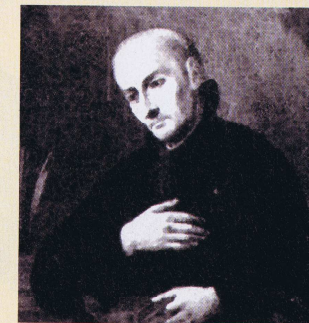


Mission Fruit

By Russell M. Magnaghi



The Spanish Empire's efforts to convert the Indians of Baja California established an agricultural legacy.

San Javier lies about twenty miles inland from the gulf coast of Baja California, that nearly 800-mile-long peninsula that separates the Pacific Ocean from the Sea of Cortés, or Gulf of California. Thatched-roof adobe and stone houses in the village center shelter some 130 residents. In a deep arroyo a small dam impounds water that travels through ditches, known as *acequias*, to irrigate chilies, citrus trees, corn, dates, figs, guavas, grapes, papayas, and other crops. The community's major product is onions, 400 tons of which are harvested annually. Many of the cultivars are the living legacy of a mission established there in 1699—the Mission of San Francisco Javier de Viggé-Biaundó.

The leading figure in that mission's history was Father Juan de Ugarte, whose life has become the stuff of legend. Of Basque extraction, Ugarte was born in 1662 in what is now Honduras, then part of Spain's vast colonial holdings in the New World. At the age of sixteen he joined the Society of Jesus, more commonly known as the Jesuits, the Catholic order founded in 1540 by the Basque Ignatius of Loyola. After a stint as a philosophy professor and administrator in Mexico City, Ugarte crossed the gulf to Baja California and quickly became involved in stabilizing the two nascent Jesuit missions in Loreto and San Javier. These were hampered by a constant shortage of provisions and foodstuffs. Under the mandate of Spain's Laws of the Indies, missions on the edge of the empire had to become self-sufficient, but

Founded in Baja California by Jesuits at the turn of the seventeenth century, Mission San Javier is now maintained by Mexico's National Institute of Anthropology and History. Top: Father Juan de Ugarte (1662–1730) was the moving force behind the mission.

ERIC FLETCHER



the Christianized Indians who lived at the two missions often had to be sent into the hills to hunt and gather food as they had traditionally done.

Large, powerful, and characteristically barefooted and barelegged, Ugarte labored hard at physical tasks, setting an example for the Indians—the Monqui in Loreto and the Cochimi in San Javier. Under his direction the Indians followed a standard work procedure. The mission was a frontier institution whose purpose was to evangelize the Native Americans and assimilate them into the Spanish Empire. According to the 1759 account by the Mexican Jesuit Miguel Venegas,

In the morning, after saying mass, at which he (Father Ugarte) obliged them to attend with order and respect, he gave a breakfast of pozoli to those who were to work, set them about building the church and houses for themselves and his Indians, clearing the ground for cultivation, making trenches for the conveyance of water, holes for planting trees, or digging and preparing the ground for sowing.

Ugarte supervised a construction program that transformed Loreto into a permanent village with farming and livestock; organized the building of a fifty-foot seaworthy vessel for transport and exploration (officials in Spain and Mexico sought more convincing evidence

that Baja was a peninsula); and re-located the San Javier mission five miles to the south, to a better location for farming, where he saw to the construction of the irrigation system with its dams and ditches. He even arranged to train local women to become weavers.

As an evangelizer in San Javier, Ugarte learned the Cochimi language, but also got his message across by more colorful means. To give just one example of the exploits for which he is renowned, he faced the challenge of a mountain lion—and of a local medicine man who instructed the people that killing the lion would bring them bad luck and death. As long as the lion was allowed to roam freely, livestock was being killed, but the challenge to his spiritual authority was probably Ugarte's greater concern. One day, while riding a mule through the barren hills back toward San Javier, Ugarte confronted the mountain lion on the narrow path. He quickly dismounted, picked up some rocks, and let fly. Hitting the animal on the head, he killed it. Then he threw the warm carcass over his saddle and took it six miles back to the mission to show the Indians that he had dared to kill the creature and was none the worse for it.

While Ugarte's work was directed at converting the Indians to Christianity, he also brought them an agricultural base for their new lives within the Spanish Empire. The role of plants and gardens in the Spaniards' missions—for sustenance, income, and medicine—was a long-standing tradition. Many Asian plants had been introduced to southern Europe by the Greeks and Romans, to which was added the influence of the Moors, who were in Spain for more than seven centuries. Besides introducing new plants and animals, the Spaniards brought with them the concept of irrigation, learned from the Arabs. Not only did they efficiently construct irrigation ditches (*acequias*) to convey water to dry areas, they also introduced the elaborate rules and regulations for monitoring the entire irrigation system.

By transferring a variety of crops from mainland Mexico, San Javier and other missions in Baja California ultimately set the stage for the Spanish Empire's expansion



farther north. Although the Jesuits were expelled from the peninsula in 1768, to be replaced by the Franciscans and later the Dominicans, San Javier provided dried figs, flour, sugar, and *pinole* (parched corn) for the Serra-Portolá expedition of 1769. That venture established a foothold in what the Spaniards called Alta California, at San Diego. And ultimately the Jesuit missionary interlude was largely responsible for turning what is now the state of California into a major engine of the world's modern agricultural economy.

At the end of the seventeenth century, when the Jesuits decided to evangelize Baja California, no one would have expected it to play a key role in agricultural history. Even today the peninsula is sparsely populated. It is a dry land dominated by mountains and a rocky landscape, with little rainfall but susceptible to devastating hurricanes that can undo the work of many years. In 1771 Father Jakob Baegert, a German Jesuit, could still write that the land "from top to bottom and

San José del Cabo, one of the Jesuit missions in Baja California: To achieve self-sufficiency, the missionaries were expected to establish agriculture to feed themselves and their Indian acolytes. Dating from the 1760s, this and the scenes on the pages that follow were illustrated by the Jesuit missionary Ignacio Tirsch.

from coast to coast is nothing else than a thorny heap of stones or a pathless, waterless rock rising between two oceans." Nevertheless, even in a land that can be as harsh for human survival as the Arctic or the Great Basin, native peoples had developed a hunting and gathering culture. They made do with the local fruits and vegetables and prospered in coastal settlement sites, where they had access to marine resources.

For some decades the non-aboriginal population comprised the Jesuit missionaries, the soldiers and sailors needed to protect and supply the missions, and a few retainers. Early in 1702 at Loreto there were 18 soldiers (two of them with families), 12 sailors, and 8 Black and "chino" (mixed-race) servants. By 1730 the presi-



An Indian woman (left) carries green seed pulp, while a Spanish majordomo rides his steed.

dio garrison had grown to 29 soldiers, with 41 sailors, 6 cowherds and muleteers, and 99 "others" (presumably members of their families, servants, and so on). With the coming of the Europeans, however, the native population was greatly affected by disease. Beginning in 1697, when the Loreto mission was established, there was a series of epidemics—dysentery, measles, smallpox, typhoid fever, and typhus.

The missionaries' objectives included Europeanizing their converts in external matters such as dress, diet, and daily activities. Given that the indigenous inhabitants did not practice agriculture, the Jesuits used it to attract new converts. Father Eusebio Francisco Kino, writing his *Favores Celestiales* between 1699 and 1710, provided an overview of the land and agricultural progress. Kino, an Italian priest, had participated in an earlier attempt to establish a mission in Baja California from 1683 to 1685. He wrote that the Jesuits had planted maize, chickpeas, lentils, and beans, and that they all "produced well in proportion to the small amount which in every case has been planted."

The impediments included the lack of proper farm equipment, the small and untrained labor force, and the little time the missionaries could devote to farming given their evangelizing work. But Kino experimented with

maize and beans, planted using a bad plow, and found the results better than on the mainland. Some of the Indians imitated the Spaniards, planted maize without any experience, and harvested the crop. Kino also experimented with wheat, which was harvested and baked into communion wafers. He planted pumpkins, melons, and watermelons and found that "the land is so fertile that they yielded with extraordinary abundance, some of the same plants bearing fruit three times in a year." Perhaps knowingly overstating the case, he concluded with high praise for the land and its water supply, which he felt "promises a great plenty of products when there shall be people to cultivate the land."

In 1786, Father Clavigero, drawing on a study by Father Miguel del Barco, summed up the various crops that the Spaniards introduced into Baja California from the Mexican mainland. Fruit trees included apple, fig, guava, lemon, olive, orange, peach, pomegranate, and yellow sapodilla, as well as date palms. Maize, rice, and wheat were imported grains, while legumes included broad beans, chickpeas, and lentils. Among the other vegetables were cabbage, endive, fennel, French beans, garlic, lettuce, onions, cayenne peppers, radishes, sweet potatoes, tomatoes, and turnips. Other fruits were muskmelons, watermelons, and domesticated grapes.

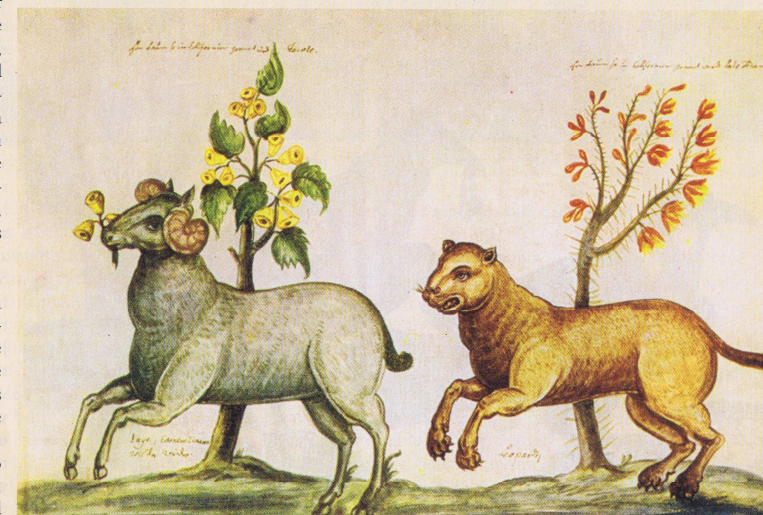
Ugarte is credited with bringing grapevines to Baja for planting, a few cuttings from mainland missions. He planted these dried sticks at San Javier to the ridicule of the Indians, who could not imagine that they would produce plants and ultimately fruit. Ugarte passed from the scene in late December 1730, having left a rich agricultural legacy to Baja California. Little did he realize that he would become known as the father of Baja California agriculture and in particular of the wine industry, which today thrives in the northern part of the peninsula, a particularly favorable environment for grapes.

Despite Kino's original optimistic assessment, however, the Jesuits had difficulty locating mission sites that could provide an adequate food supply. They were accustomed to establishing missions where large rivers fed by mountain sources provided water, or, if the river dried up, one could draw water from shallow wells. In Baja there were no rivers, and the runoff quickly spilled into porous sandy plains or into the sea. As a result, of the nine missions founded during the first twenty-four years of evangelization, one had to be abandoned and, including San Javier, five had to be moved to better locations. Conditions on the Baja Peninsula were precarious in other ways. Crops might be attacked by swarms of locusts, destroyed by drought, or wiped out by floodwaters from hurricanes.

As a whole, the mission system on the peninsula never became self-sufficient, and thus the Jesuits had to rely on imports of food and supplies from the missions on the mainland. They also incorporated into their diet the fruits, nuts, roots, and vegetables (and the wild game) utilized by the native Baja Californians. The Spaniards learned to enjoy the fruits and toasted seeds of many plants native to Baja and eaten by the Indians. They ate fruit from such cactuses as tuna or nopal (prickly pear), *pitahaya* (*Hylocereus* and related genera), the treelike succulent *garambullo* (*Myrtillocactus schenckii*), the gigantic branched *cardón* (*Pachycereus pringlei*), and *biznaga* (a barrel cactus), as well as the *anabá*, a type of wild fig. They also ate the seeds of mesquite, palo verde, and *palo chino*, or catsclaw acacia. The *ciruelo* "plum" (more closely related to cashew and mango) was found fla-

vorful, and the seed of the fruit was edible as well, with a taste similar to pine nuts. The Spaniards enjoyed them and purchased them from the Indians. Jojoba berries were used in salads in place of olives. The nut of *tedeguá*, a kind of stinging nettle of the genus *Cnidoscolus*, had a good flavor much like almond. The Jesuits replaced wild marjoram, or oregano, with the leaves of the native aromatic shrub *Lippia palmeri* (now called "Mexican oregano") for seasoning foods. The sweet yucca was served cooked and found to be tasty, while jicama (*Exogonium bracteatum*) was a crisp, cool-fleshed tuber with a high water content, eaten raw.

The Spaniards indirectly caused the devastation of the abundant native palm groves. The local people had not eaten hearts of palm, but when people from Sinaloa, across the Gulf of California, were brought to Baja, they introduced the practice. Either the trees died when the heart was removed, or the trees were chopped down to make it easier to cut out the hearts. The Spaniards found the hearts a delicious treat and used them in salads. With-



A wild ram and a jaguar are shown with yellow-blossomed tacote (probably *Nicotiana glauca*, tree tobacco) and red-blossomed Adam's tree (*Fouquieria diguetii*).

in four or five years the great palm groves resembled "a great multitude of giant and extinguished candles," the Jesuit missionary and naturalist Miguel del Barco recalled in the 1770s. Those that remained near the southernmost region of the peninsula were soon destroyed as well, as mines began to be developed in the area: the burgeoning population of mine workers and timberers shared the taste for hearts of palm.

From their neophyte charges the Jesuits learned of the

medicinal value of numerous plants, which they incorporated into their own pharmacopoeia. They learned to boil the *cardón* cactus to produce a balm for wounds and sores. Jojoba was used to relieve urinary conditions, to facilitate childbirth, and to heal wounds. A decoction of *batamote* (*Baccharis glutinosa*), a shrub, was applied topically to restore movement and strength to “weakened limbs, legs or arms,” del Barco noted. Mesquite sprouts were bruised and the juice applied to cure “sick eyes.” The castor bean was considered a severe and dangerous purgative. The dry bark of the *palo blanco* (white-barked acacia) was ground up and considered “an effective remedy for any type of sore, even persistent ones,” wrote del Barco.

Prior to the 1740s there were few civilians settled on the peninsula, unless they were associated with the Jesuit enterprise. Otherwise they were seen as poachers who interfered with the missionary work. Former soldier and self-made entrepreneur Manuel de

everything from clothing and equipment to adequate food and water.

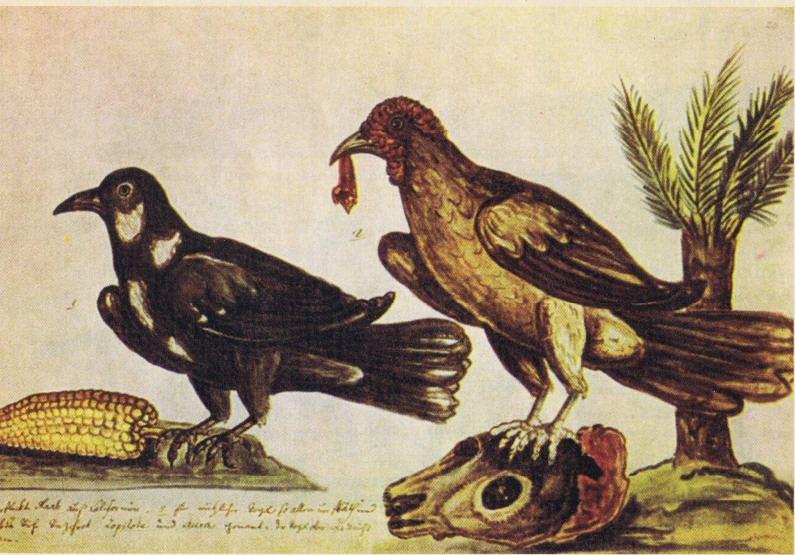
When the miners and their families became desperate for food, the Jesuits reluctantly shared with them. The Jesuits saw these mining ventures as intrusive and destructive to their evangelizing work, and as competing for the limited agricultural resources that were produced for their Indian converts. The Jesuits are said to have resisted selling produce and grain to the mining communities, in the hope that they would leave. Although the new settlers picked up farming and produced cotton, fruit, brandy, and wine, there is little evidence that they grew grain crops in abundance.

Meanwhile the Indian population continued a precipitous decline, particularly from disease. There may have been as many as 60,000 native tribespeople on the Baja peninsula when the Jesuits arrived in 1697; by 1762 their population had been reduced by two-thirds. Without mouths to feed, the agriculture of the missions declined.

The Jesuit story in Baja California came to an abrupt end in 1767–68, when the order was unceremoniously expelled by royal decree. King Charles III apparently took the action for political and economic reasons. As a result, 16 Jesuit priests and brothers from Baja California (out of 678 expelled from all Mexico) were shipped to Spain. In 1768, now under Franciscan control, many of the missions in Baja—the Jesuits had successfully established seventeen in all—were consolidated, and some were closed, in an effort to economize and make the system more efficient. Just four years later their administration changed hands again, turned over to members of the Dominican order.

Nine additional Dominican missions were established in northern Baja California

between 1774 and 1834. Mission San Fernando Velicatá, founded on May 14, 1769, was the only mission initiated by the Franciscans in Baja California, and it was taken over by the Dominicans only four years later. But it was from that site, in the northern third of the peninsula, that the first overland party of the Portolá-Serra expedition left for Alta California on March 24, 1769.



A “spotted raven” (left) and a vulture—a “useful bird that eats all kinds of dirty stuff and carcasses”

Ocio in 1747 took on the formidable task of establishing the silver mining community of Santa Ana, in the south of the peninsula, inland from the gulf. He brought together a collection of diverse people—sailors, adventurers, and cowboys, including Indians, Spaniards, and mestizos—from the mainland, since he was forbidden to use local Indians. Unfortunately, the town lacked ev-



Indians who have killed a deer prepare it for roasting.

Father Junípero Serra would become the founder of the Franciscan mission effort in Alta California. Since the missions had to be self-sustaining—and the land in the north had a Mediterranean climate, fertile soil, and sources of water—seeds and cuttings were initially taken from the former Jesuit missions in Baja and transported northward. In a more hospitable environment, European plants thrived. Their introduction not only altered the Native American diet, but also established a beachhead for the development of the commercial agriculture for which the State of California is so famous.

In Baja California, with the decline of the native population and the eventual termination of the missions, local families took over mission property and developed cattle ranches, even in the most remote locations—in many cases utilizing mission buildings and gardens for their own use. As a result, the agricultural legacy brought by the Jesuits continues through these new farmers and cattlemen. Throughout the peninsula, farms large and small, modern and traditional, flourish alongside each other. Modern vineyards and wineries have developed, as have fruit orchards. Many of the plants are the descendants of the mission crops. In a number of locations, residents still use the irrigation system created by the missionaries.

When the Jesuits left in 1768, there were 482 neo-

phytes at the San Javier mission. They became the responsibility of the Franciscans and later the Dominicans. The number of Indians there dwindled to 212 in 1771, to 103 in 1800, and by 1813 the mission was deserted, as none of them survived. Today the mission building is maintained by the National Institute of Anthropology and History, and its imposing stone church serves the local village and surrounding ranch community when a priest is available for Mass. Annually on December 3, the feast of St. Francis Xavier, people from the area visit Mission San Javier for a grand fiesta.



Russell M. Magnaghi began investigating the roots and heritage of Jesuit missions in Baja California as part of a broad academic interest in the history of the Americas, Latin American Indians, and regional history. He teaches history at Northern Michigan University, where he is a professor and the Director of the Center for Upper Peninsula Studies. In 2005, he was awarded the Charles Follo History Award, presented each year to an individual who has made an outstanding contribution to the preservation and promotion of Michigan's Upper Peninsula history.