

JANUARY, APRIL, JULY and OCTOBER \$6.00 per year \$2.00 per copy

THE SOLDADO DE CUERA: Stalwart of the Spanish Borderlands

By Max L. Moorhead

David Ross Boyd Professor of History University of Oklahoma, Norman

IN THE HISTORICAL LITERATURE of the American Southwest the sturdy soldado de cuera, or leathern-armored soldier, has long been recognized as a vital element in giving that region its indelible stamp of Spanish civilization. Like the conquistador who preceded him and the padre he often accompanied, this peculiar pioneer was hardly an unsung hero. Yet, there is little in the literature which gives him personality and less which relates his true circumstances. What we know of him has come from the biographies, general reports, and recommendations of his superior officers, from the histories in which he is given only incidental attention, and from the cold and highly suppositional military regulations under which he served.

The purpose of this study is to demonstrate not only what his superiors prescribed for him but also who he was, how he lived, and what he did in fact. The intention is not to define the subject completely and for all time but merely to enlarge our understanding of it and to suggest sources for further investigation.

Until the creation of the tropa ligera, or light troops, in 1778, the soldado de cuera was the standard common soldier of New Spain's northern frontier presidios (permanent garrisons). Thereafter he was the more heavily-armed of the two, carrying not only the musket, brace of pistols, and sword which the light trooper bore but also a lance, a shield, and especially the distinguishing cuera, a coat of multi-ply buckskin to protect him from the spears and arrows of the enemy. He was also distinct from other categories of troops who served in the frontier Indian wars. The Voluntarios de Cataluña, the Dragones de España, and the Dragones de México were members of the regular Spanish Army with distinctive uniform, equipment, and regulation.1 There were also the local militiamen, who were civilian settlers organized into companies which were supported by the merchants and proprietors, and there were the unorganized and indifferently-armed civilians who were called upon only on special occasion. In addition there were the Indian auxiliaries, sometimes assigned to presidial companies in definite numbers

and sometimes recruited only for campaigns. At lower pay than the others, they served mainly as scouts and spies but sometimes also as warriors. Finally, there were the Indian allies who, under their own chieftains and with their native arms, participated in official campaigns and also carried out forays of their own against hostile tribes.² But the mainstay of the Spanish military effort on the northern frontier of New Spain was the presidial soldier, and especially the *soldado de cuera*.

The king had enlisted companies of these quasi-regulars to protect the towns, missions, mines, ranches, farms, and caravans from the raids of hostile Indians, to discourage these attacks by carrying the war to the villages and camps of offenders, and to police the missions and pueblos of pacified natives. The few hundred troops assigned to accomplish these tasks along a frontier extending from the Gulf of Mexico to the Gulf of California had more than enough to do.

Each company was responsible for maintaining a daily patrol of one-half of the terrain between its garrison and that of its nearest neighbor on either side, often fifty or more miles in each direction. When this operation failed to prevent an attack on an interior settlement, the company had to dispatch a special force to intercept the marauders, punish them, and recover the booty. It also had to furnish its quota of troops for general campaigns into enemy territory. These were launched every year and lasted about four months each until the 1780's, when they were stepped up to one every month for a shorter duration. While these expeditions were under way it was necessary to retain a small guard to hold the fort, and at all times a heavier one had to be maintained to protect the horseherd at the presidio, in campaign camps, or on the field of battle. Still other members of the company had to perform escort duty, not only for mule trains carrying ore, merchandise, travelers, and the company's own payroll, equipment, and supplies but also for fresh horses purchased in large numbers from the interior. There were dispatches to be carried to and from adjacent presidios each month, subsidiary posts to be manned, and, less frequently, repairs to be made and new construction to be undertaken on the barracks and fortifications.

In a company of fifty-six officers and men at least twenty soldiers were supposed to be engaged in the daily patrols of adjacent terrain, another twenty in guarding the horseherd, from twelve to fifteen in occasional escorts and dispatch rides, and a minimum of six in guarding the presidio itself. However, since fifteen members of the company were exempt from these duties (the three officers, the chaplain, the armorer, and the ten Indian *exploradores*), only forty-one men were even theoretically available for these assignments. In practice about a halfdozen others were also unavailable, owing to illness or incarceration in the guardhouse. This left the company short-handed for relieving attacked settlements, participating in general campaigns, and repairing

or rebuilding its barracks and fortifications. There was almost never time for attending drill, target practice, or chapel service. Even when the companies were increased to seventy-one men each, in 1778, there were still not enough troops to perform all of the required duties.³

For many years the soldado de cuera had also to serve as herdsman, mayordomo, and even common laborer on the privately-owned estates of his provincial governor or presidial captain and as escort for their personal goods in transit. This had been prohibited by viceregal order from time to time and by the royal Reglamento of 1729, but complaints of the practice continued into at least the 1760's.⁴

It was recognized as far away as Mexico City that the life and service of the soldado de cuera was more strenuous than that of his counterpart in Europe, that he seemed always to be on duty, that he often endured the most inclement weather, and that he suffered intensely from hunger, thirst, and lack of sleep. Quite often he had to put up with a worn-out uniform, damaged weapons, and tired horses. He almost never had time for instruction in his religion, in reading and writing, or even in the military arts on which he most depended. With the little solace he gained from the few hours he had with his family, his lot in some respects was worse and more barbarous than that of the Indians against whom he risked his life in repeated battles.⁵ In the view of one military governor, an ardent campaigner himself, this was as it should have been, for spending long hours on horseback and sleeping in his clothes with his *cuera* as a mattress and his saddle as a pillow made the frontier trooper a better soldier. To provide him with the comforts enjoyed by the soldier in Europe would, he said, feminize him and make him less fit for the rigors of the Indian wars.6

Owing to such a rugged life and to the little attraction it had for the more affluent and urbane elements of the mother country and the interior of New Spain, the soldado de cuera had to be recruited largely from the frontier region itself. Few of the presidial troops were really Spaniards, and even their captains and lieutenants were less frequently drawn from the mother country as time passed. In fact, less than onehalf of the officers and men were even white men by official designation. Of the 911 officers and men of the sixteen garrisons whose inspection reports were specific on this point between the years 1773 and 1781, only 453 (49.7%) were listed as Caucasians (europeos, españoles, or criollos). Another 337 (37%) were classified as mixed bloods (mestizos, castizos, mulatos, moriscos, covotes, lobos, and less specifically, castas) and the remaining 121 (13.3%) were indios. It is true that most of the Indians were mere scouts (exploradores) but some were officially classified as soldiers, and all were carried on the presidial payroll.⁷ It should be noted that these percentages apply only to the presidial forces at large and not to a typical company.

Since the kind of manpower available and the policy for recruiting employed varied from place to place, it is impossible to establish the typical racial origin of a soldado de cuera. For instance, while Texas had two permanent presidios garrisoned entirely by españoles and Coahuila had three companies which were collectively 81.5% white and 18.5% mixed, Sonora had six which were 47.2% white, 32.2% mixed, and 20.6% Indian, and Nueva Vizcaya had four which were only 24.2% white with 58.9% mixed and 16.9% Indian. Had the inspection reports of all the companies been more specific, these proportions would be somewhat different, but the fact would still remain that the frontier troops were only nominally Spanish. The western garrisons tended to be less Spanish than those in the eastern provinces. Furthermore, as the presidial forces were increased in strength through the years, the proportions of Indian and mixed-blood troops tended to increase. In fact, three new all-Indian companies were created in Sonora in the 1780's.⁸

Available information on literacy indicates a definite relationship between rudimentary education and racial origin and therefore no standard at all for the frontier troops at large. Of the 322 non-commissioned officers and men of the eight presidios which submitted such data in 1773 and 1775, only forty-seven (14.6%) could write. While 32.5% of the sergeants, corporals and common soldiers in two all-white companies of Coahuila were considered literate, the percentage for the two in Nueva Vizcaya was 12.7 and that for the four reporting from Sonora was only 7.5° Considering the little attraction the service had for educated men and the scant time available for instruction or study after enlistment, the wonder is that the literacy rates were not lower.

The enlistment requirements for a soldado de cuera were minimal. When a new company was created in San Antonio Bucareli de la Babia in 1773, the specifications were only that the recruits be at least 5', 2" tall, have no noticeable facial defects or racial coloration (Coahuila was able to recruit white men), subscribe to the Roman Catholic faith, accept service for at least ten years, and certify that they understood the requirements and penalties set forth in the military code by either signing their names or making the sign of the cross in the presence of the recruiting officer. The enlistment form also specified the recruit's age, place of birth and residence, and color of hair, eyes, and skin.¹⁰

For many years there was no uniform code governing military discipline on the frontier. Owing to this circumstance and to the great distances between the presidios and the central authority at Mexico City both the troops and their captains developed an attitude of almost complete independence.¹¹ In 1729, however, the viceroy issued a general regulation designed to remedy this situation and also to establish a few standards. Thereafter the *soldado de cuera* was officially forbidden to sell his horses, arms, uniform, or other service equipment to civilians,

JOURNAL of the west

to gamble with these or even his personal possessions as stakes, to fire his musket or even wear his pistols within the confines of the presidio without permission from his officers, to go about unshaven, unwashed, or with his uniform in need of repair, or to ride out of the presidio on any military assignment without donning his *cuera* and shield. He was supposed to attend confession once a year and also whenever he was about to set out on campaign.¹² It is quite possible that these and other requirements attest more to the laxities in practice than to much real change in military conduct.

This was certainly the case in respect to the requirement for regular instruction and drill in basic infantry and cavalry maneuvers. The officers were supposed to train their troops to march by column and in battle line, to divide into and fire from various formations, and to advance and retreat in good order; to perform essentially the same evolutions on horseback and to open and close ranks at both a trot and full gallop. But there was never time for this. For months on end the *soldado de cuera* was away from the presidio, and so he was actually expected to learn only how to mount a horse quickly and securely and to maneuver sufficiently to intercept the enemy when they fled or dispersed.¹³

When Teodoro de Croix arrived in the frontier provinces in 1777 as commandant general of the presidios, he was aghast at the ignorance and abandon with which these garrisons were governed. He found little or no observance of the articles of the new Reglamento of 1772. Rather, he discovered a loose accounting of funds, an improper distribution of arms and gunpowder, no order in the supply service, no regular inspection of uniforms and weapons, and no instruction of the troops in either their obligations or in the use of their arms.¹⁴ Four years later, moreover, he had to admit that he himself had made little headway in enforcing discipline.¹⁵

Croix attributed his laxity not only to the scant time available for attention to these matters but also to the peculiar attitudes of both officers and men. Many of the officers, and especially those who had come up through the ranks on the frontier, were related by blood or marriage to the common soldiers. This made it difficult for them to set proper standards or to maintain a decorous aloofness befitting their ranks. Like the troops under their command they were most often of humble birth, addicted to the common vices, and without ambition. They shared with the soldier a notion all too prevalent on the frontier that for fighting Indians one needed only to be a good cowboy. Although eager for higher rank, they aspired to no greater glory than leading a mule train. On the other hand, officers drawn from Spain's regular army almost never accustomed themselves to the peculiarities of frontier warfare or became inured to its rigorous demands. Indeed, some had difficulty remaining in their saddles on the long marches, and

others could not be relied upon in battle.¹⁶ Officers born and reared on the frontier, notwithstanding their rustic behavior and plebian attitudes and the fact that less than one-half of them could read or write, were still preferred for command in that region as late as 1793.¹⁷

For all the wear and tear on his uniform the soldado de cuera must still have cut a dashing figure in his day. His short jacket of blue worsted with scarlet cuffs and collar and yellow metal buttons was matched with britches of blue shag or coarse velvet, and both were set off handsomely by a white hat with a band of silver braid, a black silk neckerchief, a white linen shirt, red woolen stockings, buckskin halfboots, and a cape of blue worsted with red lining.¹⁸ When inspections were held these garments were graded as being in good, medium, or useless condition, and in some instances they were found to be nonexistent. At the presidio of Janos in 1774 only 36% of the company's apparel was rated as being in good condition while 46% was in medium repair and 15% was almost useless. Worse, two soldiers were without stockings, and one did not even have a pair of britches.¹⁹

The condition of defensive and offensive armaments was even more alarming. As a case in point, the buckskin "armor" which distinguished the soldado de cuera from other troops might justifiably be considered in some detail. Customarily (although inaccurately) translated as a "leather jacket," the cuera was actually a heavy, knee-length, sleeveless coat. It was made of several thickness of well-cured buckskin (gamuza) bound at the edges with a strong seam and secured to the body of the wearer by encircling straps. In early-day Sonora the seams and pockets were decorated with a lining of filigreed leather and red cloth, which presented a striking contrast to the white buckskin garment itself.²⁰ By regulation the *cuera* contained seven thicknesses of select hides, which officially were considered sufficient to resist the penetration of an Indian arrow, with the outer layer bleached to a uniform However, individual preference and disinterest tended to whiteness. rule otherwise.

At the company of Janos in 1766, for instance, the Marqués de Rubi's inspection revealed that some of the *cueras* had been made with undersized hides or with mere fragments sewn together and that they were padded not only with mere scraps of buckskin but also with old blankets and coarse cloth. According to the captain, they had been of regulation manufacture when issued, but the soldiers had cut and pared the inner hides in order to make new boots for themselves and had substituted other materials for a protective thickness. All but three or four of the *cueras* at Janos were coming apart at the seams. At Buenavista Rubi found that they were padded with cotton and that the outer hides were not only dyed yellow but were also so stiff that the wearer had difficulty firing his musket from a kneeling position. At the presidios

in Coahuila the inspector found that almost all of the *cueras* were padded with quilted cotton instead of additional layers of buckskin. This gave them an excessive weight, bulk, and warmth-producing effect. They were also dyed a cinnamon color, which Rubí considered distastful.²¹ At San Antonio de Béjar in 1781 they had four thicknesses of buckskin and a padding of six pounds of combed cotton enveloped in the folds of two blankets. This gave each *cuera* a total weight of from 18 to 20 pounds.²²

Few presidios had artisans close at hand who could manufacture a *cuera*, and the fine, well-cured buckskins were obtainable only from the Indian trade. As early as the 1760's these *gamuzas* were becoming so scarce that padding with other materials was sometimes a necessity. However, some officers actually preferred the cotton stuffing. Colonel Juan de Ugalde, military governor of Coahuila, insisted that they were not only more effective in spending the force of Indian arrows but they also provided a better mattress for the soldier. He also favored dyeing the outer buckskin a cinnamon color rather than bleaching them, for the darker hue would show less soil and present a less visible target for the enemy, especially at night.²³

There was also disagreement among the officers on the military value of the *cuera*, especially that which was substandard in manufacture. A test made at Chihuahua in 1778 demonstrated that cueras of only two or three layers and weighing from twelve to fifteen pounds failed to resist the penetration of arrows shot at ranges of from twenty to thirty paces or lances hurled from a distance of from eight to ten paces.²⁴ The regulation seven-ply coat was undoubtedly more protective. Colonel Ugalde insisted that the heavier, cotton-stuffed ones used in Coahuila were indispensable for Indian fighting since they not only reduced casualties but also gave the wearer more courage and made the enemy less confident.²⁵ Colonel Domingo Cabello, military governor of Texas, concurred with this view and declared that ten soldiers armed with the *cuera* accomplished more in battle with the Indians than twenty This, he admitted, was especially true on the open plain without it. where the trooper did not have to dismount to pursue his foe as was necessary for him to do in rugged terrain. Cabello contended that an Indian warrior could discharge at least ten arrows at a soldier while he was reloading his musket for a mere second shot and that his only protection under these circumstances was his leathern armor.²⁶ On the other hand, Commandant General Croix so deplored the bulky cuera that in 1778 he created the less encumbered tropa ligera, which he hoped would some day replace the tropa de cuera completely.²⁷

Croix maintained that the *cuera* prevented the soldier from using his musket effectively and thus deprived him of his greatest advantage over the Indian. He also complained that its excessive weight handicapped both him and his horse and therefore increased the advantage the Indian

already held in the rapidity of his strikes and withdrawals. As an added burden it also wore out more of his horses on long marches. In general, he felt that it made the trooper less aggressive and less dependent upon his superior offensive arms. It was for these reasons, principally, that Croix had more confidence in his new light cavalry.²⁸

The soldado de cuera's other major defensive armament was the adarga, an oval-shaped bull-hide shield measuring approximately twenty-two inches in height and twenty-five inches in width and weighing four pounds. By specification the adargas were of uniform design, but in practice each soldier often dyed and decorated his own to suit his personal whim.²⁹ Although it was capable of warding off an Indian spear or arrow, the adarga, like the cuera, was an impediment to a soldier. He needed at least one hand for his sword, pistol or lance and another for the reins when he was on horseback. When dismounted he needed both hands for his musket. Croix's new light troops carried neither cuera nor adarga.

If the soldado de cuera was overly shielded from enemy missiles and therefore a veritable fortress on horseback, he was also a one-man arsenal. His regulation smooth-bore, muzzle-loading musket fired a one-ounce (sixteen-adarme) bullet through a 381/2-inch (three pies de toesa) barrel. Sometimes, however, he was equipped with a carabina, which had a shorter barrel and was sometimes of twelve-adarme caliber. The musket in use at San Antonio in 1779 weighed almost eight pounds and was considered by the inspector as being too heavy and also too long for firing from horseback.³⁰ Each soldier was also supposed to carry a brace of pistols of the same caliber as his musket and with barrels not more than ten inches long, but those in actual use varied in both respects.³¹ The ammunition for both weapons was supposed to be carried in a bandoleer and a cartridge pouch, according to regulation, but since both of these were worn underneath the bulky cuera and were therefore not readily accessible, one commander required that the cartridges be carried in the back pockets of this protective garment.³²

In addition to firearms, the soldado de cuera also carried a lance, which the light troops did not, and a short sword with a wide blade (espada ancha). The lance heads were supposed to be $13\frac{1}{2}$ inches long and $1\frac{1}{2}$ inches wide with a reinforcing ridge in the center, cutting edges on both side, and a cross-piece at its base to prevent too deep a penetration and thus enable a quick withdrawal for additional thrusts. These blades, however, varied in size and design, as did the length of the poles, which were usually seven to eight feet.³³ Faced with such firepower and cold steel, it is no wonder that the Indian warrior preferred stealth, cunning, and swiftness to charging headlong or standing firm against this well-armored horseman.

Yet, the heavy equipment of the soldado de cuera sometimes proved

JOURNAL of the west

his own undoing, for it often weighed as much as himself. According to the computation of one commander, his uniform weighed eighteen pounds, his massive *cuera* another eighteen, his shield four, musket and two pistols fourteen, musket case three, cartridge box with two dozen cartridges two, sword and belt three, lance three, saddle thirty-five, hanging leather leg aprons (*armas de vaqueta*) four, saddle blanket and pad twelve, bridle two, reins two, spurs one, and canteen of water two. To these 123 pounds of equipment were added the twenty-two pounds of biscuit, twelve of *pinole*, and a two-pound copper jar for heating water, all of which were carried on campaigns. This burdened his horse with a total of 159 pounds beyond the rider's own weight.³⁴

It is no wonder that each soldado de cuera was required to take several horses for his major sorties and that those which returned were much the worse for wear. Until 1729 it was customary for each trooper to maintain a string of ten horses. Then the first Reglamento specified six horses and one mule, and the new Reglamento in 1772 required the same plus an additional colt.³⁵ Even with this number, owing to losses suffered from fatigue, heavy snows, severe droughts, stampedes, and especially theft by the Indians, the armored trooper needed at least three new horses a year as replacements. Commandant General Croix considered the authorized allotment excessive, especially since each company had to maintain a reserve of 200, and that it was an open invitation to hostile Indians to raid the presidial herds. He felt that the horseguard of twenty men was an unnecessary drain on the company's manpower and that it was seldom able to prevent the marauders from making off with at least some of the animals. Nor could the company afford the escort required for remounts purchased at the distant stockfarms. Moreover, new horses purchased in the far interior arrived hoof-sore, thin, and unserviceable until the following year. Yet the cost of each head rose almost annually. With seven horses each the trooper was less considerate of his mounts than he would have been with fewer. And finally, when each soldier was accompanied by his full string on campaigns into hostile territory, the combined herd raised such a large cloud of dust that the enemy was easily alerted and allowed to flee, thus nullifying any significant achievement of the expedition.³⁶

Croix thought that each soldier in his new light troops needed only two horses and a mule if they were in good health. He believed that the presidios could get along with smaller herds if, instead of pasturing them in the open, they maintained them in simple adobe-walled corrals with feed troughs and lofts for grain and straw. In these enclosures they could be kept unhobbled and more readily roped when needed. More important, they would be better nourished, with daily allowances of straw and barley mixed with a little corn, and thus strengthened for the long marches.³⁷ Some of Croix's subordinate officers opposed this reform, put off building stables and planting grain, and forced the com-

mandant general to abandon his plan for reducing the presidial herds. Colonel Ugalde, for instance, requested that each of his troops be supplied with sixteen horses.³⁸ Some stables were built, but they were not necessarily used as Croix intended. A later commandant general saw in the stables a likely place to lodge the new troops he was requesting.³⁹

Within the garrisons the comforts and circumstances of the soldado de cuera varied according to several factors. Those presidios which formed the outer (northern) line of defense against Indian invasions were most often situated in desolate terrain. They were remote not only from convivial town life but also from essential supplies. In 1780, when harvests throughout Sonora were drastically reduced by drought, the men of some presidios had to go out like Indians in search of wild fruits. Grain had to be brought in from such distances that the freight cost more than the commodity itself, and some of the troops and their families at Santa Cruz de Terrenate and Fronteras actually died from hunger.⁴⁰ Behind the line and at San Antonio de Béjar and Santa Fé, which were beyond it, the garrisons were situated at or near towns with adjacent farmlands. There life for the soldier was comparatively easy.

By 1772 civilian merchants, artisans, and homesteaders were encouraged to settle at the presidios, and the fortifications themselves were to be enlarged on one side, if necessary, to accommodate their families. The captains were even required to assign lands and town lots to those who asked for them. In return the settlers were obligated to cultivate these lands and also to maintained horses and weapons of their own so as to respond to the captain's call to arms whenever occasion demanded it. In the distribution of lands and town lots, however, the captain was instructed to give preference to soldiers, particularly to those who had served their ten-year enlistments, to those who had retired because of old age or disability, and to the families of those who had died in military service.⁴¹

Some effort was exerted to prevent officers and men from marrying women who were undeserving of such benefits and also to insure some semblence of social decorum within the presidial community. The regulations issued in 1729 required the permision of the captain for either officers or soldiers to marry, and those of 1772 made the company chaplain responsible for discouraging personal misconduct within the family, scandalous living outside of it, and especially the open or covert introduction into the compound of lewd women.⁴² Until 1777 officers were forbidden to wed women of the frontier without royal permission, but the King heeded Croix's persuasive arguments and granted approval for the commandant general to issue such licenses whenever the circumstances appeared to justify it. Croix had pointed to the advantage some officers took of women during the absence of their fathers, brothers, and even husbands, the insufficiency of chaplains or other ministers of

the faith to safeguard public morality, and the unsavory example this set for the troops who, returning from fatiguing campaigns, were particularly susceptible to the temptation.⁴³

For a full understanding of the circumstances of a frontier soldier it would be necessary to discover and study the elaborate census records which each presidio was supposed to submit. Most of these have never come to light if, indeed, they were ever compiled. That for San Antonio de Béjar in 1779, which is at hand,⁴⁴ cannot, unfortunately, be accepted as providing typical data. San Antonio had an exceptionally large company and one of the few which were situated within fairly large civilian communities. Its statistics are offered here not only as being the only such data readily available but also as an example of what may be learned from the census reports of other presidios.

Including non-commissioned officers, there were forty-seven active soldados de cuera at San Antonio, seventeen retired or discharged men of the same category, seventeen of the new tropa ligra, and one of unspecified category who was on the sick list. Of the active sodados de cuera all were classified as "Spaniards" but only two were not born and reared on the frontier. In age they ranged from twenty-two to fiftyeight, which would seem unnecessarily old at both ends and especially for the average, which was thirty-three and one-half years. They were men of little skill for civilian life, for only one had a trade. He was a carpenter who served as the company's armorer.

Most of the soldados de cuera (thirty-four out of the forty-seven) were married men, but their families were small. Although one had eight children, seven of them had only one, and the average for the married men was 2.78. Only about half of the soldados de cuera apparently lived in the barracks. Nine owned and presumably lived in their own houses (casas) while fifteen had primitive huts (jacales). Only four had servants. On the other hand, almost one-half of them owned some land, thirteen having mere gardens (huertas) and eight allotted tillages (pedazos de tierra). Only eight, presumably the latter group, owned a yoke or more of oxen, but twenty-eight owned cows (averaging six each) and eighteen had bulls (most of them only one). None had sheep, goats, or burros. All, of course, owned horses (from five to thirtyfive each, for a rather enviable average of 9.6), but only twenty-one of the forty-seven owned mules, notwithstanding the one each required by royal regulation.

For the lower paid *tropa ligera* the ages and proportions of married men, children, and owners of homes, land, and livestock were all somewhat lower than for the slightly more well-to-do *soldado de cuera*. For the seventeen who had been separated from the service (all belonging to the latter category) and the one infirm, the most notable statistic was the average age, thirty-three and three-fourths years, which was

only slightly above that of the actives. Some had been retired for disability or other causes before their ten-year enlistments were up, for their years of service ranged from only five to twenty. Nor were the retired men any more affluent on the average than those still in service. But the company as a whole was better off financially than those of most presidios. Only four were in debt, and all except seven had balances in their favor on the presidial books.⁴⁵

Perhaps the hardest aspect of the soldier's life in most of the garrisons was his struggle to make ends meet financially. Before 1729 the soldado de cuera in seventeen of the twenty-three frontier companies supposedly received 450 pesos a year, in the other six only 400 pesos. Yet, such was the customary graft in the disbursement of royal funds that about eighteen percent of his salary was deducted before it reached him by those through whose hands it passed, from the viceroy down to the company captain. Some soldiers complained that they had received only 350 pesos and none of this in cash. Although issued from the royal funds in silver coin, the salaries (already somewhat reduced by official erosion) were collected at the district disbursement offices by agents of the presidial captains. These agents then purchased, with some profit to themselves, the goods the captains had ordered for their troops. In issuing these to the men of the companies, the captains took an additional share by raising the prices again and charging them to the individual accounts. In this manner the pay was often more than totally consumed before it reached the soldiers, and they were kept continually in debt.46

The general regulation for presidios issued in 1729 attempted to abolish the informal deductions and price-gouging, but it also reduced the soldier's nominal pay to 365 pesos for most of the companies and from 300 to 400 for others.⁴⁷ Moreover, within the next thirteen years there were complaints that the old extortions were being revived. The king ordered the viceroy to stop the practice at once and to punish the guilty parties exemplarily.⁴⁸

In 1772 the pay of the soldado de cuera was further reduced to 290 pesos. For his personal and family expenses he was assured of a scant two reales a day in cash, but most of the rest was to remain in the company's reserve fund (fondo de retención) so that he would not gamble it away or spend it unwisely. This reserve was then issued as needed to pay for his daily ration and for the replacement of the horses, uniforms, armaments, and other military equipment which he had lost or rendered unserviceable. Between twenty and twenty-five pesos were withheld annually for the first four of five years so that each soldier would have 100 pesos in trust for the welfare of his family and for his own retirement, and another ten pesos a year were deducted for the company's common fund (fondo de gratificación). This latter contribution went for the company's general expenses, the outfitting of new recruits,

journal of the west

and the rationing of Indians who came to the presidio either as prisoners or to seek peace.⁴⁹

Although the Reglamento of 1772 restricted the soldier's right to spend his own pay, it also protected him from some of the extortions of the past. For his personal and family supplies he had now to pay only the original purchase price plus a commission of two percent. The captain and his agents were forbidden to participate in these procurements, and they were now placed in the hands of a combined paymaster and supply officer (*habilitado*). Moreover, the troops themselves were to elect this agent from among the subaltern officers, and he was to render an accounting to them periodically.⁵⁰

Notwithstanding these reforms, the soldier was still hard pressed to cover his necessary expenses during the next several years. In an itemized accounting in 1779 for the presidio of San Antonio, the military governor of Texas estimated that it cost the soldado de cuera of that garrison more than fifty-nine pesos a year for replacement of his seven horses and one mule, over seventy-seven for that of his armament, more than eighty-three for that of his uniform, saddle, and its trappings, over ninety-six for his daily rations, and over forty-four for clothing his The total cost was almost 362 pesos, which, when charged family. against his salary of 290 pesos, left him almost seventy-two pesos in debt each year. This accounting did not include all of the expenses of a soldier and his family, and it presumed that a bachelor was little better off than a married man. He suffered the additional expense of thirty-six pesos a year plus firewood and rations for a cook, who prepared his meals and the provisions for his sorties and who also washed his clothes. Besides, the governor noted, cooks in those parts were notoriously wasteful. If a bachelor had his mother with him, he was better attended but still not free of her expenses. That many soldiers had a balance at the end of the year was due to the economical management of the presidial captain and the fact that the replacement costs itemized did not occur every vear.51

In a similar accounting for the more remote presidio of Fronteras in 1782, Commandant General Croix estimated the annual expenses of the soldado de cuera at just under 236 pesos without counting deductions for sick pay and the habilitado's purchasing commission, which together amounted to a little over fourteen pesos. This left the soldier with a free balance each year of almost thirty-nine pesos. Croix noted that a more prudent member of the company emerged with an even larger surplus by taking proper care of his uniform, arms, horses, and riding equipment, by investing some of his savings in a small herd of sheep, goats, or beef cattle, which members of his family tended, by producing a surplus of livestock, wool, cheese, or grain for market, and, fortuitously, by having an industrious and economical wife. Croix argued that unmarried soldiers suffered fewer expenses and that many presidial fam-

ilies were supported by two or more of its members who were soldiers, and that these were able to invest more money in income-producing enterprises. Admittedly, however, Croix's accounting of the soldier's annual expenses was based on peace-time prices while the cost of food in 1782 was considerably higher.⁵²

Throughout the eighteenth century the kings, viceroys, and commandant generals sought to ameliorate the sad plight of the frontier soldier. For the most part, however, they confined their efforts to purely administrative changes in the disbursement and supply services. The Reglamento of 1729 simply held the captain of a presidio more accountable for his handling of the soldier's pay and provisions. That of 1772 removed these functions from the captain's control and vested them in that of an elected subaltern member of the company, who was limited to a two percent purchasing commission and saddled with a schedule of price controls. When several of these habilitados failed to keep their costs within the tight budgets and thus placed the troops further in debt, the commandant general began in 1781 to let contracts to individual private merchants who were to provision one or two companies each under similar restrictions. Most of these civilian tradesmen saw so little profit in this system that they refused to renew their contracts. Therefore, in 1788, some were allowed to provision all of the presidial companies of one or two provinces. This resulted in so many complaints from all sides that, beginning in 1790, similar contracts were issued to the incorporated merchants of the principal frontier cities. Yet, this also apparently failed, for by 1793 the presidial habilitados were back in control.53 What was really needed, of course, was a larger salary for the soldier to cover the higher cost of procuring his supplies.

The inadequate pay and precarious supply system must certainly have lowered the soldado de cuera's morale. How much these reduced his military effectiveness can only be conjectured. The extent to which the troops were really protecting the civilian communiites on the frontier was the subject of a running debate between the political and military officers. The former charged that the presidios were situated too far from the towns and missions they were supposed to defend, that contingents sent to intercept or pursue Indian raiding parties were too small, arrived too late, and lacked spirit, and that the periodic general campaigns into enemy territory left the settlement almost totally undefended. Unsurprisingly, the commanders blamed the disasters on the carelessness of the civilians in venturing out into open country alone and unarmed or in leaving their livestock unguarded, on the lack of sufficient troops to cover the immense terrain, and on the natural elusiveness of the Indians themselves. The commandant generals also defended the honor and valor of their troops and the necessity of undertaking large-scale offensive operations. Although such campaigns ad-

mittedly left the defense short-handed, they did discourage even bolder raids by the hostiles and also reduced their total number.⁵⁴

It was true that in terms of men, horses, arms, and provisions expended, in miles traveled, and in time consumed, the offensive campaigns were expensive operations. Nor were the statistical results always impressive. The grand expedition directed by Commandant Inspector Hugo O'Conor in 1775 involved approximately 1,300 troops and lasted four months. It killed 130 enemy warriors, captured 104, (mostly women and children), and recovered 1,966 head of stolen livestock, all with the loss of only one soldier.⁵⁵ On the other hand, a smaller-scale campaign undertaken in 1782 by Colonel Ugalde with 240 men and lasting 112 days killed only five of the enemy and captured only thirty-seven. However, it also released six of the enemy's captives and recovered approximately 500 horses and mules.⁵⁶ In a single engagement in 1788, Lieutenant José Manuel Carrasco with a contingent of eighty-five troops fired a total of 1,761 rounds at a hostile band of Apaches four times his own strength in rugged-mountain terrain. Although the lieutenant was able to report that he had wounded a "large number" of the enemy, he could claim only five killed.⁵⁷ In order to ascertain the effectiveness of such operations, however, it would be necessary to study a large number of campaign and battle reports.

Perhaps the best indication of how effectively the frontier troops coped with their Indian adversaries is the statistics compiled and submitted monthly by the commandant generals from on-the-spot military and civilian reports. There are some gaps in these running box scores, some of the exact figures may have been little more than educated guesses, and the element of exaggeration for effect may also have been present. However, in the absence of Indian records for the same operations, these calculations are all we have. For the 127 months accounted for in the 220-month period from February of 1778 to June of 1796, the reports show that casualties inflicted by both sides were almost even. "The Enemy" killed 2,069 "Spaniards," the overwhelming majority of whom were civilians, while the "Spaniards" dispatched 2,004 Indians, most of whom were warriors. However, the Indians took only 279 captives (mostly civilians) while the troops captured 1,808 Indians (mostly women and children) for an advantage of more than six to one. The only significant gain made by the Indians was in the theft of Span-While they reportedly stole 41,519 head (mostly horses ish livestock. and mules), the troops were able to recover only 18,550, or considerably less than half that number. Throughout these eighteen years, the figures show only little change either in the trend of combined casualties or in the advantage gained by either side until the late 1780's, when the Spanish government launched a general "peace offensive." Thereafter the number of casualties and other losses on both sides declined noticeably, and the advantage swung clearly to the Spanish cause.⁵⁸

How reliable these statistics are and how much the soldado de cuera was responsible for the turning of the tide and the negotiations which temporarily pacified many hundreds of hostiles are both moot points.⁵⁹ Perhaps the fairest judgment that can be reached is that the frontier soldier at least held his own during these many years of desultory warfare.

What, then, can we conclude from this general analysis of the soldado de cuera? Certainly, of the several categories of fighting men on the northern frontier of New Spain, he was the soldier most relied upon to defend the civilian communities from Indian attack. Although he was untrained in the formal military arts and woefully lacking in discipline, he brought to the service a stamina, spirit, and peculiar talent which Indian fighting demanded and which Spanish regulars usually lacked. Although recruited from the rustic society of the frontier, often from the illiterate lower castes, he rose through the ranks to positions of command. He had more military assignments to carry out than time permitted. Every year he spent months on campaign into waterless deserts, weeks on short rations, days in the saddle, nights without sleep, and hours in mortal combat. He was overly burdened by armor and weapons, and these were seldom in serviceable condition. He had to buy, repair, and replace these from his own salary, and this was all too small. Even within the garrison he was hard pressed to provide for himself and his family. He was not a carefree teen-ager but a mature man, usually married and with children to support. If there was someone in his family who could look after it for him, he could have a small plot of land for raising crops and livestock and thus could better make ends meet, but he had no time for this himself. Yet, under all his physical and budgetary strains, the soldado de cuera fulfilled his purpose. Although he never completely pacified his Indian adversary, he did hold him at bay and enable the Spanish frontier to survive that continuous effort to roll it back.

NOTES

- Assistant Inspector Colonel Roque de Medina, Estado de la Revista de Inspección, Arispe, Dec. 30, 1779, and Jan. 19, 1780 (enclosed with Commandant General Teodoro de Croix to Minister José de Gálvez, No. 479, Arispe, Feb. 23, 1780), Archivo General de Indias (Sevilla), Audiencia de Guadalajara, Legajo 278 (hereinafter cited as AGI, Guad. 278). See also Commandant General Jacobo Ugarte, Plan que demuestra el Estado Mayor de las Provincias Internas, Arispe, Dec. 15, 1787, Archivo General de la Nación (México, D. F.), Provincias Internas. Tomo 254, Expediente 2 (hereinafter AGN, PI 254, Exp. 2). The writer wishes to acknowledge with appreciation a grant from the Faculty Research Committee of the University of Oklahoma which aided his travel to and research at Se-villa during the year 1966.67 villa during the year 1966-67.
- For a detailed study of the Indian auxiliaries and allies, see Oakah L. Jones, Jr., Pueblo Warriors and Spanish Conquest (Norman: University of Oklahoma Press, 1966).
 Junta de Guerra, Dictamen, Chihuahua, June 15, 1778 (certified copy enclosed with Croix to Gálvez, No. 217, Chihuahua, June 29, 1778); Croix to Gálvez, No. 198, Chihuahua, May 1, 1778; and Croix to Gálvez, No. 458 (Informe General), Arispe, Jan. 23, 1780, AGI, Guad. 276 and 278.
- Viceroy Marqués de Casafuerte, Reglamento para todos los presidios de las Provincias Internas de esta Governación (Mexico, 1729), Articles 36 and 61 (hereinafter cited as Reglamento de 1729); Casafuerte to the King, México, Mar. 2, 1730; and Inspector Gen-

eral Marqués de Rubí, Cargos...contra el Capitán Don Pedro de la Fuente, El Paso, July 29, 1766, AGI, Guad. 144 and 273. Casafuerte to the King, Mar. 2, 1730, *loc. cit.*; Croix to Gálvez, No. 198, May 1, 1778,

- 5. loc. cit.
- 6. Colonel Juan de Ugalde to Croix, No. 36, Monclova, Dec. 28, 1779 (copy enclosed with
- Colonel Juan de Ugalde to Croix, No. 36, Monclova, Dec. 28, 1779 (copy enclosed with Croix to Gálvez, No. 835, Arispe, Oct. 7, 1782), AGI, Guad. 254. Extracto de la Revista de Inspección, Presidio de Río Grande, Nov. 1, 1773; Monclova, Oct. 25, 1773; Aguaverde, Oct. 11, 1773; San Sabá, Nov. 16, 1773; Carrizal, Dec. 25, 1773; Cerrogordo, July 3, 1775; Altar, July 22, 1775, and July 5, 1779; Compañia Vo-lante de Sonora, July 17, 1775; Terrenate, July 6, 1775, and Mar. 3, 1779; Tubac, Aug. 9, 1775; Fronteras, July 27, 1775; Compañía Volante de Chihuahua, Aug. 20, 1777; Janos, Oct, 10, 1780; Tucson, May 3, 1779; Espíritu Santo, Aug. 10, 1780; and San An-tonio de Béjar, Mar. 30, 1781 (enclosed with Viceroy Antonio María Bucareli to Minis-ter Julián de Arriaga, No. 1056, 1314-1317, 1998, and 2000, and with Croix to Gálvez, Nos. 142, 330, 589, 591, 624, 854, and 872), AGI, Guad. 270, 271, 272, 513, 514, 515, 516, and 518. 516, and 518.

The term *español* is interpreted here in its literal sense although, technically, it referred to a Spaniard with one-eighth Indian blood. Likewise, the supposedly pure *criollo* sometimes had a tinge of Indian blood and achieved white status only by special grace. There-

- fore, the percentage of pure whites is even smaller than these records would indicate. These were the companies of Opata Indians at Bavispe and Bacoachi and of Pimas at San Rafael de Buenavista. See Commandant General Felipe de Neve to Gálvez, Arispe, Dec. 1, 1783, paragraph 42 (enclosed with Neve to Gálvez, No. 53, same date), AGI, Guad. 520; and Max L. Moorhead, THE APACHE FRONTIER: Jacobo Ugarte and Spanish Indian Relations in Northern New Spain, 1769-1791 (Norman: University of Oklahoma Press, 1968), pp. 55-57, 99n.
- See the Extracto de la Revista de Inspección for the presidios of Aguaverde, Oct. 11, 1773; Río Grande, Nov. 1, 1773; Carrizal, Dec. 25, 1773; Altar, July 22, 1775; Com-pañia Volante de Sonora, July 17, 1775; Terrenate, July 6, 1775; and Fronteras, June 27, 1775, loc. cit.
- 10. Medina to Capitán Rafael Pacheco, San Juan Bautista del Río Grande, Nov. 8, 1773 (en-

- closed with Bucareli to Arriaga, No. 1313, México, Mar. 27, 1774), AGI, Guad. 513.
 11. Casafuerte to the King, Mar. 2, 1730, *loc. cit.*12. *Reglamento de 1729*, Articles 58, 59, 81, 117, 118, 119, 132, and 133.
 13. Colonel Domingo Cabello, Papel de Puntos deducidos de la Revista de Inspección, San Antrono de 30, 1270, AGI, Curd. 283. tonio de Béjar, June 30, 1779, AGI, Guad. 283.
- 14. Croix to Gálvez, No. 293, Chihuahua, Oct. 23, 1778, AGI, Guad. 275.

- Croix to Gálvez, No. 624, Arispe, Mar. 26, 1781, AGI, Guad. 281.
 Croix to Gálvez, No. 293, Oct. 23, 1778, *loc. cit.* Commandant General Pedro de Nava to Minister Conde de Campo Alange, No. 9, Chihuahua, May 2, 1793, AGI, Guad. 289.
- Rubí, Extracto de la Revista de Inspección, Altar, Feb. 1, 1767; Reglamento e instrucción para los presidios que se han de formar en la línea de Frontera de la Nueva España. Resuelto por el Rey Nuestra Señor en Cédula de 10 de Septiembre de 1772 (México, 1790), Title 3, Article 1 (hereinafter cited as Reglamento de 1772); Croix to Gálvez, unnumbered (Informe General), Arispe, Apr. 23, 1782, paragraph 91, AGI, Guad. 273, 002 acto 970 preservinger. 293, and 279, respectively. 19. Paige W. Christiansen, "The Presidio and the Borderlands: A Case Study," unpublished
- paper read at the Western History Association meeting at Dallas, Texas, Apr. 20, 1968, citing Commandant Inspector Hugo O'Conor, Extracto y demás estados concernientes a la Revista de Ynspección, Janos, Jan. 15, 1774, AGI, Guad. 513. See Dr. Christiansen's article above.
- Ignaz Pfefferkorn, SONORA: A Description of the Province, edited by Theodore E. Treutlein (Albuquerque: University of New Mexico Press, 1949), 155-156.
 Rubí, Extracto de la Revista de Inspección, Janos, Oct. 30, 1766; Buenavista, Mar. 2, 1767; Monclova, June 27, 1767; and Río Grande, Nov. 24, 1767, AGI, Guad. 273.
 Cabello, Papel de Puntos, June 30, 1779, loc. cit.
 Hurdie Corie Andrea Andrea Andrea Corie and Andrea Corie and Corie

- Oct. 7, 1782, loc. cit).
- 26. Cabello, Papel de Puntos, June 30, 1779, loc. cit.
- 27. Croix to Gálvez (Informe General), Apr. 23, 1782, loc. cit., paragraphs 38-47, et passim.
- 28. Ibid., paragraphs 46 and 47.
- 29. Reglamento de 1772, Title 4, Article 1; Medina, Extracto de la Revista de Inspección, Santa Cruz de Terrenate, Mar. 3, 1779, and Tucson, May 3, 1779, AGI, Guad. 271.

- 30. Reglamento de 1772, Title 4, Article 1; Cabello, Papel de Puntos, June 30, 1779, loc. cit. Fot the new tropa ligera Croix ordered shorter barrelled guns of smaller caliber (12 ardames). Croix to Gálvez, No. 202, Chihuahua, May 1, 1778, and enclosures, AGI, Guad. 276.
- Reglamento de 1772, Title 4, Article 1. At Terrenate the pistol barrels were 11 inches long, and at Buenavista they were of different calibers. Medina, Extracto de la Revista de Inspección, Santa Cruz de Terrenate, Mar. 3, 1779; loc. cit., and Buenavista, Oct. 10, 1779, AGI, Guad. 271.
 Reglamento de 1772, Title 4, Article 1; Ugalde to Croix, Sept. 14, 1781, loc. cit.
 Reglamento de 1772, Title 4, Article 1; Sidney B. Brinckerhoff and Odie B. Faulk, LANCERS FOR THE KING: A Study of the Frontier Military System of Northern New Spain, with a Translation of the Reval Beaulations of 1772 (Pheneiry: Ariona Historical Foundation)
- with a Translation of the Royal Regulations of 1772 (Phoenix: Arizona Historical Foundation, 1965), 21-22, 72.
- 34.
- Cabello, Papel de Puntos, June 30, 1779, loc. cit. Casafuerte to the King, Mar. 2, 1730, loc. cit.; Reglamento de 1729, Article 65; Regla-mento de 1772, Title 4, Article 5. Croix to Gálvez, No. 458 (Informe General), Jan. 23, 1780, loc. cit., paragraphs 76-90, 35.
- 36. 162-172.
- 37. Ibid., paragraphs 83-85, 162-164.
- 38.
- Croix to Gálvez, No. 835, Oct. 7, 1782, *loc. cit.*, paragraphs 63-68. Commandant General Joseph Antonio Rengel to Minister Marqués de Sonora, No. 140, Chihuahua, Mar. 2, 1786, AGI, Guad. 289. 39.
- 40. Croix to Gálvez, No. 458 (Informe General), Jan. 23, 1780, loc. cit., paragraphs 62-64; Croix to Gálvez, unnumbered (Informe General), Arispe, July 29, 1781, AGI, Guad. 279. Reglamento de 1772, Title 11, Articles 1 and 2. Reglamento de 1729, Articles 89 and 103; Reglamento de 1772, Title 13, Article 13. Croix to Gálvez, No. 8, México, Feb. 26, 1777; Gálvez to Croix, Aranjuez, May 24, 1777 41.
- 42.
- 43. (draft), AGI, Guad. 516. Cabello, Estado General de la Tropa, San Antonio de Béjar, July 1 and 3, 1779, AGI,
- 44. Guad. 283.
- 45. Ibid.
- 46. Casafuerte to the King, México, May 25, 1723, and Mar. 2, 1730 (copies), AGI, Guad. 144.
- 47. Reglamento de 1729, Articles 1-25 for the pay scales; 62, 78, 125, and 136 for restric-tions against defrauding the soldier of his pay; twenty-four unnumbered pages follow-ing page 196 for the new schedule of maximum prices for provisions.
- 48. King to Viceroy Conde de Fuenclara (Instrucción), Aranjuez, Apr. 23, 1742, AGI, México 1505.
- 49. Reglamento de 1772, Title 2, Article 5; Title 5, Articles 1-7.
- 50. Ibid., Title 14, Articles 1-12.
- 51. Cabello, Papel de Puntos, June 30, 1779, loc. cit. 52. Croix to Gálvez (Informe General), Apr. 23, 1782, loc. cit., paragraphs 91-95.
- 53. Croix to Galvez (Informe General), Apr. 25, 162, 162, 66, 61, paragraphs 91-95.
 53. Ibid., paragraphs 323-370; Neve to Gálvez, No. 33, Arispe, Oct. 20, 1783, and enclosures, AGI, Guad, 518; Nava to Campo Alange, No. 9, May 2, 1793, loc. cit., paragraph 17. See also Max L. Moorhead, "The Private Contract System of Presidio Supply in Northern New Spain," Hispanic American Historical Review, XLI (Feb. 1961), 31-54, and "The Presidio Supply Problem of New Mexico in the Eighteenth Century," New Mexico Historical Review, XXXVI (July 1961), 210-229.
 54. See attraction of the correspondence between Interdent Coverner Feline Diag. do Ortogo.
- 54. See especially the correspondence between Intendant-Governor Felipe Díaz de Ortega and Commandant General Ugarte and that of both with the Viceroy from July to Sep-
- tember of 1788, in AGN, PI 127, Exp. 4. 55. O'Conor to Bucareli, Carrizal, Dec. 1, 1775 (certified copy with Bucareli to Arriaga, No. 2108, México, Jan. 27, 1776), AGI, Guad. 515.
- 56.
- 57.
- No. 2108, México, Jan. 27, 1776), AGI, Guad. 515. Ugalde, Relación extactada de...la campaña, Santiago de Monclova, June 30, 1782 (certified copy enclosed with Croix to Gálvez, No. 835, Oct. 7, 1782, *loc. cit.*) Carrasco to Ugarte, San Buenaventura, May 21, 1788, AGN, PI 127, Exp. 2. See the monthly Extracto y Resumen de Hostilidades sent by Croix, Neve, Rengel, Ugarte, and Nava to the Minister of the Indies between February 15, 1778 and July 5, 1796, in AGI, Guad. 270, 271, 275, 276, 278, 281, 282, 283, 284, 285, 286, 287, 289, 290, 292, 517, 518, 519, and 520. See also Secretary Pedro Garrido y Durán, Noticia que manifiesta el numero de muertos y prisioneros... desde Enero de 83 hasta fin del año de 84, Chihuahua, Jan. 18, 1785 (enclosed with Rengel to Gálvez, No. 23, Chihua-hua, Feb. 26, 1785), AGI, Guad. 520. 58. hua, Feb. 26, 1785), AGI, Guad. 520.
- For the statistics on Indians suing for peace in the late 1780's and early 1790's, see Moor-59. head, The Apache Frontier, 277 and 277n.