
Veenas and Veenadharis in Sculptural Heritage of Kerala

Akhil K. N.¹ and Preeta Nayar¹

¹. Department of Archaeology, University of Kerala, Kariavattom Campus, Thiruvananthapuram, Kerala – 695 581, India (Email: akhilkn2639@gmail.com; preetasnayar@gmail.com)

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Abstract: *Veena is a stringed musical instrument originated in ancient India. It has been in use since the days of Rigveda. There are different types of veena, mainly depending on the place and position of its various components and method of playing. The present study shows that there are four types of veena, viz., traditional veena, tumburu, bowed veena and stick zither, found along with different gods, goddesses, saints, female terrestrials and musicians in procession in the sculptural depictions of Kerala. They are mainly sculptured in wood and rarely in stone. These musical instruments identified from the sculptural heritage of Kerala are smaller and portable compared to the present-day veena which is heavier and bigger. All the instruments depicted in the sculptural art of Kerala are almost extinct today.*

Keywords: Veena, Veenadhari, Tumburu, Bowed Veena, Stick Zither, Sculptural Heritage, Kerala

Introduction

Vadyas or musical instruments are devices made to resonate with rhythmic sounds. Even though the real inventors of these instruments are the humans themselves, their origin, theory and techniques are attributed to divine beings in the Indian context. Almost all Gods have their signature musical instruments as one of their attributes in their iconic form as well as in literary descriptions. Playing musical instruments during the time of worship is considered an expression of devotion in the form of music.

Modern musicologists follow the Sachs-Hornbostel system for the classification of musical instruments. This system broadly categorizes musical instruments into four types: (i) idiophones, (ii) aerophones, (iii) membranophones and (iv) chordophones. Idiophones are percussion instruments made without membranes, aerophones are air-blown instruments, membranophones are percussion instruments with membranes and chordophones are stringed instruments. This four-fold classification, in fact, has existed in India since the sage Bharata of the 2nd century CE. He classified the instruments as (i) *ghanavadya* (idiophones), (ii) *sushiravadya* (aerophones), (iii) *avanaddhavadya* (membranophones) and (iv) *tatavadya* (chordophones).

Veena (Chordophones)

The term '*veena*' used in this paper is a general term to signify stringed instruments. They are musical instruments which use chords or strings stretched between two points on these instruments. *Veena* was one of the most important musical instruments in ancient India. The term *veena* is derived from the word '*vana*', which means 'sound' and 'tone' together. The *veena*, referred to in *Vedic* literature, is a harp-like musical instrument (Coomaraswamy, 1931). This stringed instrument was usually played to accompany *Vedic* chants.

Morphology of a Modern Veena

A modern *veena* (Figure 1) consists of a wooden resonator called a gourd (*kutam*) having an acoustic cavity, which is top plated with a bridge and a long stem (*dandi*) made of a single block of wood. The stem has 24 metallic frets placed in a logarithmic manner fixed by means of a resinous substance. The part of the stem having frets is called the fretboard. The strings are tied on the bridge at the end and the pegs on the other end, which run over the stem. The pegs can be rotated to tune the strings. There are seven strings on a modern *veena*; four of them run over the fretboard (main strings), and the remaining three are on the side of the neck (secondary strings or *meetu*). Apart from the main resonator, there is a secondary resonator on the top part of the stem. The mechanism of *veena* is that when a string is plucked either with a hand or a plectrum (the object used for plucking), the sound is transferred through the bridge to the top plate of the wooden resonator. This causes vibration of the air inside the acoustic cavity. Since the air is vibrating inside an acoustic cavity, the feasible sound produced by the string gets amplified, and a loud and clear audible sound is produced. The frequency range of the sound produced by a modern *veena* is in between 80-6500 Hz (Chakravorty, 2012; Amogh, 2015).

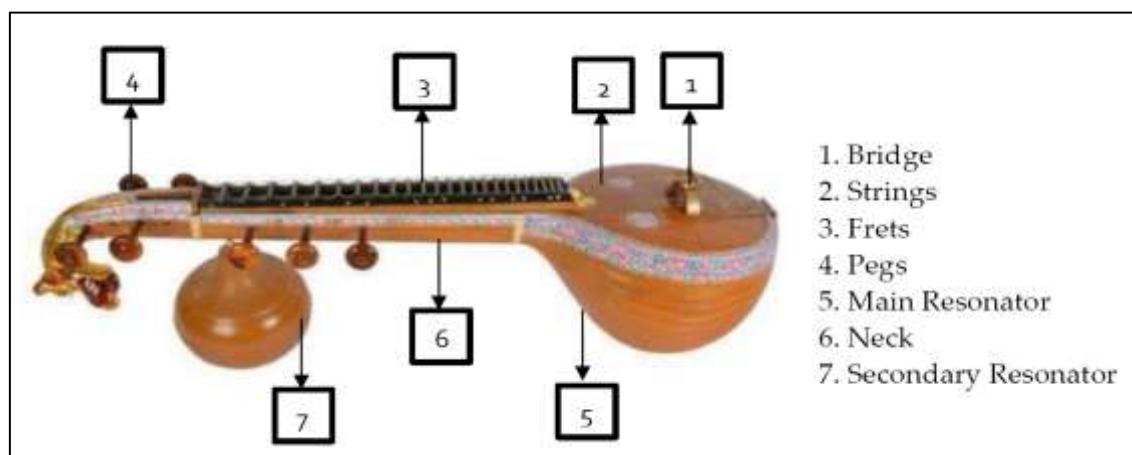


Figure 1: Parts of a modern *Veena*

Origin of Veena

*Veena*s or chordophones are complex instruments. They require higher cognitive capacity. Krishnaswami (1965) puts forward a hunter's bow theory to explain the origin

of stringed instruments. A hunter might have noticed the pleasant humming sound while shooting his arrow. Later, he must have observed that the sound could be amplified when the string was plucked near a cavity. The strings of varied lengths might have been attached to the bow to make sounds of varied tones, resulting in the formation of a primitive harp. This primitive form must have gone through numerous evolutionary stages. As a result, a wide variety of stringed instruments, which we see today, might have got evolved.

This theory is backed by a few Mesolithic cave paintings, mainly from the Bakti Bundal shelter (Figure 2) and the Nimbu Bhoj shelter (Figure 3) of Pachmarhi Hills, Madhya Pradesh. The images clearly show a human figure playing on a proto-multi-stringed harp, similar in shape to a bow. Interestingly, this proto harp has a resonator (acoustic cavity) for amplifying the sound.



Figure 2: Bow-shaped multi-stringed harp player with a group of dancers, Bakti Bundal shelter



Figure 3: *Harpist and family*, Bow-shaped multi-string harp player, Nimbu Bhoj Shelter

(Courtesy: Pathak 2016)

Vayupurana attributes Narada as the inventor of *veena*. It explains how Narada's *veena* became the *veena* of the Earth. Once, Urvashi was dancing in Indra's court accompanied by Narada with his *veena* called *Mahathiveena*. Narada intentionally made some mistakes in his *veena* to get the attention of the audience on to the flaws made by Urvashi. Upon noticing this, the sage Agastya cursed Urvashi to become a bamboo and Narada's *veena* to become the *veena* of the world (Mani, 1993).

Lord Shiva is considered a lover of *veena* music and, thus, is called *veenaganapriya*. In this context, he is known as *Veenadhara Dakshinamurti*, one of the twenty-five forms of Shiva coming under the *yoga* aspect. The belief is that Shiva invented *Rudra veena*, drawing inspiration from the grace of his wife, Parvati. He skilfully designed the instrument, embodying Parvati's features in its construction. Her slender form became the neck of a *veena*, her breasts were replicated as two gourds, her bangles transformed into frets, her tresses manifested as strings, jewels took the form of pegs, the crown evolved into a

peacock ornament and rings incorporated as the plectrum of the *Rudra veena*. *Saraswati veena*, likewise, is believed to be invented by the goddess Saraswati (Beck, 2013).

The bowed string instruments started appearing in Indian art only after the 10th century CE. *Bharathabhashya* of Nanyadeva, which contains details of instrumental music played at dramatical performances, describes the mythical origin of bowed string instruments: Ravana was practising penance to please Lord Shiva, but he was not pleased even though Ravana, a strong devotee of Shiva, offered one of his heads. Hence, finally, he decided to please Shiva with his music. He tore out the flesh from his hand, removed the sinew from the flesh and stretched it to use it as the string of his *veena*. Lord Shiva, immensely pleased to hear Ravana's music, gave a boon to him and named his instrument *Ravana-hasta* (Beck, 2013).

With these introductory details, we shall explore the status of the depiction of *veena* in the sculptural art of Kerala, which has a tradition that spans about twelve centuries.

Veena in the Sculptural Heritage of Kerala

The sculptural heritage of Kerala is rich with depiction of various types of *veena*. They are mainly seen in bracket figures and mono-scenic and narrative panels. Four types of *veena* are observed in the sculptural depictions in Kerala, *viz.*, *veena*, *tambura/tumburu*, bowed *veena* and stick zither.

Veena: The image of the *veena* seen in the sculptural art of Kerala is usually small and portable, unlike the heavy and oversized modern *veena*. A good example is the *Anantashayi* panel of the *shrimukham* of Elamkunnappuzha Subrahmanyaswamy temple in Ernakulam district. Narada is shown here playing a portable miniature *veena* (Figure 4). The instrument is identified by its shape and playing style. A stringed instrument usually possesses at least one resonator, one string and one peg. The key points to identify a *veena* in sculptures are the resonator of the instrument (the resonator and the stem are made from a single wood) and fingers of both the hands shown to play the instrument. Here, one hand is seen plucking the strings either with a plectrum or fingers, and the other is shown pressing the strings against the stem.

There is depiction of a sage playing a *veena* in standing posture in the *Nataraja* panel housed in one of the western corner gables of the *vilakkumamatam* of Vaikkom Mahadeva temple, Kottayam district (Figure 5). There is a male musician playing *veena* in seated posture carved on the southern wall of the *vilakkumamatam* of Irinjalakuta Kutalmanikyam temple in Thrissur district (Figure 6). This *veena* is identified based on the posture of the player, position of *veena*, number of resonators and the characters associated with *veena*. Musicians playing *veena* are depicted in two postures: either standing or sitting. The depictions in Vaikkom Mahadeva and Irinjalakuta Kutalmanikyam temples belong to the first type.

One of the bracket figures found on the sanctum sanctorum of Tiruvilwamala Vilwadrinatha temple in Thrissur district (Figure 7) shows a sage playing single

resonator *veena* held almost in a vertical position. A female musician is playing *veena* in a horizontal position across the waist (Figure 8) in the *balikalmandapam* of Mutukurushi Kirata temple in Palakkad district. While playing *veena*, it is held in two positions: either close to the head (almost in vertical position) or across the body (horizontal position). These sculptures illustrate similar positions.



Figure 4: Narada playing small portable type double resonator *veena*, Elamkunnapuzha Subramanya temple

Based on the number of resonators, there are two types of *veena*: (i) only with a main resonator (single resonator) and (ii) with main and secondary resonators (double resonator). Tiruvilwamala Vilwadrinatha temple sculpture holds the *veena* with a single resonator. The sculpture of Narada in the *Anantashayi* panel in Elamkunnapuzha Subrahmanyaswamy temple (Figure 4) possesses a *veena* with a double resonator.



Figure 5: Standing player, Vaikkom Mahadeva Temple



Figure 6: Seated player, Irinjalakuta Kutalmanikyam temple



Figure 7: Vertical position, Tiruvilwamala Vilwadrinatha temple



Figure 8: Horizontal position, Mutukurushi Kirata temple



Figure 9: Saraswati playing *veena*,
Alampallam Vishnu temple



Figure 10: Narada playing *veena*, Arpukkara
Shri Subrahmanyaswamy temple



Figure 11: Female terrestrial *veena*
player, Mutukurushi Kirata temple



Figure 12: Ravana playing *veena*,
Vasudevapuram Shrikrishna temple

Important characters associated with *veena* are the goddess Saraswati (Figure 9), the sage Narada (Figure 10) and the female terrestrials (Figure 11). The image of goddess Saraswati playing *veena* is observed, for example, in the temple car of Alampallam Vishnu temple in Palakkad district (Figure 9). Sculptures that show Narada playing *veena* are of common occurrence in Kerala as observed in the *Anantashayi* scene in the *kuttambalam* of Arpukkara Shri Subrahmanyaswamy temple in Kottayam district. *Balikalmandapam* of Mutukurushi Kirata temple shows a female terrestrial playing *veena*. All these *veenas* belong to the small portable type seen in the sculptural art of Kerala. Interestingly, there is a stone sculpture depicting the demon king Ravana playing *veena* at the base of the entrance of Vasudevapuram Shrikrishna temple in Kottayam district (Figure 12). The instrument seen in Ravana's hand is eroded, and it is difficult to identify to which category this *veena* belongs to.



Figure 13: Modern *tumburu* played in vertical position (courtesy: Eambalam Administrator)



Figure 14: *Tumburu* played in vertical position, Tirunavaya Navamukunda temple

Tumburu: *Tumburu* (Figure 13) is a drone instrument. It has almost similar features of a *veena* except that it has no secondary resonator. The playing style of *tumburu* is different from that of *veena*. While playing *tumburu*, the player uses only one hand to pluck the instrument. This is the main aspect of identifying *tumburu* from *veena*. As it is a drone instrument, there is no need to change the sound by pressing the string against the stem. The player uses only one hand, left or right, to pluck the strings and the other hand is shown either resting on or supporting the instrument. Position of *tumburu*, posture of

players and characters associated with *tumburu* are the main features that help identify *tumburu*.

While playing, *tumburu* is held either vertically (close to the head) or horizontally (across the body). A bracket figure in Tirunavaya Shri Navamukunda temple in Malappuram district shows a sage playing *tumburu*. He holds the instrument in a vertical position (Figure 14). Another bracket figure found in Chovvallur Shiva temple in Ernakulam district shows a lady playing *tumburu* in a horizontal position (Figure 15).

Musicians play *tumburu* either in seated or standing postures. The *dashavatara* panel housed in the *namaskara mandapam* of Ayilur Shiva temple in Palakkad district depicts a sage playing *tumburu* in sitting posture (Figure 16). *Palazhimadhana* panel observed in the *balikkalmandapam* of Chittur Bhagavaty temple in Palakkad district presents Narada playing *tumburu* in standing posture (Figure 17). Narada (Figure 17) and female terrestrials (Figure 18) are the main characters found in sculptural art of Kerala using *tumburu* as their musical instrument. The *balikkakal mandapam* of Trippakkudam Shiva temple in Kottayam district depicts both these characters playing *tumburu*.



Figure 15: Player using *tumburu* in horizontal position, Chovvallur Shiva temple



Figure 16: Player using *tumburu* in seated position, Ayilur Shiva temple

The playing style (one hand will be shown plucking the string of *tumburu* and the other holding the instrument) helps one to identify whether the instrument in the hands of a deity is *veena* or *tumburu*. If the deity is presented just holding the instrument instead of

playing, it is difficult to distinguish *veena* from *tumburu*. Nataraja sculptures usually show this instrument as one of the attributes in one of his hands without playing it. The Nataraja sculpture carved on the ceiling beam of the *namaskara mandapam* of Udayanapuram Subrahmanya temple in Kottayam district (Figure 19) is an apt example to cite this situation. In such cases, it is safe to identify the attribute as *veena/tumburu*. A sculpture of Narada seen as bracket figure in the *kuttambalam* of Arpukkara Shri Subrahmanyaswamy temple (Figure 20) and another bracket figure in the *balikkalmandapam* of Trippakkudam Shiva Temple (Figure 21) are other examples.



Figure 17: Narada playing *tumburu* in standing position, Chittur Bhagavaty temple



Figure 18: Lady terrestrial playing *tumburu* in standing position, Thrippakudam Shiva temple



Figure 19: Nataraja holding *veena/tumburu*, Udayanapuram Subrahmanya temple



Bowed Veena: The bowed *veena* (Figure 22) is like a single resonator type of *veena* observed in the sculptural art of Kerala. In bowed *veena*, the player uses a bow to make the sound. One hand holds the bow and fingers of the other hand are pressed against the strings.



Figure 20: Narada holding *veena/tumbaru*,
Arpukkara Subrahmanyaswamy temple

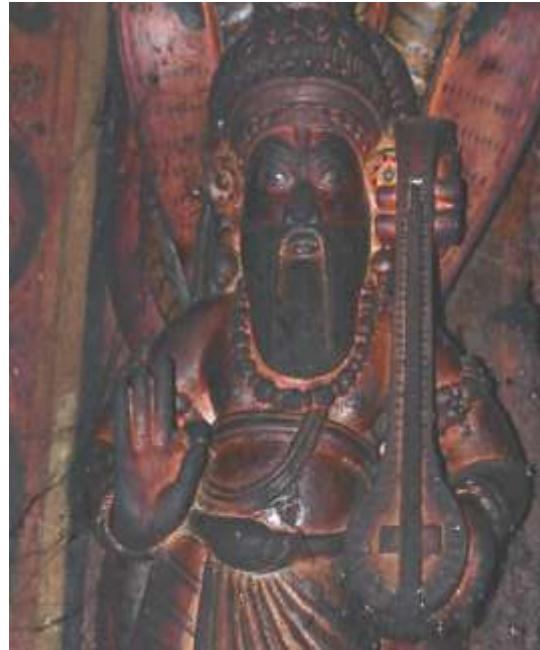


Figure 21: Sage holding *veena/tumbaru*
Trippakkudam Shiva Temple



Figure 22: Bowed *veena* with resonator
resting on the shoulder of the player
Cheranallur Mahadeva temple



Figure 23: Modern bowed *veena* player
belonging to the Pulluva community
(Courtesy: G. Katyan Misra)

The bowed *veena* is held either with the resonator resting on the shoulder of the player (Figure 22) or the resonator resting in any of the hands (Figure 24). A procession panel carved in the *balikkalmandapam* of Cheranallur Mahadeva temple in Ernakulam district shows bowed *veena* with resonator resting on the shoulder of a player. Narada shown in

the *Parvatiparinayam* panel on the southern wall of the *ardhamandapam* of Cherukunnu Annapurneswari temple in Kannur district shows bowed *veena* with the resonator resting in one of the hands. The Nataraja (Figure 25) carved on the wall of the sanctum sanctorum of Chunakkara Mahadeva temple in Alappuzha district holds the bowed *veena* as one of the attributes without playing it.



Figure 24: Narada playing bowed *tumburu*, Cherukunnu Annapurneswari temple

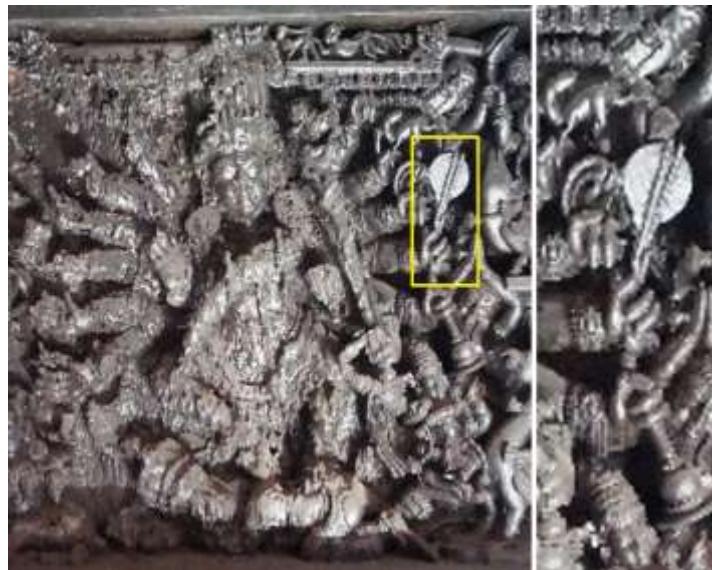


Figure 25: Nataraja holding bowed *veena* as an attribute, Chunakkara Mahadeva temple, Alappuzha

Musicians usually play bowed *veena* in seated or standing postures with the bow in the player's right hand and the *veena* in the left. *Kiratarjuniyam* panel housed in the *namaskara mandapam* of Kaduturuti Taliyil Mahadeva temple in Kottayam district portrays Narada playing bowed *veena* in sitting posture with crossed legs (Figure 26). The depiction of musicians standing and playing bowed *veena* is common in sculptural art of Kerala. A female musician playing bowed *veena* carved on the sanctum sanctorum wall of Ettumanur Shiva temple in Kottayam district is an interesting depiction in this context (Figure 27).

Nataraja (Figure 25), Ardhanariswara (Figure 28), associates of Shiva (Figure 29) and female terrestrials (Figure 27) are the main characters associated with bowed *veena* found in the sculptural art of Kerala. Ardhanarishwara playing bowed *veena* is seen on the wall of the sanctum sanctorum of Vazhappalli Shiva temple in Kottayam district. Associates of Shiva playing bowed *veena* have been carved on the wall of the sanctum sanctorum of Ettumanur Shiva temple.

There are special occasions when bowed *veena* is depicted as bowed *tumburu* (Figure 24). The instrument is identified as bowed *tumburu* as the player is not using one of the hands to press the strings. Narada in the *parvatiparinayam* panel carved on the southern wall of the *ardhamandapam* of Cherukunnu Annapurneswari temple is presented with a bowed *tumburu*.



Figure 26: Seated Narada in cross-legged position playing bowed *veena*, Kaduturuti Taliyil Mahadeva temple



Figure 27: Standing female figure playing bowed *veena*, Ettumanur Shiva temple



Figure 28: *Ardhanari* playing bowed *veena*, Vazhappalli Shiva temple



Figure 29: Shiva's associate playing bowed *veena*, Ettumanur Shiva temple

It is a point of interest to note that the bowed *veena*, known as *Pulluva veena* (Figure 23), is still in vogue in Kerala. It is mainly used by the Pulluva community who perform in rituals associated with Naga shrines in the state.

Stick Zither: Zithers are primitive types of stringed instruments (Figure 30), having their strings attached between two ends of a shallow box, tube or stick. If strings are stretched between two ends of a shallow box or a tube, it is called a zither, and if it is a stick, it is known as a stick zither (Myers, 1959). The resonator is an additional part attached to the body of the zither. This makes it different from the *veena*. Stick zither in sculptural art can be identified by its stick-like shape with or without resonators. A panel of procession sculpted in the *balikkal mandapam* of Cheranallur Mahadeva temple shows a perfect stick zither. The musician depicted in the panel holds this instrument with his left hand and plucks the strings with the other (Figure 31).



Figure 30: Stick zither
(Courtesy: Patric Kersale)

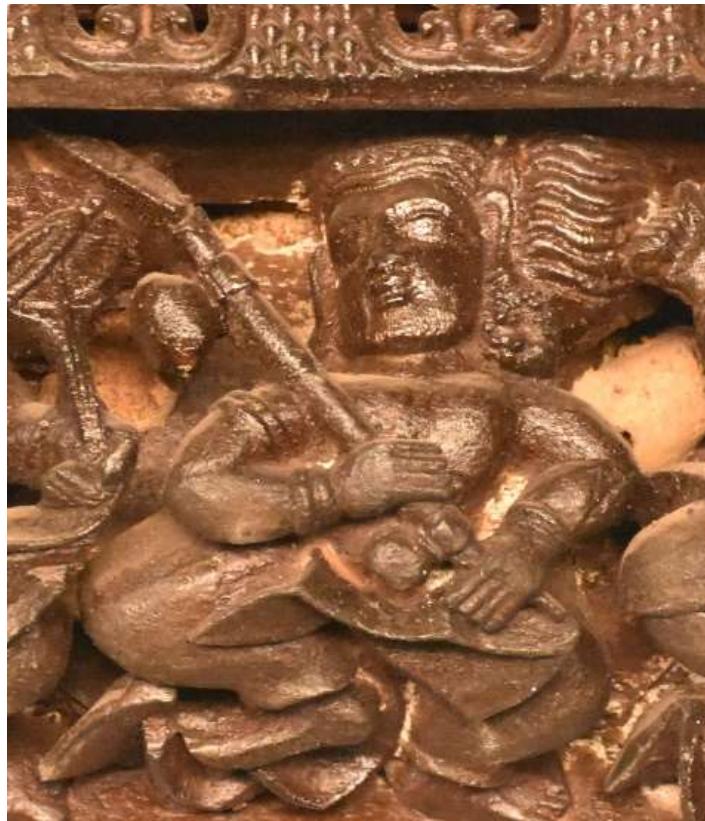


Figure 31: Stick zither player,
Cheranallur Mahadeva temple

Stick zithers are played always holding the instrument in a vertical position. It is classified based on the posture of the players, the number of resonators and the characters associated. There are fretted and non-fretted stick zithers.

Stick zithers are played by musicians either in sitting, standing or dancing postures (Figure 35). *Parvatiparinayam* panel found on the wall of the sanctum sanctorum of Chunakkara Mahadeva temple shows a musician playing stick zither in sitting posture

(Figure 34). An associate of Shiva plays a stick zither in standing posture with the accompaniment of a cymbal player in a sculptural depiction observed on the sanctum sanctorum wall of Ettumanur Shiva temple (Figure 32). Another associate of Shiva is shown on the sanctum sanctorum wall of the same temple dancing with a stick zither.



Figure 32: Fretted stick zither played by Siva's associate in standing position, Ettumanur Shiva temple



Figure 33: Non-fretted stick zither played by female terrestrial, Elamkunnapuzha Subrahmanyaswamy temple



Figure 34: Narada playing stick zither in seated position, Chunakkara Mahadeva temple



Figure 35: Dancing Shiva's associate dancing and playing stick zither, Ettumanur Shiva temple

Stick zither may have a single, double or null (no) resonator. If the instrument has only one resonator, the resonator is placed on the top of the stick, and if it has two, each resonator is placed on either end of the stick. All these three types are observed on the sanctum sanctorum wall of Ettumanur Shiva temple. Single resonator type stick zither is found among a group of musicians carved above the hunter god Shasta (Figure 36), double resonator type is found being played by a Gopi with Krishna (Figure 37), and null resonator type is observed in a group of stick zither players (Figure 38). The main characters associated with stick zither are Narada (Figure 34), associates of Shiva (Figure 35), Gopis (Figure 37) and male and female terrestrials (Figures 33 and 38).



Figure 36: Terrestrial playing zither having single resonator, Ettumanur Shiva temple



Figure 37: Gopi playing fretted zither having double resonator, Ettumanur Shiva temple

Some stick zithers possess frets arranged in a logarithmic manner on the stick. A stick zither player playing a fretted zither is seen in various scenes carved on the sanctum sanctorum wall of Ettumanur Shiva temple (Figs. 32&37). A bracket figure of the sanctum sanctorum of Anakkara Shiva temple in Palakkad district shows a sage playing a stick zither without pressing his fingers on the string (Fig. 39). Such stick zithers are called drone zithers. Zithers with box or tube-shaped resonator are not observed in sculptural depictions of Kerala.



Figure 38: Male terrestrial playing null resonator type stick zither, Ettumanur Shiva temple

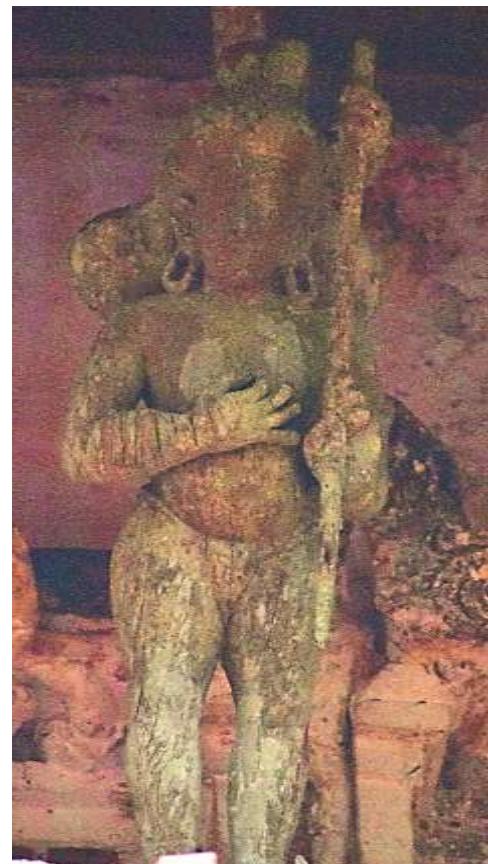


Figure 39: Male figure playing drone stick zither, Anakkara Shiva temple

Conclusion

A number of ancient Indian works like Vedas, Epics, *Shilappatikaram*, *Natyashastra*, *Saudarya-lahari*, *Sangitaratnakara*, *Sangitasudhakaram*, *Bharatakosha*, *Sangitaparjita*, *Veenatantra*, *Sangitamakaranda*, *Ragavivodha* etc. mention about different kinds of *veena* and their potential use. Some of them equate the instrument to the human body or its different components to different Hindu gods and goddesses, since it is considered divine. Sarangadeva, the author of *Sangita Ratanakara* of the 14th century CE, allocates the body of *veena* to Shiva, the strings to Parvati, the bridge to Vishnu, the main resonator to Lakshmi, the secondary resonator to Brahma, the central part of the chest board (*nabhi*) to Saraswati, the pegs to Vasuki, the cotton thread pieces used between the strings and the bridge (*jeevala*) to the moon and the frets to the Sun.

The present study shows that only four types of *veena*, viz., traditional *veena*, *tumburu*, bowed *veena* and stick zither are represented in the sculptural art of Kerala. They are sculptured and displayed with amazing technical perfection as these instruments are originally made and played. Holding these instruments in vertical and horizontal positions, sitting and standing postures of musicians while playing them, placing different components of these instruments like resonator, strings, pegs, plucking the

strings, use of the plectrum and the fingers, etc. are depicted in the sculptures demonstrating perfect similarity with the extinct and extant instruments practised in the past and the present. Sculptors, it appears, have absorbed perfect technical know how about these instruments before presenting them along with the deities, female terrestrials and people in procession with whom these instruments are generally depicted. However, a few musicians show unconventional postures such as left-handed playing (Figure 40) as in Chirakatav Mahadeva temple in Kottayam district and cross-legged sitting as in Kaduturuti Taliyil Mahadeva temple (Figure 26). Of the many *veenas* described in the study from different temples of Kerala, all, except one in granite, are sculptured in wood. Granite is, perhaps, not a medium ideal for a sculptor to give expression to an instrument like *veena*, which is a composition of many minute components assembled in precision-based intricacy.



Figure 40: Left-handed stick zither player, Chirakatav Temple

In the present musical landscape of Kerala, stringed instruments are getting less attention in cultural performances as they are subdued by percussion and wind instruments, especially in processions and programmes that have mass appeal. The *veenas* shown in sculptural art of Kerala are smaller in size and portable in use, but the present-day *veenas* are heavy ones that can only be played in a sitting posture. The stick zither, which occurs more frequently in sculptural art of the state, has become almost extinct, though the *Pulluva veena* can comfortably be placed under this category. It is still used by the Pulluva community in Kerala in certain rituals, particularly associated with the snake worship.

References

Amogh, R. N. 2015. *Vibro-acoustic Analysis of the Veena* (Unpublished Master's Thesis). Department of Mechanical and Aerospace Engineering, IIT Hyderabad.

Beck, G. L. 2013. Divine Musical Instruments: *Brill's Encyclopaedia of Hinduism*, Vol- V.

Chakravorty, S. 2012. *Instruments in Hindustani Classical Music, Role, and Performance*. New Delhi: Kanishka Publishers.

Coomaraswamy, A. K. 1931. Parts of Veena: *Journal of American Oriental Society* Vol-L. Massachusetts: American Oriental Society.

Jayanthi, R. 2005. *Analytic Study of different Bains and Techniques of Playing the Saraswathi Veena* (Unpublished PhD Thesis). Department of Music, University College of Fine Arts for Women, University of Mysore.

Krishnaswami, S. 1965. *Musical Instruments of India*. New Delhi: Ministry of Information and Broadcasting, Government of India.

Mani, V. 1993. *Puranic encyclopaedia: a comprehensive work with special reference to the epic and Puranic literature*. Delhi: Motilal Banarsidass.

Mayers, B. S. 1959. *Encyclopaedia of World Art*. New York: McGraw-Hill.

Murti, G. S. 1943. *Sangita Ratnakara of Sarangadeva*. [online] Internet Archive. Available at: <https://archive.org/details/SangitaRatnakara/page/n1/mode/2up>.

Pathak, M. D. 2016. *Musical Depiction in Indian Rock Art* [online] Bradshaw Foundation. Available at: https://www.bradshawfoundation.com/news/cave_art_paintings.php?id=Musical-depictions-in-Indian-rock-art

Popley, H. 1921. *The Music of India*. Calcutta: Association Press.

Tarlekar, G. H. 1965. Fretted Vina in Indian Sculptures: *The Journal of Madras Music Academy*, vol- XXXVI. Madras: The Music Academy.