

CHAPTER VI.

OCCUPATIONS AND TRADE.

OCCUPATIONS—Agriculture and pasture—Other usual callings. ARTS AND INDUSTRIES—Gunny-weaving—Cotton-weaving; coarse white cloths—Ádóni carpets—Women's cloths—Cotton-dyeing—Silk-weaving—Silk-dyeing—Condition of the silk and cotton weavers—Blanket-weaving—Cotton-cleaning—Cotton-pressing—Cotton-spinning—Jaggery-making—Oils—Tanning—Iron-smelting—Salt and saltpetre—Bangle-making—Brass-work—Pot-stone[articles—Wooden toys—Mats, tatties, etc.—Wood-carving. TRADE—Exports—Imports—Markets. WEIGHTS AND MEASURES—Tables of weight—Grain measures—Liquid measures—Lineal measures—Measures of time.

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OCCUPATIONS. of the population (nearly three-fourths of the total) subsist by
Agriculture agriculture and the tending of flocks and herds. The methods of
and pasture. agriculture in fashion have been referred to in Chapter IV above.
The flocks and herds include cattle, sheep and goats. Cattle, as
has been explained on page 21, are not carefully or systematically
bred, but there is profit in the natural increase even of the
inferior varieties raised in the district. Sheep and goat tending
is the special calling of the Kuruba caste. Flocks of both these
animals are hired by cultivators as manuring agents and, as will
be seen immediately, the wool and flesh of the former and the skin
of the latter are of value.

Other usual Next in numerical importance after agriculture and pastoral
callings. pursuits among the occupations of the people are the numerous
callings which are essential to the supply of the other actual
necessities of the community. There are, as elsewhere, numerous
traders and shopkeepers great and small (and many cart-drivers
and coolies employed by them) who collect the exports of the
community and distribute its productions and imports; there are
the artisans (blacksmiths and carpenters, builders and stone-
cutters, potters and leather-workers, tailors and jewellers, barbers
and washermen) who supply others of the simple needs of the
people; the butchers and toddy-drawers who provide them with
meat and drink; the doctors and astrologers, priests and school-
masters, who see to their bodily, spiritual and mental welfare;
the musicians, jugglers and players who amuse their idler
moments; and the parasites (thieves and beggars, religious and
other) who live upon them.

None of these are peculiar to Bellary alone, and there remain for discussion only those occupations which are concerned with arts and industries which are in some degree outside the common run.

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The only industry in the district which employs any considerable proportion of its inhabitants is weaving. This divides itself into the weaving of cotton, silk, wool and gunny.

The last of these may be very shortly dismissed as it is apparently practised only by a few families in Harivi on the Tungabhadra in Harpanahalli taluk, where the sunn hemp produced and prepared locally is woven into mats and bags.

Gunny-
weaving.

The cotton-weaving is of three main kinds, namely, the weaving of coarse white cloths for men, of carpets (at Ádóni) and of coloured cloths for women. The coarse white cloths are made in considerable quantities by the Málás in many villages, and the yarn made in the spinning mill at Bellary is often used for them. Few of them seem to be exported. They are disposed of in the village where they are made or at the nearest weekly market.

Cotton-
weaving ;
coarse white
cloths.

The Ádóni cotton rugs or carpets are well-known outside the district and are exported in considerable quantities to many places within the Presidency and in Mysore and Bombay and even find their way to Calcutta and London. Natives use them as purdahs and to sleep on, and Europeans buy the larger kinds for tent carpets and the smaller for hold-alls, etc. The weavers are practically all Muhammadans. The usual pattern consists of stripes of various colours, but diamond-shaped and other more complicated designs are also made. The yarn used is always mill-made and it is either dyed locally by Lingáyats and Maddéru with mineral dyes or is purchased ready-dyed from Bombay or Europe. Horizontal looms are used.* A striped rug 8 feet by 4 feet of the ordinary patterns and colours can be woven in ten hours, and sells for from Rs. 1-8-0 to Rs. 2-8-0, the wages for the work being from four to six annas. The weavers dispose of a good many of these smaller kinds to travellers at the railway-stations at Ádóni, Guntakal and Gooty, where they have established agencies for their sale.

Ádóni
carpets.

Coloured cotton cloths for women are woven in very many villages. The chief centres are Bellary, Hospet, Hampáságaram, Rayadrog, Tambarahalli and its neighbour Báchigondanahalli and Yemmiganúru.

Women's
cloths.

In some of these places cloths with narrow silk borders, or having either the warp or woof of silk, are also made, and it is not therefore easy to draw a hard and fast line between the centres for the weaving of cotton and the places where silk is the material used. Silk-weaving is, however, referred to more

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particularly below. The castes engaged in both cases are mainly Dévángas, several sub-divisions of Sáles, Kurnis, and Tógatas, with a considerable sprinkling of Lingáyats and Musalmans. Neither the methods used in preparing the warp and in weaving nor the looms employed differ from those common in other parts and they need no description. As elsewhere, the women and children assist in all the preliminary processes.

Both the all-cotton and the mixed silk and cotton cloths are of the usual long and narrow pattern, and generally a length of about a yard at the two ends is more ornamental than the rest and is carefully displayed by the wearer.

Cotton-
dyeing.

Practically all the cotton thread used is mill-made, and in most cases it is in addition bought ready-dyed, though a general exception to this rule is that, if indigo is required, the thread is dyed locally. The colour called *maddi*, a handsome dark-red, is also occasionally given to the thread by dyers in the Nizam's Dominions who use the bark of the root of the *maddi* (*morinda citrifolia*) tree and are known in consequence as Maddéru. The thread comes chiefly from the Bombay side or from Europe, and, except indigo, the dyes used are nearly always of mineral origin. Usually, only seven colours are employed. These are, in ascending order of preference, white (undyed), grass-green, scarlet, yellow, black, dark-red and indigo-blue. Indigo is far the most popular colour for the body of a cotton cloth, and is the prevailing tint of the dress of any crowd of women of the middle classes. The dye is chiefly got from Cuddapah district. To procure a really fast colour it is, however, necessary to steep the thread again and again (sometimes it is done as many as ten times) and in the cheaper cloths this perfection is not aimed at and they soon wash to the unpleasant purple-blue so commonly seen in the garments of the poorest.

Silk-weaving.

Cloths with both warp and woof of silk are rare. They are said soon to wear out. Consequently the ordinary "silk" cloth has either a warp or woof of black cotton thread. All-silk handkerchiefs are, however, made in considerable quantities for Lingáyats, who use them to tie their lingams round their necks or upper arms. The chief centres for this weaving of mixed silk and cotton are perhaps Ádóni, Yemmiganúru, Kampli, Hampáságaráram, Tambarahalli, Báchigondanahalli and Rayadrug, though in the absence of definite statistics it is difficult to make certain. The cloths mainly made are either of the ordinary dimensions worn by women or the more elaborately designed varieties which are used for making *ravikkais*, or tight-fitting bodices. These bodices are almost universally worn by the Bellary women and even the

comparatively poor classes seem to endeavour to have them of this mixed silk and cotton rather than of cotton only. At Ádóni and Rayadrag two or three families now make cloths after the Poona fashion (*pitámbar*, as they are called) in which the body consists entirely of 'shot' silk of various colours and the ends are richly ornamented with floral and other designs woven in on the loom and with much gold thread. Some of these cloths will cost as much as Rs. 150 a piece, and Rs. 50 is quite an ordinary price for them.

The silk thread is none of it produced in the district, but is purchased from outside, chiefly from Sholápur, Bagalkót, Belgaum and other places in the Bombay Presidency, from Mysore, or from dealers in Bellary who get it from these places. The Ádóni weavers get some of theirs from Chennapatnam in Mysore and from Kollegál in Coimbatore district. Large quantities are procured ready-dyed, and where the dyeing is done locally mineral dyes are chiefly used, though they are sometimes combined with vegetable dyes and these latter are still occasionally used alone.

Silk-dyeing.

Except in the Poona cloths, the only colours used are white (undyed), a dark and a light crimson, golden-yellow, orange and grass-green. By themselves these are all of them beautiful tints, but they are often combined in a manner which sets a European's teeth on edge and their brightness is greatly deadened by the black cotton warp so universally used.*

Orange and green are always made with mineral dyes. The methods employed in getting the other four tints differ slightly from village to village and it would be tedious to set out the various recipes in detail. The following is the Kampli system, and it is typical of the others: To procure white silk the raw skeins are bleached. A seer of lime is mixed with two seers of *soudu* (alkaline earth) and a little water and allowed to stand. Later 24 seers of water are added and the whole brought to the boil over a fire. Twelve seers of raw silk are plunged into the boiling fluid for a few seconds and then rinsed and dried. This removes the oily matter from the raw silk and bleaches it to a very brilliant white.

The dark and light crimson are called respectively *kachcha kirimanji* and *pakka kirimanji*, *kirimanji* being a corruption of the English 'crimson'. Both are made from cochineal. After being bleached as above, the silk is soaked in alum to serve as a mordant. For three seers of silk four tolas of alum are dissolved in eight seers of water, and the silk is soaked in this for 24 hours and then washed in running water. For *pakka kirimanji*, one and a half seers of cochineal are next added to six tolas weight of saffron and three-quarters of a seer of *xista-kai* (a hollow shell

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resembling a poppy-head, said to be a gall which forms on some tree), which have been previously powdered and mixed together. The whole is then ground to a paste in a mortar and four seers of water are added. The silk is first steeped in this for a few minutes and then rinsed in water. The liquid is next heated till it boils. The silk is plunged into it and the liquid is then taken off the fire and the silk is left to soak in it for 24 hours, after which it is washed in running water. The process is afterwards repeated a second time to make the dye fast. If *kachcha kirimanji* is required the saffron mentioned above is omitted.

When the crimson mineral dye is used the process is exactly the same except that the mineral dye replaces the cochineal. The silk looks exactly the same colour, whichever dye is used, but the weavers say that the cochineal gives a faster colour than its rival.

The yellow colour is produced either with *kapila* powder "the stellate pubescence covering the three coccus capsules" of the tree *Rottlera tinctoria*, mixed in equal parts with pounded seeds of the same tree, or with a mineral dye. Much the same troublesome processes as were necessary for the crimson dyes have to be gone through.

Condition
of the silk
and cotton
weavers.

The weavers both of silk and cotton are largely in the hands of capitalists, receiving advances and materials from them and being paid piece-work wages for the cloth they weave. In bad seasons the demand for cloths of all sorts falls off, the capitalists consequently usually stop the advances of money and materials, and the weaver is left without work. Hence the necessity for special measures for the relief of weavers when famine is about. The weavers usually say that their industry is not what it was, owing to competition with foreign machine-made fabrics. These materials are doubtless purchased largely by the men, but except in the towns it is most unusual to see a woman in this district wearing anything but the locally-made cloths and it is undoubted that these cloths are also exported in considerable quantities. Cotton cloths with silk borders are sent from Yemmiganúru and Kampli as far as South Canara. Weavers occasionally combine other occupations with their weaving and this has been pointed out as a proof of the decline of the industry, but it is not a recent symptom, for Munro says that the same thing occurred in his time.

The weavers are not remarkably progressive. They hardly ever use any but the same half-dozen colours; excepting the cases of the Poona cloths above referred to and a few imitations of the Kornád varieties made in recent years in Ádóni, their patterns are the same year after year; except in Ádóni, they have done nothing to meet the large demand which exists for cotton checks for coats

and trousers of European pattern; they none of them employ fly-shuttles or other improvements in their looms; and it is doubtful whether even their technical skill is what it was. At the Bellary Agricultural Exhibition of 1888 a piece of silk from Kampli was shown which had been embroidered in the loom with a prayer to Siva in several languages, but no one in Kampli can do such work now. Finally, (in Ádóni and Hampaságaram at any rate) they spend much of their earnings in the toddy shops, which after 6 p.m. are thronged with them.

The cumbly (kambli) is the black woollen blanket of the country which serves as bed, portmanteau, overcoat or umbrella, as need may require. It is made from the wool of the black and white sheep by the Kurubas, the shepherd caste.

Blanket-weaving.

The sheep are first shorn when they are six months old (the shears used are of the same pattern as in England) and thereafter twice a year until they are four years old, after which their wool is worthless and they are converted into mutton. The wool is cleaned and loosened with a bow like that employed for cleaning cotton but smaller, and then spun by hand. It is never dyed, but fancy grey and white borders or stripes are made by picking out the different colours of the natural wool.

The cumblies are woven on a loom designed on much the usual principles but primitive and clumsy in practice. The shuttle is of the ordinary kind but is so badly made that it sticks every second or third time it is passed. After each thread of the wool is added, a long piece of smooth wood is inserted behind it and used to push it close up to the last thread and is then removed only to be laboriously replaced after the next thread. It would seem possible to improve these methods without much cost or trouble. The warp is stiffened by being dressed with a paste made of pounded tamarind-seeds and water.

The blankets made are of all prices from 10 annas to Rs. 10, and some of them are ornamented at the ends with narrow lines of coloured cotton. Finer kinds, made from the wool of the first shearing very carefully hand-picked, are procurable in places to order. In olden days some of these fetched as much as Rs. 50. Nimbálagiri in Kúdligi taluk used to be famous for them, but in the 1877 famine the weavers who made them went to Mysore State and never returned, and none of this excellence are now made. They can be procured to order, however, from Dávanagere in Mysore. Kúdligi and Harpanahalli taluks are the chief centres of the industry and a considerable export trade is said to be carried on with many places in Mysore and the Bombay Presidency and even with Ceylon.

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Cotton-
cleaning.

After weaving, the industries which employ the largest number of the inhabitants of Bellary are those which concern themselves with the preparation for the market of the agricultural products of the district, namely, the cleaning, pressing and spinning of cotton, the manufacture of jaggery from sugar-cane juice, the making of various oils and the tanning of the skins of goats and sheep.

The cleaning of the cotton lint from its seeds, and from the leaves, dirt, etc., with which it gets mixed employs many persons in the cotton season. Four methods are employed. The first is by means of the *teckla*, or 'stone *charka*'.¹ The cotton is placed on a flat stone. A woman sits on a stool in front of it with wooden soles tied to her feet. She places a cylindrical iron roller on the cotton and rolls it rapidly backwards and forwards with the wooden soles and thus squeezes the seed out of the lint and pushes it over the front of the stone. With her left hand she feeds the roller, from in front, with the uncleaned cotton and with her right she withdraws the cleaned lint and pushes it under the stool. This appliance is used more in the Nizam's Dominions and the western part of the district than in the eastern taluks, where it is almost unknown.

The next method is by means of a bow. The *Dúdékulas* practise it to a small extent. The cotton is placed on a bamboo grating. Above it is suspended a bow some six feet long. The string of this is placed in the middle of the cotton and is then continuously struck with a piece of wood shaped like a dumb-bell. The vibrations of the string jerk the cotton into the air and free it from the seed, which falls through the grating.

The third, and at present the most popular, method is by the hand *charka*. This consists of two horizontal wooden cylinders set close to one another in a frame and revolved in opposite directions, towards one another, by a handle. The cotton is fed between the rollers and the seeds and dirt are squeezed out of it. The cleaning done by this machine is imperfect and the cotton comes out in a matted state with the fibres lying in all directions, making it troublesome to card subsequently.

The fourth method is by the saw-gin. In this a number of thin circular iron plates with toothed edges, resembling circular saws, are driven round by a handle through narrow slots. The teeth catch the cotton and pull it through the slots, but these are too narrow to allow the seed to pass as well and it consequently is separated from the lint and falls to the ground. As the lint

¹ Drawings of this and of the *charka* and saw-gin mentioned below will be found in Wheeler's *Handbook to the Cotton Cultivation of Madras*, 1862.

emerges from the slots it is brushed by circular brushes, revolving in the opposite direction to the saws, which remove it from the teeth and cleanse it from leaves and other impurities. There are three or four large gins of this pattern in Hadagalli and some more in Mágalam, but very few elsewhere. The objection to the machine is that it injures the staple.

In Tinnevely most of the cotton is ginned by steam, but in Bellary steam-ginning has been tried by Messrs. Dymes & Co. at Ádóni and found unsuccessful. In Tinnevely labour is scarce¹ and the ryots are glad to get their cotton cleaned for them and to pay for the work. In Bellary, labour is cheap after the cotton harvest and the ryot prefers to gin it himself by hand. Consequently if exporters want machine-ginned "Western" (as the Bellary cotton is called) they are obliged to lay in large stocks of cotton at the beginning of the season, in order to keep the gins running, and have to gin it on their own account. This means expenditure in warehouse-room, fire insurance, etc., locks up a considerable amount of money for several months, and also exposes the exporters to the risk of a fall in price before the cotton can be ginned. In Tinnevely, they can buy ready machine-ginned cotton from the ryots themselves, whenever they please. Moreover the character of the staple of the Bellary cotton does not lend itself well to ginning and machine-ginned "Western" is not much liked by European spinners.

Steam-ginning is, however, done at Messrs. Sabhápáti Mudaliyár's Press in Bellary and very recently a ginning factory under native management (the "Sri Lakshmi") has started operations at Ádóni.

Notwithstanding the impetus given to cotton-growing in Bellary by the cotton-famine in Lancashire which was occasioned by the American Civil War in 1861, export was much restricted by the difficulty of getting the cotton to the coast. The presses were all in Black Town, Madras, and the cotton used to be bought by the pressing firms' dubashes in Bellary and sent all the way to Madras by cart, taking weeks upon the road. In the sixties, the Madras Railway was rapidly pushed on and by 1865 it had reached Cuddapah, by 1869, Gooty and by 1870, Ádóni. In the year following, the branch to Bellary was opened. As the line was extended, the cotton was carted to the nearest station and thence railed to Madras, and steam presses began to be started there. In 1871, one of the first steamers which came through the then newly-opened Suez Canal brought a hydraulic press for

Cotton-
pressing.

¹ For the view of the matter which follows and for the history of the Presses below I am indebted to A. H. Deane, Esq., of Messrs. Dymes & Co.

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Messrs. Dymes & Co., who sent it to Ádóni. This was the first steam press erected in the district. In the following year, the same firm opened another at Bellary, but this was burnt down in 1874. Shortly afterwards Messrs. Harvey and Sabhápáti Mudaliyár put up in Bellary the press which is still known by the name of the latter and Messrs. Dymes built their existing press. About the same time, two of the steam presses in Madras were moved to Bellary and after changing hands several times they are still working under the names of the "Bellary Press Co." and the "Alam Basappa Press" *alias* the "Western Press Co." During the early seventies Messrs. Harvey and Sabhápáti and Rambillas Sowcar & Co. opened the two presses at Ádóni which are still owned by them and about a dozen years ago the "City People Press," under native management, was started in the same town.

There are thus at present four steam presses at Bellary and four at Ádóni. In the latest year for which figures are available the total outturn of these was valued at Rs. 27 lakhs. The cotton is sent both to Madras and Bombay. The bigger ryots bring their cotton to the presses for sale themselves, but the smaller fry usually dispose of it (either ginned or unginned) to native brokers, who advance them money on it months before it is picked. These brokers employ large numbers of hands to gin for them any cotton bought with the seed in it.

Cotton-
spinning.

The only steam cotton-spinning mill in the district is that at Bellary, just outside municipal limits. It is owned by a native company with a capital of $2\frac{1}{2}$ lakhs, contains 17,800 spindles and employs between 400 and 500 hands in spinning the coarser counts of yarn.

Jaggery-
making.

Jaggery is chiefly made from the sugar grown under the Tungabhadra channels. Iron mills are now almost universally used in place of the old inefficient wooden mills and in Hospet there are two firms which not only repair them but even get the various parts from Madras and adjust and put them together. The methods of making the jaggery from the cane juice are as primitive as elsewhere and seeing that sugar refined by European processes is now purchaseable in the bazaars and that the Bellary jaggery consequently no longer commands the price it did, it is time some improvements were made. The sugar is not even skimmed or strained, but is poured just as it is on to date mats to solidify. The report of Dr. Leather, Agricultural Chemist to the Government of India, of 1st November 1897 contains several most useful hints, such as the advisability of adding lime to the juice while boiling, to prevent the wasteful "inversion" which otherwise occurs, and the superior advantages of the hand centrifugal

separator (now largely used in Sháhábád in Bengal) over the old-fashioned process (used in Bellary) of getting rid of the molasses with wet water-weeds. But though the ryots appear to be well aware that they are falling behind in the race, they have adopted no improvements except the iron mill.

The chief oils made in the district are castor, gingelly, kusama (safflower, *carthamus tinctorius*) and gúrellu (niger seed, *guizotia abyssinica*). The crop last named is almost entirely confined to the western taluks, where its bright yellow flowers are very conspicuous in the autumn. Oils are also made in smaller quantities from the seeds of the ním, ippa and kánuga (*pongamia glabra*) trees and from cocoanuts. The industry is chiefly in the hands of the Gániga caste. The oils generally used for burning (they are now being rapidly ousted by kerosine) are castor and safflower. Gingelly is also burnt, but is mainly employed in cooking and for the hair. Gúrellu is like an inferior gingelly oil. Both it and ippa oil are used for both burning and cooking. Kánuga is only used for burning. Ním oil is only employed for medicinal purposes.

Except castor, they are all made in the ordinary country oil-mill. A steam mill was recently started under native management at Ádóni, but does not seem to have so far been a success. Gingelly cake is eaten in some places, but the cake of the other oils is only useful as fuel. Latterly, however, a certain quantity of ním cake has been exported from Ádóni to Cuddapah to be used there as manure, and it is also occasionally employed for improving alkaline soils. Castor is first roasted on iron pans and then ground small either on a stone, or with a pestle, or (in Hadagalli and Harpanahalli) in a machine like that commonly used for making mortar, provided with heavy stone wheels which are dragged round by bullock-power in a circular stone-lined channel in which the seed has been placed. The paste so resulting is then boiled with water and the oil rises to the top and is skimmed off. The stench caused in this process is most offensive. The cake is used as fuel for roasting the next batch of seed.

There were, until recently, five tanneries in the district, two at Ádóni and one each at Hospet, Kosgi and Rayadrug. Those at Ádóni have now both been closed, apparently on account of competition from chrome-tanned skins. The industry (and the connected trade in raw and salted skins) is, as elsewhere, mainly in the hands of Labbais. Combined with it is some trade in bones, which are collected for the Labbais by the Málás and Mádigas and exported to Bombay.

Finally, there remain the industries connected with the natural products of the district—its minerals and forest growth.

Oils.

Tanning.

Iron-smelt-
ing.

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Until twelve or fifteen years ago, iron used to be smelted by the usual primitive native processes at Kanivehalli in Sandur State, at Kámalápuram and Chilakanahatti in Hospet taluk and at Shidégallu and Mallápuram in Kúdligi taluk, the ore being all of it mined in the Sandur hills. The iron was chiefly used for making the huge circular pans in which sugarcane juice is boiled. The industry is now dead, the cheaper European iron having cut out the native product. Further particulars will be found on p. 309 below in the account of Sandur State.

Salt and salt-
petre.

The earth-salt industry, now also extinct, and the manufacture of saltpetre are referred to on pages 177 and 179.

Bangle-
making.

Glass bangles of the primitive kind are made from "bangle-earth" in the usual manner at Gollapalli in Rayadrug and Chinna-tumbalam and Muchchigiri in Ádóni.

Brass-work.

In Hospet and Hiréhálu a few families of the Bógára subdivision of the Jains make cattle-bells, rings, horns, gongs, etc., of brass and in Harpanahalli two families of Maráthas fashion the curious brass bracelets, finger and toe-rings, anklets, etc., in which the Lambádi women delight, and small bulls and other animals. The work is very rough. Brass and copper pots are procured from outside the district, largely from Hubli and Vellore.

Pot-stone
articles.

At Yarahalli, hamlet of Tavudúru in Harpanahalli, small Basavannas are roughly cut from the soapstone found near there and in Sómálápuram in Kúdligi taluk one man still makes domestic utensils of the same material.

Wooden toys.

In Kampli one, and in Harpanahalli three, families make a few toys, cradles, *kóláttam* sticks, etc., of wood turned and lacquered in the usual manner on a primitive lathe.

Mats, tatties,
etc.

Mats and tatties are made from split bamboo and date leaves by Korachas and Médaras, and the former also manufacture winnowing pans, baskets, ropes and nets of various fibres, and the long brushes used by weavers for sizing the warp.

Wood-
carving.

Wood-carving survives as an art only in Bellary town, though many of the carpenters can cut the rough designs with which outer doorways are usually embellished. In Bellary carving is done by Jinigáras and they have taught the art to some Muhammadans, who are now often more skilful than their teachers. Two of these made a teak doorway, carved in the Chálukyan style, which obtained a bronze medal at the recent Arts Exhibition at the Delhi Durbar and is now in the Madras Museum.

TRADE.

Statistics of trade are not compiled for districts separately and the official figures relate to the Deccan as a whole. It is not therefore possible to speak with certainty of the course of commerce in Bellary. As has been seen, the manufactures of the district are

few, and the trade consists in the collection of the various products which it exports and the distribution of the imports. *Ádóni* is the trade centre of the northern taluks, Bellary of the centre of the district and Chittavádigi of the west. The extreme south-west deals largely with *Dávanagere* in Mysore. As was to be expected from its geographical position, Bellary trades more with the Bombay Presidency than with Madras. The chief exports are perhaps cotton, food-grains, oil-seeds, oils, blankets, hides and skins, jaggery and women's cloths, and the principal imports, salt, European piece-goods and yarn, rice, cattle, and brassware.

Of the exports cotton is the most important. Bellary and *Ádóni*, where the presses [are, are the chief centres of the trade, and there are smaller collecting centres, such as *Molagavalli* in *Alúr* taluk, in the more outlying parts of the cotton country. The endeavours which have been made to improve the nature of the cotton have been referred to on page 86 above. Of the food-grains, *cholam* and *korra* are those chiefly exported. The oil-seeds business is mainly in castor, *gingelly* and *safflower*. In Bellary this is in the hands of *Márwári* dealers who come to the town temporarily and periodically return to their own country. In the west, the agents of Bombay firms come to *Hospet* in the harvest season. *Gúrellu* (*niger* seed) is sent to Mysore from the south-western taluks. The oils made from these seeds are chiefly sent to *Cuddapah*, *Kurnool* and *Nellore*. The other exports have already been referred to. Exports.

Of the imports, salt comes from Bombay and Goa as well as from Madras. The rivalry between the three kinds is referred to on page 179 below. The trade in piece-goods, yarn and brassware has been mentioned above and the methods of the *Nellore* cattle-drovers are referred to on page 22. Rice is imported from the *Anantapur*, *Cuddapah* and *Kistna* districts, very little being grown in Bellary itself. Imports.

Both in the collection of exports and the distribution of imports the weekly markets play an important part. There are, however, many fewer of these than in the average district in the south. The Local Boards supervise them, and annually sell by auction the right to collect the fees at them. Judged by the amount of the bids for this right, the market at Chittavádigi is nearly twice as important as any other, while those at *Hospet*, *Yemmiganúru*, *Kottúru*, *Harpanahalli*, *Rayadrug* and *Kosgi* (in this order) come next. Markets.

As elsewhere, the weights and measures in popular use are bewilderingly complex and call aloud for standardisation. It is impossible to enter into their manifold local variations and all

CHAP. VI. that will be attempted is to indicate the tables more generally
WEIGHTS AND MEASURES. in use.

Tables of weight.

The ordinary table of weights is as under :—

21 tolas (of 411½ of an ounce)	=	1 seer.
1½ seers	= 1 sava seer.
2 sava seers	= 1 adi seer (3 seers).
2 adi seers	= 1 panch seer (6 seers).
12 seers	= 1 dhadiyam.
4 dhadiyams	= 1 maund (25.92 lbs.).

The reason, it is said, why a weight of six seers is called panch seer, which literally means 'five seers', is that the old maund weighed 40 seers instead of 48 as at present. The panch seer was then equal to five seers or one-eighth of a maund. In 1812 the Collector changed the weight of the seer from 25 to 21 tolas and that of the maund to 48 seers, and one-eighth of this new maund was still called 'panch seer,' though it now weighed six seers. The same explanation accounts for the names adi seer and sava seer. There are also the *ara pávu*, or one-eighth of a seer, and the *pávu*, or one-quarter of a seer. A seer of gold or silver weighs, as elsewhere, 24 tolas. The candy is not used, the weights larger than the maund being the *héru* and the *nága*. The former is used for chillies, jaggery and tamarinds and, though it may be said to be generally equal to nine maunds, it varies in different localities and also according to the goods weighed and is sometimes eight and sometimes eleven maunds. The *nága* is used for weighing cotton and is usually equal to 12 maunds.

Grain measures.

Throughout the district the seer used for measuring grain is one which will hold 84 tolas' weight of a mixture of nine kinds of grain, which seems to be equivalent to 86 tolas' weight of paddy. This is very usually divided into halves, quarters, eighths and sixteenths, known as *ara seer*, *pávu seer*, *ara-pávu seer*, and *chaták*.

The multiples of this seer in use in different parts differ, however, very greatly. In Alúr and Ádóni taluks the following obtain :—

84 tolas mixed grain	= 1 seer.
8 seers	= 1 muntha.
1 muntlas	= 1 kadava.
2 kadavas	= 1 irasa.
2 irasas	= 1 túm.
20 túms	= 1 putti (2,560 seers).

In Bellary taluk a putti similarly weighs 2,560 seers. But in the four western taluks there is no putti and the largest measure is the *khandaga*. This differs greatly in different places, being

sometimes equivalent to 1,200 seers, sometimes to 1,280 and sometimes to 1,600. The smaller multiples of the seer also differ widely in different localities and the terms applied to them have varying values. Thus the *padi* may be two seers or four; the *harivi* 24, 30 or 32 seers; the *gidna* four seers, sixteen, or even 32; and the *guli* 58, 60, 64, 68 or 70 seers.

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WEIGHTS
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In addition to the above weights there are sundry vague terms in popular use among the lower classes, such as *pudusedu*, half a handful; *châredu*, a handful; and *dôsedu*, a double handful.

Oil and ghee are sold throughout the district by weight and not by measure, but the seer of butter may be of either 21, 32, 36 or 42 tolas. Milk, buttermilk, and curd are retailed by the sub-multiples above referred to of the seer used for grain.

Liquid
measures.

The English inch, foot and yard are coming into use, but the popular table is as under:—

Lineal
measures.

5 angulas (or thumb's breadth) = 1 chotu (distance between tips of thumb and first finger when fully extended).

6 angulas = 1 génu (hand's span).

2 génu = 1 mola (cubit, length from elbow to tip of middle finger).

2 molas = 1 gaja (yard).

4 molas = 1 máru (distance between tips of the two middle fingers measured across the chest with the arms horizontal).

There are also many curious measures used for special purposes. Bodice cloth is sold in terms of a cubit *plus* the length of the two top joints of the middle finger; the removal of *nath* grass is paid for by the *kól* (stick) of six (sometimes five) molas; the Oddes use a *mattam* of $3\frac{1}{2}$ molas when calculating well-digging operations. For distances, even more vague measures are in popular use, such as *kúgalati*, the distance at which a shout can be heard; *chénipattu*, the length of the side of a dry field; *haradári* or *paruvu*, which is about a league; and *gávada* or *ámada*, ten or twelve miles.

English hours and minutes are coming into use, and in books and in astrology accurate terms are employed, but in popular usage the ordinary measures of time are—

Measures
of time.

$2\frac{1}{2}$ gudias (or, in Canarese, ghaligis; 24 minutes each) = 1 thásu or hour.

3 thásus = 1 jámanu.

There are, as before, popular and vague measures of time such as "the time it takes to chew betel," etc.; and the hour of the day, at which an event occurred is, as elsewhere, indicated by such phrases as "cock-crowing time," "lamp-lighting time," "the time when the cattle come home," and "the time of the midday meal."