

Madder

Dried stems and leaves of madder called *tsoe* (*Rubia cordifolia*) are chopped into small pieces. This material is boiled together with the yarn to produce several colours ranging from pink to deep red. It is good for dyeing raw silk, cotton and wool. Madder can be preserved in dry place for years.

The ripe berries of berberis, locally called *kepatsang* (*Berberis aristata*) are used as a source of red colour, while the barks of nut of the walnut tree can be used to obtain orange colour in woollen yarns.

Pangtse

Leaves from *pangtse shing* (*Symplocos paniculata*) are gathered from the forest, which can be used fresh or dried, to make yellow colour. Pangtse leaves are boiled in water along with woollen yarns. The yarn is then allowed to drip. Sometimes, *yung ga* (*Curcuma longa*) or turmeric is also used to obtain a bright yellow colour.

Lemon, also called *churoo* (*Embllica officinalis*), variety of other berries, herbs, plants, and roots are used along with alum mordant to boost colours in the yarn. However, since dyed yarns from India are available at cheaper price, only a few Bhutanese weavers practise the tradition of natural dyeing processes these days.

5.2.2. Woodwork

For centuries, many great master carpenters of Bhutan have displayed their skills to produce distinctive architectural designs that had come to be our heritage in wood work or *shingzo*. Woodwork continues to be a dominant part of most construction works. For structures that require wood, master carpenters are called upon to employ their knowledge and skills and to engineer the entire works without any blue print.

The achievements of our master carpenters are evident in the dzongs, temples and monasteries, palaces, houses and bridges. The dzongs are widely appreciated by their architectural marvels. Trulpai Zowo Balep is respected and revered as a legendary artisan, for his contribution in the construction of Punakha Dzong in 1637.

A long thread called *thig* containing dissolved red soil; a pendulum (*chongdo*) and a wooden lupon are essential possessions of a carpenter as are other tools.

Bhutanese master carpenters rely on their knowledge and experience, and are expert in the joining wood without using metal nails. Each structural part like



pillars, doors, beams, window frames, and roof girders are fitted separately on the ground. These elements are then joined together using thick wooden pegs. Logs with ledges serve as staircases. Roofs are also made of wooden shingles, weight down in their places by boulders.

Items for daily use

Skills in wood work are also employed in making tools and essential items as listed below:

- Wooden printing blocks, altars and plates for making offerings in the household, drums (nga) and masks of different types;
- Cups, scabbards, handles for knives and swords and boxes of different types;
- Musical instruments like guitar and drums,
- Various decorative items like the dragons, eight lucky signs and other decorative items.
- Sports items lime darts (khuru) and targets (*bha*),
- Wooden phalluses of different sizes.

5.2.3. Stone Work

Like in many other countries, *dozo* (masonry or stonework) is an old craft that is still in practice throughout the country. The skills of Bhutanese masonry can be seen in fortresses, temples, monasteries, stupas and farmhouses.

It required special skills to cut and polish stones into right shapes and sizes and was carried out under the strict supervision of the head carpenter, who also had the role of an architect. Stone masons use an axe like tool called *dota*. Stones of crude shapes and sizes are chiselled into right shapes according to the style of the structure. There are mainly five different types of stone shapes that the masons prepare for construction. They are *jamdo*- used