

CHAPTER V

SOME LITTLE REGARDED WILD FRUITS AND BERRIES

Greate store of forrest frute which hee
Had for his food late gathered from the tree.

The Faerie Queene

NO one has to be told of the edibility of our wild strawberries, huckleberries, currants, cranberries, mulberries, raspberries, blackberries, elderberries, grapes and persimmons; nor of the pleasure which some palates find in the bitterish tang that goes with the familiar wild plums and cherries, although the only use to which most housewives consider these last fitted is the manufacture of jams and jellies. It is more to the purpose, therefore, in this chapter to touch upon some less known fruits of the hedge and heath—using the word fruit in its limited popular sense as based on succulency, rather than with botanical accuracy.

Throughout the basin of the upper Missouri and from Saskatchewan to New Mexico, the Buffalo-

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berry (*Shepherdia argentea*, Nutt.) is at home. In the journals of travelers in the upper plains two or three generations ago, no bush is more often men-



BUFFALO-BERRY
(*Shepherdia argentea*)

tioned than this. By the French *voyageurs* and *engagés* it was called *graisse de boeuf*, that is, "beef fat," which seems in harmony with the story I have read that the name Buffalo-berry is derived from the

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fact that it was a customary garnish to the monotonous buffalo steaks and tongue of those early days. The plant is a somewhat spiny shrub or small tree with silvery, scurfy leaves, and forms at times extensive and all but impenetrable thickets. The species is diœcious, and only the pistillate plant bears fruit; but that does it abundantly-tight clusters of small, scarlet berries, so sour as to find few takers until the frosts of October temper their acerbity. Then they are pleasant enough whether raw or cooked, though still with a touch of acid astringency that makes, for sprightliness. Jelly made from them ranks especially high, and to this end they are gathered by white dwellers in the regions where they grow. In fact, the plant is not infrequently found transferred to gardens. The berries used to be one of the Indians' dietary staples, lending a lively, fruity flavor to the unending stews and mushes of the red men. There is a related plant, the Silverberry (*Elaeagnus argentea*, Pursh), native to much the same region and often cultivated in gardens for the sake of the fragrant, silvery, funnel-form flowers and attractive foliage. Its white, scurfy berries, while in a sense edible, are too dry and mealy for most people, and are left to the prairie

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The Nightshade family, to which we owe the tomato, the potato and the egg-plant (as well as the tobacco and some very poisonous fruits), is represented in our wild flora by a number of plants bearing edible fruit. Of these the red berries of two shrubs of the deserts and semi-deserts of Arizona, New Mexico and Utah resemble tiny tomatoes and go among the Spanish-speaking population under the name of *tomatillo*, that is, "little tomato." They may be eaten raw, if perfectly ripe, or boiled and consumed either as a separate dish or used to enliven stews and soups. Dried, they look like currants and may be stored away for winter use. Botanically the plants are *Lycium pallidum*, Miers, and *L. Anderson*, Gray. They are more or less spiny shrubs, with small, pale, narrowish leaves, bunched in the axils of the branchlets, and bearing funnel-form greenish or whitish flowers—those of *L. pallidum* nearly an inch long; of *L. Andersonii* much smaller. To the Navajo Indians, the berries of the former have a sacred significance and Doctor Matthews states that in his day they were used in sacrificial offerings to a Navajo demi-god. Similarly among the Zuñis the plant is sacred to one of their priestly fraternities, and treated with reverence as an intercessor with the gods of the harvest. When

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the berries appear, certain individual plants are sprinkled with sacred meal and this business-like prayer proffered: "My father, I give you prayer meal; I want many peaches?"¹

To the same family belongs the genus *Physalis*, some, perhaps most, species of which yield fruits that may be eaten. They, are distinguished by a bladdery calyx which loosely envelops the small, tomato-like berry. These plants are known to Americans as Ground Cherries, and to the Spanish-speaking residents of our Southwest as *tomates del campo*, that is, "wild tomatoes." Of the score or so of species indigenous to the United States, *Physalis Viscosa*, Pursh, is one of the best known—a hairy, sticky perennial, common in fields east of the Mississippi from Ontario to the Gulf. The nodding, greenish-yellow flowers have a purplish-brown center; and the yellow fruit is reported on excellent authority to be the best. A species producing red fruit (*P. longifolia*, Nutt.), found wild from Nebraska to Texas and westward to Arizona, has been thought worthy of cultivation by the Zuñi Indians, who used to grow it, and perhaps still do, in the women's quaint little gardens on the slope of the river Zuñi-

¹ Stevenson, "Ethnobotany of the Zuñi Indians." 30th Ann. Rept. Bur. Amer. Ethnology.



TOMATO DEL CAMPO
(*Physalis longifolia*)

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gardens familiar to every observant visitor at this famous old pueblo. A favorite method of using the berries, according to Stevenson,² was to boil them and crush them in a mortar with raw onions, chili and coriander seeds. Among the whites, the Ground Cherries, when used at all, are made into preserves.

In the Rose sisterhood—a family that has given us a wealth of garden fruits—are a number of wildings of more or less food value. Next to the wild strawberries, raspberries and blackberries, none perhaps stands higher in popular favor than the Amelanchier, in popular parlance Service-berry, June-berry, Shad-bush or Sugar-pear.³ It is found with specific variations in leaf and fruit on both our seaboard, as well as in the Middle West, a small tree or shrub with rather roundish, serrated leaves, and producing in late spring or early summer loose clusters of round or sometimes pea-shaped, crimson or dark-purple berries. These are juicy, with a pleasant taste not unlike huckleberries. To white settlers throughout the continent this berry has

² "Ethnobotany of the Zuñi Indians."

³ *Service-berry*, a name transferred from an English species of *Pyrus*, whose fruit was known as *serb*, *serve* or *service*; *June-berry*, because the fruit generally ripens in June; *Shad-bush* because blooming when the shad are running in Eastern rivers.



SERVICE-BERRY
(*Amelanchier canadensis*)

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always been an abundant wild stand-by for fruit pies. Old time Indians used it not only fresh but dried 'for winter consumption. Lewis and Clarke's journal mentions a berry that is undoubtedly this, which the Indians were observed preserving by pounding- masses together into "loaves" of ten to fifteen pounds weight. These would keep sweet throughout the season and would be used as needed by breaking off pieces to be soaked in water and dropped into stews. Strong competitors with man for the berries are the birds and the bears.

Another western berry that has appealed strongly to Indian tastes but not, so far as I know, to ours, is the fruit of a species of Buckthorn (*Rhamnus crocea*, Nutt.) Doubtless there is nutrition in the berries, but they possess, according to Dr. Edward Palmer, the peculiar faculty of temporarily tinging red the body of one who consumes them in quantity. He tells a gruesome story of accompanying as surgeon a troop of United States soldiers in pursuit of a band of twenty-two Apache Indians in Arizona, who were eventually surprised in their camp and killed outright. The bodies of all were discovered to be beautifully reticulated in red from the juice of the *Rhamnus* berries on which the Indians had been gorging, the color having been

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taken up by the blood and diffused through the smallest veins.

Our American Hawthorns (botanically, *Crataegus*, a genus which some modern botanists have split up into a hopeless multitude of confused species) bear clusters of tiny, alluring apples in various colors—yellow, purple, scarlet, dull red, some almost black. Many of these are admirable for jelly making. Among the best are the large haws of *Crataegus mollis* (T. & G.) Scheele, about an inch in diameter and of a bright scarlet color. The species is fairly common throughout the eastern United States and Central West. The Summer Haw (*Crataegus flava*, Ait.), a small tree of the Southern States, bears somewhat pear-shaped, yellowish fruits, one-half to three-fourths of an inch in diameter, which are also esteemed for jellies, as are the shining blackish berries of the Black Haw (*Crataegus Douglasii*, Lindl.), common in the Pacific Northwest, and sweet and juicy enough to be pleasant eating uncooked. In fact, when it comes to providing raw material for the jelly makers, almost any thicket in late summer will yield something, for even the hips of the Wild Rose have been turned advantageously to that use. The hips of certain species, that is; those being preferred whose content is juiciest and fleshiest—as, for

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instance, the plump berries of the beautiful Nutka Rose of the Far Northwest. Frost is an essential



AMERICAN HAWTHORN
(*Crataegus mollis*)

agent in arousing palatability in most sorts of rose fruits.

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On the Pacific Slope one of the cherished berries for jelly making is the Manzanita (*Arctostaphylos* of several species), a remarkable evergreen shrub, or sometimes a small tree, whose shiny, chocolate-colored trunk and twisting branches, as hard as bone, are familiar to every traveler in the California mountains. The popular name is Spanish for "little apple," and aptly describes the appearance of the fruit. This is borne very abundantly and is ripe in mid-summer. The mountain folk, describing the plant, will tell you there are two kinds, one with smooth berries and the other with sticky ones: but botanists are not so easily satisfied, and have described at least a dozen species. The one most often used for jelly is *Arctostaphylos manzanita*, Parry, common in mountainous regions throughout the length of California, and also, I believe, in parts of Arizona and Utah. The berries are smooth skinned, with an agreeable acid flavor, and nutritious, but dry, mealy and seedy. Chewed as one travels, they are a capital thirst preventive, but the pulp should be very sparingly swallowed, as it is quite hard to digest. Indians, in former days, however, set great store by them as an article of diet, and in specific Manzanita tracts, just as in the oak-groves, there were recognized tribal or family



MANZANITA
(*Arctostaphylos Manzanita*)

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rights. The berries were consumed either dried and ground into pinole, or cooked as a mush, or in the fresh state. Death from intestinal stoppage is said to have sometimes resulted, however, from too free indulgence in the uncooked fruit.⁴ A favorite aboriginal use, too, was in the manufacture of cider, which will be described in the chapter on Beverage Plants.

To white cooks the Manzanita is of negligible interest except, as already hinted, as a basis for a jelly, which is famously good. The following recipe I have from Mr. Edmund C. Jaeger of Riviera, California: Select berries, by preference of the smooth-skinned variety, which are more juicy than the others, picking them when full grown but still green, say about the first of June. Put them in a boiler with cold water to cover ; and after bringing them to a boil, let them simmer until thoroughly cooked through: then pour into a cheese-cloth sack and press out the juice. This will have a cloudy look. Add sugar in the proportion of pound for pound, and boil till the liquid jells. The sugar clarifies the juice, and the jelly is a beautiful, clear, amber red. Should the berries be too ripe, there will be

⁴ Chesnut. "Plants Used by the Indians of Mendocino Co., California."

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failure to jell, but an excellent table syrup is the result, instead.

Wild currants, gooseberries, plums and cherries all play into the jelly maker's hands ; and so do the acid, scarlet berries of the eastern Barberry (*Berberis canadensis*, Pursh), found in mountain woods



OREGON GRAPE
(*Berberis aquifolium*)

from Virginia to Georgia, as well as of the European Barberry (*B. vulgaris*, L.) which has become a wild plant in some sections. On the Pacific slope another Barberry is the familiar Oregon Grape (*Berberis aquifolium*, Pursh), a shrub two to six feet high, with evergreen pinnate leaves of seven to nine

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leathery, holly-like leaflets, abundant in rich woods among rocks, especially in northern California and Oregon, of which latter State it is the floral emblem. Erect clusters of small but conspicuous yellow



OREGON GRAPE
(*Berberis aquifolium*)

flowers adorn the bushes in the spring, succeeded in autumn by blue berries of a pleasant flavor which are useful for jelly making and also as the basis of a refreshing drink. Cousin to the Barberry is the

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familiar May Apple, Wild Lemon or American Mandrake (*Podophyllum peltatum*, L.), a common herb, with umbrella-like leaves sheeting the ground in rich



MAY APPLE
(*Podophyllum peltatum*)

woodlands and shady meadows throughout the region east of the Mississippi from Canada to the Gulf. The pear-shaped fruit, about the size of a butternut, has claims to edibility. When green it exhales a

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rank, rather repulsive odor, but when fully matured, all that is changed into an agreeable fragrance, hard to define—a sort of composite of cantaloupe, summer apples and fox grapes. Brought indoors, two or three will soon perfume a whole room. As to palatability, tastes differ: some people loathe the flavor; others are fond of it. It ought not to be condemned on the evidence of unripe specimens, but should be tested fully mature, at which stage the little “apples” are yellowish in color and drop into the hand at a touch. They may be eaten raw in moderation, the outer rind being first removed, or they may be converted into jelly. Care should be exercised with respect to the leaves and the root, which are drastic and poisonous.

Occurring throughout the same range with the May Apple, but much less common east of the Alleghenies, is a small tree affecting stream borders and producing in early spring odd, solitary, purplish flowers pendulous from the leaf axils at the same time with the opening leaves. It is the North American Papaw (*Asimina triloba* Dunal). In September or October it bears sparse bunches of oblong, greenish, pulpy fruits each four or five inches in length and an inch or two in diameter, known as papaws, wild bananas, or, by old time French set-

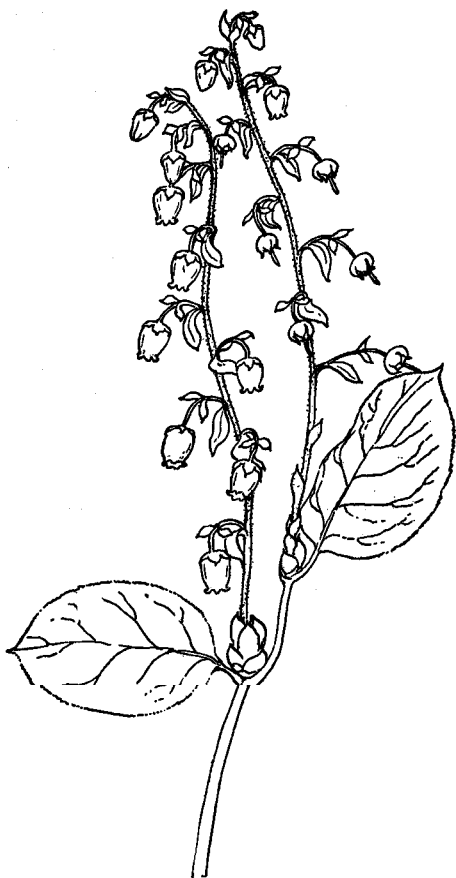
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tlers, *asimines*—a Gallicized form of the Assiniboine Indian name of the fruits. They are unquestionably of some food value, though again tastes differ on the point of their palatability. “Edible for boys” is the classing they get from one good authority; but, on the other hand, the sweet, aromatic flavor is distinctly pleasant to some maturer palates. Perhaps, as I have heard it suggested, the divergence in views may be due in some degree to the fact of different natural varieties within the species. Our Papaw is a far-strayed member of the tropical family that includes the Anonas—the cherimoya, the sour-sop and the custard apples. Another plant tribe of the tropics that finds a small representation in the United States is the Passion Flower family, noted for its remarkable blossoms in which the devout have thought to see a perfect symbol of the Divine Passion. There is one species, commonly called Maypop (*Passiflora incarnata*, L.), so frequent along fence rows and in cultivated fields of the Southern States as to be in the class of a weed. The fruit is a yellow, egg-shaped berry, a couple of inches long, accounted edible, but more esteemed when made into jelly than when eaten raw. Nevertheless to some tastes the flavor is agreeable. I fancy it is to this plant that John Muir refers in his “Thousand Mile

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Walk to the Gulf," quoting for it a local Georgia name, "Apricot vine," having a superb flower "and the most delicious fruit I have ever eaten"

The Heath family, which gives us the huckleberry, blueberry and cranberry (too well known to be treated here), as well as the manzanita already described, has two or three other members growing wild and bearing berries whose edibility is touched with a special grace of spiciness. One of these is the familiar Teaberry, Checkerberry or Wintergreen (*Gaultheria procumbens*, L.), an aromatic, creeping, evergreen vine usually of coniferous woods, from subarctic America southward through the eastern United States to Georgia. The crimson-coated berries, about the size of peas, are pleasant morsels and make a welcome feature in a small way in the autumnal displays of fruit venders in Eastern cities. A Pacific Coast species of *Gaultheria* with black-purple berries (*G. Shallon*, Pursh) has become commonly known by the name of Salal, a corrupted form of its Indian designation. It is a small shrub, one to three feet high, with sticky, hairy stems, frequent in the redwood forests of Northern California, and thence northward in shady woods as far as British Columbia. Lewis and Clarke's journal contains several references to the Oregon Indians' fondness



SALAL
(*Gaultheria Shallon*)

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for the berries, which, under the names of Shallon and Shewel, seem to have been a staple of diet with them. Though thick of skin they are well flavored.

Paradoxical enough, it is the desert that grows some of our most important and most juicy wild fruits. Among these the plump pods of species of *Yucca* or Spanish Dagger, abundant throughout the arid regions of the Southwest, are of recognized worth. One of the most widely distributed is *Yucca baccata*, Torr., called by the Mexican population *Palmilla ancha* or Dátil---the former name meaning "broad-leaved little date-palm," and the latter, "the date fruit." The fruit is succulent, plump, and in shape like a short banana, and is borne in large, upright clusters, seedy but nutritious. The taste is agreeably sweet when fully developed, which is in the autumn if birds and bugs spare the pods so long. Indians have always regarded the Dátil as a luxury. As I write there comes visibly to mind a chilly, mid-August morning in the Arizona plateau country, when two Navajo shepherdesses left their straggling flock to share in the warmth of our camp fire and pass the time of day. As they squatted by the flame, I noticed that one slipped some objects from her blanket into the hot ashes, but with such deft

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secretiveness that my eyes failed to detect what they were. Later as the woman rose to go, she raked away the ashes with a stick and drew out several blackened Yucca pods, which had been roasting while we talked. I can testify to the entire palatability of this cooked fruit (the rind being first removed), finding it pleasantly suggestive of sweet potato. Those fruits that morning were still green when plucked. Dr. H. H. Rusby informs me that the sliced pulp of the nearly ripe pods makes a pie almost indistinguishable from apple pie. The ripe fruit may be eaten raw, but the more usual custom among the Pueblo Indians, who would travel long miles in the pre-education days to gather the succulent, yellow pods and bring them home by the burro-load, was to cook them. Sometimes they were simply boiled, and on cooking the skin was removed, since it then separates easily from the pulp; but there was a more complicated process, resulting in a sort of conserve, that was considered better. This was to bake the fruit, peel it and remove the fibre, and then boil down the pulp to a firm paste. This was rolled out in sheets of about an inch in thickness, and carefully dried. Afterwards these were cut up into convenient sizes and laid away to be consumed either

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as a sweetmeat, or dissolved in water as a beverage, or employed like molasses on tortillas and bread.⁵ The young flower buds of this and some other species of *Yucca* possess a considerable content of sugar and other nutritive principles, and by the aborigines are considered delicacies when cooked. Coville records a custom of the Panamint Indians who collected the swelling buds of the grotesque arborescent *Yucca* of the Mojave Desert known as the Joshua tree (*Yucca brevifolia*, Engelm.) and roasted them over hot coals, eating them afterwards either hot or cold.

The *Yuccas* have been useful to the desert people in other ways than as food, and we shall hear of them again in subsequent chapters. It is not remarkable, therefore, that the plant is imbued, with sacred significance and enters in many ways into native religious ceremonies. Among the Navajos, *Yucca baccata* is called *hoskawn* and allusions to it are of frequent occurrence in the folk lore of that interesting race. Its leaves are the material out of which the ceremonial masks employed in the religious rites of these people are made. The Government has given particular distinction to this plant

⁵ Bandelier, quoted by Harrington in "Ethnobotany of the Tewa Indians," Bull. 55, Bur. Amer. Ethnology.

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by bestowing its Spanish name on the "Datil National Forest" of New Mexico.

The Cactus family, those especial plant children of the desert, yield some quite choice fruits, though they make us work to get them, hedged about as they are with vicious spines and bristles. Of several genera indigenous to the United States producing edible berries, the most widely distributed is *Opuntia* embracing two quite different looking divisions, one with broad, flattened joints (the *Platopuntias*) and one with cylindric, cane-like joints (the *Cylindropuntias*). The former division includes the Well-known Prickly Pears or Indian Figs, of which two species (*Opuntia vulgaris*, Mill., and *O. Rafinesquii*, Engelm.) occur in sandy or sterile soil of the Atlantic seaboard. Their seedy, lean, insipid berries, each an inch or so long, are edible in a way, but they are not at all in the same class with the fat, juicy "pears" of many of the species growing wild in the Southwestern desert country, where the genus is best represented. Even there, there is great choice in the fruits of different species, those of the broad-jointed sort being much the best. Such plants are called *nopal* by the Spanish-speaking Southwesterners and the fruit *tuna*. Among these *Opuntia laevis*, Coult., and the varieties of *O. Engel-*



Prickly Pear (*Opuntia Tuna*), one of the important food plants of the desert regions. (See page 108.)

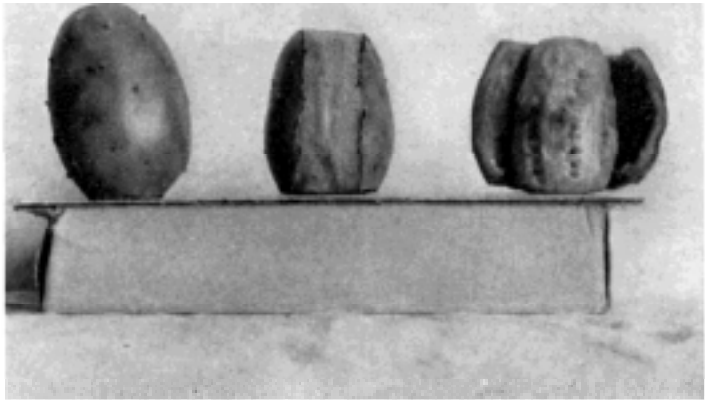
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manni and *O. Lindheimeri* (the last abundant in Southern California) are especially valued. Better than these, however, are certain species introduced a century or more ago by the Franciscan Missionaries from Mexico, the motherland of the cacti. These are *Opuntia Tuna*, Mill., and *O. Ficus-Indica*, Mill., and they now grow wild in many parts of California, especially about the old Mission towns, the fruit being annually harvested by the Mexican population.

The gatherer of tunas is faced by two difficulties—the rigid, needle-like spines that bristle on all sides of the plant, and the small tufts of tiny spicules that stud the fruit itself. The latter are really the more dangerous, because a touch transfers them from the tuna to the picker's flesh, there to stick and prick wickedly. If they happen to get into the mouth or upon the tongue, the pain is persistent and agonizing. With care, however, nothing of that sort need happen. Armed with a fork and a sharp knife, you spear your tuna firmly with the fork, give it a wrench and complete the parting from the stem by a slash of the knife. The next step is to peel the "pear," which is made up of a pulpy, seedy heart enveloped in an inedible rind. This may be readily got rid of in the following way: Handling the tuna with a



Gathering tunas, fruit of the nopal cactus, California.



Tunas, fruit of a Southwestern cactus—showing how it is opened to secure the meaty pulp.

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glove or speared upon a fork, lay it upon a clean board, and holding it down slice off each end; then make a longitudinal cut through the rind from end to end; lay open both flaps of the rind, which may then be pressed back, separating along natural lines from the pulp. If the gathered fruit is first placed in water and stirred well, the spicules are to a considerable extent washed off.

Eaten raw, tunas of the better sort are refreshing and agreeable to most people, though the bony seeds are an annoyance unless one swallows them whole, after the Mexican fashion. The taste differs somewhat with the species, those that I have eaten possessing a flavor suggesting watermelon. The sugar content is considerable, and a very good syrup may be obtained by boiling the peeled fruits until soft enough to strain out the seeds; after which the juice may be boiled down further. No sugar need be added, unless a very sweet syrup is needed. Care should be exercised to select fruit that is really ripe; in some sorts maturity is slow to follow coloration. After all, though, it is Mexico where tuna raising and consumption have become an art, and the tuna market is an interesting feature in many Mexican towns. During the time of the harvest whole

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families go to the hills and camp out in the Nopaleros (the areas where the cactus grows) and live practically upon tunas alone. Mr. David Griffiths, in his monograph "The Tuna as a Food for Man,"⁶ states that at such times about two hundred tunas a day constitute the ration of one individual. Large quantities are dried for future use and several products are also manufactured from the fresh fruit. One of these, called *queso de tuna* (that is, "tuna cheese"), is an article of sale in the Mexican quarters of our Southwestern towns. It is made by reducing the seeded tuna pulps to an evaporated paste, and is sent to market in the shape of small cheeses, dark red or almost black.

Another member of the Cactus family that is an important food source in the Southwest is the Sahuaro (*Cereus giganteus*, Engelm.). It is Arizona's floral emblem, and abounds throughout the southwestern part of that State and across the frontier into northern Mexico, forming at times in the desert strange, thin forests casting attenuated shafts of shade. It is one of the world's botanical marvels, a leafless tree with fluted, columnar trunk and scanty, vertical branches, rising sometimes to

⁶ Bull. 116 Bur. Plant Industry, U. S. Dept. Agriculture.

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the height of sixty feet and tipped in spring with numerous creamy, pink flowers. The fruit commonly goes by its Mexican name, *pitahaya*. It ripens in June and July, and somewhat resembles the tuna in form, with a juicy, seedy, crimson pulp. To civilized tastes, the fresh fruit is rather mawkish, less sweet than that of the related *pitahaya dulce*, which is common on the Mexican side of the border and is borne by *Cereus Thurberi*, Engelm. Nevertheless the Arizona *pitahaya* is of considerable food value and highly relished by the Indians of the region, particularly the older generation of Papagos, who make a festival of the opening of the *pitahaya* harvest, dating their new year from that event, and used to intoxicate themselves as a religious duty upon a sort of wine that they made for the occasion from the fermented first fruits.

The *pitahayas* are gathered with a twenty-foot pole, made of the rod-like ribs of some dead sahuaro lashed together and having a hook affixed to the tip, with which the fruit is dislodged. Such part of the crop as is not consumed raw is boiled down, as in the case of the tuna, the seeds removed, and then boiled again until the mass is reduced to a syrup. This is of a clear, light brown color, and pleasantly sweet,

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making a fair substitute for molasses and correspondingly good on bread or corn cakes. It is set away for winter consumption.⁷ The inner part of the pitahaya may also be sun-dried, and will then keep for a long time. Sahuaro seeds are quite oily, and I am told by Mr. E. H. Davis that the Papagos dry them and grind them into an oleaginous paste, which they spread like butter on their tortillas. The ribs of this most useful plant are also employed by these same Indians as the basis of their stick-and-mud houses—a practice doubtless inherited from the ancients, as in many old cliff dwellings sahuaro ribs are found reinforcing adobe.

A word about one more desert fruit, and this chapter closes. On the Colorado Desert of South-eastern California, there is indigenous a stately palm known as the California Fan Palm (*Washingtonia filifera*, Wendl., var. *robusta*), which has been widely introduced into cultivation in the Southwest. In the cañons of the San Jacinto Mountains opening to the desert and in the desert foothills of the San Bernardino Mountains, as well as here and there in certain alkaline oases of the desert itself, extensive groves of this noble palm flourish—the remnant, it is

⁷ For an interesting and detailed account of the Arizona Sahuaro harvest and uses, see Mr. Carl Lumholtz's "New Trails in Mexico,"



California Fan Palm (*Washingtonia*),
which furnishes food, textile
and building materials.



Cereus giganteus—Saguaro—producing
a fruit that is used for wine,
syrup and butter.

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believed, of far greater forests that probably existed in that region in primeval times. The mature fruit of the *Washingtonia* is berry-like and black, resembling a small grape or cherry, and is borne in huge compound clusters, which hang below the leafy crown of the tree in autumn and early winter. The relatively large seed is embedded in a thin pulp of sweetish flavor, which is edible, though it requires industry and a long pole to reach the fruit. These requisites were possessed by the old-time desert Indians, who used to make of the palm-berries an important feature in their diet, not only consuming the pulp both fresh and dried, but also grinding the seeds into a meal, which Dr. Edward Palmer thought as good as coconut.