,, ,, Kaisiki	,,	$p\ d_1\ n_2\ \dot{s}$	Jalarnavam जलार्णवम्	38	
,, ,, ,, Kaiali	,,	$p\ d_1\ n_3\ \dot{s}$	Jhalavarali झालवराळि	39	
,, ,, Chatusruti Kaisiki	,,	$p\ d_2\ n_3\ \dot{s}$	Navaneetam नवनीतम्	40	
,, ,, ,, Kakali	,,	$p\ d_2\ n_3\ \dot{s}$	Pavani पावनी	41	
,, ,, ,, Shatsruti	,,	$p\ d_3\ n_3\ \dot{s}$	Raghupriya रघुप्रिय	42	
ra gi dha na (Suddha Sadharana Suddha Suddha)	$s\ r_1\ g_2\ m_2$	$p\ d_1\ n_1\ \dot{s}$	Gavambhodhi गवांभोधि	43	**VIII Vasu** वसु ra-gi chakra
,, ,, ,, Kaisiki	,,	$p\ d_1\ n_2\ \dot{s}$	Bhavapriya भवप्रिय	44	
,, ,, ,, Kakali	,,	$p\ d_1\ n_3\ \dot{s}$	Subhapantuvarali शुभपन्तुवराळि	45	
,, ,, Chatusruti Kaisiki	,,	$p\ d_2\ n_3\ \dot{s}$	Shadvidhamargini षड्विधमार्गिणि	46	
,, ,, ,, Kakali	,,	$p\ d_2\ n_3\ \dot{s}$	Suvarnangi सुवर्णांगि	47	
,, ,, ,, Shatsruti	,,	$p\ d_3\ n_4\ \dot{s}$	Divyamani दिव्यमणि	48	
ra gu dha na (Suddha Antara Suddha Suddha)	$s\ r_1\ g_3\ m_2$	$p\ d_1\ n_1\ \dot{s}$	Dhavalambari धवळांबरि	49	**IX Brahma** ब्रह्म ra-gu chakra
,, ,, ,, Kaisiki	,,	$p\ d_1\ n_2\ \dot{s}$	Namanarayani नामनारायणी	50	
,, ,, ,, Kakali	,,	$p\ d_1\ n_3\ \dot{s}$	Kamavardhani कामवर्धनि	51	
,, ,, Chatusruti Kaisiki	,,	$p\ d_2\ n_3\ \dot{s}$	Ramapriya रामप्रिय	52	
,, ,, ,, Kakali	,,	$p\ d_2\ n_3\ \dot{s}$	Gamanasrama गमनाश्रम	53	
,, ,, ,, Shatsruti	,,	$p\ d_3\ n_3\ \dot{s}$	Visvambhari विश्वंभरि	54	
ri gi dha na (Chatusruti Sadharana Suddha Suddha)	$s\ r_2\ g_2\ m_2$	$p\ d_1\ n_1\ \dot{s}$	Syamalangi श्यामलांगि	55	**X Disi** दिशि ri-gi chakra
,, ,, ,, Kaisiki	,,	$p\ d_1\ n_2\ \dot{s}$	Shanmukhapriya षण्मुखप्रिय	56	
,, ,, ,, Kakali	,,	$p\ d_1\ n_3\ \dot{s}$	Simhendramadhyamam सिंहेन्द्रमध्यम	57	
,, ,, Chatusruti Kaisiki	,,	$p\ d_2\ n_3\ \dot{s}$	Hemavati हेमवति	58	
,, ,, ,, Kakali	,,	$p\ d_2\ n_3\ \dot{s}$	Dharmavati धर्मवति	59	
,, ,, ,, Shatsruti	,,	$p\ d_3\ n_3\ \dot{s}$	Nitimati नीतिमति	60	
ri gu dha na (Chatusruti Antara Suddha Suddha)	$s\ r_2\ g_3\ m_2$	$p\ d_1\ n_1\ \dot{s}$	Kantamani कान्तामणि	61	**XI Rudra** रुद्र ri-gu chakra
,, ,, ,, Kaisiki	,,	$p\ d_1\ n_2\ \dot{s}$	Rishabhapriya रिषभप्रिय	62	
,, ,, ,, Kakali	,,	$p\ d_1\ n\ \dot{s}$	Latangi लतांगि	63	
,, ,, Chatusruti Kaisiki	,,	$p\ d_2\ n_3\ \dot{s}$	Vachaspati वाचस्पति	64	
,, ,, ,, Kakali	,,	$p\ d_2\ n_3\ \dot{s}$	Mechakalyani मेचकल्याणि	65	
,, ,, ,, Shatsruti	,,	$p\ d_3\ n_3\ \dot{s}$	Chitrambari चित्रांबरि	66	
ru gu dha na (Shatsruti Antara Suddha Suddha)	$s\ r_3\ g^3\ m_2$	$p\ d_1\ n_1\ \dot{s}$	Sucharitra सुचरित्र	67	**XII Aditya** आदित्य ru-gu chakra
,, ,, ,, Kaisiki	,,	$p\ d_1\ n_2\ \dot{s}$	Jyotiswaroopini ज्योतिस्वरूपिणि	68	
,, ,, ,, Kakali	,,	$p\ d_1\ n_3\ \dot{s}$	Dhaturvardhani धातुवर्धनि	69	
,, ,, Chatusruti Kaisiki	,,	$p\ d_2\ n_3\ \dot{s}$	Nasikabhooshani नासिकभूषणि	70	
,, ,, ,, Kakali	,,	$p\ d_2\ n_3\ \dot{s}$	Kosalam कोसलम्	71	
,, ,, ,, Shatsruti	,,	$p\ d_3\ n_3\ \dot{s}$	Rasikapriya रसिकप्रिय	72	

Note. The nomenclature given above for the 72 Melakarta ragas is the one in currency at the present day. Venkatamakhi's separate nomenclature for the same is given below in their serial order:

1. Kanakambari कनकांबरि	19. Jhankarabhramari झंकारभ्रमरि	37. Sowgandhini सौगन्धिनि	55. Syamala श्यामल
2. Ppenadyuti फेनद्युति	20. Nariritigaula नारीरीतिगौळ	38. Jaganmohanam जगन्मोहनम्	56. Chamaram चामरस
3. Ganasamavarali गानसामवराळि	21. Kiranavali किरणावळि	39. Dhalivarali धालिवराळि	57. Sumadyuti सुमद्युति
4. Bhanumati भानुमति	22. Sriragam श्रीरागम्	40. Nabhomani नभोमणि	58. Desisimharavam देशिसिंहारवम्
5. Manoranjani मनोरंजनि	23. Gaurivelavali गौरीवेळावळि	41. Kumbhini कुंभिनि	59. Dhamavati धामवति
6. Tanukirti तनुकीर्ति	24. Veeravasantam वीरवसन्त	42. Ravikriya रविक्रिय	60. Nishadam निषादम्
7. Senagrani सेनाश्रेणि	25. Saravati शरवति	43. Girvani गीर्वाणी	61. Kuntalam कुन्तलम्
8. Janatodi जनतोडि	26. Tarangini तरंगिणि	44. Bhavani भवानी	62. Ratipriya रतिप्रिय
9. Dhunibhinna shadjam धुनिभिन्नषड्जम्	27. Sourasena सौरसेन	45. Sivapantuvarali शिवपन्तुवराळि	63. Gitapriya गीतप्रिय
10. Natabharanam नटभरणम्	28. Harikedaragaula हरिकेदारगौळ	46. Sthavarajam स्तवराजम्	64. Bhushavati भूषावति
11. Kokilaravam कोकिलारवं	29. Dhirasankarabharanam धीरशंकराभरणम्	47. Sauviram सौवीरम्	65. Santhakalyani शान्तकल्याणि
12. Roopavati रूपावति	30. Nagabharanam नागाभरणम्	48. Jeevantini जीवन्तिनि	66. Chaturangini चतुरंगिणि
13. Geyahejjajji गेयहेज्जज्जि	31. Kalavati कलावति	49. Dhavalangam धवळंगम्	67. Santanamanjari सन्तानमंजरि
14. Vativasantabhairavi वाटीवसन्तभैरवि	32. Ragachudamani रागचूडामणि	50. Namadesi नामदेशि	68. Jotiragam ज्योतिरागम्
15. Mayamalavagaula मायामालवगौळ	33. Gangatharangini गांगतरंगिणि	51. Kasiramakriya काशिरामक्रिय	69. Dhautapanchamam धौतपंचमम्
16. Thoyavegavahini तोयवेगवाहिनि	34. Bhogachayanata भोगच्छायानाट	52. Ramamanohari राममनोहरि	70. Nasamani नासामणि
17. Cchayavati छायावति	35. Sailadesakshi शैलदेशाक्षि	53. Gamakakriya गमकक्रिय	71. Kusumakaram कुसुमाकरम्
18. Jayasuddhamalavi जयशुद्धमालवि	36. Chalanata चलनाट	54. Vamsavati वंसवति	72. Rasamanjari रसमंजरि

* Since the notes Sa and Pa are met with in all the melakarta ragas and since the note Suddha Madhyama is constant for the first 36 melakartas and the note Prati Madyama for the second 36 melakartas, the lakshanas of the other four changing notes (viz Ri, Ga, Dha, and Ni) are alone given under this column :

Reference : V. N. = Venkatamakhi's Nomenclature.