

LAND OF THE KWAPA

This pectoral, used by both men and women for traditional Kwapa festivities, is made of hand-strung chaguiras beads in ceremonial colors and shells from the Upper Gulf of California.

“The Kwapa people are the river. Our whole life was based on the river. By that I mean our food, shelter and beliefs, since before the arrival of the Spaniards. When you take the river, the trees and the woods away, I have no identity. I have nowhere to go. If the river stops flowing, we will no longer exist.”

—Colin Soto, tribal elder, Somerton, AZ

INTRODUCTION

These maps are the result of a participatory process involving the three Kwapa communities of Somerton, Arizona, El Mayor, Baja California and Pozas de Arvizu, Sonora, as well as mapping experts from INEGI (Instituto Nacional de Estadística y Geografía), and anthropologists from the University of Baja California and the university museum's Cultural Investigations Center. The goal of these maps is to promote conservation, understanding of and respect for the indigenous landscape – both real and imaginary – as well as to build and increase the institutional capacity of the Kwapa to protect and promote their natural and cultural heritage.

The ethno-cartography mapping process included workshops that reviewed the history of the Kwapa tribe since the first contact with Spanish explorers in the 16th century and the history of mapping of the region, and identified key natural and cultural features of the Kwapa landscape. These workshops were followed by field visits to sites near the community of El Mayor, including the traditional Kwapa cemetery, ancient mortars in the rock, the rock window where adolescent boys were initiated in the use of bows and arrows, mountains important in Kwapa mythology, ancient trails over the Sierra Cucapá, and a biznaga cactus garden where the Kwapa collected buds to incorporate them into traditional recipes. Site coordinates were recorded using a GPS unit for precise placement on the map. The mapping team also surveyed the region from the air, making it possible to appreciate, for the first time, how the identified features fit together in the Kwapa landscape.



Top: The mapping team included members of the three Kwapa communities, INEGI cartographers, an historian and Sonoran Institute staff.
Bottom: Angel Pesado and Nicolas Wilson (Pozas de Arvizu), Inocencia Gonzales Saiz (El Mayor) and Joaquin Marrieta (Sonoran Institute) pose after flying over the Delta.

IMPORTANCE OF THE REGION

The Colorado River Delta, which only a hundred years ago was one of the greatest desert estuaries in the world, covering more than 3,000 square miles – twice the size of Rhode Island – has shrunk by more than 90% due to dams and diversions upstream. Today, it is sustained by a trickle from improbable sources: agricultural return flows from southwestern Arizona and the Mexicali Valley, effluent from the cities of Mexicali and San Luis Rio Colorado, and seepage from the All American Canal, which runs along the border. The river itself rarely reaches the Gulf of California.

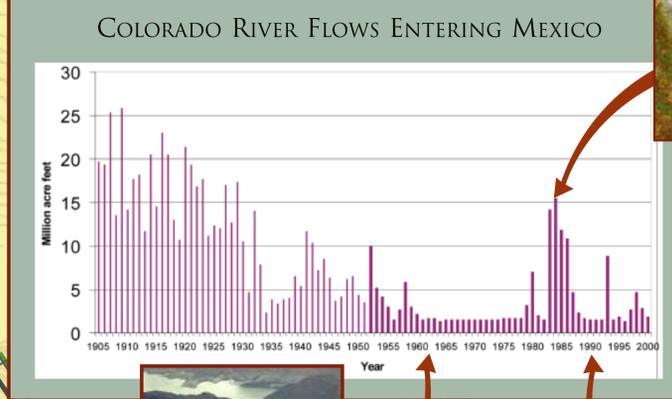
As a vital nesting and feeding area for more than 380 species of birds, including the bald eagle and the largest known population of the endangered Yuma clapper rail, the Delta remains a crucial link in the Pacific Flyway. More than 350,000 shorebirds, representing over 50% of all bird species in North America, use it annually for shelter and feeding. The Delta is also crucial to the cultural survival of indigenous communities on both sides of the border, particularly the Kwapa (known as the Cocopah in the U.S. and the Cucapá in Mexico). Their way of life has been seriously impacted by the disappearance of region's riparian habitats; the communities' social fabric would almost certainly disintegrate if the Delta's remaining wetlands were to vanish.

In its diminished state, the Delta continues to exist in Mexico today primarily because of leaks and other inefficiencies in the water delivery system, which have enabled modest restoration efforts undertaken by environmental organizations in partnership with local communities and Mexican government agencies. Paradoxically, the ongoing drought and the desire for increased water efficiency in the system may be creating an opening for action on both sides of the border. Preliminary research shows that relatively modest amounts of water could ensure the protection and restoration of key conservation priorities in the Delta and this could be accomplished at a fraction of the cost of restoration efforts elsewhere along the Colorado.

The ultimate goal is to develop an 80,000-acre functional riparian corridor from Morelos dam to the Rio Hardy. A key to success is the acquisition of base instream flows and pulse flows for environmental purposes. Restoration in the Delta will bring a number of ecological, economic and social benefits. These include increased riparian and marsh wetland habitat for migratory and resident birds, including waterfowl, pheasant, dove, and quail; resurgence of Kwapa culture and traditions, based on its enduring connection to the river; increased revenues from tourism, currently estimated at \$300,000 per year along the Rio Hardy alone; increased hunting and fishing opportunities in the Mexicali Valley, currently valued at \$1.2 million; increased social cohesion for the region's smaller towns and ejidos; and greater recreational opportunities for the region's more than 1 million residents. Freshwater flows into the Gulf of California could have the added benefit of revitalizing nurseries in the Upper Gulf of California, on which a highly productive fishing industry depends.



A leak from a nearby canal forms a small trickle in the dry Colorado River bed below San Luis Rio Colorado.



Lake Powell, which formed behind Glen Canyon Dam after its completion in 1964, is now only half full due to the drought that began in 2000.



By 1990, the Delta had dried up once again.

United States: Imperial, Seeley, Holtville, Heber, Calexico, El Centro, Yuma, Somerton, Gadsden, San Luis, Pozas de Arvizu, San Luis Rio Colorado, Colonia Carranza, Colonias Nuevas/Luis B. Sanchez, Ejido Durango, El Faro, Manantiales, Pozos, Cerro Prieto, Geothermal Plant, Cerro de la Puntilla, Las Tinajas, Cerro El Centinela, Laguna Salada, Cerro Prieto, Mina de Yeso, Agua de las Mujeres, Pozo Salado, Campo de biznagas, Cañon de David, Cola del Diablo, Camino del Azufre, Panteon, Cerro Adelaida, Isla Lulu, Isla Tacon, Moreros, El Mayor, Cerro del Mortero, Cerro El Aguila, Laguna de las Tinajas, Cerro del Vestido, Cerro de la Garza, Pozo El Coyote, Rancho Los Chinos, Cerro Pinto, Cuerpo de la Ballena, Sierra Las Pintas, Isla Montague, Isla El Pelicano, El Golfo de Santa Clara.

Mexico: Mexicali, Yuma, Somerton, Gadsden, San Luis, Pozas de Arvizu, San Luis Rio Colorado, Colonia Carranza, Colonias Nuevas/Luis B. Sanchez, Ejido Durango, El Faro, Manantiales, Pozos, Cerro Prieto, Geothermal Plant, Cerro de la Puntilla, Las Tinajas, Cerro El Centinela, Laguna Salada, Cerro Prieto, Mina de Yeso, Agua de las Mujeres, Pozo Salado, Campo de biznagas, Cañon de David, Cola del Diablo, Camino del Azufre, Panteon, Cerro Adelaida, Isla Lulu, Isla Tacon, Moreros, El Mayor, Cerro del Mortero, Cerro El Aguila, Laguna de las Tinajas, Cerro del Vestido, Cerro de la Garza, Pozo El Coyote, Rancho Los Chinos, Cerro Pinto, Cuerpo de la Ballena, Sierra Las Pintas, Isla Montague, Isla El Pelicano, El Golfo de Santa Clara.

Geographical Features: Sierra Cucapá, Rio Colorado, Rio Hardy, Biosphere Reserve, Laguna Salada, Cerro Prieto, Cerro de la Puntilla, Cerro El Centinela, Cerro del Mortero, Cerro El Aguila, Cerro del Vestido, Cerro de la Garza, Cerro Pinto, Cerro de la Ballena, Sierra Las Pintas, Isla Montague, Isla El Pelicano, El Golfo de Santa Clara.

Infrastructure: Highway 8, Highway 2, Highway 5, Major Roads, Railroads, Canals.

Other: Agricultural fields, Biznaga cactus buds, Ancient mortars, Burials, Large areas of the Delta were flooded in 1984.

Map Legend:
 - Streams & Water Bodies (Blue line)
 - Alluvial Plain (Light yellow)
 - Urban Areas (Grey)
 - Major Roads (Black line)
 - Railroads (Black line with cross-ticks)
 - Canals (Blue dashed line)
 - Biosphere Reserve (Green dashed line)

Scale:
 0 2.5 5 Miles
 0 2.5 5 Kilometers

Inset Maps:
 - Top left: Map of the Colorado River Delta region showing California, Arizona, Sonora, and Baja California.
 - Top right: Aerial view of a river delta.
 - Middle left: Photo of a person working with cactus buds.
 - Middle right: Aerial view of agricultural fields.
 - Bottom left: Photo of ancient mortars in a rock.
 - Bottom center: Photo of a dry riverbed.
 - Bottom right: Photo of a mountain range.



HISTORY

The ancestors of the Kwapa are believed to have migrated to the Colorado River Delta region sometime between 1,000 BC and 0 AD. Archeological evidence suggests that by 700 AD, most of the Yuman-speaking people, to which linguistic family the Kwapa belong, moved further north in the Lower Basin along the river. Around 900 AD, the river flooded an area running from the Coachella Valley in southern California to Cerro Prieto in Baja California, forming Lake Cahuilla. When the lake began to dry up, just prior to the arrival of the Spaniards, the tribes living along its shores returned to the proximity of the river and forced the Kwapa to move further south to the Delta lowlands, which were likely under water at many times before 1500.

The first European to encounter the Kwapa was Hernando de Alarcón, a member of Coronado's expedition who reached the Upper Gulf of California in August 1540 and traveled up the Colorado River in two small boats. Juan de Oñate, the first governor of New Mexico, who traveled along the eastern bank of the river in 1604-05, was the first to mention them by name, using the word "Cocapa." He estimated the population to number 5,000-6,000 souls.

Later encounters with the Kwapa included those of Father Kino, Jesuit missionary to the Indians of the Pimeria Alta (1702), Franciscan Father Garcés (1771-76), and Lieutenant R.W.H. Hardy, who was commissioned to explore the Gulf of California for resources (1826) and eventually gave his name to the main Colorado tributary in the Delta, the Rio Hardy. Kwapa men served as guides to the steam-boat captains navigating through the maze of channels up to Yuma between 1852 and 1916. By the end of the 19th century, the Delta had almost become a *terra incognita* once again, unoccupied and unknown to white men.

In 1888, the Mexican government conceded nearly 900,000 acres in the Delta to General Guillermo Andrade, most of these on traditional Kwapa land. In 1905, the Colorado River Land Company, a land syndicate, began constructing an irrigation system in the Mexicali Valley using imported Chinese workers. An informal census in 1910 counted on the order of 1,200 Kwapa, roughly 200 families spread between Mexicali and Yuma. Near Colonia Lerdo, a Kwapa community was dedicated primarily to agriculture, growing corn, pumpkins, beans, melons and watermelons. In the years that followed, some families moved to the banks of the Rio Hardy while others moved to Somerton, near Yuma, AZ where the Kwapa were already established. A small community was formed in Pozas de Arvizu which, still today, is one of the three principal Kwapa communities.

In 1937, agrarian reform under President Lázaro Cárdenas transferred most of the land in the Delta, which then belonged to the Colorado River Land Company, into the hands of ejidos or agrarian communities. The Kwapa were given 5,782 acres to cultivate but lost their right to them in the following decade because they didn't tend them as written in Mexican law. The Kwapa continued raising cattle and goats and growing vegetables on land that was no longer theirs. In 1975, after years of efforts, they were given 350,000 acres in the Laguna Salada and the mountains, arid lands that cannot be cultivated.

Today, the Kwapa number only around 1,500, and most live in Somerton, AZ. The other two communities lie south of the border, along the Rio Hardy in El Mayor, Baja California, and in Pozas de Arvizu, Sonora.



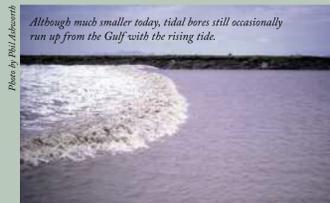
The geothermal plant near Cerro Prieto supplies much of the energy for Mexicali. According to legend, the mountain was formed by the ashes of a witch that devoured almost all of the Kwapa people.

ENERGY

The Kwapa live in a region full of earthquake, geothermal and strong tidal activity. According to myths and legends, the Cerro Prieto, now the site of a major geothermal plant that provides energy to Mexicali, is formed by the ashes of a witch who drew the people to a cave by singing and dancing before killing and eating them. A courageous young man, one of the last remaining members of the tribe, shot her with an arrow and her body was then cremated, freeing an owl who took off flying.

When the Colorado River used to flow freely into the Gulf of California, the collision of the outgoing river and the incoming sea water during high tides would create a wall of water almost 20 feet high. The tidal bore, known as "El Burro," migrated with the tides and caused havoc in its wake. In 1922, not long after Aldo Leopold visited the region, El Burro killed 85 people when it rolled the 36-ton steamer Topolobampo. According to longtime residents of the region, its rumble could be heard for miles around until the early 1960s. Today, the tidal bore has disappeared and the river itself only reaches the sea in the wettest of years.

“On the map the Delta was bisected by the river, but in fact the river was nowhere and everywhere, for it could not decide which of a hundred green lagoons offered the most pleasant and least speedy path to the Gulf. So it traveled them all, and so did we.”



Although much smaller today, tidal bores still occasionally run up from the Gulf with the rising tide.

—Aldo Leopold, who canoed through the Delta for three weeks in 1922 with his brother



This guide was created by the Kwapa mapping team and the Sonoran Institute and made possible through the generous support of The Christensen Fund. We wish to thank members of the mapping team for their invaluable contributions: Colin Soto of Somerton, Arizona; Nicolas Wilson, Alonso Pezado and Angel Pezado of Pozas de Arvizu, Sonora; Inocencia Gonzales Saiz and Antonia Torres Gonzales of El Mayor, Baja California. The following also worked with the team: Daniel Otero Palafox, Efrén Vera Rocha, and Rodolfo Payán Ortega of INEGI (Instituto Nacional de Estadística y Geografía); historian Yolanda Sánchez Ogas; and UABC Museum researcher Alberto Tapia Landeras. Our heartfelt thanks to Bruce Gordon, Founder and President of EcoFlight, who allowed us to see this magnificent region from a completely different angle.

— Joaquín Murrieta-Saldivar and Mark Lellouh



Above: Floodwaters from the Rio Hardy nearly reached El Mayor in 1983. Below: 25 years later, the river, fed by agricultural return water, flows at a distance.



Kwapa fishing boats catch up to two tons of corvina in their nets near the mouth of the Colorado River.



FISHING



Juan Portillo Laguna fixes a fishing net.

For centuries, the Kwapa fished in the myriad waterways and wetlands that crisscrossed and dotted the Delta, using nets and traps made of willow to catch fresh and brackish water fish. Starting in the 1930s, the construction of Hoover Dam and filling of Lake Mead reduced the Colorado River flows to the Delta by more than half. From 1964 to 1981, when Lake Powell was filling up behind newly built Glen Canyon Dam, virtually no fresh water reached the region, and it dried up into oblivion. By the late 1970s, only a few Kwapa were still eking out a living along the Rio Hardy, a tributary to the Colorado fed by agricultural return water, or in the valley's canals.

Beginning in 1979, large amounts of water were released down the Colorado River due to exceptionally wet El Niño winters. These waters brought back to life a portion of the formerly defunct Delta and also filled Laguna Salada (a.k.a. Laguna Macuata), a below sea level depression that fills with Colorado River water during very wet years, forming a lake 40 miles long. Along its shore, small commercial fishing operations sprang up, including the first fishing cooperative. Mullet, mojarra, big-mouthed bass, carp and shrimp were plentiful – 165 lbs of shrimp for some boats in a single night! Fishing continued until the late 1980s when the lake dried up.

In the late 1980s, the Kwapa began looking for other places to fish commercially, and with the opportunities drying up elsewhere, turned their attention to the southernmost portions of the river where seawater mixes with whatever freshwater is present. Fishing camps were established in areas known as La Bocana and El Zanjón. Floods in 1992-93 brought plentiful corvina with the tides, a species which had been presumed extinct. In order to protect it and the totoaba, the Mexican government created the Biosphere Reserve of the Upper Gulf of California and Colorado River Delta, creating a no-take area in the Reserve's nuclear zone and a imposing temporal prohibition to allow the corvina to spawn.

These fishing restrictions are in direct conflict with the Kwapa's now larger commercial practices, creating an impasse that pits traditional indigenous rights against modern environmental laws. The Kwapa claim that the government is trampling upon their traditional rights and that the timing of the fishing prohibition doesn't even make sense; the government retorts that the Kwapa didn't traditionally fish in this area of the Delta, that, in any case, the law must apply equally to all citizens, and that anyone is welcome to fish in the nuclear zone if it's for their personal consumption only.

The vast majority of corvina fishermen are based in El Golfo de Santa Clara and the Kwapa catch represents only an estimated 5-10% of the total. A solution that protects both ecologically sensitive areas and traditional rights should not be impossible to find if the Kwapa and the Reserve enter into a real dialogue.



Antonia and Martin Torres spent nearly a decade fishing in the waters of Laguna Salada in the wet 1980s.



This map, dated 1777, is the first to mention the Kwapa by name – "Cucapa", as they are known in Mexico.

ADAPTATION TO MODERN LIFE



Kwapa children pass a typical house in El Mayor at dusk.



Tribal elder Colin Soto has been a guiding force behind much of the restoration along the river in the Limitrophe region.

Before the Delta began to dry up after the construction of Hoover Dam in the 1930s and especially after the building of Glen Canyon Dam in the 1960s, the semi-nomadic Kwapa lived very close to the land – and to the water. In those days, there were plentiful beavers, foxes, raccoons, coyotes and big cats, such as bobcats, jaguars and pumas. The elders speak of gigantic flocks of green and blue-winged teals that nearly obscured the skies during the spring and fall migrations. Families raised goats and even cattle, grew corn, pumpkins and beans on small plots, or harvested wild wheat near the river. Anywhere one put in a line or a net, it was easy to catch fish. While some Kwapa had already migrated to Mexicali, many maintained a traditional lifestyle.

But times have changed, and the Kwapa have had to adapt to modern life in many ways. In Somerton and Pozas de Arvizu, much of the land owned by the tribe is leased to other farmers. The Cocopah casino in Somerton brings in much needed revenue and employs some 40 tribal members. Making a living in El Mayor, where the official unemployment rate stands at 37%, is not easy. During the spring, the Kwapa fish corvina in the Upper Gulf. The rest of the year, they will look for seasonal work in the tourist camps along the Rio Hardy, in the wheat, cotton, green onion and other fields of the Mexicali Valley, and in the maquiladoras on the craft of chaquira and sell their intricate bead jewelry at the museum in El Mayor, through stores in Mexicali, and at area fairs. Most families in El Mayor live on less than \$200 per month.

Border security is an issue in the Limitrophe region near Somerton. The Kwapa have cleared more than 60 acres along the river congested with dense thickets of vegetation, facilitating the work of the Border Patrol and Cocopah Police in protecting the border. Riparian restoration is taking place on another 75 acres where invasive plant species, such as salt cedar, are being replaced by native willows and cottonwoods, a pond and walking paths. In Mexico, the Kwapa have been active participants in restoration efforts along the Rio Hardy as well as the mainstem of the Colorado River.



Inocencia Gonzales Saiz gathers willow bark...



... to make traditional skirts.



Doña Inocencia, a Kwapa elder and accomplished craftswoman, is one of the pillars of the community. She and her daughter Antonia turned to caring for the museum in El Mayor after Laguna Salada dried up in the 1990s.

CULTURAL EXPRESSIONS

The Kwapa traditionally wore willow bark skirts, body and face paint, and bead jewelry known as "chaquira," originally made of earth and glass and now made of colorful plastic, to form intricate necklaces, bracelets, earrings and large pectorals, the latter of which were used mainly for ceremonies. Working with Kwapa elders, anthropologist Anita Williams helped to revive the tradition in the early 1970s and now all three Kwapa communities sell chaquira pieces at fairs and festivals on both sides of the border. The traditional colors were blue, white and red, but now artisans use a wide variety of colors. In recent years, women in El Mayor have begun integrating locally available materials, such as willow, arrowweed and salt cedar into their jewelry.

TRADITIONAL CHANTS

Creation
In the beginning there were two beings who emerged from the depths of the earth.

One created light and human beings; the other was the destroyer.

My Land
This land is mine, it is our land.

The land on the river banks was mine a long time ago, when Indians were Indians, when Indians came and went as they pleased.

The Rattle Sings
The rattle sings, sings, sings.

In winter and in summer, it sings, it sings.

To the coyote in the moon, it sings, it sings.

Transcribed by Yolanda Sánchez Ogas.



Ancient Kwapa artifacts adorn a display at the University Museum in Mexicali.



A young dancer wears a traditional willow bark skirt and a ceremonial chaquira beadedwork pectoral.



Kwapa girls dance at a special celebration in El Mayor.



Ricardo Sandoval, one of the earlier chaquira craftsmen, works on a necklace.



The Annual Kwapa Festival brings together the three communities and celebrates Kwapa culture with traditional chants, dancing and food.



Guards dry in front of a simple dwelling in Pozas de Arvizu. Made into rattles, they accompany traditional chants and dancing.



The Cocopah Casino has helped to raise the standard of living in Somerton.



Kwapa craftsmen sell their chaquira jewelry in El Mayor.

