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DATES AND THE DATE PALM.

Even those whose knowledge of the customs of the Orient extends no further than a recollection of the contents of that time-honored story book, the "Arabian Nights," are doubtless aware that, since time immemorial, the date has been the chief food staple of the desert-dwellers of the East. The "handful of dates and gourd of water" form the typical meal and daily sustenance of millions of human beings both in Arabia and in North Africa, and to this meager diet ethnologists have ascribed many of the peculiar characteristics of the people who live upon it. Buckle, who finds in the constant consumption of rice among the Hindoos a reason for the inclination to the prodigious and grotesque, the depression of spirits, and the weariness of life manifest in that nation, likewise considers that the morbid temperament of the Arab is a sequence of vegetarianism. He points out that rice contains an unusual amount of starch, namely, between 83 and 85 per cent; and that dates possess precisely the same nutritious substances as rice does, with the single difference that the starch is already converted into sugar. To live, therefore, on such food is not to satisfy hunger; and hunger, like all other cravings, even if partially satisfied, exercises control over the imagination. "This biological fact," says Peschel, "was and still is the origin of the rigid fastings prescribed by religions so widely different, which are made use of by Shamans in every quarter of the world when they wish to enter into communication with invisible powers." Peschel and Buckle, however, are at variance as to the influence of the date diet as affecting a race; and the former remarks that, "while no one will deny that the nature of the food reacts upon the mental powers of man, the temperament evoked by different sorts is different;" yet "we are still far from having ascertained anything

in regard to the permanent effects of daily food, especially as the human stomach has, to a great degree, the power of accommodating itself to various food substances, so that with use even narcotics lose much of their effect." The same author also adds that the date "trains up independent and warlike desert tribes, which have not the most remote mental relationship to the rice-eating Hindoos."

It remains for the reader to reconcile this disagreement of learned doctors according to his own judgment. The evidence of those who subsist on the date is certainly overwhelming in its favor. The Assyrians, tradition says, asserted that it was such a great gift to them that its worth could not be too extravagantly told; for they had found, for the leaves, the fruit, the juices, and the wood of the tree, three hundred and sixty different uses. The Mohammedans adopt the date palm into their religion as an emblem of uprightness, and say that it miraculously sprang into existence, fully grown,

at the command of the Prophet. Palm branches still enter as symbols of rejoicing into Christian religious ceremonies; and throughout Palestine constant reference is found to the date and the palm in the naming of towns. Bethany means "a house of dates." Ancient Palmyra was a "city of palms," and the Hebrew female name Tamar is derived from the word in that language signifying palm. In Africa there is an immense tract of land between Barbary and the great desert named Bilidulgerid, "the land of dates," from the profusion of the trees there growing.

In this country, the date as an article of food is classed

in growth, it shoots up a magnificent stem, to the height sometimes of eighty feet, the summit of which is covered with a graceful crown of pinnated leaves. The trunk is exceedingly rough and spiny; the flower spathes, which appear in the axils of the leaves, are woody, and contain branched spadices with many flowers; more than 11,000 have been counted on a single male spadix. As the flowers are dioecious, it is necessary to impregnate the female blossoms artificially in order to insure a good crop; and to this end the male spadices are cut off when the pollen is ripe and carefully shaken over the female ones. At from six to ten years

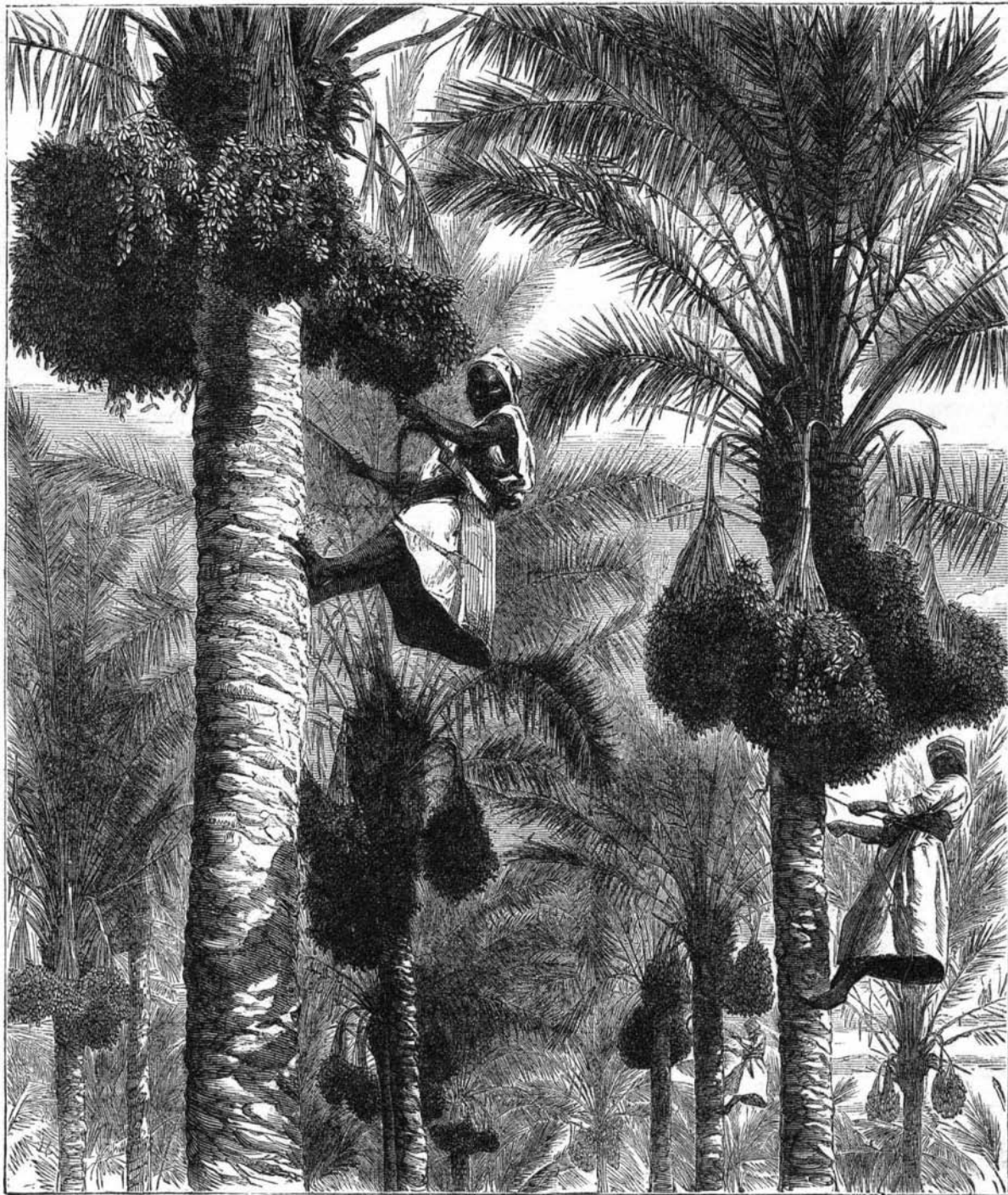
of age, the tree bears, and then remains fruitful for upward of 200 years. An excellent idea of the palm in full bearing may be obtained from our illustration, which represents the mode of gathering the dates, of which a single tree will often yield from one to four hundredweight in a season. The fruit varies much in size and quality; and in the oases of the Sahara forty-six varieties have been named.

The utilization of the date palm and its products are very numerous. The stem yields starch, and timber for houses, boats, fences, fuel, etc., as well as an inferior kind of sago. The leaves serve as parasols and umbrellas, and for material for roof covering, baskets, brushes, mats, and innumerable utensils. At their base is a fiber, which is spun into excellent rope. When the heart of the leaf is cut, a thick honey-like juice exudes, which, by fermentation, becomes wine (the "toddy" of India), or vinegar, and is also boiled down into sugar. The young shoots, when cooked, resemble asparagus; and the dates themselves are dried and ground into meal, from which bread is prepared.

Panthers as Seed Distributors.

It is well known that bees carry pollen from flower to flower, and that eggs of marine animals are often car-

ried long distances in the stomachs of aquatic birds. A very curious instance of this kind, showing how vegetable species may be diffused by means which no botanist, however acute, would be likely to think of, is mentioned by Mr. Alfred Smee, who states that, attached to the skin of a panther recently shot in India, were found numerous seeds, each of which had two perfect hooks, manifestly designed to attach themselves to foreign bodies. As the panther moved about it collected the seeds on the skin and carried them about wherever it went; but when it rubbed against the shrubs, it of necessity brushed some off, and thus distributed them. One of the seeds produced a handsome plant, and beautiful clusters of tubular flowers. It was immediately recognized to be the *Martynia diandra*—a plant which, although introduced into England as far back as 1731, has scarcely ever been cultivated, although it has been commented on by botanists and other writers.



GATHERING DATES IN CEYLON.

with the prune, the fig, and the tamarind, to be used merely as a luxury. We find it coming to the markets at just about this time of year in the greatest quantities, packed in baskets roughly made from dried palm leaves. The dates, gathered while ripe and soft, are forced into these receptacles until almost a pasty mass, often not over clean, is formed. Their natural sugar tends to preserve them; but after long keeping they become dry and hard. This renders them unfit for use; but they still find a sale to the itinerant vendors who, after steaming them to render them soft (of course at the expense of the flavor), hawk them about the streets. Dates in the pasty condition are not relished by those who live on them; nor, on the other hand, would we probably fancy the dried, almost tasteless fruit which, strung on long straws, is carried in bunches by the Arabs in their pouches.

The date palm (*Phoenix dactylifera*) is the most important species of the dozen which make up its genus. Though slow