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A LOG OF THE VERDE

The "Taming" of an Arizona River

by
James W. Byrkit

THE VERDE RIVER is the only perennial waterway remaining in Arizona. Though its flow is puny in many places, it is never dry. It drains more than 6600 square miles of Arizona's high Colorado Plateau and mid-level river basin region and records show that over an eighty-eight-year period of time it discharged 657 cubic feet per second near its mouth, making it second only to the Salt in annual intra-Arizona drainage. For many thousands of years its waters, a critical source of food, drink and shelter, have been a magnet for all animals, man included. Prehistoric people channeled the water to grow irrigated crops. Modern newcomers felt that they could do the same. And so they set about transforming nature by "taming" the "raging" floods and by "harnessing" the "fitful" streams and rivers, forgetting that Nature did not design Arizona to support farms and fountains, cities and subdivisions, smelters and swimming pools.

"God enriches," says the motto of the State of Arizona, but thanks to such rivers, Arizonans have enriched themselves through exploitation and "management" of an erratic and unruly water supply. By killing the Gila and harnessing the Salt and taming the Verde, the lower desert has been conquered - for the time being, anyway. Senator Barry Goldwater,

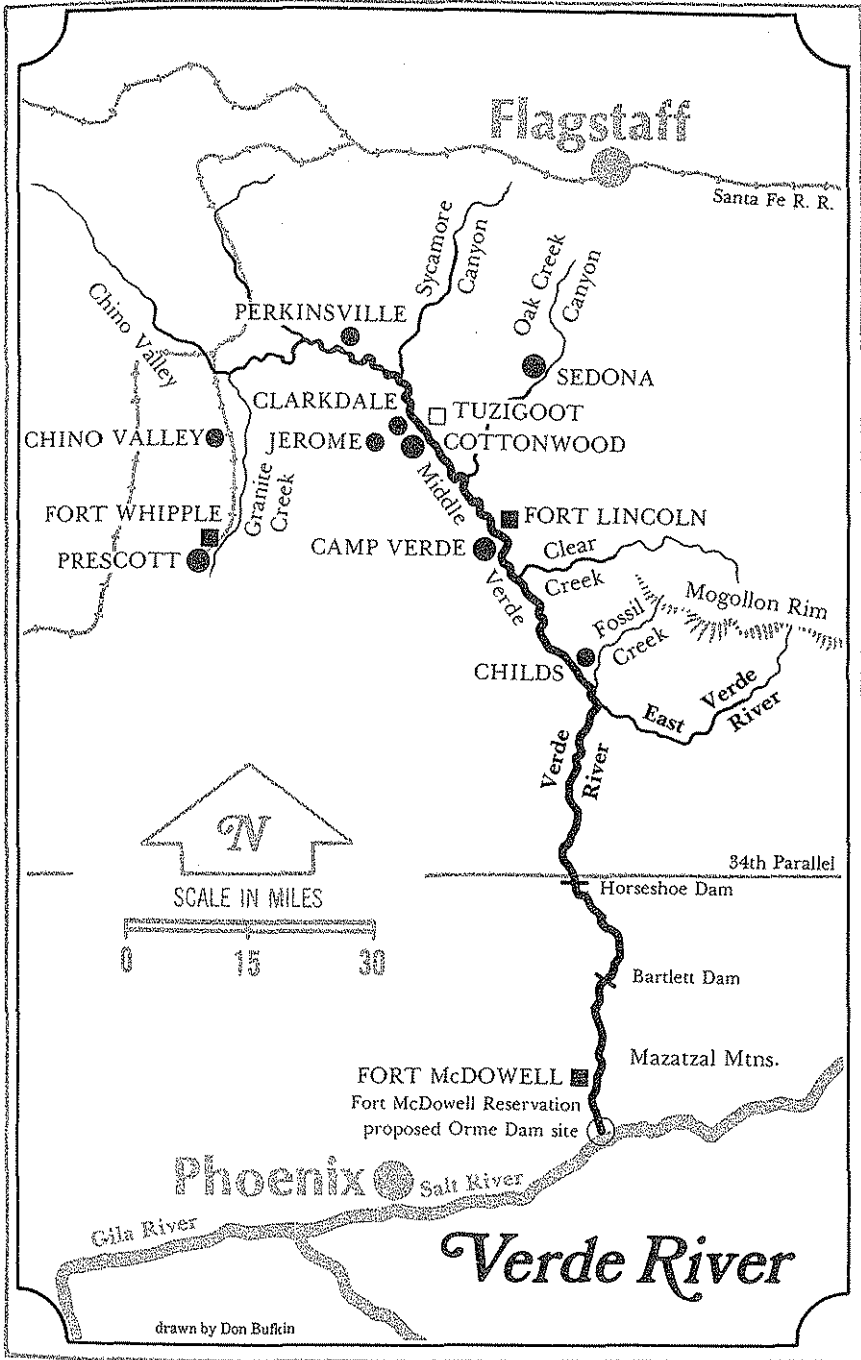
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a fervid supporter of the Central Arizona Project, has warned that "at least five civilizations have lived in this area and they all disappeared because of a lack of water." He argues that Arizona's future depends on developing more water availability. Perhaps he would find a better explanation for these failures if he would listen to the words of Major John Wesley Powell who said simply, more than a hundred years ago: "There is not sufficient water to supply these lands."

People have been living along the Verde for around five or six thousand years. Two miles south of Clarkdale, on a long limestone ridge that rises 120 feet above the river, is Tuzigoot, the remains of a prehistoric town built by Indians who farmed the rich bottom land more than 800 years ago. Hundreds of such sites can be found all along the river. About 800 A. D., however, the population was becoming very large. Improvements in food production had enabled the area to support a larger population. New varieties of corn as well as new irrigation techniques were developed. Outsiders were attracted to the river: the Hohokam from the Gila and Salt River Valleys moved up from the lower Verde; later (about 1125) the Sinagua people from the Colorado Plateau to the north moved down.

Then during the thirteenth century the Southwest experienced a disastrous drought. Indians from areas with no waterways flocked to the Verde Valley. Tuzigoot quadrupled its population in less than twenty-five years. In the 1400s this and other similar pueblos were abandoned. The cause is not clear; overpopulation with its attendant economic imbalance and susceptibility to epidemics is the explanation archaeologists offer most often. When the Spaniards arrived, Tuzigoot was in ruins and a modern Indian tribe, the Yavapai-Apaches, were living in thatch-roofed huts in the Verde Valley. The 19th century French-American guide Antoine Leroux recorded other ruins similar to Tuzigoot when he came through the region in May, 1854.

White men entered this valley in 1583, twenty-four years before the English settled Jamestown. Antonio de Espejo, who had heard of fabulous mineral deposits here, was guided by Indians from the Hopi mesas across the Colorado Plateau and down the eastern side of the Verde Valley — then marched up the river, which he named El Rio de los Reyes (the River of



Kings), to a site reported to him by his guides. Centuries later this place would become Jerome, the now defunct mining camp perched on the eastern side of the Black Hills overlooking the river. In 1598 Marcos Farfán de los Godos followed a similar route to the Jerome site.

One of the Southwest's most famous lost-mine legends has its locale fixed somewhere on the Verde five to ten miles east of present-day Perkinsville. A rich gold vein, the story says, was discovered by the Apaches in an arroyo leading down to the river. In 1765, or thereabouts, Spanish soldiers seized the mine, drove the tunnel deeper into the mountainside and encountered ore so rich that it could be smelted without milling. The Apaches harrassed them, however, killing them one by one until only two Spaniards survived. They managed to escape, leaving their bullion stacked in the tunnel, and returned to Tubac to tell their story.

Further activity at the fabulous mine was prevented by the 1767 edict of King Charles III, curtailing Spanish activities in the New World. The two miners, however, had left a map which located the shaft. Numerous search parties combed the area but it has not yet been rediscovered. Pearl Turner, for many years a conductor on the Santa Fe line along the Verde, believed that the lode was in a ravine that ran south to north from Mormon Pocket tank through the Antelope Hills to the south side of the river eight miles east of Perkinsville.

When, a few decades later, the Americans marched in, the Verde Valley's appeal as an oasis in a forbidding desert made it a focal point in frontier history. In February of 1826 the famous frontier trapper, scout and mountain man James Ohio Pattie led a party, which included trapper Ewing Young, up the Salt River from its confluence with the Gila, which Pattie called the "Hee-lay." When it reached the mouth of the Verde, about twenty-five miles east of the modern city of Phoenix, the party split. Pattie led one group on up toward the headwaters of the Salt while the remainder of the expedition ascended the Verde (which was called the "San Francisco River" at the time) to its source.

These men, apparently, were the first United States citizens to explore the river. Moving along the desert floor for only a few miles, they followed the stream through the mountains up

the lower Verde past such tributaries as the East Verde and Fossil Creek. Continuing northward, they made their way through the waterway's rugged middle chasm which separates the two main regions of the river – the Upper and the Lower Verde. Emerging from the north end of the chasm, they came to the large, flat and lush Verde Valley. Along the base of the Black Hills, past the sites where Camp Verde, Cottonwood and Jerome would be founded within forty years, they journeyed onward to the river's head. From this point they could see in three directions the snow-covered mountains of northern Arizona's high country which they decided, correctly, were the source of the river's water. They then returned to the Salt to reunite with the rest of the party.

Three years later, Ewing Young returned via the Gila to trap the Verde. He made his way upstream to Chino Valley at the river's origin and then headed north and west to California. In his company was the young Kit Carson, not yet twenty years old, experiencing his first major trapping expedition.

Following the 1848 Treaty of Guadalupe Hidalgo the United States Army participated in America's effort to discover a suitable overland route to California. In this pursuit Captain Lorenzo Sitgreaves, following in general the 35th Parallel, crossed Arizona north of the Verde River in 1851. Two years later he was followed by Lt. Amiel Weeks Whipple, who was attempting to locate a railroad route. Whipple scouted the juniper-covered Verde drainage area southwest of Bill Williams Mountain which he called the "Black Forest" and, from atop the westernmost extent of the Mogollon Rim, eyed the green valley admiringly.

And so, outside Santa Fe in November, 1863, United States officials, members of a party on their way to Arizona to establish a territorial government, decided to locate a fort in the fertile "Val de Chine" – Chino Valley – at the source of the Verde River as the site of the new Territory's seat of government. They named it in honor of Whipple. Mining activities at nearby Prescott had only recently erupted and Tucson, the only other community of any size in the territory, was considered to be dangerously pro-Confederate and pro-Mexican. Besides, Easterners found the grass lands and great springs in Chino Valley more familiar and attractive than the desert to the south. On

December 23, 1863, Major Edward B. Willis set up camp at Del Rio Springs, the Verde's year-round headwater source. Newly appointed Governor John N. Goodwin and his party arrived at the Del Rio Springs Camp on January 22, 1864. Four months later the fort was moved to its present-day setting on Granite Creek (a tributary, when it flows, of the Verde) twenty-five miles to the southwest.

Today Del Rio Springs is a ranching community. A dam holds the springs' discharge to create Sullivan Lake and provide water for the local stock. But enough still flows over to become the incipient Verde. And here, at 4348 feet elevation, the Arizona high-country water begins its journey toward the Salt River Valley, dropping 3008 feet to the river's mouth — to irrigate farms and suburban lawns and to provide the multiplying Valley of the Sun residents with drinking water, midwestern landscapes and Big Surf.

Such tributaries as Big Chino Wash and Williamson Valley Wash, which drain the Juniper Mountains, the Black Hills and the Santa Maria Mountains, periodically add their own contribution to the Verde. From Sullivan Lake the stream meanders eastward for about thirty-five miles, then abruptly turns south toward its confluence with the Salt. In this region Bear Canyon, Wildcat Draw, Rattlesnake Canyon and Hell Canyon drain the Verde watershed, which includes places with such telling names as Buzzard Knoll, Deadman Pocket, Lonesome Pocket and Secret Pocket. Certain others testify, in their own way, to the determination needed for men to penetrate the area: Mormon Pocket, Government Canyon, Bandit Tank.

In its first few miles the Verde drops down into a narrow cut, sharing the canyon floor with occasional sandbars and a ranch or two as it winds eastward. Except for the 500-kilovolt Arizona Public Service transmission facility from the Navajo generating plant at Page to Sun City that sweeps down from the north and across the river, the land has not changed in the past 100 years. Twenty miles from Sullivan Lake the Verde approaches a spur line of the Santa Fe Railroad, which can be seen coming down out of a draw from the north as it makes its way from Drake, on the Santa Fe Ash Fork-Prescott-Phoenix branch line, across Whipple's "Black Forest" to the more congenial topography of the Verde River bed. The goal is Clark-

dale, in the Verde Valley, another twenty-five miles downstream.

Since early Territorial days, railroads have played an important part in man's assault on the Verde and its environs. Railroading on the Verde Valley side of the Black Hills centered on Jerome, but the camp's location on a thirty-degree slope, 2000 feet above the 3300 foot valley floor, created a hauling problem. As early as 1880 Dr. James A. Douglas, who was to build the Phelps Dodge Corporation into a copper-producing giant, had looked at the rich mineral resources at Jerome but he decided that the ruggedness of the terrain and the long distance from a market made the development of a mine there prohibitive. The celebrated Montana copper king, William Andrews Clark, looked at the property in 1888, however, and decided to build a narrow-gauge railroad parallel to and about seven miles south of the Verde River, crossing the Black Hills to Jerome. The United Verde and Pacific ran for twenty-six miles on a course as winding as the river. The route had 126 curves which prompted people to call it "the crookedest line in the world." The first train ran to Jerome on January 24, 1895. In 1911 the Santa Fe built the standard-gauge railroad from Drake to Clarkdale that follows the established and excursion-quality scenic course of the Verde. Clark's narrow-gauge UV & P was abandoned in January, 1920.

There are three Sycamore Canyons or Creeks which abut the Verde River. The most spectacular is the one that opens from the north onto the Verde thirty-five miles downstream from Sullivan Lake. From its mouth north to its head, Sycamore Canyon winds for twenty miles and spreads as much as seven miles from side to side. Some points along the rim are nearly 7000 feet high. The deep cut which, like Oak Creek Canyon or the Grand Canyon, is the result of the Colorado Plateau Uplift, provides a variety of ecological associations and geological formations. Spectacular yet confined, the place has become a geologists' and biologists' classroom. No vehicles have as yet travelled Sycamore Basin. In 1935 the Department of Agriculture designated the canyon a primitive area. In 1972, it was classified as a wilderness of 47,762 acres.

One of America's truly remote regions, Sycamore lies within the Coconino, Kaibab and Prescott National Forests and

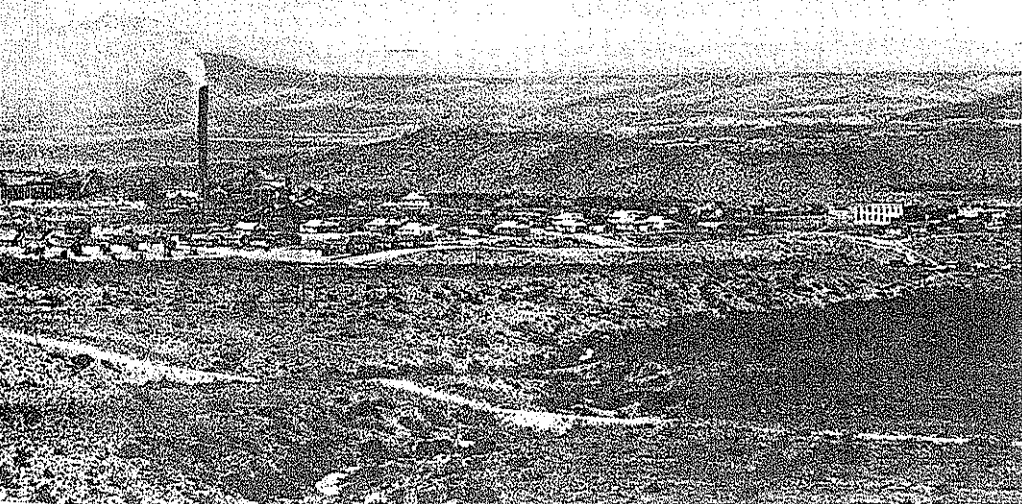
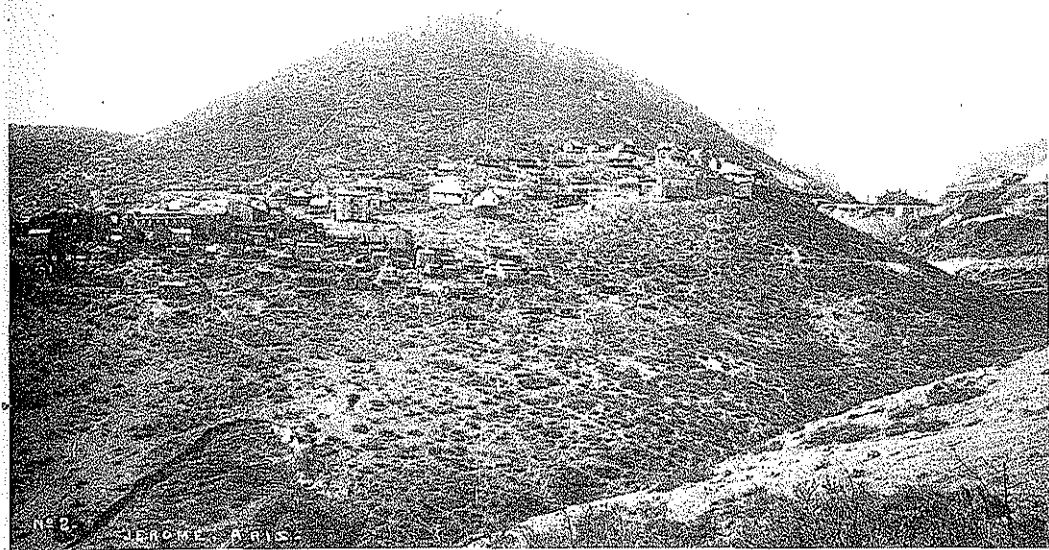
attracts an increasing number of people. Hikers, hunters and nature lovers alike have descended on it, leaving their litter and graffiti and burning campfires. As a consequence, the Forest Service has created a "management plan" in an attempt to preserve its wilderness traits. Public use of the area will be discouraged, an entry permit system is to be initiated and stock grazing will be curtailed. Eventually camping and picnicking will be restricted or prohibited.

This management plan has brought another outcry from the public. People want to use such places as they see fit; Arizonans don't want the government telling them how they can use public lands. Several meetings have been held by the Forest Service to gauge popular feelings and people have expressed overwhelming objections to the wilderness plan. Eventually popular sentiment will prevail, no doubt. At best, Sycamore will become a curiosity, an embalmed vestige of America's past. As observer Theodore Roszak has said: "In another four generations, [there will be] no wildlife or wilderness on land or sea outside protected areas and zoos."

At the mouth of Sycamore the river turns southward and breaks out into its best-known area. Here, ninety miles north of Phoenix, almost exactly in Arizona's geographical center, lies the Verde Valley. Its 3500-foot elevation, which provides a nearly ideal climate — with a touch of the seasons and the extremes of none — has attracted people for thousands of years. Where the Verde River and its tributaries such as Oak Creek and Beaver Creek flow, the country is as green as its Spanish name suggests. Natural springs abound. Water, more than anything, makes this chosen spot a refuge from the forbidding Arizona desert.

Geological evolution has been generous. The Valley, with an east-west breadth of twenty-five miles and a north-south length of forty miles, is a basin or "sink" created by the Verde Fault, which formed the Black Hills to the west, and by the Colorado Uplift, which formed the Mogollon Rim to the east. These geologic phenomena create a 7000-foot encircling barrier as well as marvelous scenic outcroppings and erosion features. There is a feeling of pleasant seclusion and natural security where the sink and its abundant water supply have created a veritable Eden for more than 10,000 years. Best of all,

A Log of the Verde



Overlooking the Verde Valley, Jerome clings to the side of Mingus Mountain before the turn of the century. The reduction works are at the right. Below, a 1925 view of Clarkdale.

for the modern refuge seeker, is the fact that unlike most of the desirable land in Arizona, a great deal of the Verde Valley is privately owned and for sale. From the mouth of Sycamore Creek, at 3550 feet, to the lower end of the Verde Valley when it enters the Verde chasm, the river drops only 620 feet as it meanders forty-nine miles along the floor. All things flourish, including the developer.

While the river appears to be losing its war with man, it has won at least one battle. Two miles below the Packard Ranch, at the confluence of the Verde and Sycamore Creek, it has cut through a volcanic bed and created what the local people call "Box Canyon." In the 1930s the U.S. Department of the Interior considered building a dam there to be called "Gittings Dam." The proposal offered two sites: one at 3490 feet, which would be 180 feet high; the other a half mile downstream at 3480 feet, also 180 feet high. Water backed up by the dam would have flooded the Verde River back seven miles to Mormon Pocket. Sycamore Canyon would have been inundated six miles back to Summers Spring. But Gittings Dam was never built and the Verde gained another reprieve.

Below Box Canyon the stream flows slowly. During run-offs it is broad and brown with silt. A substantial decrease in riparian vegetation has hastened the flow tremendously in the last hundred years. One observer, Hiram Hodge, said in 1877 that the Verde was eighty feet wide here, twice its normal width today. Ranches dot Duff Flat to the east while the Santa Fe continues to shadow the river on its west bank. Four miles south of the Packard Ranch a trestle crosses a draw coming down out of the piedmont of the Black Hills. A local story contends that when the Santa Fe was laying its track into Clarkdale in 1911, the engineers in charge, once the Verde Valley had been entered, were eager to get the job over with. When they realized another trestle was necessary, they expressed their frustration and the draw is identified on maps today by their comment: SOB Canyon.

Forty-three and a half miles from Sullivan Lake, the river curves southwest and then southeast. The edge of the black old slag dump at Clarkdale creeps into its water. Clarkdale is the most northerly town on the river. Established in 1912 as the site for a new smelter for William Andrews Clark's Jerome copper

bonanza, the place is a reminder that people did not just recently begin to blight the waterway's natural beauty. One Jerome native remembers the mining and smelting days:

Some people did garden, and the gardens did quite well unless the sulphur smoke came up. The smoke had sulphuric acid in it and burned everything, including our lungs and the paint on the houses. The trees and the gardens looked nice. Then one day of the smoke and there wouldn't be a leaf left on anything.

Even though the smelter was closed in 1953, the effects of mining and smelting can still be seen in the neighborhood. Woodchute Mountain, highest of the Black Hills, was denuded of its wood, used to stoke the furnaces and timber the tunnels. Smoke-stunted vegetation can still be seen in Sycamore Canyon and other parts of the Verde Valley. In addition, overgrazing by cattle in the late nineteenth century further helped to destroy the lushness of the area. Today the surrounding walls and a 7000-foot inversion layer make the valley a natural trap for polluted air.

Among the first settlers on the Verde to develop irrigation from the river were the four Willard brothers, cattlemen from northern Nevada, who came to Cottonwood in 1878. They heard of the fine, green valley and drove their stock to Arizona, experiencing many hardships along the way. The end of the great cattle boom in the 1880s forced them to turn to farming. Gardens, pastures and orchards flourished. They helped organize the group which built the Cottonwood Ditch, one of the biggest irrigation projects in the valley. Ironically, in a tragic accident, two of the brothers drowned in the Verde. Today descendants own the Cottonwood Waterworks, a utility which serves this rapidly growing Verde Valley area.

South of the old Willard place the river winds past ranches and farms and past a new public camping site – Dead Horse State Park. The area, once bucolic and serene, saw its first traffic light installed as recently as 1977. The signs of growth are everywhere. Subdivisions, real estate offices, mobile-home sales lots and shopping centers now command attention – not wild-life, sunsets and green stream beds. Newcomers in a quest for simplicity, solitude and a haven from the crime and tensions of the city are changing the Verde Valley from a rural, slow-paced

area into familiar suburbia. Sadly, most of the people who wish to escape the city and "get back to nature" cannot give up many of the comforts which our technological skills have made possible. These people are going to destroy the very thing they come to enjoy. The invasion threatens to spoil permanently the Valley's fragile geographic and biologic attractions.

Fifty-four miles from Sullivan Lake, at 3200 feet, is the mouth of Oak Creek, one of the Verde's most generous tributaries. Indian ruins, now vandalized to virtual invisibility, at one time were nestled in caves overlooking this confluence from the northeast. Across the Verde to the north and south, on the hills and buttes and on the flats, sit mobile and "modular" homes, more than a thousand of them, along the twenty miles of river between Cottonwood and Camp Verde.

South of Oak Creek's mouth lies Middle Verde, site of a reservation for the approximately 700 remaining members of the Yavapai-Apache Indian tribe. Occupying two riverine sites totalling 640 acres, the native people today support themselves primarily through work in the surrounding Anglo communities. Only about 150 Indians actually live on the reservation.

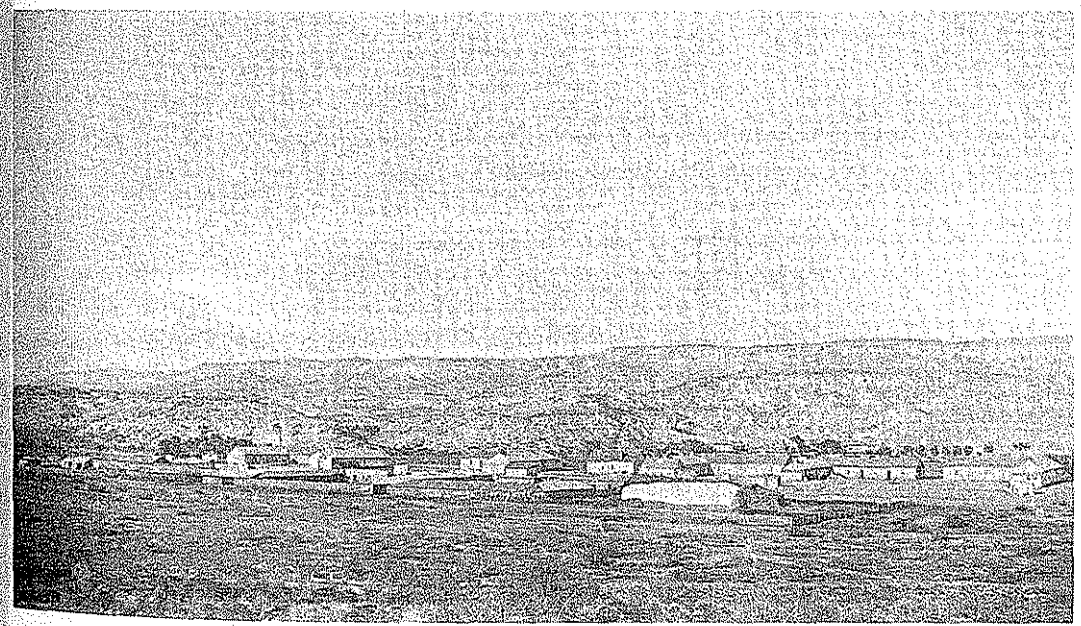
Below Middle Verde the river flows under the bridges of U.S. Interstate Highway 17 and then meets Beaver Creek, which drains the Colorado Plateau to the east, seventy miles from Sullivan Lake. At Beaver Creek's confluence lie the remains of Fort Lincoln, built in 1866 as a base for soldiers stationed there to protect the first settlers from Indian attacks. Pauline Weaver, the almost legendary mountain man and trapper, died here in his tent in 1867.

When the Beaver Creek location proved unsatisfactory, the fort was moved one mile south to a bluff on the west side of the river. This post, built between 1871 and 1873, was called Camp Verde. It served as a primary colony during this period of Arizona's development - a supply base, travel stop and staging area for the army, whose main task was to subdue Indian activity.

As Indians were captured, they were held on a reservation upstream near Cottonwood. In the winter of 1875, 1500 of these captives were forced to march to a new home on the San Carlos Indian Reservation near Globe. Cold and hunger took the lives of 200 of the marchers. After 1900 some of the survivors returned to the Verde Valley to live.

A Log of the Verde

Prehistoric ruins on Oak Creek near its junction with the Verde. Below, a panoramic photograph of Fort Verde taken in October, 1887.



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The fort's last conflict with the Indians took place in 1881 thirty-five miles east of Camp Verde at "Battleground Ridge." The army abandoned the post ten years later. Today Camp Verde is growing rapidly, a haven for people tired of urban living. Its crime rate is also growing rapidly.

The first Anglo settlers came in 1865 and settled in the valley near the mouth of Clear Creek, another of the river's perennial tributaries, three miles downstream from Camp Verde. Overlooking the settlement site is Squaw Peak, Arizona's geographic center. Seeking a longer growing season and reliable irrigation sources, James Parrish and John M. Swetnam in January of 1865 led a group of nine men from Fort Whipple to the area with the dream of supplying fresh fruits and grain to the Prescott miners and soldiers. In addition, like others in pursuit of the nineteenth-century American agrarian ideal, they hoped to develop a substantial degree of self-sufficiency. Among the first settlers were Edward A. Boblett, C. M. Ralston, Jake Ramstein and William L. Osborn. Eventually names like Casner, Wingfield, Allen, Bristow, Dickinson, Hance, Van Deren, Strahan, Thompson, Jordan, Head and Arnold joined the roster of Verde Valley pioneers.

The Camp Verde-Clear Creek area figured in the original Central Arizona Project proposal of 1944. The CAP, a massive program to bring Colorado River water to Arizona's south-central desert lands, has touched off the biggest water controversy in Arizona history. It originally included a high dam - Marble Gorge Dam - in the Grand Canyon thirty-six miles below Lee's Ferry. From that point a 139-mile tunnel was to run to the Verde River near Camp Verde carrying 3000 cubic feet per second. Using the Verde as a ditch, the CAP plan at this time included a series of dams on the river to impound and regulate the water. This idea was eventually abandoned, but the object of the proposal was to utilize the Verde River as a channel to supply the Salt River Valley.

The Clear Creek area marks the Upper Verde's southern end. Through a narrow chasm the river plunges down toward its lower region. At flood time rapids runners have had an adventure which parallels, on a modest scale, the experience found in the Grand Canyon section of the Colorado River. In

recent years several people have lost their lives in the wild and inaccessible section between Cottonwood Basin and Childs, twenty-one miles below the mouth of Clear Creek.

Childs, reached by a narrow and steep dirt road, is at 2695 feet elevation ninety-eight miles downstream from Sullivan Lake. Across the river and north about a mile lie the remains of Verde Hot Springs, once an isolated twenty-room, rustic rock-and-timber two-story lodge and spa, a popular resort built in the late 1920s which burned to the ground in 1958.

Here one can see what is perhaps one of man's less destructive assaults on nature in his attempt to use Arizona's water to his advantage. In 1897 Yavapai County cattleman Lew Turner discovered Fossil Springs in Fossil Creek, another Colorado-Plateau-draining tributary which flows east to west into the Verde three miles below Childs. The spring, located ten miles up Fossil Creek from the river, discharged 20,000 gallons of water per minute. The drop in elevation from the spring to the river was 1600 feet.

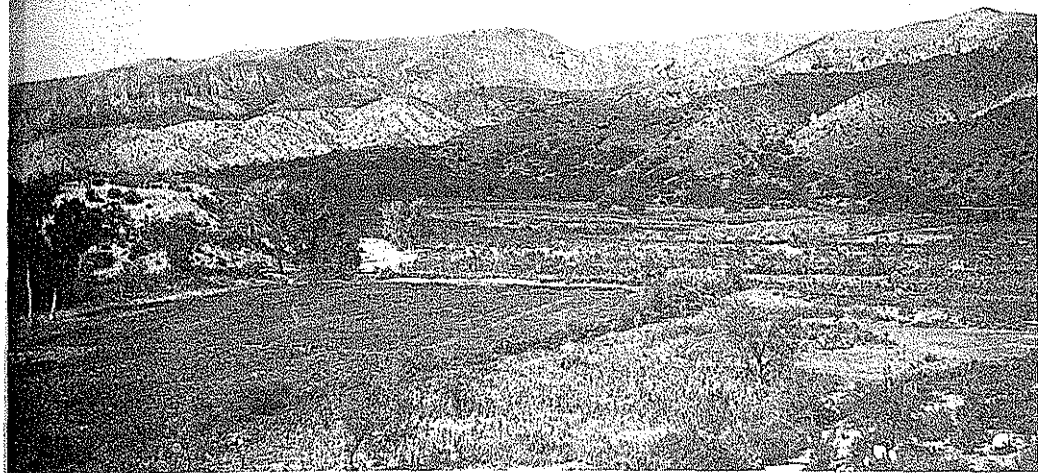
Turner noted all this plus the fact that the year-round flow tended to be steady. He sought funds to build a power plant on the Verde and in 1907 construction began. A dam was put up below the springs and the water was diverted through a flume to a man-made reservoir above Childs which was named Stehr Lake. The water then plummeted 1075 feet down through a penstock to three generators at Childs and emptied into the Verde, its original destination. By June of 1909 the Childs plant was in operation. In 1915 the Arizona Power Company, which had taken over the station, built a second plant as part of the Fossil Creek system. By the mid-1920s this wonderfully simple and efficient hydro-electric operation was providing electricity for Pine, Payson, Camp Verde, Jerome, Mayer and Prescott and seventy percent of the electricity used in Phoenix. The plants are still in operation. In 1976 the American Society of Mechanical Engineers designated the Fossil Creek operation as a National Mechanical Engineering Landmark.

In a flagrant and cruel gesture of contempt toward the Childs station a 345 kilovolt APS power line from Glen Canyon to the Phoenix metropolitan area crosses the Verde less than half a mile below the plant.

Downstream from Sullivan Lake 105 miles, the river meets its last tributary of substance. The East Verde rises in the pines under the edge of the Tonto Rim thirty-five miles to the east in the lower southwest corner of Gila County. Its normal flow has been supplemented in recent years by a unique arrangement between the Phelps Dodge Corporation and the Salt River Project. In an effort to replace water drawn off the Black River in central-eastern Arizona for its mining operations in Morenci, Phelps Dodge acquired water rights on East Clear Creek, which drains into the Little Colorado. During the winter months Phelps Dodge impounds runoff water in Blue Ridge Lake, a reservoir the copper company built for this purpose, and then pumps the water nine and a half miles over the Little Colorado-Gila River watershed divide on the Mogollon Rim and into the East Verde. This manipulation of Arizona's high-country natural drainage created a controversy at the time it was built in the early 1960s, and it still brings a troubled and indignant frown to the brows of the state's naturalists and ecologists. As in other Arizona confrontations, however, the politics of water use is controlled by those interest groups which can exercise the most power.

Between Camp Verde and the lower desert, the land is rough and isolated. Few roads or farms or ranches can be found here. Deer, mountain lion, beaver, ducks and cranes are reminders of what the Verde's more developed areas must have been like when Ewing Young and Kit Carson came up the river in 1829. A little time and effort can still bring the modern adventurer a taste of wild honey or a petroglyphic rubbing. Place names testify to the quality of human experience here: Grief Hill, Hardscrabble Mesa, Bloody Basin, Skeleton Ridge and Dead Man Creek. Some local place names, sadly, have been changed to accommodate – in what is a contradiction in this permissive age – propriety. The configuration of one hill on the west side of the Verde across from the confluence of the East Verde inspired early explorers to name it Squaw Tit. Recent USGS maps show a change, however. The place is now called Squaw Butte and some more Arizona history and color are lost.

The Verde watershed lies in a region which the Bureau of Reclamation designates in Arizona as the "Upper River Basin,"



*An early scene in the verdant Verde Valley while the river flourished.
Below, the hotel at Verde Hot Springs, 1935.*



a transition zone between the plateaus of Arizona's north and east and the state's arid southwest desert. It is through the rugged mountain ranges which separate this transition zone from the lower deserts that the lower Verde flows. These ranges are oriented, for the most part, in a north-south direction. The Verde and its intermittent sisters to the west, the Agua Fria and the Hassayampa, drain the Upper River Basin in this north to south pattern. To the east rise the Mazatzals (known to locals as the "Matzals" or "Maztals") while the west is bounded by Pine Mountain, Turret Peak, West Cedar Mountain and the McDowell Mountains.

At the East Verde confluence the mainstream turns from the south-southeast route it has followed since the mouth of Sycamore Canyon and heads in a southerly direction. Passing below the Mazatzal wilderness area and between Long Mesa and the Limestone Hills, it winds past Pete's Cabin Mesa and Mule Shoe Bend. Wet Bottom Creek then joins it. A few more meanders and it passes Tangle Creek and Sycamore Creek, skirts a hot spring, and flows under the renowned 500-foot Verde River suspension sheep bridge.

Most of the watershed and most of the Verde River itself lie within Yavapai County. From the mouth of Fossil Creek seventeen miles to the mouth of Wet Bottom Creek the river forms the boundary between Yavapai and Gila Counties. Fourteen and a half miles farther downstream, at 2000 feet elevation, it becomes Horseshoe Reservoir as it enters Maricopa County.

Horseshoe Dam, 138 miles from Sullivan Lake and at 1900 feet elevation, is another example of watershed manipulation. During World War II the Phelps Dodge Corporation built Horseshoe Dam to conserve more water for the SRP. In exchange, Phelps Dodge received a 250,000 acre-foot credit on SRP water which the copper company used for production purposes in Morenci, diverting it out of the Black River. Completed in 1945, Horseshoe is an earthfill and rockfill dam. The reservoir's capacity is 139,200 acre feet. Today Horseshoe is usually very low but still is a popular recreational area for anglers and boating enthusiasts.

Another eighteen miles downstream from Horseshoe is

Bartlett Dam. Completed in 1939, this was the first substantial obstruction to the Verde. It was built by the SRP and funded partially by the federal government, is of multiple-arch construction and has a water depth of 188½ feet. Its storage capacity is 178,000 acre feet. A short distance south, high-tension lines carrying 345 kilovolts of APS electricity from the Cholla Power Plant in northeastern Arizona to Phoenix sag across the river.

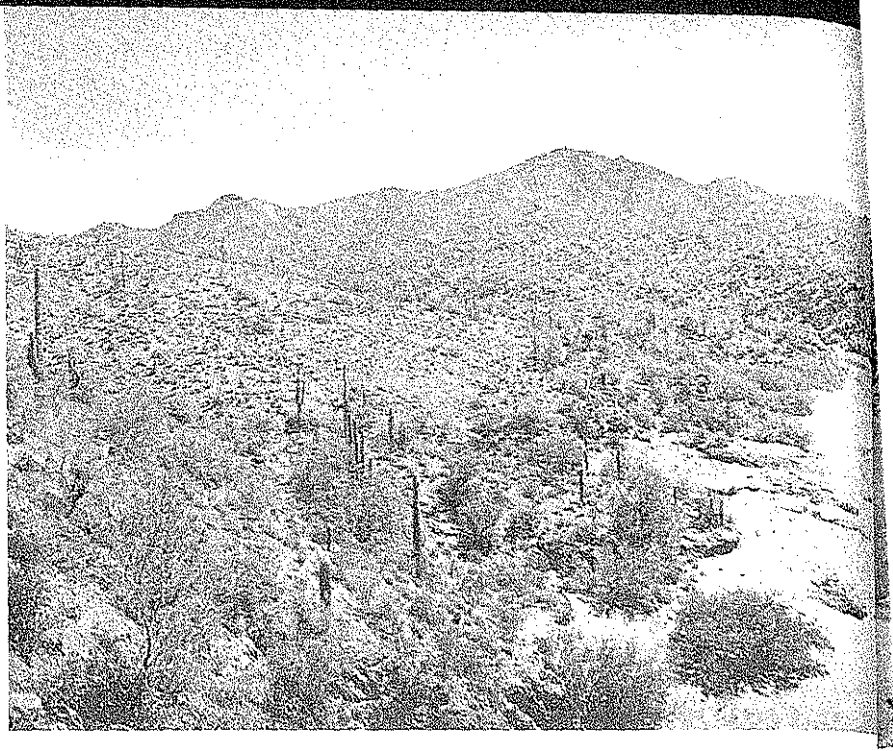
Below this point the Verde is finally out of the rugged mountain area and emerges onto the flat desert plain. The average drop from Camp Verde to Horseshoe Dam is twenty-one feet per mile, but now the river bottom is flat and even. Flow is totally regulated by Bartlett Dam and is determined by the SRP's needs and desires.

Ten miles downstream, in a north-south parallelogram four miles wide and ten miles long and extending almost to the Verde's confluence with the Salt River, is the Fort McDowell Indian Reservation, established in 1903. Here 300 members of the Mohave-Apache (Yavapai) Indian tribe live on 24,680 acres of cottonwood, cacti and mesquite-covered desert.

Fort McDowell was established as an army post on September 7, 1865, on the west bank of the river by five companies of California volunteers. Like Camp Verde, its purpose was to protect settlers in the new Arizona Territory. Salt River Valley pioneers feared an Indian attack from the mountains to the northeast. The fort, located about seven miles north of the Verde's confluence with the Salt, saw little action and was abandoned on September 18, 1890.

Today, near the reservation's inhabited area, the City of Phoenix draws water from the river through an infiltration gallery and from shallow wells to supply its domestic metropolitan needs. People in Phoenix drink water that fell in the Black Forest or in Munds Park or at Tonto Natural Bridge.

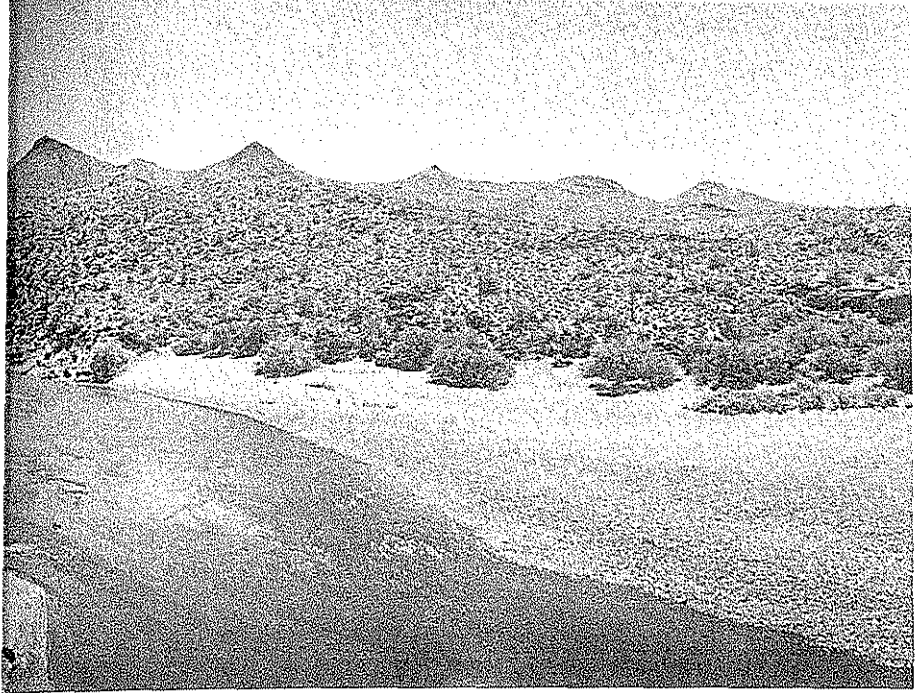
White men at the time the army abandoned Fort McDowell considered this to be undesirable desert land even though it was covered with willow, wolfberry, ironwood, salt cedar, palo verde, arrowweed, cottonwood, mesquite, and desert scrub and had a variety of cacti including prickly pear, saguaro and cholla. And so, like many other unattractive pieces of American real



estate, it was set aside for Indians. Since it was upstream from the diversion and canal system of the Salt River Project, the "McDowell Basin" had no value as potential irrigable land.

But no one ever predicted the water needs of the south-central Arizona deserts. Using the old Hohokam ditches as a model, Phoenix settlers and other Valley of the Sun pioneers built the first irrigation canal in 1868. Within twenty years more than 100,000 acres had been "reclaimed." By 1892, Arizona's "fearless dreamers" and "dedicated builders" had "pushed back the frontier" with ten canals. Today the Salt River Project, which controls all the "water rights" for this extensive project, irrigates 250,000 acres, all of them in Maricopa County. The SRP watershed totals 13,000 square miles while 138 miles of main canals distribute the water. Six storage dams have an impounding potential of 2,072,000 acre feet.

Arizonans have developed a water law that eschews the traditional European and American "riparian principle" which assigns water to lands lying adjacent to streams or through which they flow. Instead, in a way which particularly benefits such irrigation systems as the SRP, Arizona water can belong to people who live many miles from any natural waterway. Surface water rights are recognized on the basis of the "doctrine of prior appropriation," that is, a "first come, first served" or "first in



June 5, 1932: the lower Verde looking upstream toward the proposed site of Bartlett Dam.

time, first in right" concept. This principle, as interpreted over the years by the Arizona courts, has always benefitted mining and irrigated farming even though the mines and fields were oftentimes great distances from the water source. The attendant flumes, ditches, canals, and dams often provoked not only a great manipulation of Arizona's water but also a manipulation of the politics and the laws concerning the scarce resource.

Today Arizona's surface water is by law subject to appropriation, a low priority being given to wildlife and other natural usage. In addition, non-usage of water by someone with prior entitlement may constitute "abandonment," leading to a loss of an appropriated water right. Moreover, since the modern method of filing for water rights was not required by the state until the adoption of a state water code in 1919, many older irrigation systems upstream, such as those in the Verde Valley, have no clear or certain record of appropriation. These "rights," in many cases, had been established only by usage,

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often going back to the nineteenth century. On account of this uncertainty, many Verde River water users stand to lose their claims.

The demands placed on the SRP's resources are increasing constantly as the Salt River Valley's population mushrooms and its ground water shrinks. For more than thirty years desert residents have looked forward to the Central Arizona Project for relief from the ever-present threat of a water shortage. Some Salt River overflowing in the metropolitan Phoenix area has caused fear of a major flood. To provide additional flood control and to store water brought to south-central Arizona by aqueduct, the CAP master plan included a large dam exactly at the confluence of the Salt and Verde Rivers at 1340 feet elevation. Named the "Orme Dam" after one of the SRP's early developers, the structure was designed to hold 367,000 acre feet. Built with an earth-filled core and a sand, gravel and cobble fill on the outside, the dam was to be 195 feet high with a crest 5700 feet long. Its 1975 projected price was \$223,160,000. When filled, it would inundate sixty percent of the Fort McDowell Indian Reservation, including all of the inhabited area. CAP authorities scheduled construction to begin in 1978 and to be completed in five years.

As soon as the dam was authorized in 1968, numerous protests were heard. Ecologists, fishermen, "tubers" and the Indians all expressed disapproval. Geologists declared that two faults threatened the proposed dam with destruction by earthquake. Users of the Phoenix metropolitan water supply complained that the high salinity of Colorado River water would spoil the purer Verde River water they had been drinking. Wildlife lovers argued that the Southern Bald Eagle's natural habitat was imperiled.

United States Senator Edward Kennedy gave his support to the Fort McDowell tribe, warning the members that they must consider carefully the merit of flooding their reservation. The issue became a bitter controversy. Politicians, the media and numerous interest groups found in the Orme Dam another example of the white man's betrayal of the native American. Advisors to the Indians warned that no matter what setbacks to Orme Dam might appear, "history lends little credibility to

promises for the Indian." As a result the tribe began planning for recreational facilities on the Orme Dam reservoir.

In April, 1977, however, the structure as it was originally conceived was eliminated from the CAP master plan. Interested parties considered more than forty alternatives, including a smaller dam at the original site, another a short distance downstream on the Salt, a third at Tangle Creek above Horseshoe Reservoir and a proposal to increase the height of Horseshoe Dam. But these suggestions have encountered opposition too. In the meantime Verde and Salt River watershed residents vow they are not going to let the SRP control their water.

Through it all the old river keeps running, discharging below Bartlett Dam 476,700 acre feet per year. Four miles south of Fort McDowell it flows under east-west Arizona State Highway 87, which runs from Phoenix to Payson. Three miles farther downstream, 178 miles from Sullivan Lake, now flowing at a constant rate year round, it empties into the Salt.

It has withstood man's attacks longer than James Ohio Pattie's Hee-lay, but in its function and even in its form, it is fast becoming a ditch. Dammed, artificially fed, stripped of its vegetation, its flow regulated, its wildlife depleted, the Verde is not merely tamed and domesticated, it is broken and emasculated - not yet dead but mechanically lifeless, an uncomplaining servant, dutifully obedient to its master.

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