

Tapping The Wild Date

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Natural rubber is obtained from the latex that exudes when the mature trunk of *Hevea brasiliensis* is tapped. Tapping the stem of pines such as *Pinus pinaster*, *P. sylvestris*, *P. palustris* and *P. caribaea* yields turpentine. Sugar maple (*Acer saccharum*), when tapped at the proper time, exudes a sugary sap from the stem. Extraction of a sweet fluid from some species of palms has been an ancient practice in the tropics. For example, when the spadices (flower bunches) of *Cocos nucifera*, *Borassus flabellifer* and *Caryota urens* are prepared and pared at the critical stage and maturity, they exude sugary juice. In *Arenga pinnata* as well as *A. wightii*, usually the stalk of the spadix is tapped. But the entire crown of *Corypha elata* is chopped off just when the only flower bunch emerges. The tip of the naked stem is scooped into a shallow depression from which the juice is collected. Sometimes the noble date (*Phoenix dactylifera*) is also similarly treated for obtaining sap. However, with the wild date (*Phoenix sylvestris*), a portion of the tender stem is injured for the extraction of a juice which is rich in sugars, vitamins and protein. An account of the method of tapping the wild date and the importance of the juice thus collected is given below.

The Wild Date

True to its popular name, *Phoenix sylvestris* grows in a wild state throughout India except at the tip of the southern peninsula and in Kashmir. This species also grows densely in Pakistan and Bangladesh, and sparsely in Burma and Ceylon. In some Indian states, there is a growing awareness to cultivate this

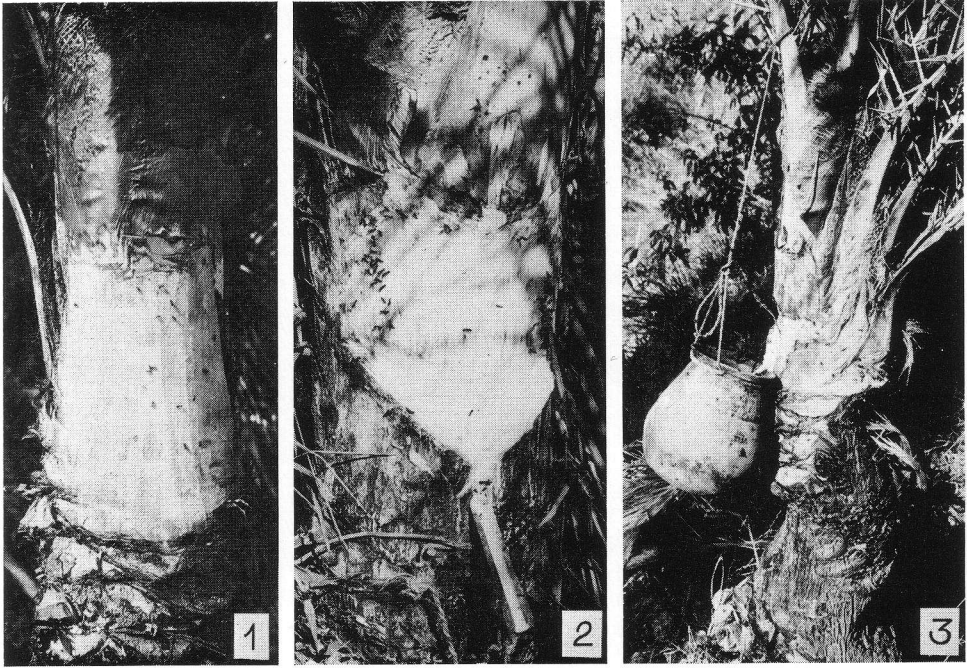
palm partly because it is extremely easy to grow, it on account of its hardness to drought and neglect, and partly because it is useful.

The wild date is a very graceful palm having about a hundred green leaves that form the spherical crown, and bearing persistent bases of dead leaves on the stem which veer in eight spirals either clockwise or counter-clockwise. The palm lives for about 60–70 years, producing a stem about 18–20 meters tall. If the stem is tapped regularly, the overall growth of the palm is reduced, but the trunk with its persistent zig-zag notches looks very characteristic indeed (Fig. 4). There are about 30 million wild date palms now growing in the various states of India.

Method of Tapping

The most important use of the wild date is the extraction of a sweet juice, known also as sweet toddy, or *neera* from the tender stem. Tapping the wild date is very common in the northeastern parts of India and Bangladesh, and is getting popular in other parts of India as well thanks to the effort of the Palm Gur Organization under the Khadi and Village Commission. The tapping season commences in October or November and continues through the colder months up to March or April after which time, with the rise in temperature, the quantity and quality of the sap deteriorate.

The first stage of the operation consists of the cutting off of all the older leaves up to the leaf-base on one-half of the crown leaving the vertically disposed younger leaves uninjured. Thus, the peripheral layer of the stem on one side

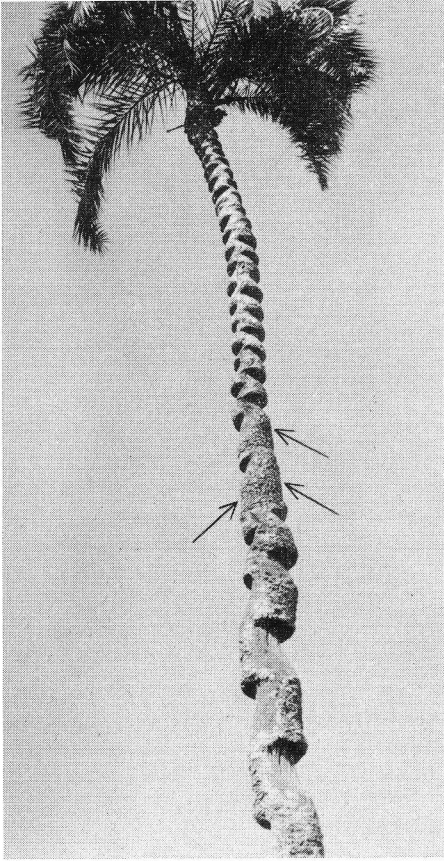


1-3. Stages in the tapping process of the wild date palm as followed in India. 1, The stem is exposed on one side. 2, A broad V is cut and a bamboo tongue is fixed. 3, A mud pot is hung to collect sap.

is exposed. The surface, though brilliant while freshly cut, becomes a brownish tan within a short time due to the presence of tannin and because of oxidation (Fig. 1). Then the palm is left undisturbed for about a week to ten days. After this interval, a layer 15 to 25 cm. broad, 30 cm. lengthwise and one cm. thick in the shape of a broad V is sliced off in thin layers from the exposed surface with the help of a special tapping knife. Between localities, there are variations in the size of tapping area, frequency of tapping as well as the shape of the tapping knife and collection pot. Sap starts trickling from this freshly exposed surface and flows downward, reaching the narrowest portion of the V where a thin, half-split bamboo is fixed with its free end jetting out as a tongue through which the sap flows into a mud pot hung in position (Figs. 2, 3). The

presence of ants and flies on the pared surface indicates the flow of sap. The mouth of the mud pot is usually covered with a piece of jute gunny or a set of date leaves mainly to keep away the several species of birds that almost live on this sweet sap during the colder months.

The first 24 hours of this process yields the maximum flow of a superior quality sap. On the second day, the cut surface is gently scraped to ensure continuous flow of the sap. The cut surface is again freshened next day by mild scraping, and the dripping continues for another day. After three days, the tree is given a short rest period of three or four days, on the expiration of which another deep layer of about one cm. is pared off from the exposed portion as in the first instance which ensures a good flow of better quality juice. On the two



4. Permanent tapping marks on a wild date.

subsequent days, the practice adopted during the first week is repeated. Likewise, the tapping goes on for a continuous period of four or five months and the injury on the stem gets deeper and deeper. This mark remains permanently on the trunk since the palm belongs to the monocotyledonous group of plants which are devoid of thickening of older organs.

Because of the mechanical injury inflicted on one side, the palm grows more vigorously on the opposite side during the next approximately eight months, and so the crown is pushed slightly to the direction of the injury. This becomes handy for the tapper to make use



5. Older tapping notches enable the tapper to climb and work comfortably on the trunk.

of the opposite side to commence the operation during the next season. During the third year, tapping is done on the side and above the first tapping. Palms which are tapped year after year bear the deep scars along opposite sides in a zig-zag manner. It becomes easier to assess the age of such palms. The one in Fig. 4 bears 54 such marks with three escapes indicated by arrows. Thus, with about ten years of growth of the trunk not visible in the picture and adding three years for the development of the crown, the age of this palm can be reckoned as 67 years. However, not many palms are tapped for such long periods. The depressions become very handy for the tapper to climb the trunk and to rest during the operations (Fig. 5).

The Palm Juice

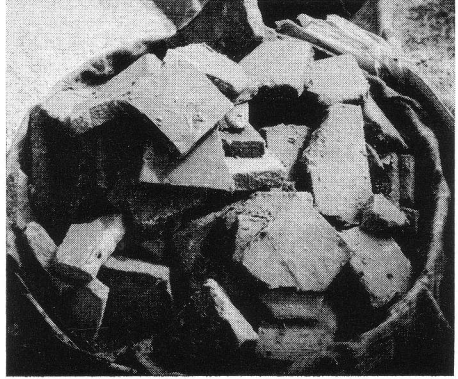
Freshly obtained sap of the wild date is clear as water, very sweet having 12-15 per cent sugars and is a delicious



6. Enjoying a glass full of energy and health.

drink rich in vitamins. A glassful forms the breakfast for many villagers during the season (Fig. 6). Application of lime in the receiving pots delays the fermentation of the juice. The fermented juice, popularly known as toddy, is also taken by those who like to get intoxicated. When the sweet juice is boiled, a thick syrup is obtained which is consumed in various ways. Sufficiently boiled down juice condenses into the palm jaggery which is moulded in suitable blocks. The jaggery finds a good market (Fig. 7) as it is either directly consumed or used in the preparation of sweets. It is often more expensive than the crystal sugar made from cane juice.

On an average, a palm during one season can yield about 40 kg. of jaggery valued at eighty Indian rupees (U. S.



7. A basket full of palm jaggery displayed in a market.

\$11.00). Of the about 30 million wild date palms in India, at least 20 million can be tapped, which would, apart from earning considerable foreign exchange, give employment to a million tappers and other artisans connected with this industry. Besides *Cocos* which is usually tapped for toddy (see *Principes* 7:70-79, 1963), *Borassus* and *Caryota* are also potential sources of palm jaggery like the wild date, and the present production in India is one hundred thousand tons of jaggery per year. The Palm Gur Organization through its over 2600 Palm Jaggery Cooperatives is endeavouring to bring more palms under the clutches of man. It has also been made possible to bottle fresh juice for distribution as soft drinks in cities like Bombay, Poona and Delhi. This nature's beverage is more wholesome and refreshing than commercially available soft drinks.