

SOCIAL ASPECTS OF WOOTZ STEEL MANUFACTURE IN NORTHERN TELANGANA

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During a detailed survey of medieval iron mining, smelting and wootz steel manufacturing sites in northern Telangana, the social aspects related to wootz steel manufacture were recorded. It was brought to light that a large number of people were involved in various activities related to iron extraction and wootz steel manufacture like mining of ore, smelting of iron, preparation of charcoal and processing of iron to wootz steel. Further, a host of people were engaged in the manufacture and production of arms, armour, cutlery and household objects based on wootz steel. These social aspects connected with wootz steel manufacture in Telangana have been explained. Specific communities were engaged in iron and wootz steel-related activities in this region. The social hierarchy observed in these communities have also been recorded. The worship of *Māmāyī* by members of the community has been explored in some detail. The community involved in the trade of iron and wootz steel has also been described. New insights have been obtained into the socio-ethnological aspects of wootz steel tradition of northern Telangana region. The continuity of some of these traditions is noteworthy.

Key words: Communities, Social customs, Traditions, Wootz steel, Worship.

INTRODUCTION

The rich blacksmithing tradition of the Indian subcontinent is quite evident from available material evidences like the numerous iron objects discovered in archaeological excavations¹ and the presence of large iron

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objects like forge welded iron pillars, beams and cannons². Another important ferrous product that originated from the Indian subcontinent and one that found fame far and wide was wootz steel³. An important area for the production of wootz steel was the Deccan (i.e. South India) and in particular the Telangana region, as available from historical sources⁴. A detailed survey⁵ of wootz steel production in northern Telangana has revealed valuable material⁶ and archaeological evidences related to the manufacture and use of wootz steel, “The Wonder Material of the Orient.”³ In this communication, the social aspects of iron and wootz steel manufacture in Telangana will be outlined, with particular focus on the communities involved in iron and wootz steel manufacture.

As an introduction, we note that blacksmiths were a very important part of the fabric of traditional Indian social formations. They were crucial to the economic well-being as well as security of society. Therefore, they were regarded with respect and given a high position in the social hierarchy of artisans, in ancient and medieval periods. The artisans formed the *Viśvakarmā* community in general and this included people involved in different production like textiles, pottery, carpentry, metal-work, etc. In particular, five groups were represented in the so-called ‘*pañcannam varu*’, which included blacksmiths, goldsmiths, bronze-smiths, carpenters and sculptors (idol makers). These communities regard that they all originate from God *Viśvakarmā* (*viśva* – universe and *karma* – action), who is regarded as Divine God of Architecture and Engineering/Technology/Manufacturing in Hindu tradition. Among these communities, blacksmiths were particularly important, due to their close association with the ruling class. Their technical expertise was much in demand for making war equipments (which included swords, blades, artillery and guns) and the very survival of the ruling class depended on these very equipments.

IRONMAKING AND BLACKSMITHING COMMUNITIES

A distinct difference must be noted in the social status of the communities involved in iron extraction and working with iron. Iron extraction and its attendant processes (like ore collection, charcoal making, furnace construction, iron smelting, etc.) were handled by one community while the working of iron thus extracted was the responsibility of another community.

The former were called as '*muddā kāmmārī*' or "lump iron makers." The very nature of their work dictated that the former were confined to the areas where iron ore and trees were available (therefore, usually near the forests away from villages and towns). On the other hand, the blacksmiths who worked the iron lumps into useful objects were located in villages and towns. The blacksmiths were known as '*kāmmārī*.'

The community involved in iron extraction was called as '*muddākāmmārlu*' or '*muddakolimī kāmmārlu*'. It is interesting to note that iron-making furnace was called as '*muddā kolimī*' in Telugu language, literally meaning "iron smelting furnace." It is also interesting to note the connection of the word "*muddā*" with "*muṇḍā*", one of the three important classes of iron (i.e. *muṇḍā loha*) as classified in historical literary texts⁷. The community involved in iron extraction was also referred to as '*bayatikāmmārī*' or "the outside dwelling smiths" which is connected to their work usually near the forests, away from the villages. This situation has changed in the recent times. Since their traditional occupation of iron making is no longer required (due to the large production of iron and steel from efficient blast furnaces), members of this community involve themselves in blacksmithy work in villages. Rather than settle permanently, there are evidences that at least some of the community members travel from place to place and therefore lead a migratory life. This is at least the case with the *āgāriyās*, the traditional iron making community found in parts of Madhya Pradesh, Jharkhand and Chattisgarh⁸. Other communities involved in the mining and cleaning of iron ore, charcoal preparation and smelting of iron, were the '*Bānjārā*' or '*Lāmbādā*' tribal communities.

The presence of the *āgāriyā* community was not widely noted in the three districts of Northern Telengana (Adilabad, Nizamabad and Karimnagar). A few of them could be observed in the northern parts of Adilabad district. For example, a village named "Āgar Guḍā" in Bejjur Mandal is named after this community. Members of the *āgāriyā* community still live in this village to this day, but they are not involved in iron smelting activities. Interestingly, this village borders the Chattisgarh state. Large heaps of slag were spread over several acres of land near this village, providing ample evidence of iron smelting activities in the past. Some of the *āgāriyās* in Chattisgarh state and Madhya Pradesh states are still involved in iron smelting (small quantities) for their day to day needs⁸.

In several cases we can notice people living in huts and houses constructed out of slag pieces. A blacksmith's house made of slag "bricks" is seen in Fig. 1. This house is located at Ramgapet in Jagtial mandal, Karimnagar district.



Fig. 1. A blacksmith's house made of slag "bricks" located at Ramgapet in Jagtial mandal, Karimnagar district.

The '*muddākāmmārī*' community is not treated equally with the general smith communities. In the social strata, the lump iron makers come below the general smiths. Clearly, there were differences in also the social organization and customs between these two groups. Details of the customary practices of the *āgāriyās* are available based on several first hand accounts of *āgāriyā* community life. The most notable, of course, is the study of Verier Elvin⁹ who spent a significant period of his life staying with the *āgāriyās* and recording the minute details of their activities. Therefore, the social customs of the *āgāriyās* will not be presented here.

SOCIAL CUSTOMS OF BLACKSMITHS

As most communities in several parts of India and the world, particular communities often stay together in the same location in the village or town. Such was and still is the case with the blacksmith community in several villages in Telangana. With particular reference to wootz steel making, the same blacksmith community was involved in working wootz. However, some members were adept and skillful in working wootz ingots and even now the working of wootz based objects is performed by special blacksmiths. All blacksmiths cannot work with wootz steel and therefore it is clear that among the blacksmith community, the working of wootz was considered a special operation. This special operation must have required the necessary skill and this brings into focus the important issue of traditional knowledge system into focus. This also provides indirect indication that the thermo-mechanical processing of wootz steel was the key to obtain objects from wootz steel.

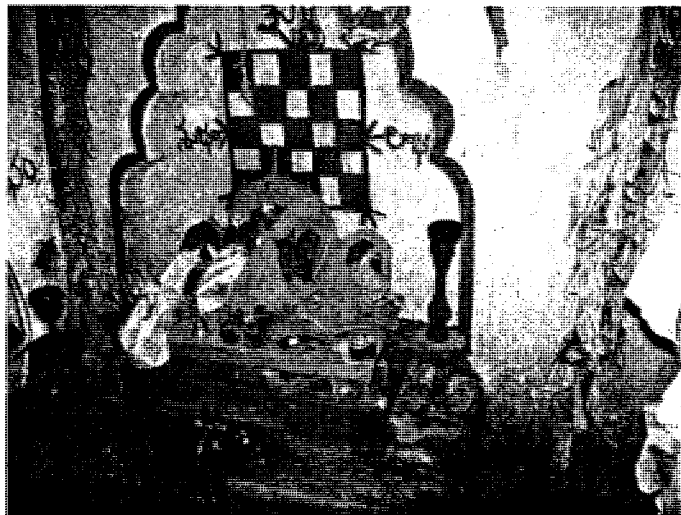
Some interesting observations were recorded with respect to the blacksmith community in the villages of Telingana. In most of these villages, one will find a temple devoted to Goddess '*Māmmāyī*.' She is considered to be the Goddess of Metal-work. Interestingly, the name *Māmmāyī* sounds like *Māmmā* or *Āmmā*, which means "mother" and *Āyī* or '*Āyas*' means iron in Sanskrit. In all the villages where wootz was produced and processed, we find a temple of Goddess '*Māmmāyī*'. There is a street called *Māmmāyī vāḍā* in the famous wootz production center of Konasamudram.

There are some unique customs also followed in these communities with respect to worship. The annual event of *Māmmāyī* temples is usually held at the beginning of the Telugu New Year (an event that is known as *Ugā dī*). In this event, which is usually celebrated by the blacksmith community on the first day of the Hindu month of *Caitra*, they take a procession of the goddess through the village. Interestingly, the idol that is taken in procession is a bronze image, while the main deity is of stone. In the month of *Caitra* (which is considered to be the beginning of Telugu new year and which usually falls in late March or early April as per the Christian calendar), members of the blacksmith community offer prayers to *Māmmāyī*, and in particular, keep their tools aside (usually in front of the deity) for 9 days. The community members do not work during this festive period. After due prayers, on the 10th day, they start their normal routine.

Further interesting subdivisions can be noted even in the worship of *Māmmāyī*. The famous wootz making centre of Konasamudram has some interesting insights. In this relatively small village, that was once world renowned for wootz steel manufacture and export, there are two temples devoted to *Māmmāyī*. The first is the temple devoted to *Peḍḍā Māmmāyī* located in a street called *Kāmmārī* Street (“Blacksmith’s Street”). In Telugu, “*peḍḍā*” translates as elder. This temple (Fig. 2a) was the traditional worship



(a)



(b)

Fig. 2. (a) The temple devoted to *Peḍḍā Māmmāyī* located in *Kāmmārī* Street in Konasamudram and (b) view of deity

place of the blacksmiths of Konasamudram. There is also a community hall for the blacksmiths next to the temple. At present, there are about 30 families of the smith community, residing in and around this place. There is another temple in the same village devoted to *Māmmāyī*. However, there is an interesting story. The second temple is devoted to *Cinnā Māmmāyī* and this is located in Kāncārī Street (“Bronzemaker’s Street”). As the name denotes, this is the location where all the bronze makers of the village live. This temple (Fig. 3a) was the traditional worship place of the bronze workers of Konasamudram. As noted before, in Telugu, “*cinnā*” translates as junior. Therefore, it is clear from this discussion that separate temples and deities were associated with each branch of workers. Based on the name of the deities, it is reasonable to propose that the blacksmith were placed at a higher hierarchy compared to the bronze smiths going by the name “elder” given to their Goddess (i.e. *Peḍḍā Māmmāyī*).



Fig. 3. View of deity *Cinnā Māmmāyī* located in the temple in Kāncārī Street in Konasamudram.

Information on other important *Māmmāyī* temples was researched and the following information was recorded from Mattela Gangaram, chief blacksmith of Ibrahimpaṭnam in Karimnagar district. He noted that there is one big *Māmmāyī* temple between two villages called *Cinnā Kalāvālā* and *Peḍḍā Kalāvālā* in Peddapally Mandal in Karimnagar district, on the highway leading from Karimnagar to Ramagundam. There is a temple at Konapuram village in Kāmmāripallī Mandal in Nizamabad District. This village temple of '*Māmmāyī*' is defaced and abandoned now because of the negligence of the villagers and blacksmith community. There is another *Māmmāyī* temple at the village of the fort of Balkonda in Nizamabad district. There was a temple at Jagtial but it is not known to the people. The name of the Goddess of Jagtial is often repeated in the songs of the blacksmiths.

REVIVING MEMORIES

During the fieldwork by the first author, several families related to blacksmithy were interviewed. One can glean insights on social arrangement in the past from these memories. Let us take the example of a traditional blacksmith family of Kāmmāri Narsaiah at Jagtial in Karimnagar district. They disclosed that their ancestors were in direct contact with the petty chiefs of the region and their family was respected by the society for their skill in working with wootz steel. Kāmmāri Narsaiah is no longer alive but his wife Dharmakka, aged about 90 years, recollected that her husband's family led a very respectable life in the town. The grand father of her in-laws, a person named Hanmanthu, was employed in the Jagtial Fort. He was an expert in knitting *maille* coat with wootz steel wires. Her father-in-law, by the name of Perumallu, was a gun maker and he served in the court service. She was married to Narsaiah when she was very young, at the age of eight. Narsaiah was a famous blacksmith of his town and he worked independently on his own. At the time of '*Rāzākār*' movement, he was making guns and *thāpañcas* (muskets?) on his own. There was a search warrant issued by the Nizam Government against him. At present, the traditional blacksmithy work of the family was not being carried forward because her son was in the employment with the state government. Therefore, their traditional workshop was closed.

The above narration brings to light the sad plight that such a wonderful tradition of wootz steel working and the traditional knowledge associated

with manufacturing objects out of wootz steel is fast dying out in the Telangana region. Very soon, there will be no one who will know how wootz steel was worked. It is time that a proper survey is made of the existing wootz steel makers and record all their experiences and knowledge for the benefit of posterity. Several real life stories which remain in the memories of the great blacksmiths of this region needs to be recorded, especially to highlight India's rich material heritage.

TRADING OF WOOTZ

Selling of iron ore was very predominant in Deccan. '*Herākāssī*' was sold in the daily and weekly markets as well the itinerant traders used to sell the ore in the streets. The prices of iron ore and iron is mentioned in some medieval documents^{10,11}. The trade in iron ore and iron must have been of relatively larger volume than wootz steel. However, the premium commanded by wootz steel was much more than ordinary iron. Ishrat Alam¹² of Aligarh Muslim University has researched the original records of the Dutch East India Company and has revealed the large Dutch trade in wootz steel from the Telangana region.

The community that was involved in trade of wootz steel was '*komiṭī*', the trading community. It was observed that in most wootz steel villages, this community had command over the trade. Information was collected that the *komiṭī* community used to advance the money for wootz steel making. Later, the same people were involved in the trade of this material.

Since the trade in wootz steel was quite brisk from certain centers in Telangana during the pre-modern period, some interesting information regarding specific locations where wootz steel cakes were traded was obtained. In the famous medieval wootz steel making centre of Konasamudram, local people of this village said that the trading place was '*Bandrodī Baṅglā*' in the Bandrodi street. This building may be seen in the modern day (Fig. 4). It is a big mud house which was the traditional metal trading centre of Konasamudram. It is no longer a trading centre and the family that owned the building have shifted away from this village in search of their livelihood. A similar situation was also noticed in Ibrahimpaṭnam village in Karimnagar district. The *komiṭī* community at Kalleda village in Kadem mandal in



Fig. 4. The present condition of *Bandroḍī Baṅgalā* in Konasamudram. This was the place where wootz ingots were traded in the past.

Adilabad District were the property owners of the village. The village was a '*vathan jāgīr*' conformed by the king of this region. In the modern day, they have sold out most of their lands in the village and moved to larger towns like Jagtial in Karimnagar for their livelihood.

CONCLUSIONS

The social dynamics and customs of the people were involved in various activities related to manufacture and processing of wootz steel in northern Telangana region has been presented for the first time. The communities engaged (and the social hierarchy) in iron and wootz steel-related activities in this region has been recorded. The community involved in the trade of wootz steel has been described. A break in blacksmithing tradition has been noticed in modern times as member of the communities

take up other jobs than blacksmithing. The continuity in some of the social traditions, like the worship of Goddess *Māmāyī* by members of the community, is noteworthy.

REFERENCES

1. V. Tripathi, *The Age of Iron in South Asia: Legacy and Tradition*, New Delhi: Aryan Books International, 2001, pp. 91-110.
2. R. Balasubramaniam, *Marvels of Indian Iron through the Ages*, Rupa and Co, New Delhi, 2007.
3. S. Srinivasan and S. Ranganathan, *Wootz Steel- Legendary Material of the Orient*, Indian Institute of Science, Bangalore, 2004.
4. S. Jaikishan and R. Balasubramaniam, "Literary Evidences of Iron and Wootz Steel Production in Medieval Telangana," *IJHS*, 42.3 (2007), this issue.
5. S. Jaikishan, "Survey of iron and wootz steel production sites in northern Telangana," *IJHS*, 42.3 (2007), this issue.
6. S. Jaikishan and R. Balasubramaniam, "Material evidences for wootz steel production in Northern Telangana," *IJHS*, 42.3 (2007), this issue.
7. R. Balasubramaniam and S. Kalyanaraman, "New Insights on Classification of Iron-Carbon Alloys, specially High Carbon Steels in *Rasaratnasamuccaya*," *IJHS*, 42.3 (2007), this issue.
8. Alok K. Gupta, Regional Research Laboratory, Bhopal, personal communication, 2004.
9. V. Elvin, *The Agariya*, Oxford University Press, Calcutta, 1942, pp. 274-275.
10. T.V. Mahalingam, *Economic Life in the Vijayanagar Empire*, University of Madras Publication, 1951, p. 98.
11. S.K. Sinha, *Medieval History of Deccan*, Vol II, Andhra Pradesh Government Archaeological Series No. 24, 1968, p. 220.
12. Ishrat Alam, "Iron manufacturing in Golkonda in 17th Century," (translations of the original Dutch records of Daniel Havert), *Proceedings of the Indian History Congress*, (1988), p. 246.

