

liberal settlements, and an assured future. Your lordship and I are both too old—excuse me—to take the boy and girl, sentimental, love in a cottage, ideal of married life as our standard. We ought also to be able to reason calmly as to an alliance between a very noble young lady and such a suitor as myself. I am several years older than Lady Gwendoline De Vere, and——”

“And therefore, if for no other reason, the idea is one not to be entertained by her father or herself,” interrupted the earl, growing crimson. “Your home, sir, is scarcely one to which a young lady, delicately nurtured, could be brought as a wife, even if——” And then the repugnance of the idea choked his voice.

“I could afford, and should afford, a better home than that of which your lordship makes such disparaging mention,” philosophically replied Jabez Sleuthby. “It would probably be in London. A new field might open out before me,” he added, almost dreamily, as he scented fresh prey and lucre on a grander scale; “and I might even part with the porcelain works, and sell my Gweltmouth house property, which requires constant attention. Lavish or extravagant I shall never be, but I am far from demanding that a young wife should share the frugal simplicity of my present mode of life; and I assure you that Lady Gwendoline Sleuthby——”

“I would sooner see my daughter in her coffin than have her called by such a name!” cried out the earl vehemently, as he sprang from his chair and made a movement towards the bell.

Jabez smiled his grim smile.

“Have you reflected, my lord, that as I can be a serviceable friend, so I might become a very dangerous enemy? Those who have thwarted me have usually had bitter reason to repent it. You live in a glass house, Lord Malvern, and would be wiser to abstain from stone-throwing. You are, if not already a ruined man, so near the brink of the abyss that a push might plunge you fathoms deep. Are you aware that the deeds you have signed involve very serious consequences—that you are bound, so to speak, in parchment chains, the weight of which you will feel on the day I choose to transmute parchment into iron?”

Do you want an execution in Marblehead Priors, or a writ of *fi. fa.*, and an auction of plate, furniture, and family pictures? Would you like injunctions, suits, notices of action and ejection, to hail upon your illustrious head? Would you prefer to finish as a titled outlaw, hunted abroad to live on the small income settled on the countess, and leading a precarious life at second-rate Swiss *pensions* and in Boulogne-sur-Mer, the gibe and jest of those who read your history in such journals as thrive by gossip? If so, let it be war to the knife, or to the writ, between us!” And Jabez, with a threatening scowl that matched his menacing words, in his turn rose from his chair.

The wretched earl passed his scented handkerchief across his heated forehead, and felt, it may be guessed, very like a criminal who sees the judge slowly don the black cap, as a preliminary to hearing that he is to be hanged by the neck till he is dead.

“You will—you will make allowance for a father’s feelings, Mr. Sleuthby!” he stammered out. “Nothing could be farther from my wish than to give offence—to—to one whom I have learned to look on as a friend. Pray sit down—calm yourself. I never meant to be rude; but, of course, it is impossible in these days to coerce a daughter or——”

He broke down here, almost sobbing. Cowed by the threats of the man in whose power he felt himself to be, he felt but one wish—to temporise, to gain time, to trust to the chapter of accidents. Any course, it seemed to him, was better than the simple manliness of a persistent refusal. Jabez read him like a book.

“I will not,” he said grimly, “intrude longer on your lordship at present. We must soon discuss this matter again. I can only trust that I may carry with me the conviction that your lordship will offer no actual opposition to my suit.”

“No—no—quite the contrary,” said the earl hastily, as he shook his visitor’s hand. “Only give me time to think, to consider the affair in all its bearings, and who knows? we may see our way—Good-bye, my dear friend, good-bye!”

And so they parted.

END OF CHAPTER THE FIFTEENTH

THE LAC INDUSTRY OF INDIA.

BY THE AUTHOR OF “INDIAN INDUSTRIES,” “INDIAN HOUSEHOLD MANAGEMENT,” ETC.



THE trade in the substance known as *lac* has of late years increased very much in India, in the Punjab as well as in Bengal. Comparatively few people know how the lac-dye they read of in commerce is produced; and hearing it very frequently spoken of as “gum-lac,” fancy it is a species of gum, which it cannot really be said to be, as it is produced by an insect—the *Coccus lacca*. On certain trees is a cellular, resinous incrustation, secreted by the insect

round the branches of the trees it affects; in colour varying from deep orange to dark red, according to the tree on which it is produced. It contains from 60 to 70 per cent. of resinous lac, and about 10 per cent. of a deep red colouring matter, which is manufactured into lac-dye. The remaining 20 or 30 per cent. is useless, and considered only in the light of refuse.

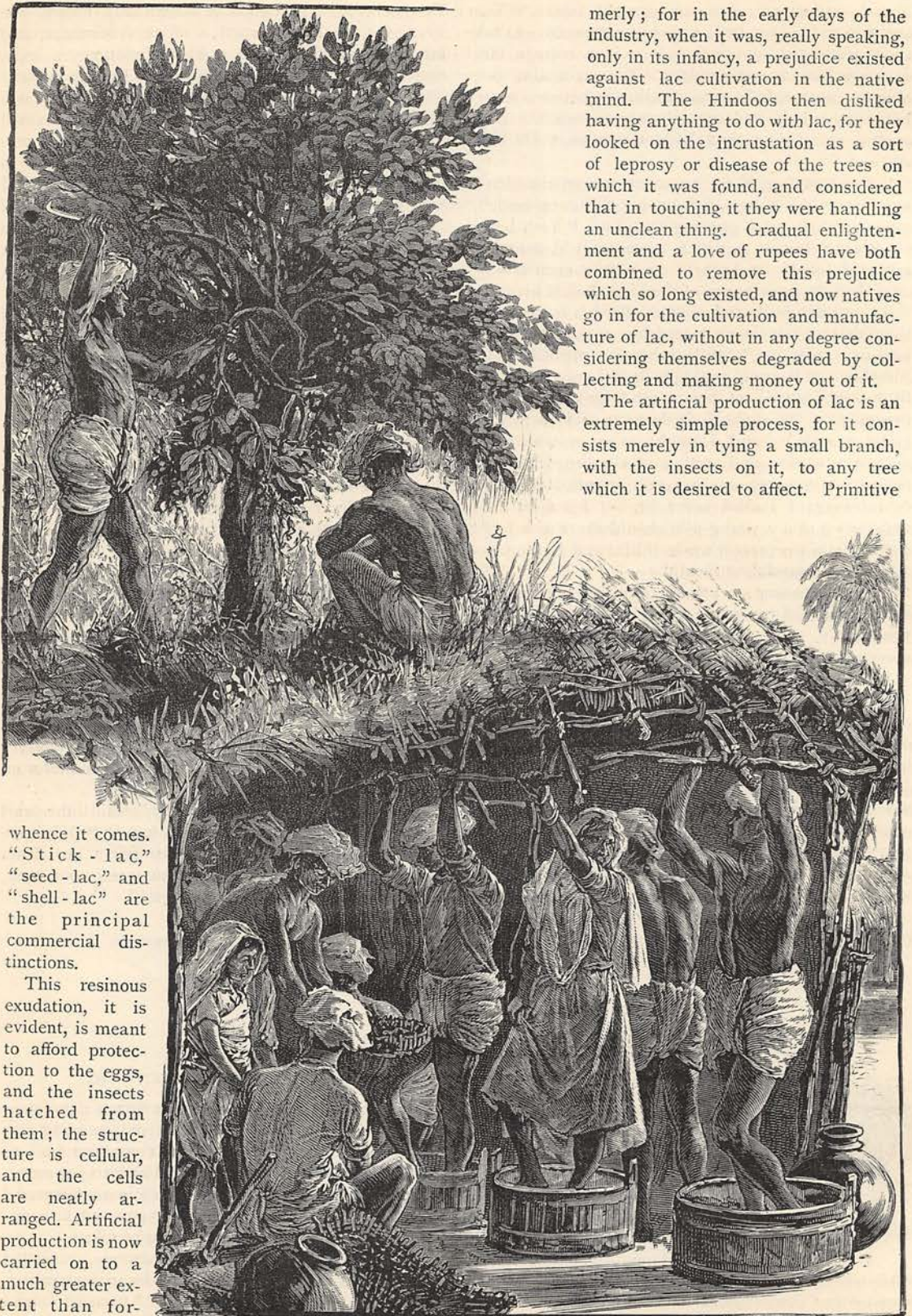
Lac, as turned out after manufacture, is called *shell-lac*, and is known in the trade by various names, such as “button,” “orange-leaf,” “garnet,” and “reddish orange-leaf,” according to the locality from

merly; for in the early days of the industry, when it was, really speaking, only in its infancy, a prejudice existed against lac cultivation in the native mind. The Hindoos then disliked having anything to do with lac, for they looked on the incrustation as a sort of leprosy or disease of the trees on which it was found, and considered that in touching it they were handling an unclean thing. Gradual enlightenment and a love of rupees have both combined to remove this prejudice which so long existed, and now natives go in for the cultivation and manufacture of lac, without in any degree considering themselves degraded by collecting and making money out of it.

The artificial production of lac is an extremely simple process, for it consists merely in tying a small branch, with the insects on it, to any tree which it is desired to affect. Primitive

whence it comes. "Stick-lac," "seed-lac," and "shell-lac" are the principal commercial distinctions.

This resinous exudation, it is evident, is meant to afford protection to the eggs, and the insects hatched from them; the structure is cellular, and the cells are neatly arranged. Artificial production is now carried on to a much greater extent than for-

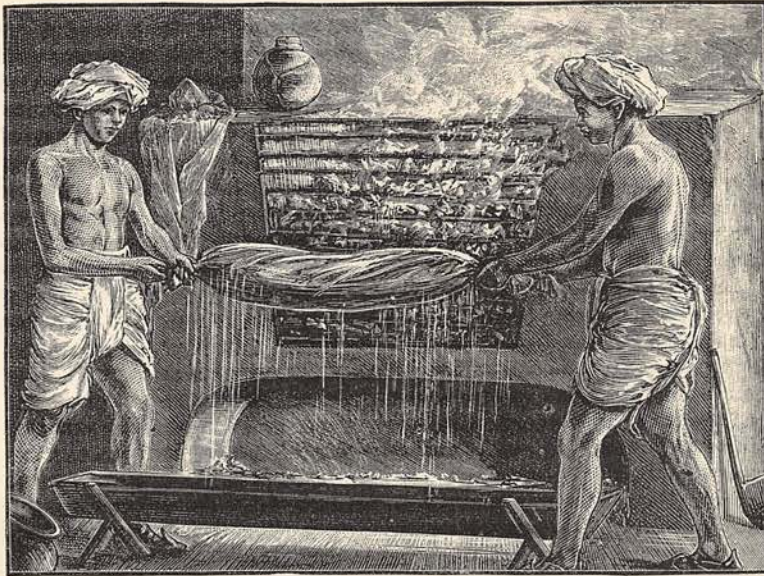


GATHERING AND WASHING LAC.

as is this method of production, it is by no means generally practised or understood by the natives ; probably the reason why lac is not more often artificially obtained is because the natives are, as I have before mentioned, prejudiced against it, and also because they fear to injure the trees by the spread of lac on them.

The *Palash* tree, botanically known as *Butea frondosa*, and the Beri tree (*Zizyphus jujuba*) are the

The late crop is considered the most valuable of the two. The lac is cut before the larvæ swarm ; the colouring matter, which is part of the female insect's body, would be in a great measure lost if the insects were allowed to leave their cells before cutting. A great deal of material is wasted by the primitive methods which obtain for gathering the crop. When the incrustation is formed on thick wood it is merely scraped off with a reaping-hook, or a rough instrument of that



MELTING LAC.

trees the *Coccus lacca* chiefly affects ; but it is also found on other trees, such as the Pipal (*Ficus religiosa*), the Banyan (*Ficus indica*), the Anjir (*Ficus carica*), the Pilkhan (*Ficus venosa*), the Gular (*Ficus cunia*), the Phagura (*Ficus caricoides*), the Siriss (*Acacia sirissa*), the Kikar (*Acacia arabica*), the Lasura (*Cordia myxa*), and others.

Lac produced on different trees varies in quality ; that produced on the *Zizyphus jujuba*, or Beri, is considered the best, and the Siriss, Kikar, and Pipal rank next in quality. The *palash*, also called by the natives *dakh*—which word, it is said, gives its name to the city of Dacca—is considered the most suitable tree for the production of lac. It is a fair-sized tree, and its flowers are very bright scarlet, from which it is frequently spoken of as the “flame tree,” and is a great favourite with the natives, who offer the flowers in their temples, and decorate their persons with them also, the women frequently entwining them in their hair on festive occasions. It is fancied that the red colouring matter of the lac insects is improved by the natural juices of the bark of the *palash*.

There are two seasons for the production of lac, February to April, and July or August ; the crops being collected in June, and October or November.

character ; but when on thin wood, such as twigs of trees and small boughs, the part is cut off intact. Thus much wood and stick is sold with the incrustations, and the name of “stick-lac” is so obtained—being the lac in its purely natural state. When gathered for export, before being packed, as much of the wood as possible is separated from the lac, as it so increases the charge of freightage.

The coarse stick-lac, just as it is cut off the trees, is purchased by the zemindars in the lac districts, and brought by them to the factories. On its arrival the stick-lac is crushed between rollers, separated from the wood by screening, then placed in tubs half filled with water, and washed by coolies, male or female, who stand in the tubs, hold on to a bar above their heads, and stamp upon the lac until the liquor comes off, after a variety of changes, clear. The lac is then dried in long bags of a cylindrical shape, made of cotton cloth ; they are from nine to ten feet long, and about two inches in diameter. These bags, when filled, look very much like huge sausages. When full, they are held by two natives over open charcoal furnaces. One man taking one end of the bag, and the other the other end, they twist in opposite directions. The heat of the fire gradually melts the lac—or

Lak, as it is spelt in Hindustani—and this, exuding through the bag, drops into a trough set below to catch it. The lac melts soonest close to the hands holding the bag, and the twistings given to it make it drop off at those points. When a sufficient quantity is melted, it is taken out of the trough in a wooden spoon and spread over a wooden cylinder, the upper portion of which is brass-covered. The stand of this machine slopes away from the native feeding it, and is spread well all over its surface with the lac by the other assistant. The sheets of lac are cut with a sharp instrument at the upper edge by the feeder, and waved for a few seconds in the air by the assistant, until they are quite brittle. They are then simply laid lightly one on top of the other. Their number is taken at the end of the day, and the workers paid—sometimes according to the work done, sometimes by fixed wages, as the case may be, or sometimes the head operator (the feeder) is paid by the sheet, and the assistants at a fixed rate. The sheets of lac are placed in packing-cases and put under pressure, which breaks them up into fragments. They are of a beautiful golden colour—that is, those of the best quality—and look rather like sweetmeats of a very luscious character.

The liquor drawn off in the various washings, which is of a deep red colour, is carefully strained, so that all the woody particles are removed. It is then poured into wooden tubs and left to settle, the sediment is washed a good many times, and then finally allowed to subside, the supernatant fluid being drawn off. The sediment, when it has arrived at the proper consistency, is put into presses, and then formed into small, square cakes, which are quite hard, and in colour a deep purple. They are marked with the manufacturer's stamp, or trade mark, and are then known as lac-dye, or cake-lac. The dark purple substance yields, by the addition of mordants, a most brilliant scarlet dye, which is little, if at all, inferior to that produced by cochineal.

Lac-dye is largely used in India for dyeing purposes by the native dyers. Also in Kashmir—where but little lac is produced, the lac insect not thriving in the neighbourhood of the snow—the wools used in shawl-making are generally dyed with lac-dye; at least those in which brilliant scarlet is found.

In many parts of Bengal shell-lac is largely manufactured. There are lac manufactories at Elambazaar, in the Lohardugga district of Chota-Nagpur, along the banks of the Parulia, and also scattered all over the Punjab, at Nurpur, Adinanagar, in the Hoskiarpur district, &c.

Large quantities of stick-lac are obtained from Chota-Nagpur, and from Sambalpul and Raipur in the Central Provinces. In the Sonthal Pergumaks the industry has markedly increased of late years. In the subdivisional officer's report, he says, when he first went to the district, about eight years ago, the annual crop only amounted to about 600 maunds; but the October crop, 1880, yielded 16,000 maunds, and the crop gathered in May, 1881, from 6,000 to 7,000 maunds in the Dumka subdivision. The greater portion of this was sent as stick-lac from the Baidyanath Station

on the chord line of the East Indian Railway to Mirzapore in the North-West Provinces, where it was manufactured into shell-lac at the factories, and forwarded to Calcutta for exportation to the United States and London markets. It seems a pity that the transformation from stick-lac to shell-lac cannot be managed in the district, as there is an extra expense and considerable loss of time in forwarding it for treatment to Mirzapore, some 400 miles distant, from whence it must be sent back again to Calcutta for shipment.

Lac is exported almost exclusively in the manufactured state as dye, shell-lac, and button-lac, but chiefly as shell-lac. The United States is the principal market for shell-lac. The prices of this article rose to their highest point in 1876, since which year they have been much depressed, caused by the fact of over-production by the manufacturer, by reason of the impetus given to the trade by the high prices ruling in the year named. This state of things is now, however, improving, and symptoms are shown of the steady increase of the trade; production and consumption are both advancing. The figures—quantity and value for lac—for five years, including its different forms, are as follow:—

Years.	Cwt.	Rupees.
1876-77 ...	128,712 ...	53,69,764
1877-78 ...	104,645 ...	36,20,481
1878-79 ...	91,423 ...	29,87,157
1879-80 ...	71,048 ...	37,14,959
1880-81 ...	82,088 ...	57,83,202

The use in England, the United States, &c., to which shell-lac is put is chiefly in the making of sealing-wax, varnishes, and by hatters in their trade; by dyers and japanners lac is also used.

In India lac is used very much in furniture and house decorations, in the making of bangles for women, lac marbles, toys of various kinds, walking-sticks, variegated balls and sticks, mats, and bracelets which are afterwards silvered. These bracelets are chiefly made in Panch Mahals district in Gujarat; they are much worn by the Vania women throughout Malwa, and by the Dahod ladies of the Rajput caste. Their cost is very little—about a halfpenny each, or even less. The lacquered work of various parts of India is too well known to need much description; the lacquered wooden and papier-mâché trays and boxes imported into England from India are seen now in nearly every town. In their manufacture lac is freely used. The lacquered work from different places is to be distinguished by the different colours of the lac used. For instance, in work of this kind from the Punjab, purple lac will be used; golden, orange, and drab mark other distinct varieties. Rajputana, Sindh, Kashmir, Bareilly, Karnul, Surat, Ahmedabad, may be named as centres of this trade, and the beautiful lac ornaments made for women at Ellichpur in Berar deserve especial mention.

It would be easy to multiply instances in which this curious substance is used; but I think I have written enough to show that the lac industry is a wide-spread one, and each year becoming of greater importance.

ELIOT-JAMES.