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**Low-Stress Livestock Management:
Low-Stress Livestock Handling, Natural Horsemanship, and Ranch Roping
Operations Manual**

Prepared as part of a grant by the
Friends of Big Bend National Park

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Friends of Big Bend National Park Grant Project

Introduction

Historically, trespass livestock have been a major problem in Big Bend National Park (BBNP). Trespass livestock threaten park resources and compromise visitor experience.

In recognition of these facts, the Friends of Big Bend National Park funded the continuation and expansion of a pilot project conducted in early 2006 which significantly reduced trespass livestock numbers by using nontraditional, innovative, low-stress livestock management techniques.¹

The grant project funded by the Friends ran from January 17 to April 11, 2007.

Project Goal

The goal of the project was to implement an in-park team trained in low-stress livestock management (which consists of low-stress livestock handling techniques, natural horsemanship, and ranch roping) which would significantly reduce trespass livestock numbers.

Project Objectives and Results

1. Conduct low-stress trespass livestock roundups.

a) Seven roundups were conducted which resulted in the capture of 44 animals. This basically represents all of the known trespass livestock between Boquillas Canyon and Santa Elena Canyon. Aerial recon by the pilot-ranger at the end of March, 2007 (near the end of the grant project) detected only one trespass animal (on an inaccessible vega) between Boquillas Canyon and Santa Elena Canyon. Additionally, ground recon (via horseback, vehicle, and foot) between Boquillas Canyon and Solis revealed no fresh livestock sign. Furthermore, there is evidence that the Mexican stockowners are taking measures to better control their animals (i.e., fence construction, blocking livestock river crossings with debris, and frequent mounted scouts in the park looking for their stock).

b) The roundups were 100% successful in capturing the target animals on the first attempt (i.e., none got away). Traditional roundups have a much lower success rate.

c) Trespass animals were treated gently, fairly, humanely and ethically, which is often not the case in traditional roundups.

¹ Twenty-three trespass animals were captured in five roundups.

d) Through proper handling, all animals willingly loaded in trailers, which is not the case in traditional trailer loading.

e) During the low-stress roundups riders never got their horses out of a walk, and there were no injuries to horses, riders, or captured stock, and no equipment was damaged. This is often not the case with traditional roundups.

2. Construct temporary holding pens in strategic locations.

a) Three temporary holding pens were built (i.e., at San Vicente, Rooney's, and Solis). The pens are out of public view and use the natural topography (e.g., deep washes) to advantage.

3. Conduct "low-stress livestock handling" training consisting of classroom and field exercises with assigned park staff.

a) Two-hour powerpoint presentation, "Introduction to Low-Stress Livestock Handling," attended by 17 people.

b) Bud Williams² three-hour presentation, attended by 17 people.

c) Field training. Conducted 20 scouts (a) in search of trespass livestock, (b) to better educate team members on the geographic layout of problem areas (in preparation for future roundups), and (c) to run practice scenarios in preparation for future roundups. Also, 66 peoplehours of in-field low-stress livestock handling training was conducted with team members.

4. Provide "natural horsemanship" training consisting of classroom and field exercises with assigned park staff.

a) Two-hour powerpoint presentation, "Introduction to Natural Horsemanship" attended by 19 people, followed by a two-hour live demonstration attended by 9 people.

b) Field training. 192 hours of individual instruction.

4. Provide "ranch roping" training for assigned park staff.

c) Three-hour "Introduction to Ranch Roping" class attended by 11 people.

d) Two-hour continuation class attended by five people.

e) Field training. 50 hours of individual instruction.

² Bud Williams is the foremost expert on low-stress livestock handling. He visited BBNP March 2-4, 2007.

Findings, Recommendations, and Justifications

On the basis of the results and experience of the pilot project in 2006 and the grant project in 2007, the contractor derived the following Findings and Recommendations. Each recommendation is supported by a Justification.

Finding. Low-stress livestock handling is efficient, cost-effective, humane, ethical, congruent with the image and philosophy of the National Park Service, and aptly suited to deal with trespass livestock in BBNP, whereas traditional livestock handling is not.

Recommendation. BBNP needs to make a clear transition from traditional livestock handling to low-stress livestock handling.

Justification. During the 2006 pilot project and the 2007 grant project, 23 and 44 trespass animals respectively were captured during 12 roundups. As measured by the number of animals encountered versus the number captured, the roundups were 100% effective. That is, no trespass animals escaped. Although exact data is unavailable, the effectiveness rate of traditional roundups is far less. Additionally, the number of people-hours per animal caught during low-stress roundups is significantly less than traditional roundups.

Finding. Natural horsemanship is hand-in-glove with low-stress livestock handling and is congruent with the image and philosophy of the National Park Service, whereas traditional horsemanship is not.

Recommendation. BBNP needs to make a clear transition from traditional horsemanship to natural horsemanship.

Justification. Natural horsemanship is more subtle, sophisticated, ethical and humane than traditional horsemanship. Natural horsemanship is state-of-the-art and the wave of the future, whereas traditional horsemanship is on its way to obsolescence.

Finding. Ranch roping is hand-in-glove with low-stress livestock handling and natural horsemanship and is congruent with the image and philosophy of the National Park Service, whereas team roping is not.

Recommendation. BBNP needs to make a clear transition from team roping to ranch roping.

Justification. Team roping, a fast-paced, high-stress rodeo sport event, has no place in low-stress livestock handling and should not be allowed in BBNP. Team roping is relatively ineffective, inefficient, and dangerous. Additionally, every animal chased but not caught learns that running means escape, so it makes the next capture attempt that much more difficult.

Finding. Traditional roundups are unnecessary.

Recommendation. Discontinue traditional roundups.

Justification. Traditional roundups (i.e., prescheduled 2-3 day roundups using day-hire area cowboys) are relatively expensive, inefficient, ineffective, high-stress, and often subject trespass animals to inhumane and unethical treatment. Additionally, they are dangerous. According to BBNP trespass livestock coordinators, past and present, roundup crew members and their horses have suffered injuries, and panicked animals have broken down portable corrals and caused other equipment damage. A concern of the park should be a visitor, with camera in hand, witnessing a traditional roundup at its worst.

Finding. Two- and three-day roundups are unnecessary.

Recommendation. Discontinue two- and three-day roundups.

Justification. All of the roundups conducted during the 2006 pilot project and 2007 grant project were single-day roundups and proved to be more cost-effective than two- and three-day roundups.

Finding. Overnight roundups are unnecessary.

Recommendation. With rare exception (e.g., Mesa d'Anguilla), single-day roundups in the form of proactive covert patrols, proactive overt patrols, and reactive roundups should be SOP.

Justification. With one exception, the 12 roundups conducted during the 2006 pilot project and 2007 grant project were single-day roundups.

Finding. Dark-thirty roundups are unnecessary.

Recommendation. SOP for roundups should be normal shift, daylight hours.

Justification. All of the roundups conducted during the 2006 pilot project and 2007 grant project were conducted during normal shift, daylight hours. Using low-stress methods, trespass stock

can be located, gathered, corralled, and transported within the span of a day. Additionally, livestock respond better to low-stress methods during the heat of the day than during cool mornings.

Finding. Day-hire area cowboys are unnecessary.

Recommendation. Discontinue the use of day-hire area cowboys.

Justification. Day-hire area cowboys are not only unnecessary but often counterproductive.

With rare exception, cowboys are traditional horsemen, team ropers, and traditional livestock handlers--the worst possible combination--and have no knowledge, skills or abilities (KSAA) in low-stress livestock handling. As Bud Williams says, "Most cowboys don't know how to work cows." Furthermore, once on board on a roundup, cowboys are difficult to control; they believe that they are the subject experts and, furthermore, they have little if any respect for park rangers and consequently don't take direction well. Additionally, day-hire cowboys can be replaced by in-house personnel already on the payroll, thus saving money.

Finding. Large numbers of roundup personnel are unnecessary.

Recommendation. Use no more than three people of adequate KSAs and experience on any roundup.

Justification. All but one of the roundups conducted during the 2006 pilot project and 2007 grant project used from only one to three people. Using low-stress methods, more than three people is not only unnecessary, but can be detrimental.

Finding. No ground crew is necessary.

Recommendation. The roundup crew (i.e., one to three people) can serve as their own ground crew, and additional resources (e.g., trailers) called in as necessary.

Justification. In traditional roundups conducted in BBNP, a ground crew of several people and vehicles accompanies the riders. The idea is that when stock are encountered, the ground crew will set up a large catch pen while the riders are gathering the livestock. During the 2006 pilot project and 2007 grant project none of the roundups used a ground crew. The riders basically traveled "light and fast" with only the stock trailer, set up the portable catch pen as needed, or gathered stock into one of three in-place catch pens. On two of the 12 roundups additional

trailers were called in to haul stock.

Finding. Large catch pens with wings are unnecessary.

Recommendation. The stock trailer with its eight panels is all that is needed for any roundup.

Justification. Small catch pens are less intimidating and easier to habituate livestock to than large catch pens involving multiple vehicles and trailers bumper-to-bumper. Furthermore, as Bud Williams counsels, wings only get in the way and are an unnecessary, even detrimental crutch.

Finding. The Rio Grande River is not a problem when rounding up trespass livestock.

Recommendation. The proximity of trespass stock close to the river is no reason to not do a roundup.

Justification. The conventional belief that the river presents a major problem in rounding up trespass livestock in particular locations (e.g., on river vegas) has discouraged roundup attempts (e.g., at Comptons and the upper Solis vega). The source of this belief is the frequent experience during traditional roundups of animals running across the river upon seeing horsemen. According to Bud Williams, the animals do not want to be across the river as is often stated, or else they'd already be there. The only reason they cross, he says, is because they are herded across by the roundup crew (i.e., they approached incorrectly). Several successful gathers of animals right on river's edge using low-stress livestock handling methods has demonstrated that Williams is correct.

Finding. Park personnel with no training in low-stress livestock handling, natural horsemanship, and ranch roping have historically conducted and participated in roundups.

Recommendation. Staff not trained in low-stress livestock handling, natural horsemanship, and ranch roping should not be allowed to participate in roundups.

Justification. The old paradigm (i.e., traditional livestock handling, traditional horsemanship, and team roping) is obsolete and needs to be replaced by the new paradigm (i.e., low-stress livestock handling, natural horsemanship, and ranch roping). This will only happen if staff trained in the latter conduct all roundups. Staff not trained in the new paradigm will do what they know, which is more of what shouldn't be done.

Finding. Hotshots have been used in BBNP to trailer load trespass animals.

Recommendation. Hotshots should not be allowed.

Justification. Hotshots are unethical and inhumane and have no place in BBNP. Furthermore, low-stress livestock handling methods render hotshots unnecessary. What the park doesn't need is such an incident being witnessed by the wrong park visitor.

Finding. Captured animals have routinely been coerced, forced, and drug into trailers with ropes.

Recommendation. Dragging animals with ropes or otherwise forcing animals into trailers should not be allowed.

Justification. Such physically coercive measures are not only unethical and inhumane, but obsolete and unnecessary. Unfortunately and unnecessarily, at least one animal has been killed during trailer loading, and others injured, terrorized and brutalized. Again, what BBNP doesn't want is such an incident--which is in violation of Texas Penal Code Sec. 42.09(a)(4)--being witnessed by the wrong park visitor.

Finding. Chemical immobilization has been used with limited effectiveness.

Recommendation. Chemical immobilization should be used sparingly and with caution, and not as a substitute for low-stress methods.

Justification. Experience has shown that some "tranquilized" animals get away, and that the capture rate of tranquilized animals is less than low-stress methods.

Finding. USDA personnel are traditional livestock handlers.

Recommendation. USDA personnel should not be allowed to load their trailers when taking delivery of trespass livestock. Captured animals should be loaded by park personnel trained in low-stress trailer loading, and the animals should be taught to trailer load before the arrival of the USDA.

Justification. Trespass livestock are the responsibility of the park until loaded in the USDA trailers. Furthermore, presumably the animals gathered will have been captured using low-stress livestock handling methods. An integral part of those methods is to make a contract with each animal that it can trust its handlers to treat it fairly, gently, ethically, and humanely. To allow USDA personnel--who are traditional livestock handlers--to load animals is a breach of that

contract.

Finding. There is no debriefing after traditional roundups.

Recommendation. Debrief after every roundup.

Justification. It is important that the in-house, low-stress trespass livestock handling team continue its education and in-service training. An integral part of this is for the team to debrief or critique every roundup, realistically evaluating its performance relative to low-stress livestock handling methodology.

Finding. There is a direct correlation between control measures and the number of trespass livestock in BBNP.

Recommendation. Aggressively continue proactive overt and covert patrols for trespass stock.

Justification. The best way to build on the success of the pilot project and the grant project is to keep the pressure on. Control efforts need to be consistent, not intermittent. Trespass livestock need to be dealt with as soon as they come in the park, not after they have taken up residence, established a territory, caused resource damage, and become feralized.

Finding. Mexican stockowners are accustomed to the historical pattern of periodic organized 2-3 day roundups with little if any enforcement activity in-between.

Recommendation. Inform the Mexican stockowners that BBNP now has an in-house trespass livestock team.

Justification. If the Mexican stockowners know that (a) the park no longer relies on traditional organized roundups, but (b) has an in-house team that is actively patrolling, and that (c) this team is responsible for most of the successful gathers during the last two years, (d) they are likely to make a concerted effort to control their stock.

Finding. Park personnel not trained in natural horsemanship are allowed to ride park horses.

Recommendation. Only people trained in natural horsemanship should be allowed to ride park horses.

Justification. To mix traditional with natural horsemanship is to confuse the horses, at best. At worst, it will undo in one stroke all that the natural horsemen have been doing (e.g., destroy

confidence, trust, and responsiveness).

Finding. There are no written policies regulating the rounding up of trespass livestock.

Recommendation. The above recommendations should be made a matter of written policy.

Justification. To be successful, the recommended paradigm shift needs the written endorsement of management. Short of this, the forces of inertia and tradition could prevail and BBNP may find itself regressing to the old customary way of doing things. Furthermore, in the absence of written policies there will be no consistent handling of trespass livestock.

The treatment of captured animals by traditional livestock handlers, horsemen, and ropers in BBNP has often been unethical and inhumane. Such is not the case in low-stress livestock handling. Low-stress roundups are low-stress (for trespass animals, horses and riders), and treat trespass animals gently, fairly, humanely and ethically.

Conclusion

BBNP is facing a paradigm shift. The old paradigm consists of traditional livestock handling, traditional horsemanship, and team roping. The new paradigm consists of low-stress livestock handling, natural horsemanship, and ranch roping.

The old and new paradigm lie on a continuum of subtlety, sophistication, and humane and ethical treatment of animals. The old paradigm is obsolete and incongruent with the philosophy and image of the National Park Service. The new paradigm is enlightened and congruent with the philosophy and image of the National Park Service.

Trespass Livestock in BBNP

Problem

The National Park Service is mandated to "Conserve the scenery and natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for future generations" (Organic Act of 1916). A serious threat to this mission in BBNP is trespass livestock. Specifically, according to the Science and Resource Management Ranger Division, nonindigenous species--including burros, horses, and cattle--are problematic because they degrade the park's natural, archeological, historical, and cultural resources by

- damaging fragile spring ecosystems and competing with indigenous species for water
- threatening wildlife by introducing disease
- overgrazing park vegetation and degrading habitat
- causing significant trailing that leads to erosion
- damaging archeological, historical, and cultural sites through trailing and trampling
- spreading exotic plant species
- trampling rare plants and damaging riparian areas

Additionally, trespass livestock degrade visitor experience by causing

- campsite spoilage
- trail spoilage
- parking area spoilage
- a public safety hazard (i.e., large animals on park roads)

Furthermore, the presence of trespass livestock in BBNP is a violation of Title 36 of the Code of Federal Regulations, Sec. 2.60 (a) The running-at-large, herding, driving across, allowing on, pasturing or grazing of livestock of any kind in a park area . . . is prohibited."

Background

The major trespass livestock problem in BBNP is cattle, horses, and burros from Mexico. The park's shared southern border is not fenced, and there are few fences on the Mexican side. Furthermore, given that the majority of the Rio Grande's water is diverted for upstream uses, such as irrigation, it is no longer the natural boundary that it once was, and livestock can cross easily most of the year. Additionally, as a third world country, Mexican livestock management

practices are virtually nonexistent; that is, they have no disciplined breeding or range management practices which leads to unsustainable stocking levels and tremendous overgrazing.

Consequently, the park is very attractive to Mexican livestock. And, as former District Ranger and Trespass Livestock Coordinator Kathi Humbly (personal communication, October 22, 2003) notes, "If the animals don't come over on their own, they are often herded over."

As noted, these burros, cattle, and horses present a significant risk to park resources. According to Raymond Skiles (personal communication, October 15, 2003), the park's wildlife biologist, "The major issue has to do with their impact as an exotic animal, and like any other exotic animal, they have certain characteristics that create impacts which include grazing and denuding vegetation, hoof action that creates trails and erosion, and contamination through feces of springs, and other unnatural damage to plants, animals, habitat, soils, and water quality for riparian habitats. In addition to the ecological effects, there is the human experience; they are well-known and disliked for leaving waste in campsites, which makes campsites less desirable by visitors." To this list can be added (a) trampling of historic structures and archeological sites, (b) the introduction of disease (e.g., vesicular stomatitis), and (c) the spread of exotic and undesirable plant species.

An additional concern is what Skiles terms "feralized stock." Feralized stock are populations of animals that have been away from their owners for so long that they are in a reproducing phase and are becoming wild: "To the degree that the stock is currently owned and can be considered domestic and have simply strayed in the park, they are trespass stock, and not wild. But when those animals have been here long enough, particularly to the point that they are reproducing and the offspring have never been in captivity or branded, then we think that they are transitioning into a wild horse or burro issue." In that case, some may argue that the animals would then be protected by The Wild Free-Roaming Horse & Burros Act of 1971. Hence, effective control measures are critically important before this happens.

Control measures

Past efforts at controlling trespass livestock in BBNP relied primarily on the conventional-style roundup and roping. Basically, the method involves hiring area cowboys, launching a roundup on a prescheduled date, searching for trespass livestock, herding the animals into a portable corral or roping individual animals, then forcing them into a trailer. Unfortunately,

while some animals are caught, others escape. The result is that those animals have learned to escape by fleeing which makes the next attempt at capture even more difficult. For instance, Ranger Ellis wrote of a conventional roundup he directed on Feb. 11, 2003:

In the hills north of the Hot Springs area we located a herd of 7 burros. We covered three or four miles while attempting to capture them with no success. There were times when the herd was a half-mile away and running from us. . . . At this point the horses were fatigued and the operation was terminated. All were in agreement that the capture of these burros called for other methods. Attempts to drive and rope in open country, even with experienced cowboys and horses, appeared futile. The burros alerted quickly and moved over very steep and loose rocky terrain with ease, leaving mounted cowboys with little or no opportunity to rope or direct the herd.

As this roundup illustrates, conventional methods are inefficient, often ineffective, and hazardous (to humans, horses, and trespass animals). More efficient, effective, and safe low-stress livestock handling methods are available.

The objective of low-stress livestock handling methods is the opposite of traditional methods; that is, it is not to chase the animals and force them into a place they do not want to go (i.e., a corral or trailer); rather, it is to gain the animals' trust, shrink their flight zone, and teach them to move in a controlled way at a walk to a desired location (e.g., a temporary catch pen). In brief, it involves working with the animals and not against them, using persuasion, not coercion. These methods are more humane, effective, and economical than conventional methods. For instance, Ranger Paredes wrote of a conventional roundup he directed on Oct. 20, 2004:

In my opinion we have captured all of the burros that can be safely captured from the Boquillas Canyon area in this manner. There are about a half a dozen burros remaining in this area that are unbranded and wild and have probably never been handled. . . . I believe we may need to consider trapping or direct reduction of these animals if we expect to remove them from the park without getting someone hurt.

These burros, however, were captured on Feb. 2, 2006 using low-stress techniques.

Additionally, according to Kathy Hambly, former director of the trespass livestock program, there is an inverse correlation between the number of trespass livestock in the park and enforcement activities. When enforcement activities are aggressive (i.e., roundups and high-visibility mounted patrols) the number of trespass livestock in the park diminishes significantly, both through capture and stimulating the Mexicans to better control their livestock.

"Getting rid of them is the answer," according to Skiles. "We don't need to spend too much time understanding that they do **not** have a place in the park given our policies and what we need to be preserving. With that understanding the only question is how and who should get rid of them."

To date, the primary responsibility for dealing with trespass livestock has fallen on the Resource and Visitor Protection Division, although the interpretive division has done public education contacts, and the resource management division has done some studies on trespass livestock effects and helped get money to deal with the problem. As a practical matter, however, it has been the protection rangers who have been most actively involved, primarily because trespass livestock is a 36 CFR violation. The enforcement of 36 CFR 2.60, however, has been inconsistent over the years. The trespass livestock problem was much worse many years ago, according to Skiles, but then "the park service finally decided and had the fortitude to maintain a fairly firm policy of dealing with the animals." That policy was an in-park law enforcement directive for how law enforcement deals with trespass livestock authored by Hambly. Basically, the directive tells the rangers how to deal with both domestic and Mexican livestock. For example, for domestic livestock, rangers can give a warning and instruct the owner to get their livestock off the park. For second offenses rangers can cite the owner and fine them \$100 per head. The Mexican policy is that they don't get them back; they are rounded up and turned over to the USDA.

Introduction to Low-Stress Livestock Handling

I. Introduction

A purpose of the Friends of Big Bend grant project was to conduct low-stress livestock management training consisting of classroom and in-field exercises with assigned park staff. As part of the classroom training, I prepared and presented a two-hour powerpoint presentation on fundamentals of low-stress livestock handling (L-SLH) with a special emphasis on trespass stock. This outline is the embellished notes of that presentation. It's purpose is to serve as a basic manual on how to do low-stress livestock handling.

II. History

To put L-SLH in context we need to know a little about the history of livestock handling in general.

A. Driving. The oldest method employed by humans in working animals, which likely originate with the hunt, is where the hunter positioned himself so that the animals were between him and where he wanted them to go. The next step was to scare them and hope they ran in the right direction. We come by this naturally because for eons human beings drove prey animals to their deaths.

Driving is still prevalent to this day as evidenced by the wild horse roundups in Nevada, the buffalo hazing in Yellowstone NP, and traditional roundups conducted in BBNP.

Driving is dangerous, ineffective, and has an uncertain outcome because it often puts the animals in survival mode, which results in a panicked flight with the animals going somewhere not intended. Driving is the epitome of high-stress livestock handling.

B. Leading. An English tradition, imported with the colonists, consisted of working with individual animals and very small herds, where leading tame animals was practical. Leading works because following is a common behavioral trait found in all herd animals (i.e., they naturally follow their mother or the herd leader). This tradition heavily influenced the eastern U.S. and remains mostly an eastern practice with its small herds on small farms and dairies. However, leading has been done here in BBNP with individual animals caught in the field, and remains a viable option.

Leading is by far the least stressful method to move livestock, but it's practiced little in

the west due to the larger herds and landscapes.

C. Herding. The most common practice in the west is herding. Pastoralism, defined as the herding of livestock by nomadic tribes, has a long history in the Old World. The Moors and Iberians heavily influenced the Spanish who, of course, brought their animals and pastoral philosophy and skills to the New World. A primary characteristic of their pastoralism was that it was a male dominated enterprise. As one author put it, "There was an exaggerated sense of manliness, a right--nay, an obligation--to dominate any and all. Today we call it machismo" (Smith, p. 20). And that tradition of macho pastoralism was passed on from the Conquistadors to the native Indians to the Mexican vaquero to the Texas cowboy and to all points north via the great cattle drives of the 1880s, and remains the predominate livestock handling method in the west.

Advantages of herding over driving, if done correctly, include increased control over the animals and controlled slow movement in a direction of choice. Depending on how it is done, traditional herding ranges from medium- to high-stress.

Medium- to high-stress herding has been done in BBNP, but when things don't go as planned, the tendency is to revert to driving.

III. Founders/Key players

Then along came some particularly observant stock people who challenged the 500-year-old, traditional Spanish pastoralism and started a revolution in stock handling.

A. Bud Williams. Born in 1932 in Oregon, Williams spent his life working with livestock and studying livestock behavior on farms, ranches, and feedlots in the western U.S. and Canada. He also has worked livestock and wildlife (including reindeer, bison, and elk) as a consultant around the world. Williams used to teach a two-day L-SLH school.

B. Temple Grandin. A Ph.D. in animal science, assistant professor of animal science at Colorado State University, owner of Grandin Livestock Handling Systems, and author of several book chapters and numerous professional journal articles, Grandin has done a great deal of scientific research on livestock behavior.

C. Burt Smith. With a Ph.D. in range management and systems ecology, Smith was a livestock extension specialist at the University of Hawaii for over 20 years. An important contribution of Dr. Smith is that he attended Bud Williams' stockmanship school, then submitted Williams'

methods to empirical research, concluding that low-stress livestock handling, or “stockmanship,” was a teachable skill. Prior to that, what Williams did with livestock looked like magic and many believed that you either had to have a special talent or be an apprentice to the sorcerer to learn it. Smith is the author of Moving ‘Em: A Guide to Low Stress Animal Handling.

D. Steve Cote. A district conservationist for the Natural Resources Conservation Service in Idaho and a student of Bud Williams, Cote has helped to operationalize and popularize L-SLH on large public lands grazing allotments. He is the author of Stockmanship: A Powerful Tool for Grazing Lands Management.

IV. Old paradigm v. new paradigm: General characteristics

What Williams initiated was a whole new way of thinking about and working livestock that seriously challenged traditional approaches. His way is so radically different that it qualifies as a new paradigm.

What follows are some general characteristics of traditional livestock handling (“old paradigm”) and what’s come to be called “low-stress livestock handling” or “stockmanship.”

Old Paradigm

physical
human-centered
scientifically incorrect
fear, force, coercion
crude, harsh, inhumane
fast, impatient, tense
more is better
high-stress

New Paradigm

psychological
livestock-centered
scientifically correct
trust, confidence
subtle, kind, humane
slow, patient, calm
less is more
low-stress

Old paradigm.

Physical. According to the old Spanish pastoral philosophy of dominance it was believed that we had to force dumb, brute animals to do or go where we wanted.

Human-centered. Basically, we simply don’t care what the animal thinks or how it feels about things or what its point-of-view is. We don’t understand that there might be a way to work with the animal’s mind to get it to willingly do what we want. When things go wrong we tend to blame

the animals (e.g., “Stupid cows don’t want to get in the trailer.”)

Scientifically incorrect. Little or no understanding of research-based animal behavior principles and psychology.

Fear, force, coercion. Consequently, animal handling techniques tend to be based on fear, force, and coercion. Since it doesn’t even cross our minds that animals will willingly do what we want if it’s presented to them correctly, the assumption is that we’ll have to make them do what we want.

Crude, harsh, inhumane. As a result, handling techniques tend to be crude, harsh, and often inhumane (e.g., aggressive dogs, hotshots, beating or dragging animals into trailers).

Fast, impatient, tense. The general attitude is one of impatience and wanting to get the job done fast. Consequently, the people are tense and, by osmosis, the animals are tense.

More is better. The philosophy is: If it isn’t working do more of the same (i.e., more pressure, more noise, more dogs, more whips, more hotshots).

High-stress. Consequently, this approach tends to be high-stress. Unfortunately, it is SOP in the industry and remains the dominant paradigm. According to Bud Williams, “We probably work livestock less well now than a 100 years ago because there’s less talented people. In fact, we do a terrible job of working our animals, and we don’t teach people how to work livestock properly. Our basic instincts are 100% wrong for working livestock. For example, animals don’t like to be chased, but we are predators and our instinct is to chase. We have to overcome our instincts to work livestock correctly; we usually do the opposite of what should be done.”

New paradigm.

Psychological. In this approach we work livestock based on an understanding of animal behavior principles and psychology. We learn to understand what’s important to them, how they perceive and think about things, and to work with their minds so they willingly do what we want. The idea is that to move livestock we move their minds, instead of just their bodies.

Livestock-centered. A primary consideration is the animal’s point-of-view and needs, not ours. We try to understand the animal’s world and what’s important to them so we can behave in a way they understand.

Scientifically correct. This approach is based on scientific principles of animal behavior and learning theory (reviewed below).

Trust, confidence. By handling livestock correctly we can gain their trust and confidence which then allows us to get close and work with them in a controlled way.

Subtle, kind, humane. As a result, the techniques used are subtle, kind, and humane.

Slow, patient, calm. It's extremely important to work livestock slow. In fact, the fastest way to work livestock is slow. According to Dr. Smith: "Over 90% of the problems that arise from working or handling animals result from trying to work them too fast." Animals need to progress on their own timeframe, so patience is required. Williams says that "You only have to have an ounce more patience than the animal and you'll win every time." Fortunately, livestock are very impatient so it usually doesn't take long to get them to do what we want. Regarding calmness, Cote says, "You must have calmness before attempting to get stock to do something. And the way to do that is to prove to the animals that you aren't going to get aggressive or forceful."

Less is more. Contrary to old school, less is better (i.e., less people, less pressure, no force, no noise, no whips, no hotshots, no fear).

Low-stress. Consequently, this approach is low-stress, or if done properly, no-stress.

V. Attitude

For those schooled in the old paradigm, the transition to the new paradigm requires a profound and often difficult attitude and behavioral adjustment. Many experience a lot of resistance, which is natural enough given that they have to basically admit that most of what they know about livestock handling and may have spent years practicing is obsolete. As Cote says, "Most of the things you've been doing with your stock all your life have been wrong. This can be hard to accept." He goes on to say, "Perhaps the most common obstacle is that you realize stockmanship means you won't get to handle the stock like you want. You'll have to fight some old habits and really pay attention to what animals require." And Williams says, "In order for you to learn to work livestock the way that I do, you must first change your attitude, from make to let, and from blaming the animal to taking responsibility for the way it reacts. This will probably be the most difficult thing I can ask you to do."

Additionally, L-SLHandlers (or "stockmen") must:

1. Believe that it works and decide to fully commit to it before expecting good results.
2. Understand that we're working with the stock, not on the stock.
3. Appreciate the fact that in working livestock, we determine everything.

4. Change our nature, not the animal's nature.

VI. Animal behavior principles

Temple Grandin admonishes livestock handlers to “use behavioral principles to control animals instead of force. An understanding of behavioral principles will make it easier, safer, and more efficient and effective.”

A. Prey animals' primary motivation is survival. Livestock, as prey animals, have a deep, hard-wired instinct of self-preservation. Therefore, it is of utmost importance that we as handlers learn how to behave in a non-predatory fashion so that we are non-threatening.

B. Prey animals have an instinctive fear of strangers. Most animals are another animal's dinner. Therefore, strange animals are treated with caution until they demonstrate that they are not a threat. Consequently, as Grandin says, “The first impression of animals is very important.”

C. Prey animals are flight animals and have a “flight zone.” Prey animals' primary defense is to flee from the perceived threat of a predator. The flight zone is defined as an area of increasing probability that the animal will move; it is not a distinct line. The flight zone is dynamic and depends on the animal's genetics, disposition, past handling and experiences, and the current behavior of the handler. If the boundary is penetrated too far or fast or at the wrong angle, the animal will flee. The flight zone of domesticated cattle generally ranges from 20'-100'.

D. Animals have excellent memories for prior bad experiences. Animals do not forget bad prior experiences; such as being chased by horsebackers. They also do not forget good prior experiences, such as being handled in a nonpredatory fashion.

E. Animals readily display signs of their mental state. Signs of nervousness include switching tails, raised heads, milling around, facing head-on, ears on alert, snorting. Signs of contentment include heads down, standing with a legged cocked, ears relaxed.

F. Animals with an excitable temperament must be habituated slowly, in small steps, whereas animals with a placid temperament can be trained more quickly and in bigger steps. This principle is very important when first approaching an animal or herd of animals to determine how fast they can be habituated to our presence. Best case is we gain their trust in minutes. Worst case is that we have to come back several different times.

G. An animal will move in a predictable direction if approached in a certain way. Handlers can easily steer or direct animals in the desired direction if they know where and how to apply

pressure. (Specific techniques are discussed below.)

H. If an animal can inspect a novel object or setting at its leisure, it will generally adopt it into its environment. Fear of novel objects is not caused by the object's novelty; rather, it is the animal being forced into contact with it before it is ready to accept it. Passive items, like catch pens and trailers, can be accepted fairly quickly if the animals are allowed to voluntarily approach them. Livestock can be kept calm by gradually and gently introducing them to things that are new to them.

I. Flight is finite. A common behavioral trait of flight animals is that when they are scared, they run off a ways, then stop and give whatever spooked them a good looking over. The reason is that the first reaction to an alarm is to flee for survival's sake. However, there is no point in continuing to run if they are not being chased. So, they put sufficient distance between themselves and the cause of their alarm and then stop and assess the situation. This is one important reason why animals should not be chased.

J. Animals seek relief from pressure. Livestock want relief from pressure and want to be able to control it. Stress builds up in livestock when they can't find relief from pressure.

Unfortunately, most people apply too much pressure and when the animal moves they keep applying pressure instead of releasing. This can lead to panic.

It is of paramount importance to:

1. Apply pressure using the least amount of movement required in order to get the desired response.

2. Release pressure at the exact moment the animal responds right. *When* we release pressure determines whether what the animal just did was the "right thing" or not, in its mind. Cote admonishes handlers to "Make all of your stock a promise that you will never break: When they respond right, you will release pressure, every time." If we don't release pressure in a timely fashion, the animal will not only not learn what we want, but it may panic.

VI. Techniques

As a practical matter, we need to learn how to operationalize these animal behavior principles in the field. In other words, how are we going to go about rounding up trespass livestock in a low-stress way? The first question is: How should we approach what are likely to be skiddish animals with a large flight zone? Well, let's ask why are they skiddish and have a

large flight zone in the first place?

A. Approach. We can assume that we will be dealing with domesticated animals (horses, burros, and cattle), but they are still prey animals with a well-developed instinct for self-preservation, therefore, they will be cautious and maintain a large flight zone until we prove to them that we are not predators. Secondly, they most likely have been chased by horsebackers, therefore their prior experience with horsemen has been bad (i.e., fearful) and they learned to escape by fleeing. Understandably, their flight zone is large, and their trust and confidence level of strange horsemen is about zero. Our challenge is to convince them otherwise, to gain their trust and confidence so that we can get in close enough to either catch them (with halter or lariat), or herd them in a slow, controlled way to a catch pen.

The most basic starting place is to let the animals find that it's okay for us to be around. So, at first we stay quietly far out of the flight zone without asking for anything. We give the livestock time to size us up, gauge our intentions, and show them that we aren't aggressive and won't do anything that bothers them. We just watch and let them get used to us being there and to relax before progressing. However, according to Williams, it is best to maintain some movement; just standing still for too long may make the animals nervous.

When stock are comfortable with us around, we approach them at a flat angle, never directly head on, by walking or riding straight lines back and forth in a zig-zag pattern, being careful to release pressure by stopping or retreating just before they move off. There's two reasons for this: (1) predators move straight in or circle, and (2) as Williams says, "We must approach in such a way that the animals think that we are going to go on by." Don't take your attention off the stock, particularly the most sensitive animal(s); it is the barometer.

If the stock get nervous, back off and let them learn that pressure has a release and that they don't have to bolt to get that release. We want them to learn that they can control pressure and that we will back off whenever they show signs of concern; if we don't, they will run.

So, we approach only to where we feel the animals will move (a signal might be when a head goes up) and then back off (release pressure). This lets them know that we only want to get that close and won't keep coming if it bothers them. Watch for a relaxed look and posture before approaching closer each time. What we're trying to do is to change their question from: "When do we run?" to, "Which way do they want us to walk?"

B. Initiating movement. When the animals accept our presence and we've shrunk their flight

zone and gotten in close enough to where we think we can ask for controlled movement--that is, that they are ready for it--we apply enough pressure to get them to move by invading their flight zone.

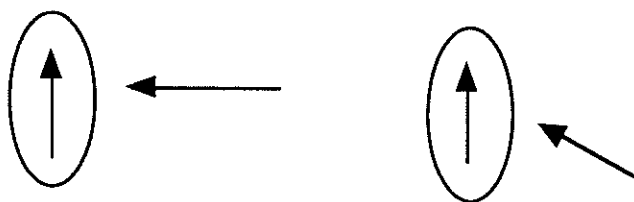
Stock are less stressed and more comfortable if they have more than one direction to go when pressured, so let them decide which direction they go at first, but make one way more open than the other (e.g., away from the river). Try to make that in the general direction that we'd like to move because livestock have a tendency to move in the direction they are already headed.

The question is: How to initiate movement? Remember the principle: **An animal will move in a predictable direction if approached in a certain way?**

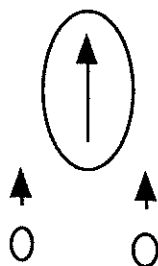
Let's look at an individual animal--because working one is basically the same as working a herd--and how to approach it to get predictable movement.

Working an individual animal.

To get an animal to move forward, one handler invades the animal's flight zone and applies pressure behind the "drive-line" (the girth) by moving in straight to its side or an angle into its flank.



If there is more than one handler, approach in a straight line behind the animal, forming a "T" to the desired direction of travel.



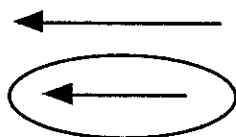
Give the animal a minute to decide how to respond to the pressure, and let it move in the general direction we want; that way it's the animal's idea so it's content. If we set up the situation right and wait, the animal will respond. Just let it move in its timeframe and don't rush things. If we anticipate the need, we can block an unwanted movement (e.g., a wash that leads to the river).

Once the animal does move, let it take a few steps before following so it can experience that release of pressure.

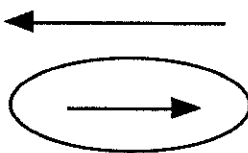
By doing all these steps, stock will have the experience of not being trapped or forced into doing anything. They will learn that doing the “wrong” thing produces continued pressure, whereas doing the right thing produces release from pressure. Eventually they learn to do what we ask because they know that in so doing they avoid pressure. This builds trust and confidence.

C. Directing/controlling movement. Once we’ve approached properly and initiated movement, we need to be concerned about how to direct and control the movement.

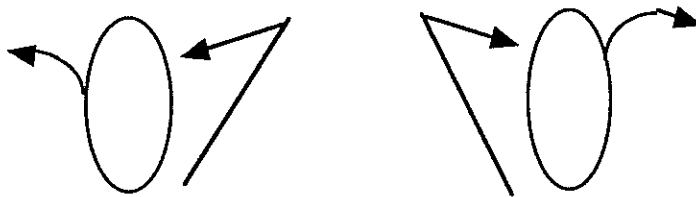
1. To slow the animal down move parallel with it inside its flight zone.



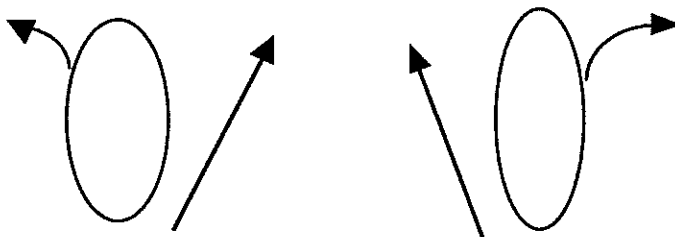
2. To speed the animal up move parallel against it inside its flight zone.



3. To turn a gentle animal pressure in front of the drive-line; it releases pressure by moving away.



4. To turn a flightier animal vector out wide and forward in the opposite direction.



Livestock are herd animals, so if we control the leader the rest will follow. Use the above techniques to control movement. Forget about pushing from the rear; those animals will take care of themselves and pressure from the rear is not only unnecessary but counterproductive (i.e., pushing from the rear makes animals nervous and cranky, and tends to turn them back so they look at us). We need to move in straight lines and make our movements deliberate, straight, and precise. The reason is that this makes it easier for livestock to know our intentions.

If the stock are going too fast there are three choices: (1) stop and do nothing, (b) follow behind but slower, or (3) go with it but vector out to the side. Any of these actions tell the stock that we are not chasing them, and given our positioning they will want to see us, so they are likely to slow and stop. Stop when they stop, let them relax, then zig-zag in to their flight zone until we get close enough to initiate movement again. On rare occasion someone may need to get ahead of the stock (e.g., to block a trail to the river), but only by vectoring real wide, far outside of the stocks' flight zone).

D. Approaching a catch pen. First, let's consider the construction of portable catch pens.

Traditional livestock handlers believe that the larger the pen the better, and that pens with wings to help guide the stock into the pen are helpful. To the contrary, low-stress livestock handlers believe and have demonstrated right here in BBNP that small pens with no large wings work fine. In fact, the large pen composed of multiple vehicles and trailers bumper-to-bumper are probably intimidating and fear-inducing to livestock, whereas a small, simple pen is less so and more easily accepted. All that is necessary to round up any stock in BBNP is the stock trailer with its eight panels which can easily be set up by one or two handlers (i.e., no extra ground crew is necessary). Three recommended designs are illustrated below.

Remember the principle: **If an animal can inspect a novel object or setting at its leisure, it will generally adopt it into its environment?** Most peoples' tendency when working stock is just the opposite: When we get close-- whether to a corral, gate, catch pen, or trailer door--we have an irresistible urge to rush 'em, trying to scare them the last few steps. This is the absolutely worst and most counterproductive thing that can be done. Look at it from the animals' perspective: (a) all of a sudden the handlers have turned into scary predators so they panic, (b) we've inadvertently convinced them that the corral is a scary, dangerous thing and that they're going to die if they go in there, (c) by excessively pressuring the rear we cause panic and force the animals to cut back because they have nowhere else to go, and (d) that relieves the

pressure so they'll do it again next time.

What should be done is exactly the opposite: Wait. Gradually and gently introduce the animals to the novel object (e.g., a pen) and give them all the time they need to voluntarily approach, inspect, and passively accept it. Often they will walk in on their own volition. This process can be facilitated with pressure-and-release, making the wrong thing difficult and the right thing easy. That is, everytime the animals turn away from the pen they experience pressure, whereas everytime they turn towards the pen they experience release. Pretty soon it becomes the animals' idea to go into the pen. If the animals go around the pen, that's okay. Simply redirect them and bring them back. Salting the entrance to the pen with hay will be helpful.

According to Williams, "Livestock aren't afraid of the corral. They're afraid of the pressure and what happens before you get to the corral. Therefore, if you teach them before you get to the corral that there's a release from pressure, if they do what you ask and that you'll never put more pressure on them than they can comfortably tolerate, then they won't be afraid of the corral and they'll go right in."

E. Once in a pen.

Immediately release all pressure; back off. Wait until the animals are comfortable in the pen before closing the exit. Have a little hay in the pen; it rewards the stock for entering, helps them think of the pen as a good place, and helps settle them by taking their minds off us.

1. Catching. After the livestock are standing calmly in the pen, we can--in the case of domesticated horses and burros--enter on foot, catch and halter them. In the case of less tame animals or larger pens, it may be necessary to rope them first. In order to do this in a low-stress manner, it is necessary to be proficient at basic ranch roping (see Introduction to Ranch Roping).

2. Trailer loading. Trailer loading has often been one of the most difficult parts of a traditional roundup, but unnecessarily so. Traditional trailer loading of livestock is based on fear and force, and it can be extremely crude, harsh, and inhumane, and consequently, ineffective. Old paradigm livestock handlers reason thus: Animals won't want to go in the trailer because it's an unnatural, scary, claustrophobic place for them to be, therefore we will have to force them in against their will and slam the door behind them before they jump back out. New paradigm handlers reason differently: Let's handle the situation in such a way that going into the trailer becomes the animals' idea, therefore they will not only go in willingly, but they will be happy

once they're in the trailer and will stay there.

The principle behind low-stress trailer loading is the same as entering a pen: Gradually and gently introduce the animal(s) to the trailer and give it time to voluntarily approach, inspect, and passively accept it. Then, cause your idea (get in the trailer) to become the animal's idea by making the wrong thing difficult (looking and being away from the trailer) and the right thing easy (looking towards and being close to the trailer). Specifically, everytime the animal turns away from the trailer apply pressure, and everytime it turns towards the trailer release pressure. Pretty soon it becomes the animals' idea to go into the trailer.

Trailer loading techniques.

1. Trailer loading with trailer attached to pen.

a) Catch and halter animals and lead directly into the trailer. If recalcitrant, use pressure-and-release techniques to persuade the animal to load.³

b) Load unhaltered animals directly into the trailer using pressure-and-release techniques.⁴

2. Trailer loading with the trailer not attached to the pen.

a) Lead haltered animals to and then into the trailer. If recalcitrant, use pressure-and-release techniques to persuade the animal to load.⁵

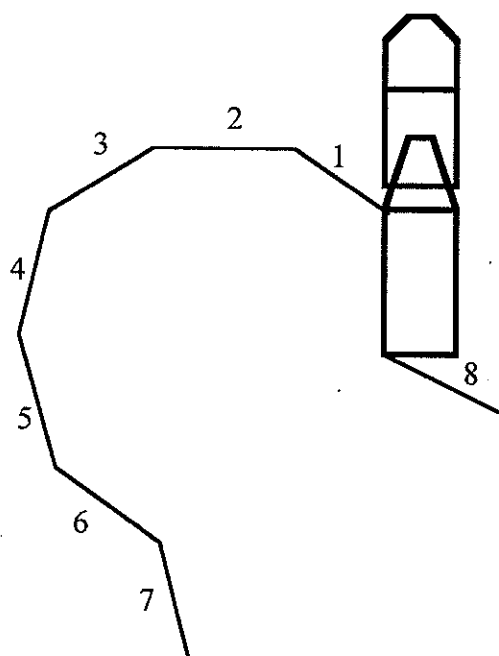
b) Trailer load cattle off a lariat. (This a very effective but specialized technique that requires ranch roping ability and experience, a rope-savvy horse, a working understanding of pressure-and-release, and personal coaching.)

The diagrams on the next three pages illustrate three recommended pen designs. As noted, all three designs use only the stock trailer with its eight panels, which is all that's necessary if low-stress livestock handling techniques are used (i.e., so that the animals are under the handlers control and in a normal frame of mind). Also, note that there are no large wings; they are unnecessary. The bottom diagram on each page illustrates how to reconfigure the catch pen for trailer loading, which is discussed on each page.

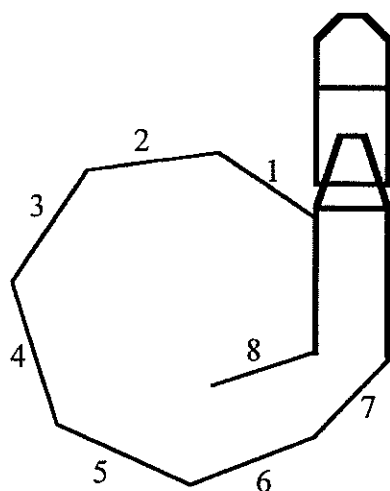
³ Specific techniques were taught and practiced during in-field exercises.

⁴ Specific techniques were taught and practiced during in-field exercises.

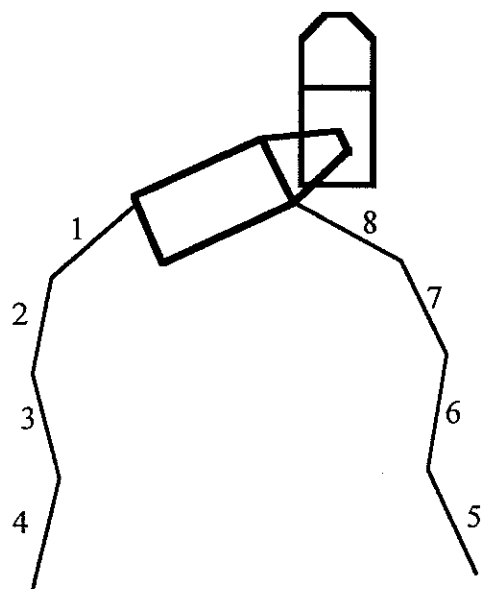
⁵ Specific techniques were taught and practiced during in-field exercises



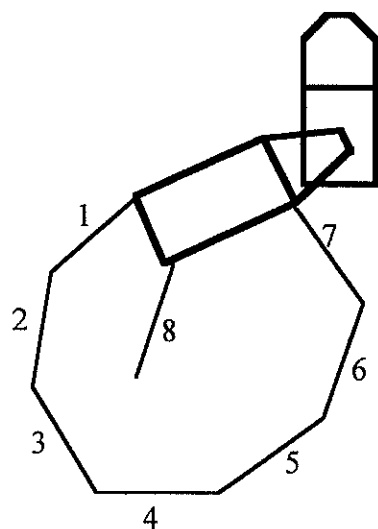
If a truck with a grill guard is used, attach panel #1 to it to enlarge the pen. Also, natural land features (e.g., a steep wash bank) adjacent to panel #8 could be used to advantage.



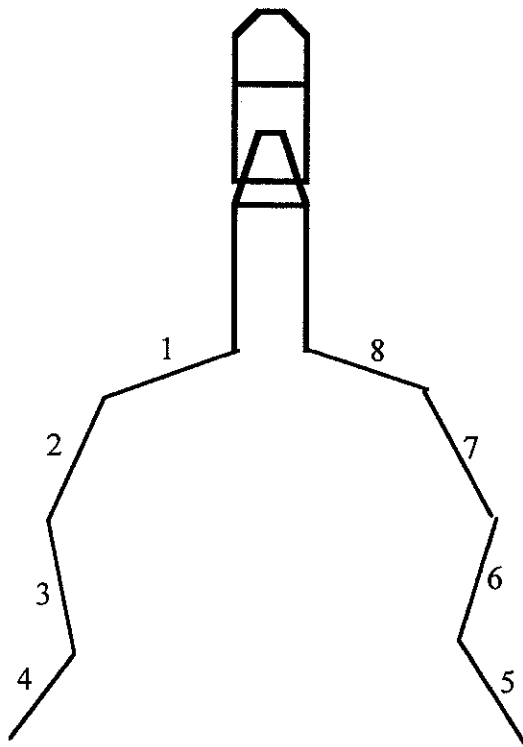
To trailer load animals, reconfigure the pen as shown. Then, load the animals one at a time using low-stress techniques until the majority have been in the trailer (it's okay if they come back out; they will load that much easier the next time). Then load the whole bunch.



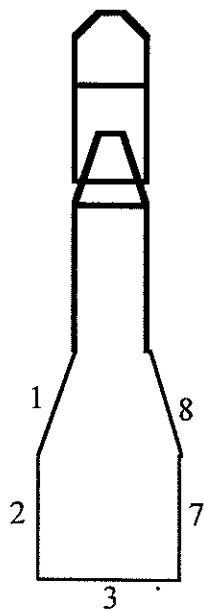
Natural land features (e.g., a steep wash bank) adjacent to panel #4 or #5 could be used to advantage .



To trailer load animals, reconfigure the pen as shown. Then, as with the last example, load the animals one at a time using low-stress techniques (i.e., making the right thing easy and the wrong thing difficult).



As with the last example, natural land features (e.g., a steep wash bank) adjacent to either panel #4 or #5 could be used to advantage.



To trailer load animals, reconfigure the pen as shown. Then, load the animals one at a time using low-stress techniques (i.e., from the front, giving each an "escape route" and pressuring into its side as it goes by).

F. Rodear

To “rodear” is a term used by the vaquero that means to round up and hold cattle, usually for the purpose of sorting or roping. With as few as one riders, trespass horses, burros, and cattle can be approached, their flight zone shrunk to the point where they either can be approached on foot, haltered or roped, then led or herded to a trailer. (See Case Studies starting on p. 41)

VII. Livestock handling problems

A fundamental tenet of the low-stress paradigm is that all domestic animal behavior problems are human-caused. Problems are caused by not understanding how livestock need to be handled. Nothing rattles livestock like people mishandling them and, unfortunately, our natural reaction is to force the issue when confronted with a problem. The source of many handling problems is trying to impose our way of doing things on the stock. But, when livestock do something “wrong” it’s simply because they are doing what they think they should or need to under the circumstances to find safety and comfort.

However, if we understand that (a) we communicate with animals by the way we move, how we move, and where we move to, (b) if we move properly animals will respond properly, then (c) if the animal isn’t doing what we want it must be due to something that we’re doing. We must keep in mind that we need to accommodate the way livestock think and react. If they aren’t doing what we want, it’s because they aren’t ready to or we’re asking wrong. So, when things don’t go right, the best immediate course of action is to stop, release pressure, evaluate the situation, and adjust accordingly.

Two things that most likely will happen to us in the field include:

1. **Stock going in the wrong direction.** If that happens, don’t try to forcibly stop them. Go with them. Let them do what they feel they should do at that time, then gently and correctly apply pressure until they decide to turn in the desired direction.

2. **Stock may take off fast.** If they do it’s because more pressure was applied to them than they could handle (e.g., too many handlers approaching too fast and at wrong angles). In other words, they were approached incorrectly. A common experience in BBNP during traditional roundups is the stock--whether cattle, burros, or horses--taking off at the sight of horsebackers. There is only one reason for this: The animals learned from prior experience--either from their owners or roundup crew--that that’s what they needed to do. Unfortunately,

the traditional response is to do more of what didn't work in the first place: chase after them.

The cardinal rule is: Don't chase stock. That is what they expect and if they are chased that only makes matters worse (i.e., it convinces them that we are in fact predators and not to be trusted as they thought, it reinforces flight behavior, and it undoes in an instant all of the habituation and trust- and confidence-building that we've done). Furthermore, it's difficult to win a chase against unmounted burros or horses. Worst case scenario is they get away, but by not chasing them we can return another day and it will be easier; that is, the stock will have begun to learn that we aren't going to chase them so they have nothing to fear, hence they will be more approachable and workable.

On the other hand, we can't allow stock to relieve pressure by running away because they will get the idea that this is the thing to do. So, what do we do? We help them understand that running off isn't the way to get relief from pressure. We do this by going with them, either behind but slower, or vectoring out to the sides, until they slow and stop.

Calming techniques:

To work livestock in a low-stress way, they must be calm. If they're not calm they won't be in a frame of mind to listen to our requests. Specific techniques include:

1. Pausing and waiting. Dr. Smith calls this one of the most effective tools of a knowledgeable herder. However, as noted, Williams cautions against standing still for too long because that can make animals nervous.
2. Stepping back. This immediately releases pressure.
3. Moving beyond the animal in a straight line. This also immediately releases pressure.
4. Move slowly. Any predator traveling at speed is suspect.
5. Mumble. Talking or singing to yourself in a low, monotonous tone.

VIII. Low-stress livestock handling in BBNP: Specific strategies

1. **Reactive.** An advantage of a trained, in-house L-SLH team is that it can respond to trespass livestock sightings in a timely manner, ideally the same day, but no later than the next day.

2. **Proactive covert patrols.** Periodic proactive covert patrols of high incidence areas should be routinely conducted. The objective is to scout an area undetected and gather any stock

found.

3. **Proactive overt patrols.** This is great follow-up for proactive covert patrols in which stock were captured. The objective is to “fly the flag,” be seen, and reinforce the belief that rangers are actively patrolling for trespass stock.

4. **Roundups.** Although this project seriously questioned the utility of organized, pre-scheduled roundups, there is still a place for them if conducted by the in-house team in known, chronic problem areas with recent sightings (e.g., Mesa d’Anguila).

5. **Rodears.** Rodearing individual and small groups of animals, especially horses and burros, has proven to be effective.

6. **Self-feeding pens.** This technique was used successfully at the Rio Grande Village horse corrals. It involved building a wing off the corner of an unused horse pasture that intercepted a burro social trail.

7. **Temporary catch pens.** Temporary catch pens made of stock panels and/or barbed wire and T-posts have been built and used at Tornillo Bridge, San Vicente, Rooney’s, and Solis. These pens use natural features of the landscape to advantage (e.g., deep washes).

8. **Portable pens.** A portable pen attached to the stock trailer can be set up as needed the day of a roundup.

9. **Chemical immobilization.** This remains a viable technique, but should be secondary to low-stress capture or herding methods.

10. **Traps and snares.** Currently untried techniques, unmanned traps and non-injurious snares could be potentially effective in certain applications and areas.

5 Characteristics of a Stockman

1. Stockmen accept that we have to change our nature, not the animal’s nature.
2. Stockmen understand and apply animal behavior principles.
3. Stockmen know what creates anxiety, fear, mistrust, and panic in livestock as well as what creates calmness and predictable responses.
4. Stockmen set up every situation so that the handler’s idea becomes the animal’s idea, so the animal wants to do what we want.
5. Stockmen take full ownership of the fact that as handlers they cause whatever the animals do; what they do determines what the stock do.

5 Do's

1. Take the time it takes and it will take less time.
2. Do everything slowly and with confidence.
3. Always reward stock for each step they do right.
4. Abandon the idea of scaring stock to go where we want.
5. Work just in and just out of the flight zone.

5 Don'ts

1. Get in a hurry or be impatient.
2. Act like a predator or chase animals.
3. Ask livestock to do something they are not ready to do.
4. Stay in the flight zone if the stock are doing what we want.
5. Apply pressure and keep applying pressure; there must be a release.

5 Rules

1. Always watch the stock and respond instantly to what the animals show you they need and on their timetable.
2. Always walk in straight lines and approach at angles, never head on.
3. Use persuasion, not coercion.
4. Don't mix paradigms.
5. Out smart 'em, not out fight 'em.

5 Laws

1. Calmness first, then pressure, then release, then wait.
2. There is no one best position or maneuver for all circumstances or all times.
3. Whatever you are doing, you are doing it too fast.
4. The livestock are never wrong; what is "right" means the way livestock need it done.
5. There are no difficult animals to work, only inexperienced or unknowledgeable people trying to work animals.

Concluding thoughts

"An understanding of behavioral principles will make it easier, safer, and more efficient and effective when working with livestock." Temple Grandin

"The low stress livestock handling method works well on every animal, no exceptions."
Steve Cote

"First learn the basics, apply those basics in the field and practice; then review the basics and practice some more." Burt Smith

"If you have truly changed your basic attitude about livestock as I have suggested; if you will look to your animals to see if your position is right or wrong; if you will take responsibility for what the animal does; then you will be able to continue learning on your own." Bud Williams

Bud Williams BBNP Visit**March 2-4, 2007****Class Notes****I. Introduction**

Big Bend doesn't have a trespass livestock problem. Everything here, including Boquillas Canyon, is easy.

You never have a livestock problem; you have a people problem.

We make things difficult in our minds that aren't difficult (e.g., trailer loading in the open).

Don't let terrain be an excuse or think that it will cause trouble; it only will if you think it will.

Nobody knows how to work livestock. We require training and certification for everything except working livestock. Should have a required two-year animal handling course and certification process.

Most cowboys don't know how to work cows.

Everyone thinks they know how to work livestock, but nobody does.

"I'm not only trying to make it easier for you but for the animals."

"I struggled with it until I learned it and you will to."

II. Attitude

Animals are extremely sensitive to our attitude. They want a confident person they can trust driving them. We're working with friends, not on animals.

Determination and confidence are more important than skill level.

If you go out with the attitude that this will be a difficult job you'll be at the top of your game and you'll succeed.

It's a mistake to think in terms of "let's go get 'em." You can't learn much while you're trying to do a job. Instead, focus on learning how to work them, to learn the process and techniques, not caring if they go to Mexico.

We have to forget excuses and blaming the livestock. People always use excuses, but if we use excuses we've set ourselves up for failure. For example, you said that "they want to go across the river." But, if they wanted to go across the river they'd already be there. They'll only go across if you handle them wrong and make them cross. The river ceases

to exist if you work them properly. Don't even go out there with that idea. If you have an excuse you just whipped yourself. Don't go to a job thinking that you need this and that to succeed. If you don't think you can do it, don't even try. If you have a job to do just go do it.

You have to go in with no time frame and determination and work with the animals before driving them out, then it's simple. Can't have a time limit; commit to get the job done. If you limit yourself to time you will hurry and defeat yourself.

The problem is when you make a mistake and don't correct it. It's not a problem to correct a problem.

A mistake is too much help. One person can do it all. "It's so simple that I wasted my whole life doing something so simple." We make it unnecessarily difficult.

The fear that they're going to get away is devastating.

III. Principles

It's a mental thing between you and the animal(s).

Livestock don't mind going anywhere if we drive and guide them right. Usually we stop them.

If you use more than two people it will be more difficult. Consider it from the animals' perspective: Would you rather have one car or a half-dozen coming at you?

You need animals in a normal frame of mind when you work them.

You have to be able to move animals in a controlled way and to be able to direct it.

Animals don't want to be in rough places. They are there because they want to get away from you, so work them right and they won't have reason to stay in there.

IV. "Reading" animals

Every step you take and every step the animal takes we're communicating. You have to learn to read the animals. If you're making a mistake the animals will tell you by their behavior.

Everything is reading the animals. They will take you where they need to go and tell you what to do.

Don't copy what you've done before; rather, read the animals. We don't realize how much animals are reading us. Assume that animals can read your mind; they are that good at reading body language.

V. Flight zone

The first point of contact is critical. Most mistakes are made here. Pressure-and-release to find out what the flight zone is. The worst thing is to pop out on them.

When driving animals you have to be constantly touching their flight zone.

Work on the edge of flight zone. You need to constantly work on them. Don't back off completely; rather, release, then come back in because you're teaching animals to take pressure so when we get to the place where we need to apply pressure (e.g., the corral) the animals will take it. If cattle will need 10 pounds of pressure to get through a gate you need to have them trained to take 10 pounds of pressure before getting to the gate. To train the animals to take this pressure, apply 10 pounds, release to 5 pounds, reapply 10 pounds, etc.

The flight zone is so changeable. It constantly changes and fast.

"Pressure zone" = the area just outside of the flight zone.

Constantly "touch 'em" (i.e., working the pressure zone). Going back and forth if too far away is detrimental. Work next to the pressure zone.

VI. "Working" livestock

"Working" with animals means learning what you have to do to move them, turn them, and stop them. When working animals you must teach them to go straight.

You must work animals in such a way that they stay in a normal frame of mind.

Can't work livestock by committee; someone has to be in charge.

Must teach livestock just as we teach horses before we get on them. Try taking a colt, putting it in a chute, saddling it up, and see what you get.

You have to make mistakes to know how to work animals (e.g., you have to pressure too much to know how much pressure they will take).

Aren't working on animals physically, but mentally.

If you work animals properly there are no lead animals because you're the leader.

Every time you work animals you teach them to be easier or harder to work.

Proper position at a walk is everything. Must read the animal(s) so we know what our position should be.

We communicate with animals by where and how we move. We must have positive movement

which animals can read. (Metaphor of erratic driver whose intentions we can't read.)

Boquillas Canyon: Spend a day working with them (i.e., start 'em and turn 'em) learning what you have to do to work them. Go where they want to go first. When animals start working for you and their mind is on you and not other things, then you can control them.

VII. Techniques

First, approach properly so you're not a threat. Second, work with them. Third, move them where you want.

Take an hour to start them and it'll save you hours later.

Most people get too much movement to start.

Zig-zag is good but don't make round turns; do "basketball turn" (i.e., stop, back, turn).

When zig-zagging back and forth across behind animals to generate movement start far enough back so they can decide calmly how to respond to you, then work close. Don't start too close or you'll scare them.

How you start animals determines 99% of the outcomes.

Don't go right at the animals. Approach at flat angles.

Have to teach animals that you can turn them, then you can direct them. Then you have to teach them to take pressure before putting them in a corral.

Can't wait until the animals run to back off; you need to read them and the signs before that happens.

I have to stay in control. Before I get to the pen I'll already know what it takes to turn them left or right and I'll turn them when I want. What does it take with these particular animals.

The trouble people have is that they plan things. It doesn't work because the animals aren't part of the planning process. You can't have a predetermined plan.

Don't back off and wait for animals to decide to do something (e.g., go in the corral) because what if they don't decide to do what you want? Rather, teach them to take pressure and go straight so by the time you get to the corral you can drive them right in. There's no need to take pressure off and let them decide what to do.

Livestock aren't afraid of a gate (or pen or trailer); it's what the handlers behind them are doing.

For example, if the country is open before them the handlers aren't really of concern, but when they feel the pressure of a gate, the pressure of the handlers become important.

Therefore, the best place to be is at the gate. We get all concerned about a gate which the stock feel and therefore makes the gate difficult. In the animals' minds the gate doesn't exist until you get there (i.e., they don't think ahead nor should we because we'll cause what we anticipate). Cattle really want to go in the gate. The reason they don't is because we're telling them not to.

Wings on corrals just get in the way; they are crutches.

Being too far away is a big problem--it's no effect.

Must teach the animals that you can turn them. Learn what it takes to turn them. What will they accept and not accept.

Apply pressure and release. "I'll put this pressure on and you learn I'll take it off.

Must use straight lines. Animals like you to go straight; if you swerve you'll pay for it.

Need a driver and a guide; can't mix roles. Must keep your position; can't be doing different things. Only one person can pressure.

If leading animals with a horse, keep the horse straight and don't turn or stop. You have to stay ahead of them. It's their idea to follow.

When moving animals you can't ride all the way across the rear without turning the point.

If you're on the side be up toward the front and out. Animals want you where they can see you and know where you want them to go.

Don't stop and stand; keep moving back and forth or rock left and right. When you stop still it's a red flag. Animals depth perception is poor and they don't know what's going on if you're not moving. Animals have to look at you with both eyes to see how far you are.

Once you get movement keep going or else the animals' minds start to change.

If you have a difficult animal don't try to force it in a pen, but take it up a little ways, let it back, then move ahead a little more, etc. Don't force 'em or chase 'em. If you chase them you're still a threat, therefore you can't do anything with them.

When moving wilder cows you can cross behind and go out to the side until heads go up, then go back a little, then out again, until the cattle are used to it, then you can ride out far enough to turn them.

The theory is that no matter what they do you're there.

The reason we have failures is that we confuse them. If you teach them something bad, you'll have trouble.

It's as much paying attention not to do the wrong thing as it is to do the right thing.

Livestock don't remember bad things. They remember bad handling.

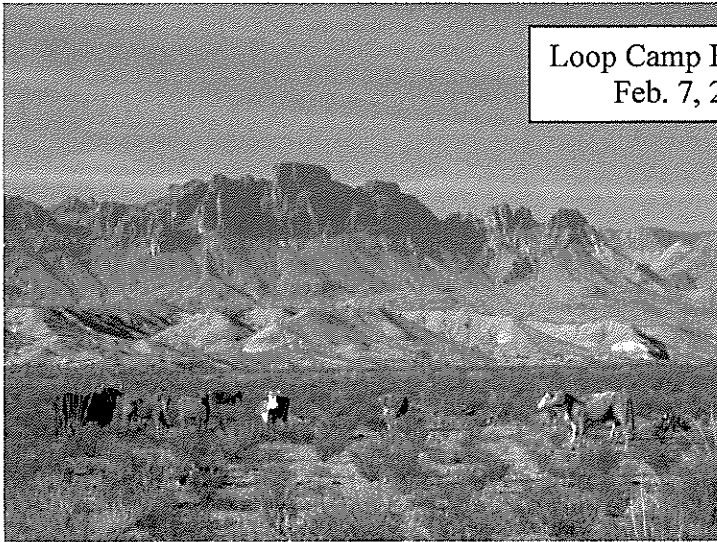
Never yell or wave your arms around animals.

VIII. Conclusion

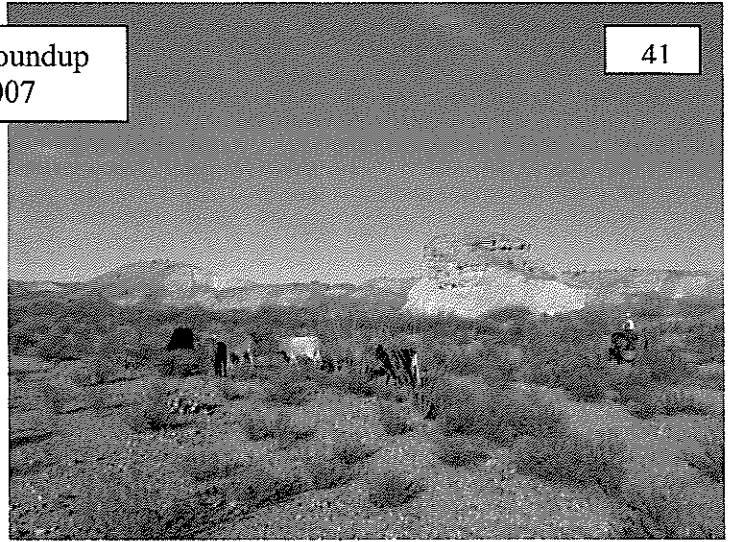
Management has to insist on it and you need people who can do it.

We don't have failures; they are learning experiences.

You can't get perfect in BBNP but you can control the problem with a more safe and efficient way.



Approach. Calmly zig-zag in to shrink flight zone, keeping the cattle in their normal frame of mind.



Initiate movement by applying pressure, then direct movement by working the sides.



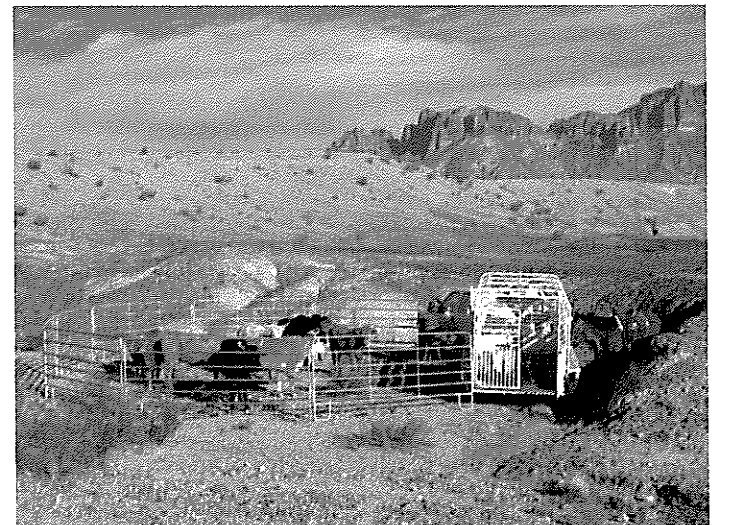
Approaching catch pen with no pressure.



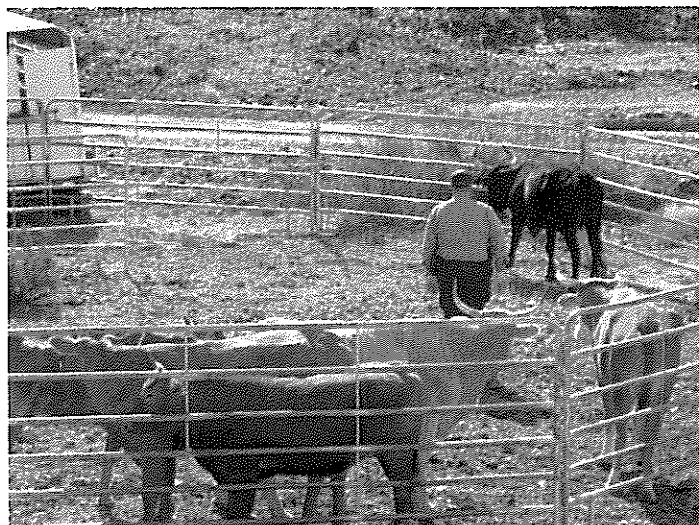
Giving cattle time to habituate with no pressure.



In ten minutes the cattle choose to walk in the pen and eat hay.



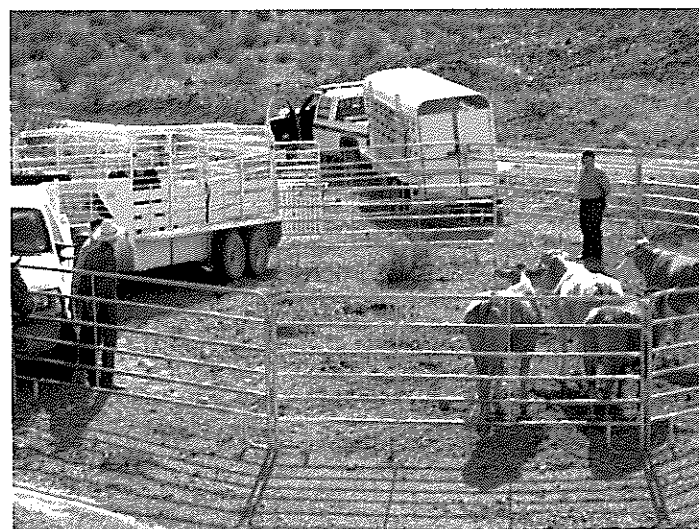
The cattle are comfortable because it was their idea to go in the pen; they weren't forced.



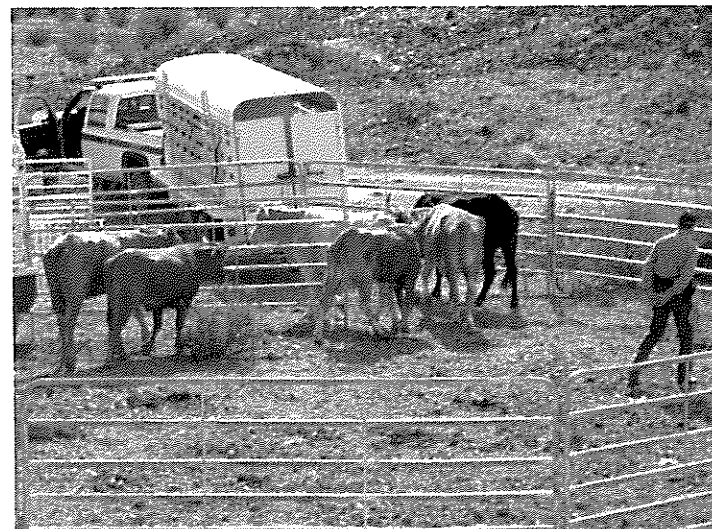
Van Inwagen trailer loading dominant cow.



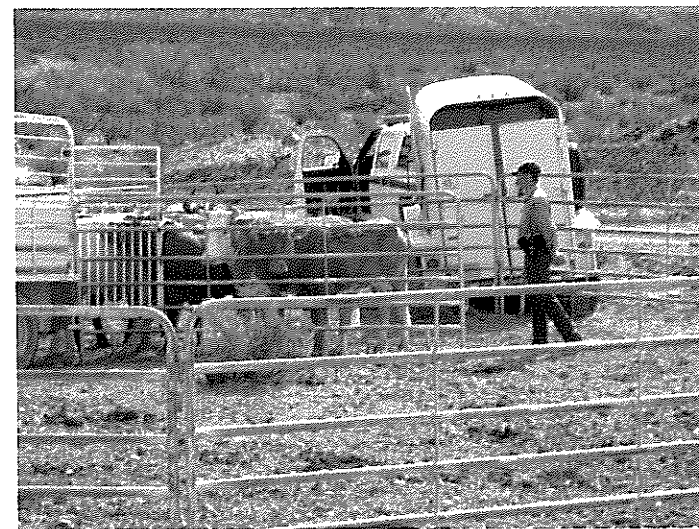
She approaches without coercion.



Cow willingly loads into trailer by herself.



Roberts brings the rest using body position only.



Roberts waits until cattle habituate to the trailer and decide to load up.

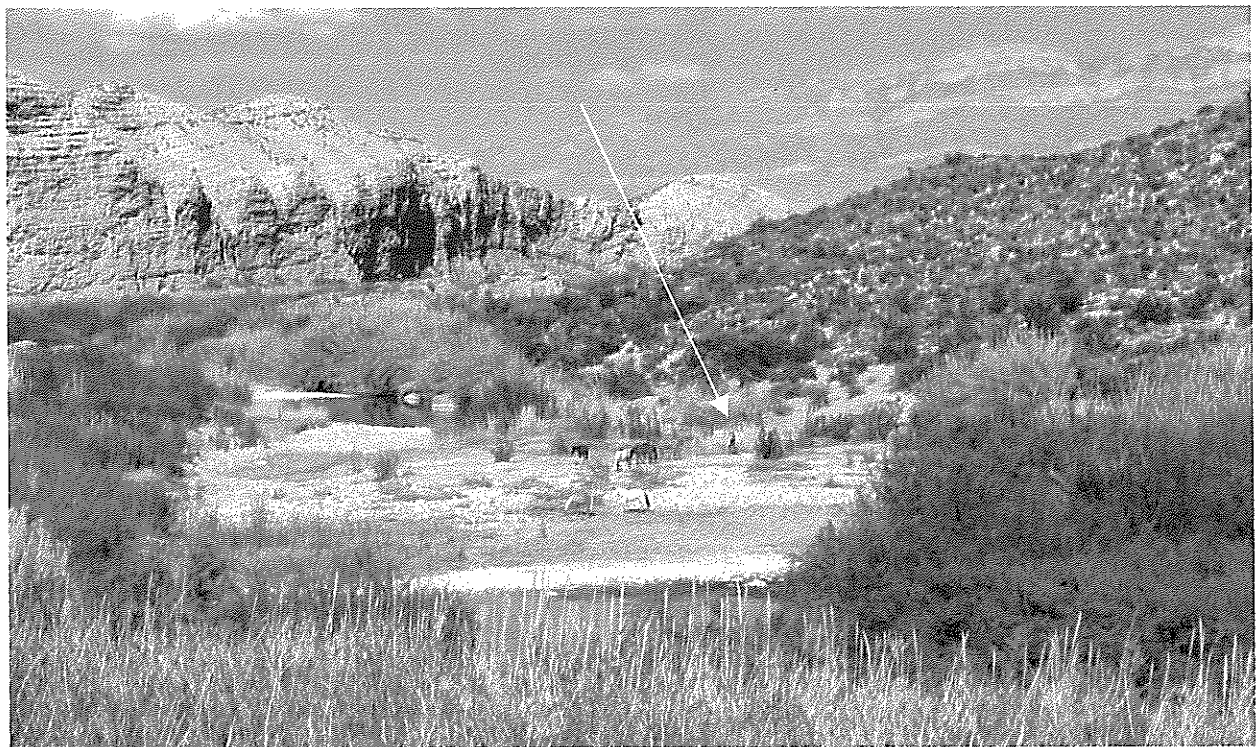


Cattle willingly step into trailer by simply making the right thing easy and the wrong thing difficult.

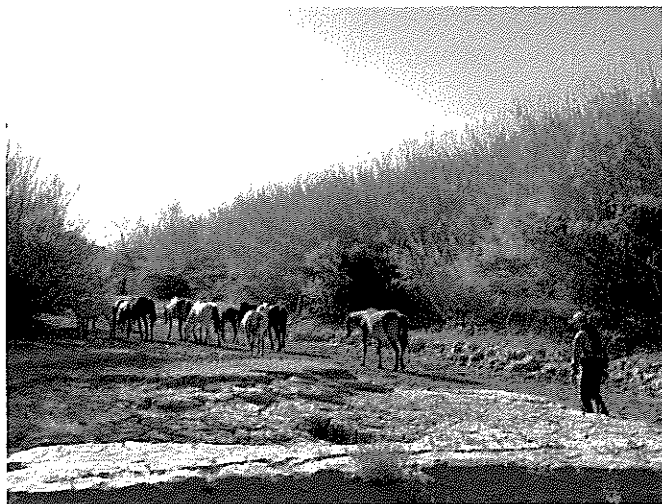
This roundup illustrates a successful gather of horses off the dreaded river on foot.



Twelve horses on a gravel bar on the river at Comptons. These horses had grazed with impunity between Rooney's and Comptons and had eluded capture for years.



Ranger Webb enters the gravel bar down river from the horses, then zig-zags in slowly and calmly until he actually pets an old mare with her colt. This illustrates the fact that if approached correctly, trespass animals will not automatically go across the river as is generally believed.



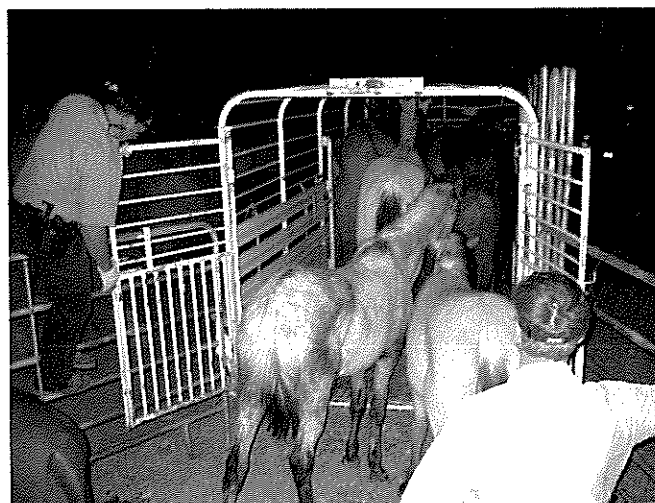
Ranger Webb trails the horses north up Glenn Draw towards the trailer on River Road.



The horses are calmly lined out and walking to the catch pen.

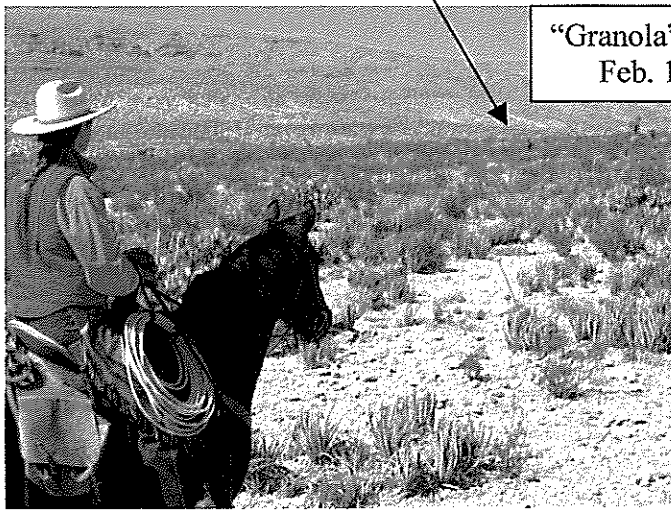


The horses calmly stand at the trailer while the handlers (two people) close the catch pen panels around them.

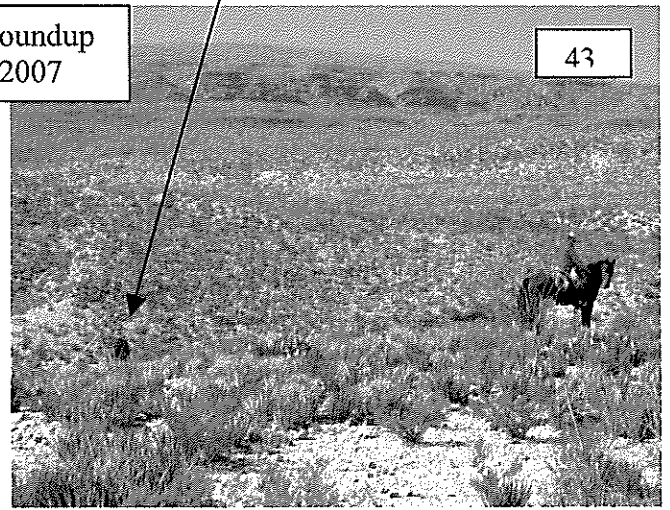


Trailer loading the horses after dark at River Road and Glenn Draw. Only mild pressure was used (no hotshots or whips needed).

This roundup is noteworthy because, as noted, the horses were at rivers edge. However, because they were approached properly they had no reason to go across the river. As Bud Williams stated, if the horses wanted to be across the river they'd already be there. So, the only reason that trespass animals go across the river during roundups is that they are driven across (i.e., they are not approached properly and kept in a normal frame of mind). This being said, it was probably advantageous to approach and move the horses off the vega on foot because they may associate a mounted horseman with "time to go home."



"Granola" Roundup
Feb. 15, 2007

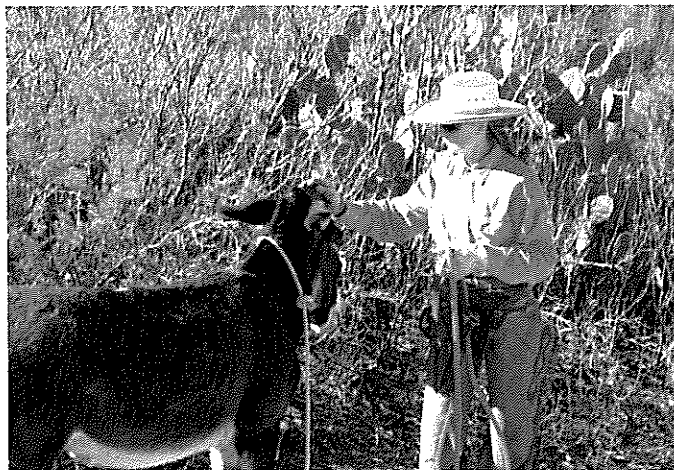


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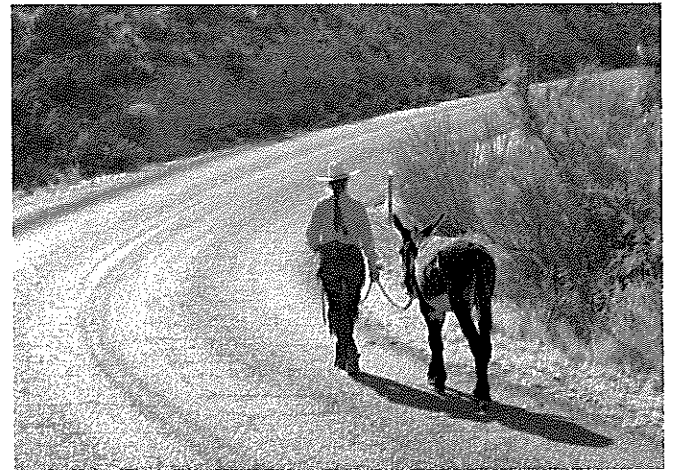
On edge of burro's flight zone (~200 yds.). It trots off ~1/4 mile and stops (remember: flight is finite if you don't pursue). Then, acting disinterested, rider approaches at flat angles (zig-zags) to within 30'.



The roper switch places and approaches within 20'. Notice the burro is grazing and the roper isn't acting like a predator. Then he maneuvers into roping position when the burro is ready to be caught.



The burro is ready to be approached and haltered.



And led to the trailer.

This roundup illustrates a two-person rodear; that is, how two people can approach, contain, catch, and trailer load a trespass animal easily using low-stress livestock handling methods. Elapsed time was three hours.

This roundup illustrates several important points. First, temporary catch pens—in this case, a 3-wire 3-T-post fence across a deep wash—can be used successfully to gather trespass livestock. Second, trespass animals—in this case, four horses and a mule—can be rounded up on foot using low-stress livestock techniques. Two people approached these animals, shrunk their flight zone, then directed them to the catch pen ~ 1 mile away. At one point the animals began to trot, so one person trotted along beside them at ~ 50 yds. distance until getting ahead of the lead animal's drive line, which stopped them. Then, pressure was directed in front of the drive line which turned the animals towards the wash and into the catch pen.

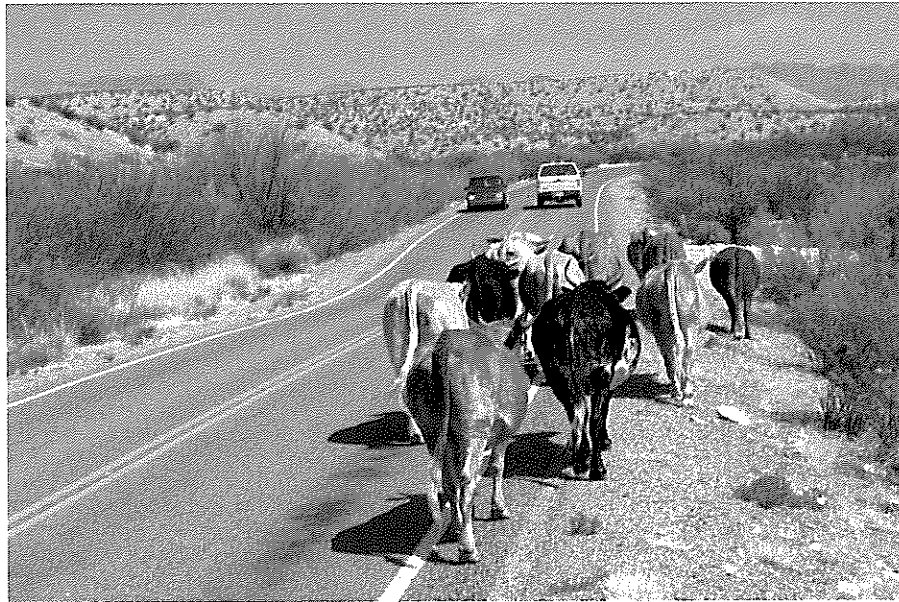


Given that this is only a three-sided catch pen (note the fence behind the animals), each animal had to be caught and led to the waiting trailer. One horse allowed itself to be approached and haltered, the other three horses had to be roped, then haltered, and the mule (the most skiddish) had to be roped and worked out to the trailer on the end of a 50' lariat.

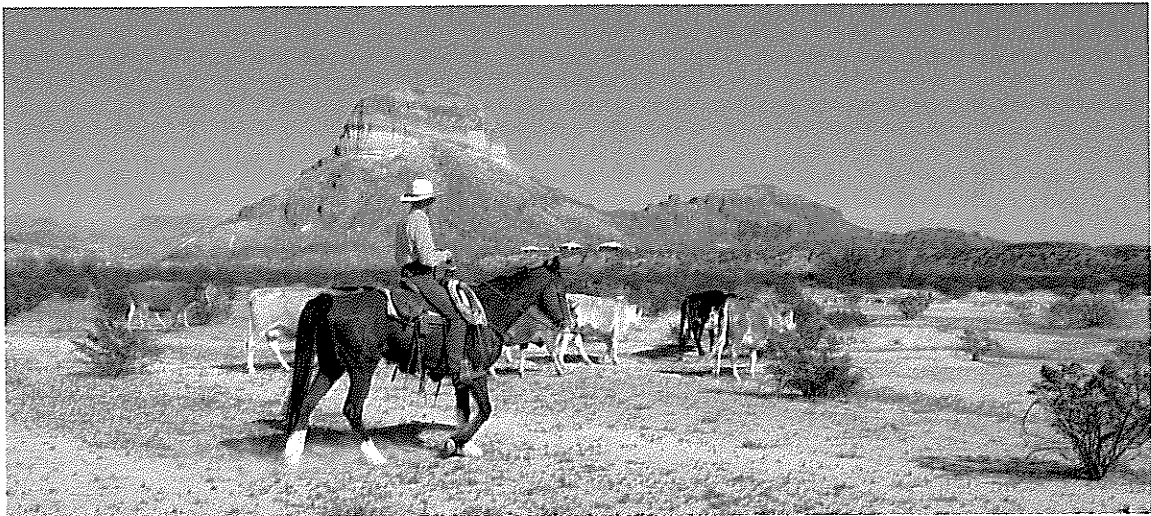


Rangers Tillman and Cutler, on foot, approach and work 12 head of cattle away from the river on the Sublette Farm Vega. By the time horseback support (two riders) arrive, the cattle are settled, manageable, and ready to trail to the corral.

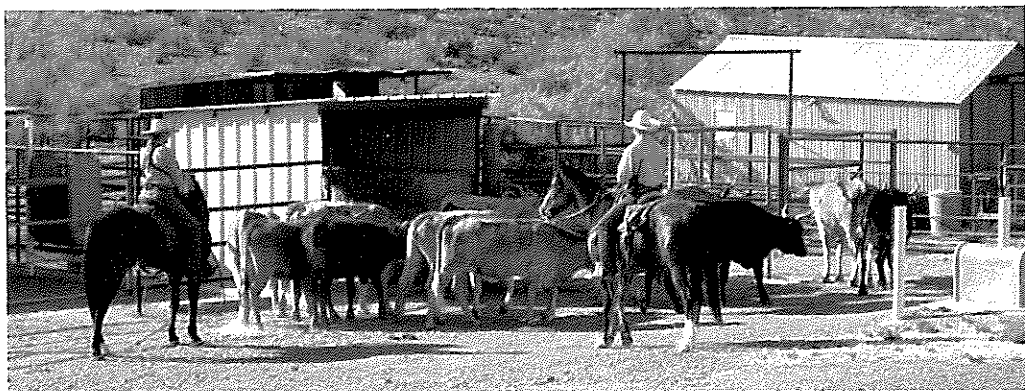




The cattle are completely under the control of the riders and easily trail down Route 16 with ranger escort alerting oncoming traffic.



Then cross country to the corral.



The riders gently hold the cattle at the entrance to the corral until it is their idea to walk in. No noise or pressure needed other than our physical presence at the edge of their collective flight zone, and blocking any movement away from the corral (i.e., making the right thing easy and the wrong thing difficult).



On river's edge below Hot Springs, Ranger Van Inwagen approaches three horses outside their flight zone and at an oblique angle.



Van Inwagen continues vectoring in at an oblique angle, shrinking the horses flight zone. Note how they are unconcerned and facing north. They are ready to move.

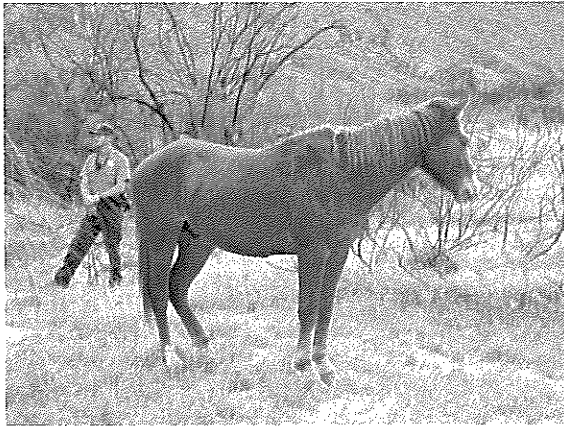


The horses trail out at a walk with Van Inwagen slowly following outside their flight zone up the Hot Springs trail.

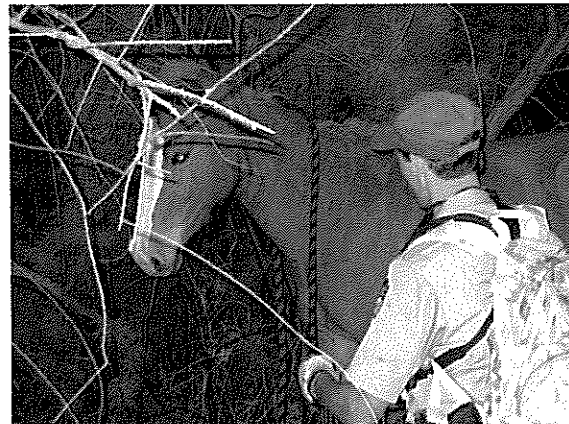
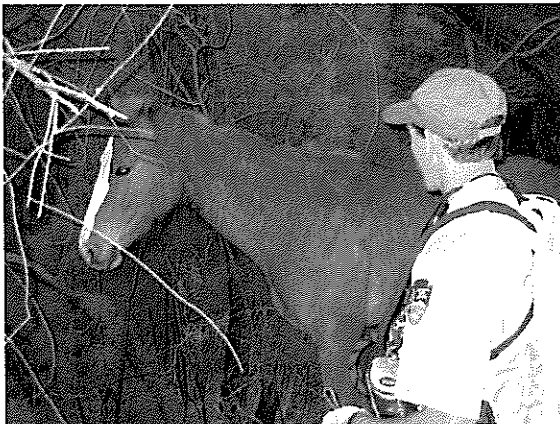


After habituating them to the Tornillo Bridge, the horses walked underneath it and into the catch pen. Each was caught, haltered, and led up to the stock trailer.

This case study illustrates a mistake corrected. This lone horse, spotted by Ranger Cutler, was rodeared by five people (the more the better on a foot rodear, after one person makes the initial approach). Cutler makes the initial approach, shrinking the flight zone, then the others zig-zag in. Since the horse wouldn't let anyone walk up to it and catch it, Hibbard takes down his lariat, but the horse immediately spooks and trots off.



We do not chase the horse, but Hibbard goes wide and around and stops it, and a second rodear begins, crowding the horse up against a thicket to limit its avenues of escape.

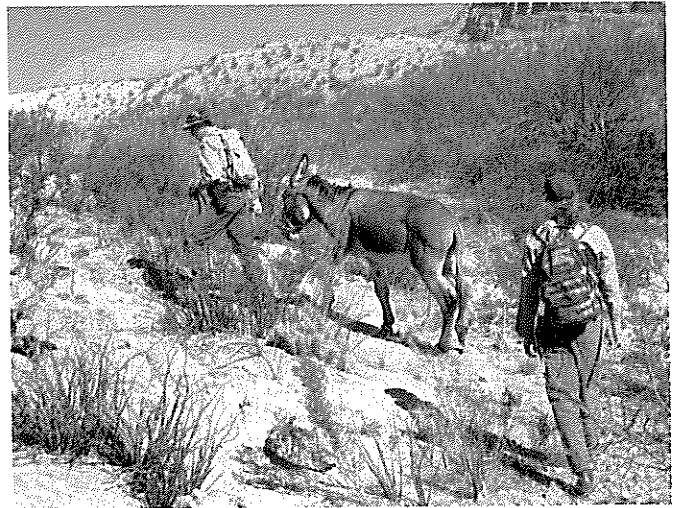


Ranger Webb slowly approaches the very skiddish horse, desensitizes it to the halter ropes which he then throws over its neck, and ties a boline incase it bolts before he can halter it. He then desensitizes it to the halter and eventually gets the halter on.

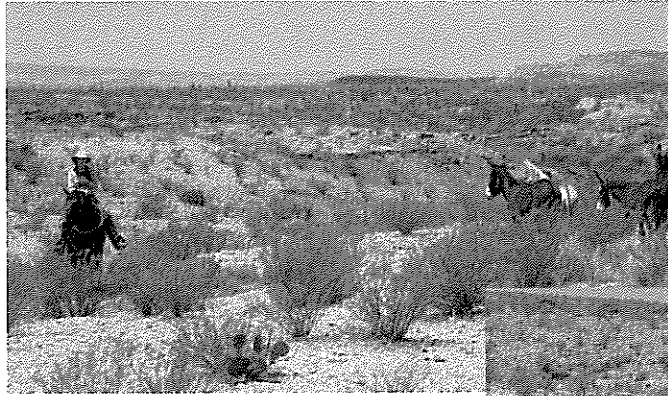




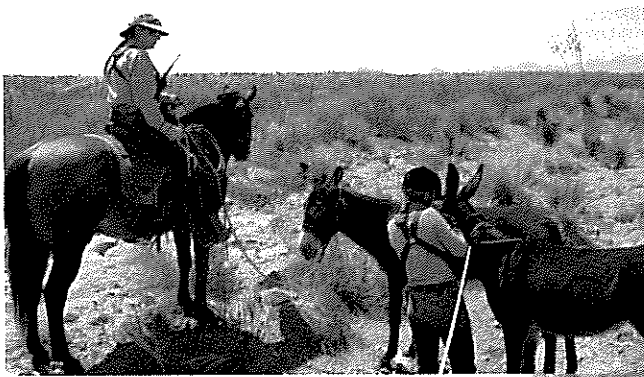
Ranger Van Schmus approaches a burro contentedly grazing near the river. Within minutes it is eating sweat feed out of her hand.



After haltering the burro, Rangers Webb and Van Schmus lead “Oatmeal” to the RGV corral. This capture illustrates that the trespass livestock in BBNP are domesticated, and if enough time is allowed to approach correctly, many of the animals can be walked up to, caught, and led away.



At first sighting, the flight zone of these four burros was $\sim \frac{1}{4}$ mile (i.e., they took off at a trot). We (four riders) followed behind but slower and they soon stopped. VIP Schroeder zig-zagged in, shrinking their flight zone to within 20 feet. The other riders then followed suit.

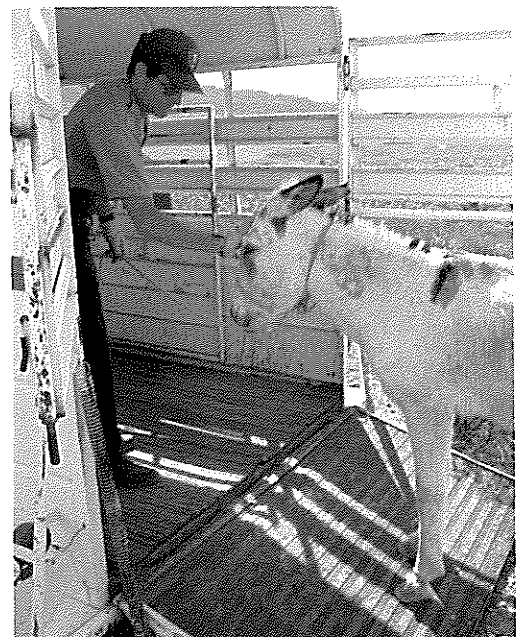
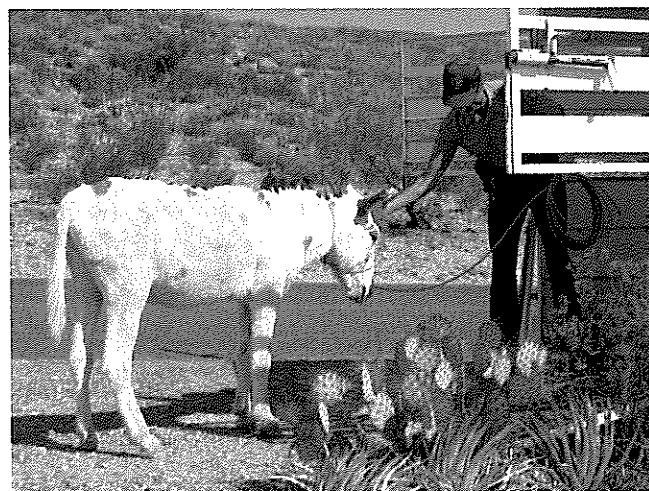
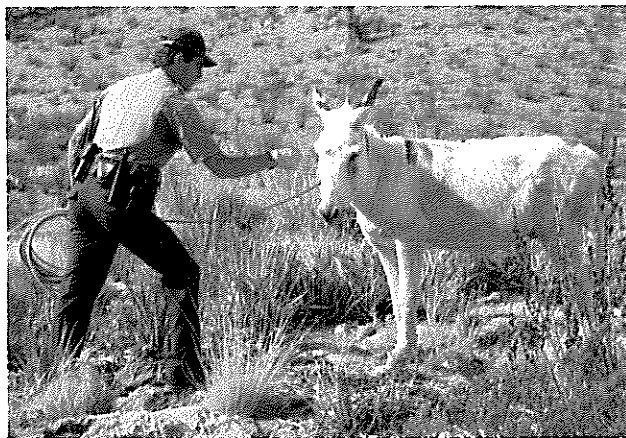
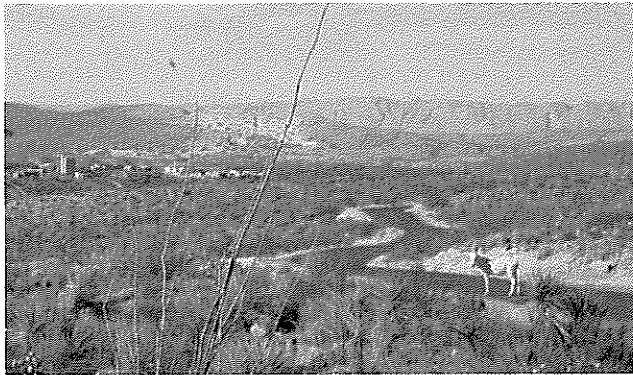


The burros are ready to be roped (from a standstill) and haltered.

Then trailed to the trailer. We attached three panels to the rear of the trailer and used pressure-and-release to easily load the burros.



This capture illustrates that a single animal can go from panicked to gentle and loaded in a trailer in two hours. This burro, "Sugar," was spotted by Ranger Hibbard on river's edge upstream from the Boquillas Overlook. Thrashing through the cane to get close, Sugar was startled and ran downstream past the overlook. Using low-stress handling methods, Hibbard moved the burro up to the highway, then to within roping range. Once roped, he led the burro to the trailer and loaded it using pressure-and-release from the front.



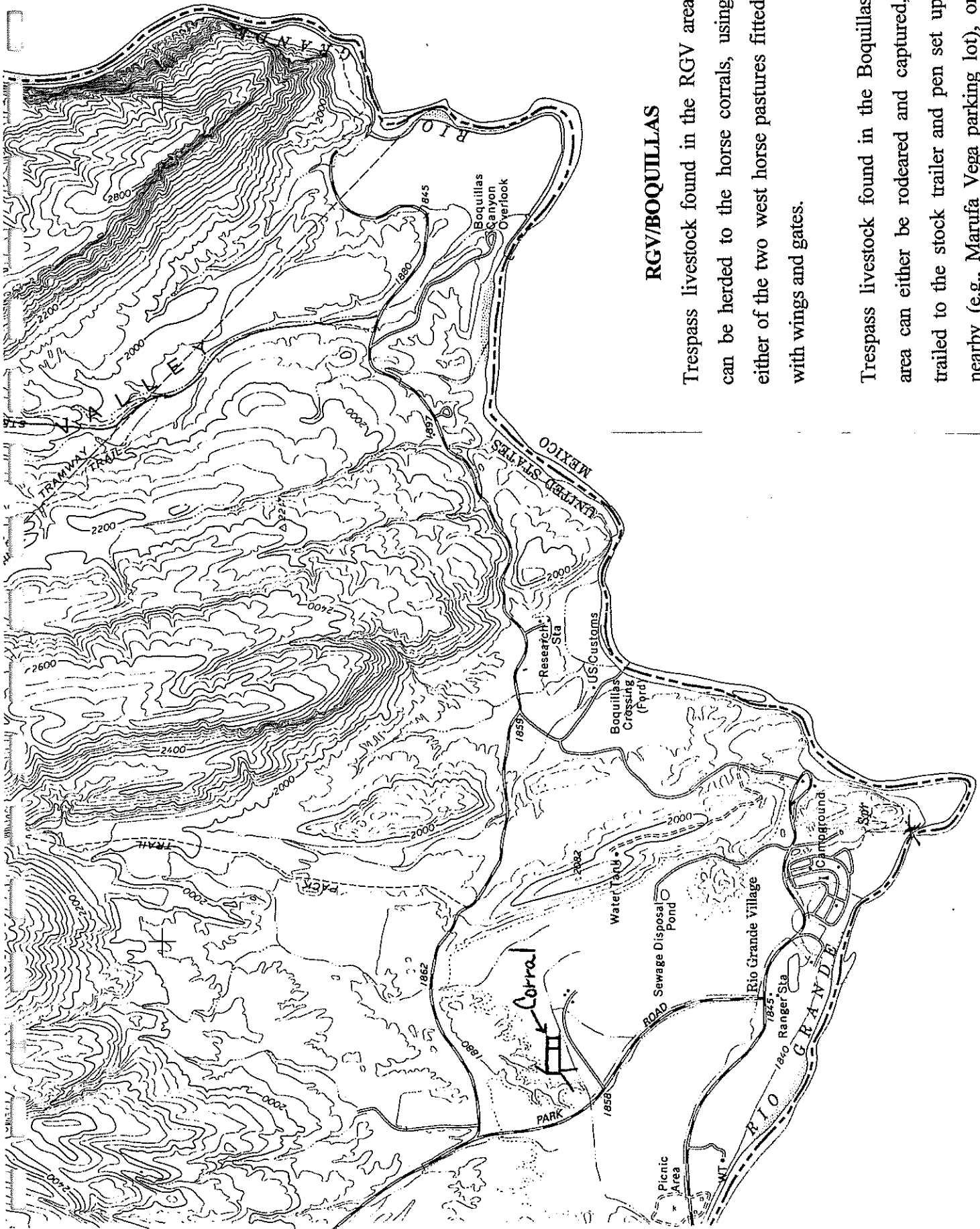
West District Roundup, April 3, 2006

This roundup illustrates cattle being successfully gathered off rivers edge.



The rider has approached slowly and calmly to ~ 25 yards. Notice that several are on alert, but one is still laying down and others have chosen to trail up the bank to the north. As long as the cattle are approached correctly and kept in a normal frame of mind, they have no reason to cross the river. I let my idea (go north) become their idea by putting gentle pressure at the edge of their flight zone between them and Mexico until they voluntarily chose to turn north. Being their idea, all eighteen cattle trailed easily to the corral 4 miles away.

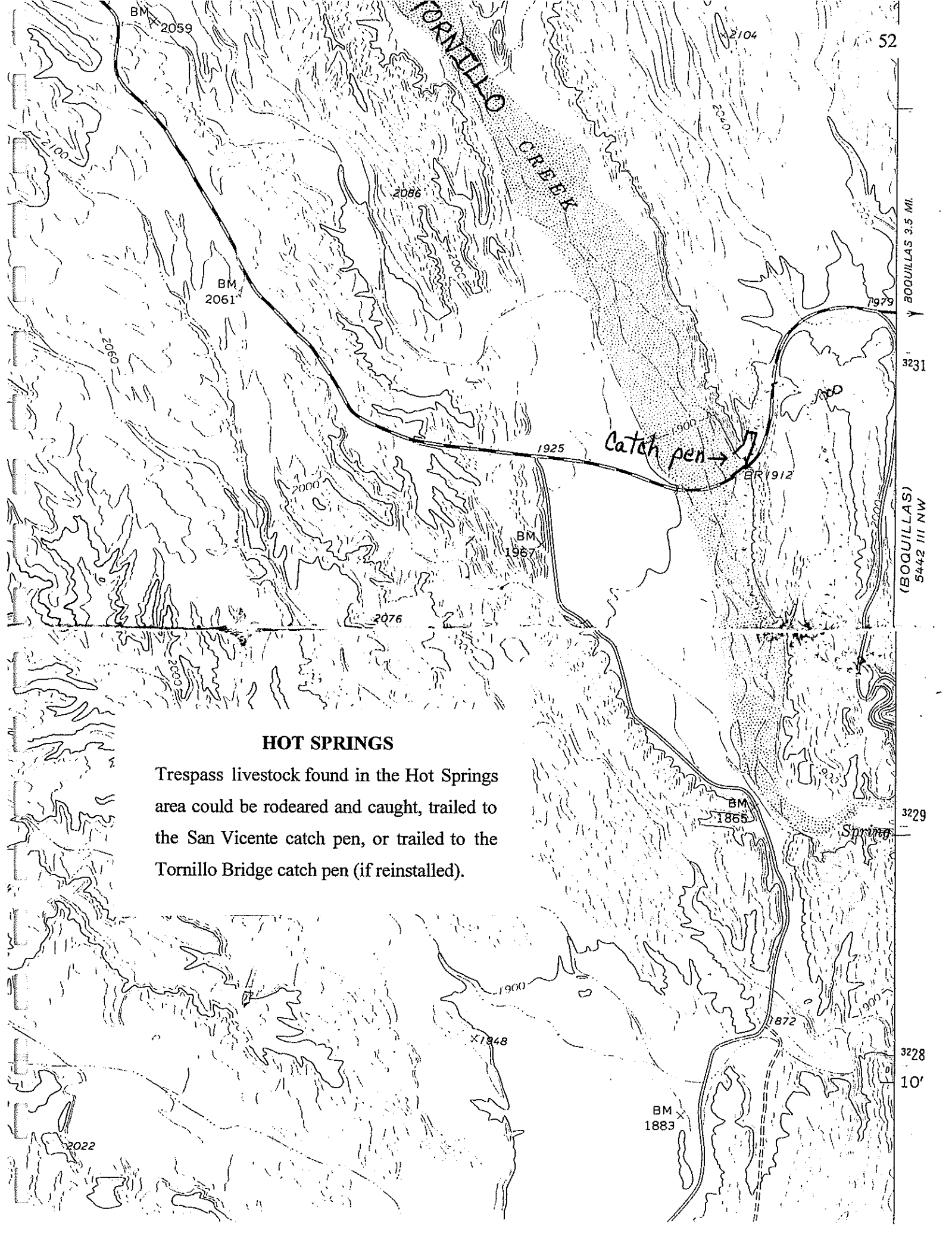




RGV/BOQUILLAS

Trespass livestock found in the RGV area can be herded to the horse corrals, using either of the two west horse pastures fitted with wings and gates.

Trespass livestock found in the Boquillas area can either be rodeared and captured, trailed to the stock trailer and pen set up nearby (e.g., Marufa Vega parking lot), or trailed to the horse corrals.



HOT SPRINGS

Trespass livestock found in the Hot Springs area could be rodeared and caught, trailed to the San Vicente catch pen, or trailed to the Tornillo Bridge catch pen (if reinstalled).

Any trespass livestock found in the area between Gravel Pit and San Vicente Crossing can be herded to the three-sided catch pen, then caught and led to the trailer, or the trailer could be backed down the wash to the pen. Check the condition of the catch pen sometime before the scout.

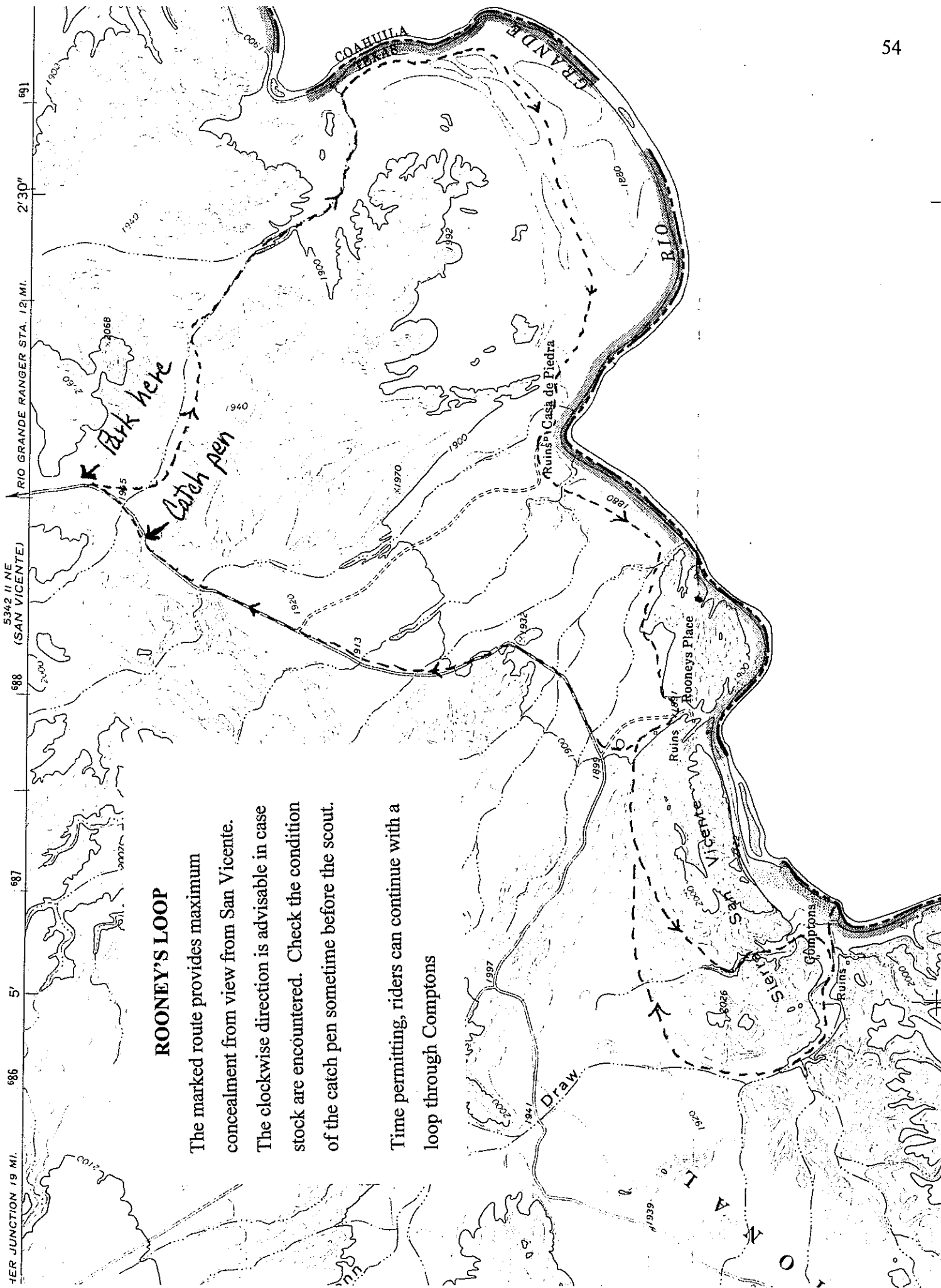


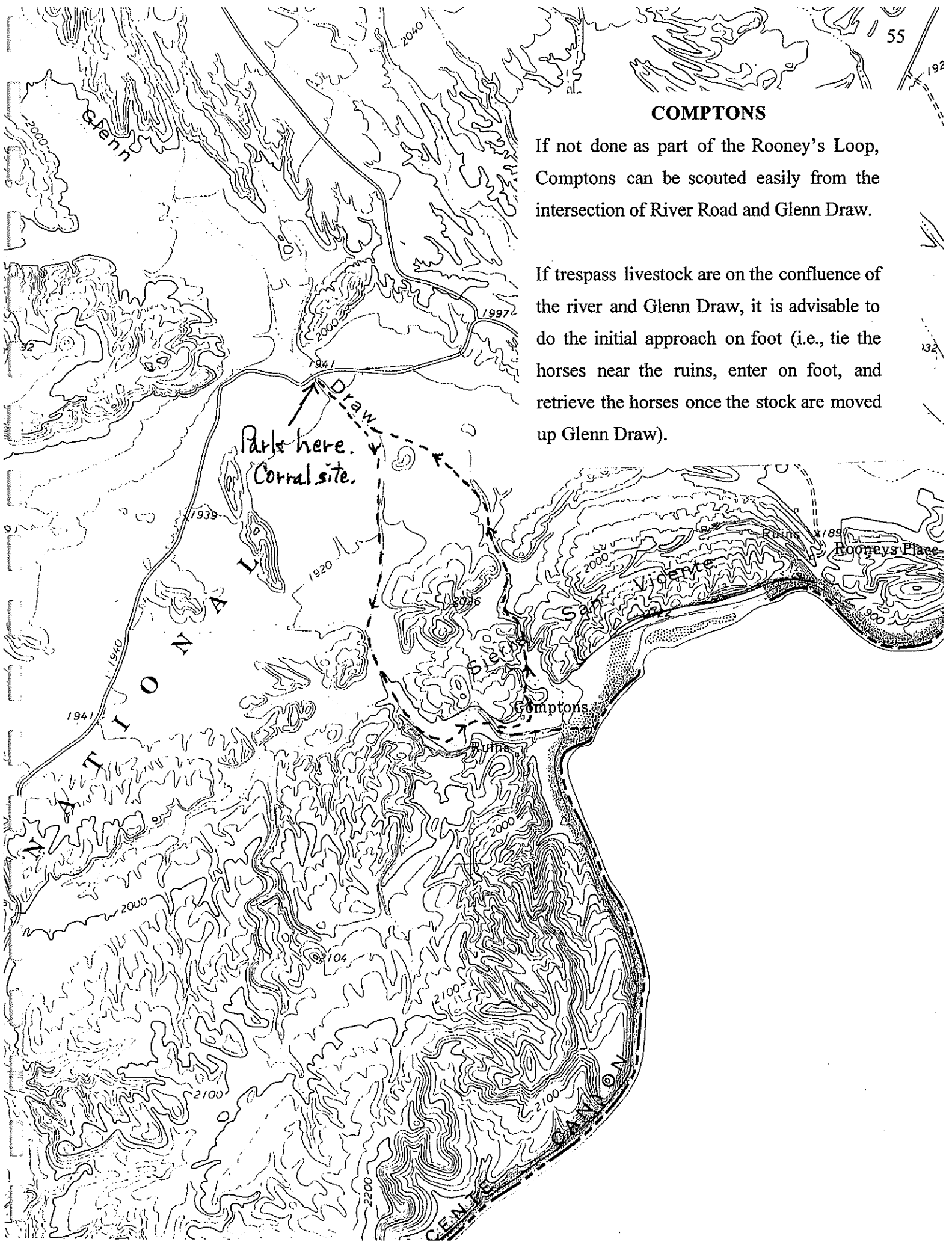
ROONEY'S LOOP

The marked route provides maximum concealment from view from San Vicente.

The clockwise direction is advisable in case stock are encountered. Check the condition of the catch pen sometime before the scout.

Time permitting, riders can continue with a loop through Compton's

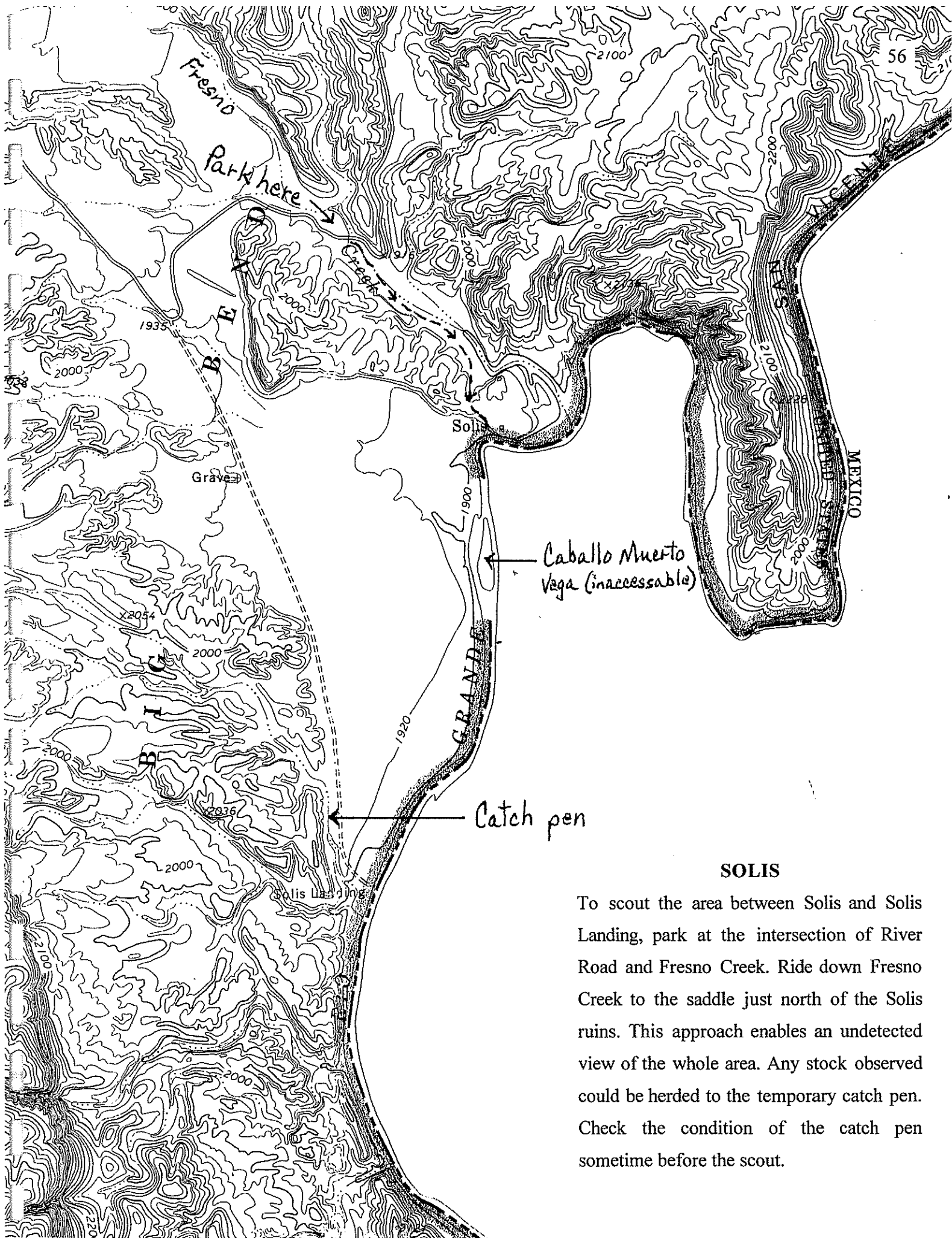




COMPTONS

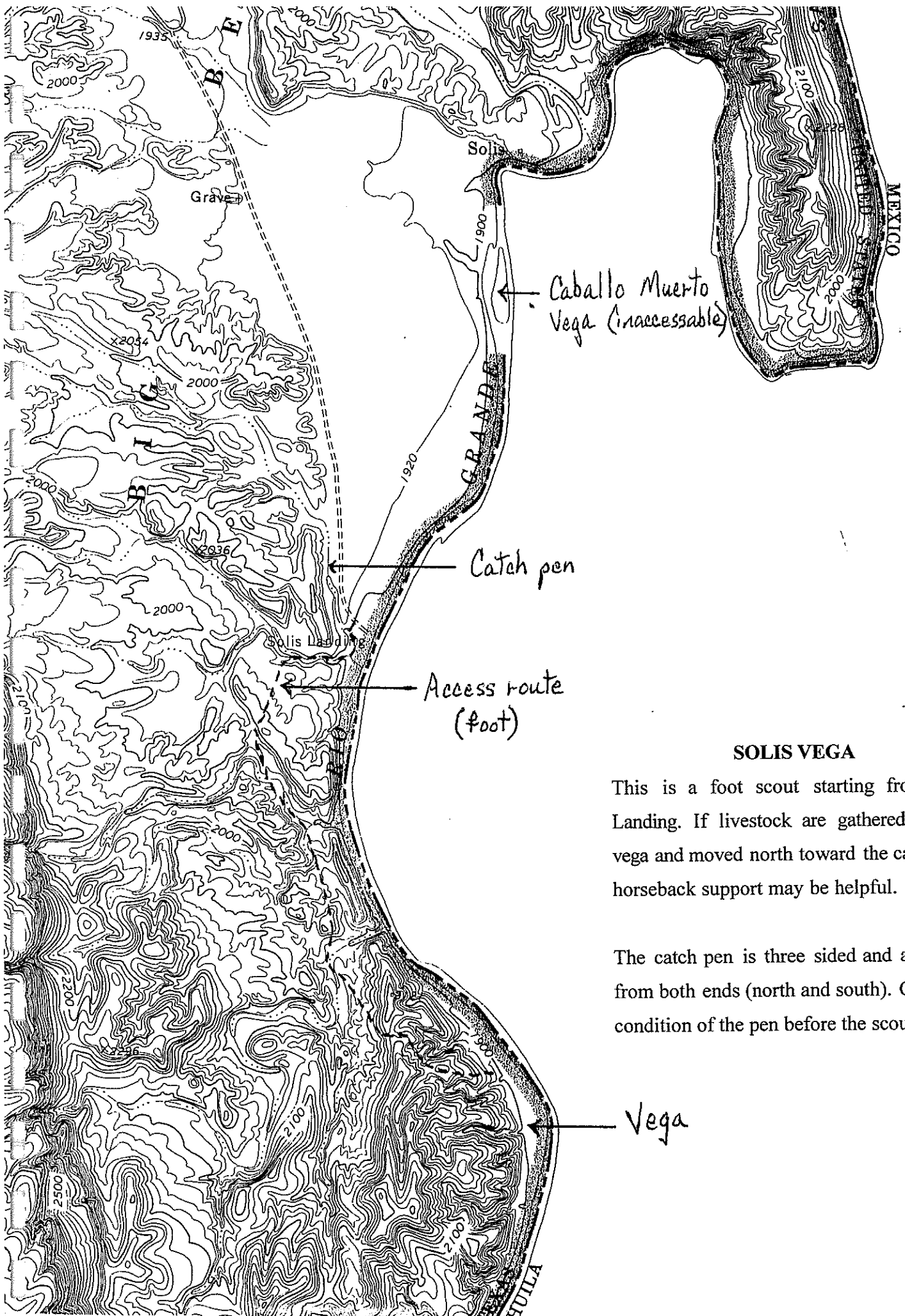
If not done as part of the Rooney's Loop, Comptons can be scouted easily from the intersection of River Road and Glenn Draw.

If trespass livestock are on the confluence of the river and Glenn Draw, it is advisable to do the initial approach on foot (i.e., tie the horses near the ruins, enter on foot, and retrieve the horses once the stock are moved up Glenn Draw).



SOLIS

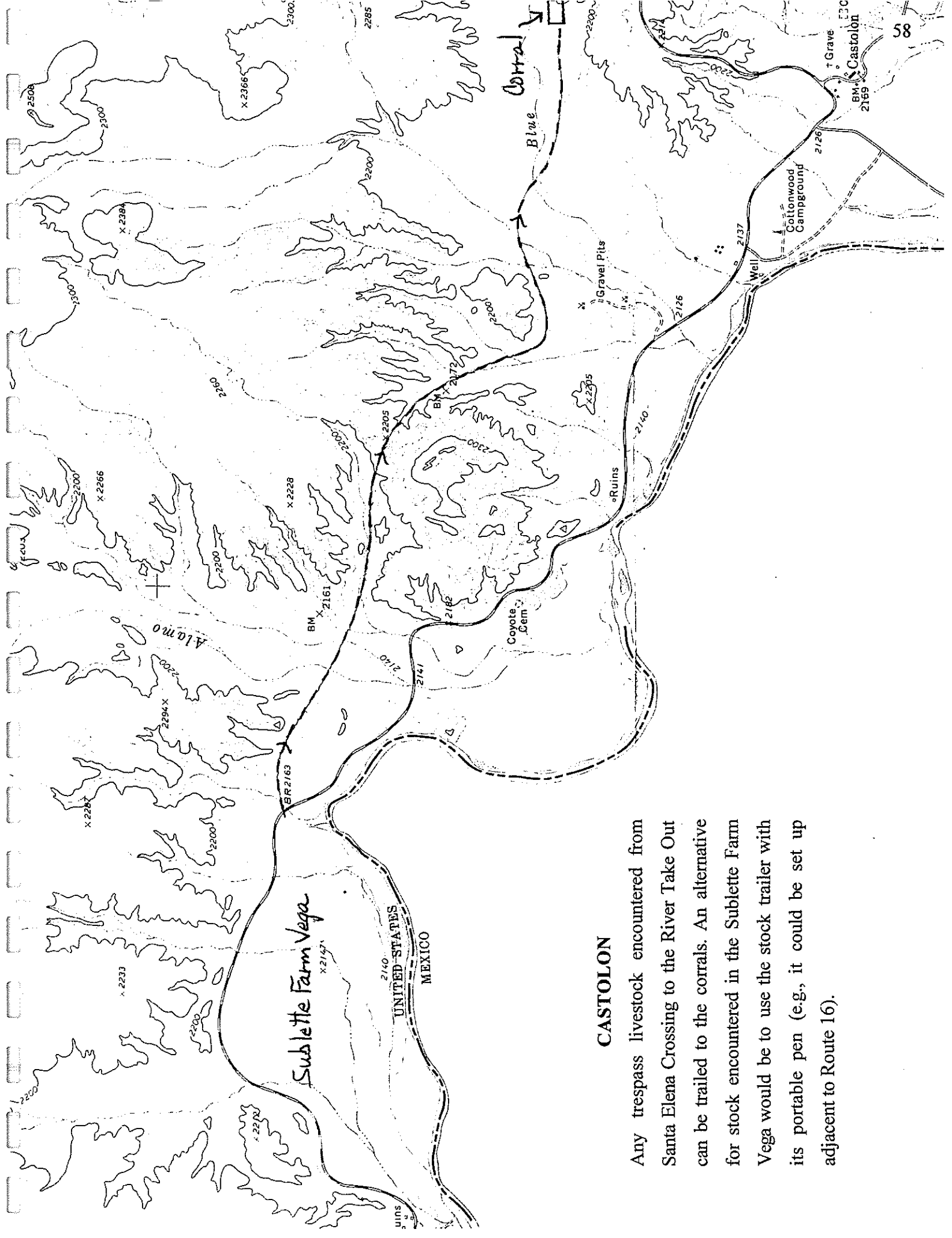
To scout the area between Solis and Solis Landing, park at the intersection of River Road and Fresno Creek. Ride down Fresno Creek to the saddle just north of the Solis ruins. This approach enables an undetected view of the whole area. Any stock observed could be herded to the temporary catch pen. Check the condition of the catch pen sometime before the scout.



SOLIS VEGA

This is a foot scout starting from Solis Landing. If livestock are gathered off the vega and moved north toward the catch pen, horseback support may be helpful.

The catch pen is three sided and accessible from both ends (north and south). Check the condition of the pen before the scout.



CASTOLON

Any trespass livestock encountered from Santa Elena Crossing to the River Take Out can be trailed to the corrals. An alternative for stock encountered in the Sublette Farm Vega would be to use the stock trailer with its portable pen (e.g., it could be set up adjacent to Route 16).

Introduction to Natural Horsemanship

I. Introduction

A purpose of the Friends of Big Bend grant project was to conduct natural horsemanship training consisting of classroom and field training with assigned park staff. As part of the classroom training, I prepared and presented a two-hour powerpoint presentation on natural horsemanship with an emphasis on its relationship to low-stress livestock handling. This outline is the embellished notes of that presentation. Its objective is to provide the reader with a fundamental understanding of natural horsemanship.

II. History

In his excellent history of the natural horsemanship revolution, Dr. Robert Miller, a famous equine vet, animal behaviorist, and horseman, wrote:

“In the final decades of the twentieth century, a revolution began in America and spread through much of the world. It wasn’t the usual sort of revolution. No shots were fired, no government was overthrown, and no geographical boundaries were changed. There were casualties, however. Ignorance and injustice, and behaviors born of them, died. . . . In their places arose new ways of thinking and acting informed by enlightenment and empowerment. When the dust settled, the revolution had dramatically improved relations between millions of people . . . and their horses.”

A. The natural horsemanship revolution. This revolution swept the world from coast to coast, the U.S. to Europe, North America to South America, and influenced all equine disciplines, from cowboy to olympian, from reining to hunter-jumper, from cutting to dressage, from pleasure rider to competitor. How did this revolution begin? Interestingly, it didn’t begin with the famous riding masters of Italy, Spain, or France, it began with a solitary cowboy from Oregon.

B. Tom Dorrance. Born in 1910, Dorrance discovered that if you understand the horse’s point-of-view and learn how to properly communicate with it, it will become a willing partner and gladly do what you ask. Dorrance called himself “the horse’s lawyer.”

C. Ray Hunt. A Great Basin cowboy and horse trainer extraordinaire in his own right, Ray Hunt was Dorrance’s principle student and single-handedly popularized Dorrance’s teachings and spread them throughout the west, including Texas.

D. Students. Pat Parelli, Craig Cameron, Buck Brannaman, Curt Pate, John Lyons, and Clinton Anderson, to name a few. The influence of these and others has been profound and far-reaching. It's even infiltrated and transformed many old, traditional ranches right here in Texas, including the 6666, Pitchfork, Kokernot 06, King, Brown, and Moorhouse, and produced several famous clinicians, such as Craig Cameron, Buster McLaury, and Lester Buckley.

III. Traditional v. natural horsemanship: Distinguishing characteristics

So, what's the difference between traditional horsemanship and natural horsemanship, as it's come to be called, not because it's natural for the human (it's not), but because it's natural for the horse?

Traditional horsemanship

Human-centered. The mindset is that the horse is a beast of burden, a slave, that "will do what I want even if I have to hurt it in the process." It never crosses this person's mind to think and act like a horse, or that the horse has a point-of-view worth considering.

Physical. We think that we need to make the horse--a dumb, brute animal--physically do what we want, often relying on all types of mechanical devices to gain control over the horse (e.g., severe leverage bits with chains for curb straps, large sharp rowelled spurs used as harpoons, tack collars, whips and quirts, tie downs, twitches and ropes). The prevailing idea is to find mechanical solutions to behavioral problems.

Fear, intimidation, force, pain, and coercion. Consequently, we think that we have to use fear, intimidation, force, and pain to coerce the horse into doing what we want.

Crude, harsh, inhumane. As a result, training and horsemanship techniques tend to be crude, harsh, and even inhumane.

Scientifically incorrect. Little or no understanding of research-based learning theory and animal behavior. Training is based on the worst, most ineffective form of behavioral conditioning: punishment.

As Buck Brannaman sums it up, this whole approach is obsolete. Why? Because there's a better way.

Natural horsemanship

Horse-centered. Primary consideration is the horse's point-of-view and needs, not ours. The idea is that we need to learn to think and act like a horse, to play by the rules of the horse's world, so

it can understand us. And natural horsemen think more in terms of partnership than master-slave. Psychological. Working with the horse's mind, not forcing its body to do things. This is based on the understanding that where the horse's mind goes its body goes. The idea is to find psychological solutions to behavioral problems.

Communication, cooperation, trust. Natural horsemanship emphasizes communication of a rider's request, rather than enforcement of a rider's demand. In natural horsemanship we learn how to communicate with horses in a language that they can understand, which makes coercion unnecessary. That language is body language (more on that later.) Regarding cooperation and trust, what we're really attempting to do in natural horsemanship is to enter into a willing partnership with our horse that is based on trust.

Subtle, kind, humane. As a result, training and horsemanship techniques tend to be subtle, kind, and humane. The natural horseman doesn't coerce or make the horse do anything. Instead, we ask the horse to do what we want using gentle techniques of persuasion which cause our idea to become the horse's idea so it willingly does what we want (more on this later).

Scientifically-correct. Based on scientific learning theory and principles of animal behavior (reviewed below).

Caveat: These are general characteristics. There are exceptions. As early as the 4th century BC, Xenophon, a Greek general, statesman, philosopher and horseman promoted the idea of psychological harmony between horse and rider and wrote: "Anything forced and misunderstood can never be beautiful." However, traditional methods are wrong to the extent that they are based on coercion and the use of unjustifiable force, and natural methods are right to the extent that they are not.

IV. Attitude

As with low-stress livestock handling, to be a natural horseman requires a profoundly different attitude than a traditional horseman. First and foremost, to be a natural horseman one must accept that the horse is an absolutely magnificent creature that is due profound respect and appreciation, and is not to be violated in any way. Additionally, to be a natural horseman we must, as Ray Hunt says:

A. Work on ourselves rather than on our horse. For those schooled in traditional horsemanship, the transition to natural horsemanship takes a profound commitment and

willingness to change which can be extremely difficult because it might mean turning your back on everything you know and practiced for many years. In other words, it takes as radical a personal transformation as it does a transformation in training methodology.

B. Horses can be controlled more effectively without the use of force. This is extremely difficult if you've been raised in the old paradigm as I was. I experienced a great deal of resistance to this principle because it was contrary to what I'd been taught, believed in and practiced for four decades.

C. Put the horse first. The natural horseman's primary consideration is the horse and how it perceives the world; that is, what's important to the horse and how it thinks about things (like getting in a trailer). Remember: natural horsemanship is horse-centered, not human-centered. In other words, we need to be willing to learn to put ourselves in the horse's hooves, so to speak, to think, act and talk like a horse, not a human.

D. Use the nature of the horse rather than fight it. In traditional horsemanship we do what's natural for us, which is to fight the nature of the horse. To be a natural horseman we need to be willing to learn and do what's natural for the horse, not us, and therein lies the effectiveness of natural horsemanship.

E. Don't make the horse learn; let it learn. In traditional horsemanship we make horses learn, but how well does that work on us? But if our natural curiosity is nurtured and we're allowed to learn, we will do so with interest and enthusiasm. Same with horses. Tom Dorrance, on his death bed, told Pat Parelli not to destroy the natural curiosity of young horses, but unfortunately, that is precisely what fear and force do.

F. The horse is never wrong. In traditional horsemanship the tendency is to blame the horse (e.g., that stupid horse won't get in the trailer). In contrast, the natural horseman understands that the horse is only doing what it perceives is best for it under the circumstances, or what it thinks the human wants. So it's not the horse's fault when it won't do what I want; it's entirely my fault for not communicating my idea to the horse in a way that it understands and accepts as its own. Consequently, as with low-stress livestock handling, excuses are out. As Clinton Anderson says, to say that your horse is spoiled, unpredictable, hard-mouthed, or whatever, "doesn't cut it." Instead, I have to ask: What am I doing to cause my horse to behave this way?

G. We must genuinely like horses. Pat Parelli says: "Before you show your horse how much you know you must show it how much you care."

V. Equine behavior and psychology

To understand natural horsemanship it is necessary to know certain fundamental things about equine behavior and psychology.

A. Prey animal. First and foremost, horses are a prey animal. As a result they have, as Ray Hunt says, only one thing on their minds -- survival, living through another day. As individuals, each animal not only wants to survive and be safe, but it also wants to be comfortable; no different than we humans.

B. Herd animal. Consequently, they find security and safety in a herd.

C. Dominance hierarchy. Within that herd they find security and safety by following a worthy leader, a horse that the others believe will keep them alive. Hence, within any herd there is what animal behaviorists call a "dominance hierarchy," which is an order of authority (aka "pecking order") for which the members of the herd compete. Once established the less dominant willingly follow (e.g., when the dominant mare signals that it's time to move out, the herd moves out). It's important to understand that the individual subordinate horse needs and wants this leadership. It's no different than having a competent superior officer in the military you trust to keep you out of harms way. As Dr. Miller says: "Horses instinctively know that following a herd leader and being close to her gives them the best chance to survive. In other words, horses *need* leadership. . . In the absence of other horses, a surrogate or substitute will do."

D. Communication.

Q: How do horses establish dominance? How do they communicate that they are top horse?

A: Leadership is determined in horses by the ability to control the movement of the other horses, and they do that with body language.

VI. Training Principles

This understanding of equine behavior and psychology lead Dorrance and Hunt to derive some essential training principles.

A. Don't act like a predator. Horses are prey animals, we are predators, and horses know it. Unfortunately, traditional horsemen tend to act like predators. Our job as natural horsemen is to convince our horses otherwise by being kind, gentle, understanding, yet a firm and fair leader that the horse can respect and trust. And how do we become that leader?

B. Establish leadership by controlling movement. By controlling the movement of the horse

it will submit willingly to our leadership. In other words, it will accept us as the dominant animal, the leader. It is absolutely essential that the human be the leader. As Hunt says, "Someone has to be the leader and if it's the horse you're going to have chaos." Dr. Miller calls this the "secret of natural horsemanship," and explains that:

"When we team up with a horse, we are, in effect, creating a small herd, a herd of two. Once they are part of a herd, horses immediately feel the need to decide who is going to be the 'boss hoss.' Among themselves, this takes the form of dominance games, whereby they try to get each other to move. Control of movement, remember, is how horses decide who is dominant over whom, who will lead and who will follow. Somewhere inside every horse is a natural follower, *but only if a more qualified leader is present*. This is a crucial point to understand. It is why the very same horse can be wild and disrespectful with one human, but attentive and well behaved with another. The difference is how he perceives the human's leadership capability."

C. Let our idea become the horse's idea. Once we've established leadership we need to construct or engineer learning experiences so that what we want the horse to do becomes it's idea, so that when it does it, it does so willingly; it takes ownership, so it's happy. How?

D. Make the wrong thing difficult and the right thing easy. Instead of making the horse do something it doesn't initially want to do with coercion or force, we set up a learning situation in which the right thing is easy and the wrong thing is difficult. In other words, we present a learning situation in which the horse has to find the right answer, then we reward the answer.

E. Be as gentle as possible but as firm as necessary. When teaching a horse a new task, natural horsemen use gentle persuasion, asking the horse to do something and then letting it do it, but escalating in degrees of firmness as necessary until we get the desired response.

F. Notice the smallest change and reward the slightest try. When we ask the horse to do something and it tries, even if just a little bit, reward it. In so doing, the horse knows that it did the right thing and the behavior is reinforced.

G. Take the time it takes and it will take less time. Horses detect impatience and get upset which erodes the learning environment.

A classic example of these training principles in action is trailer loading. In traditional horsemanship, unwilling horses are basically forced into trailers against their will. In natural horsemanship, the handler will establish leadership by doing some groundwork exercises (discussed below) in a nonpredatory fashion, then let his idea (getting into trailer) become the

horses idea by making the wrong thing (being away from the trailer) difficult and the right thing (being close to the trailer) easy and rewarding each try that the horse makes. Proceeding in this fashion and taking the time that it takes and being gentle but firm, the horse will soon load up.

VII. Training methods

How are these training principles operationalized? That is, as a practical matter, what do natural horsemen do? What are their training methods?

A. Groundwork. First and foremost is groundwork, a major innovation and essential component of natural horsemanship. (The philosophy of traditional horsemanship is basically: Get on 'em and ride 'em.)

Groundwork is where the human gains the respect of the horse and establishes his or her right to be leader of the herd. Dr. Miller defines groundwork as "a systematic, consistent way of building and reinforcing the language of communication and the leader-follower relationship that must exist between horse and human." It begins usually in the roundpen with a series of requests for the horse to move in specific ways of the handler's choosing (e.g., going forwards, backwards, left, right, disengaging the hindquarters and frontquarters, usually in the round pen).

A vital part of groundwork is establishing boundaries of personal space and behavior. It needs to be made crystal clear to the horse that (a) it may not make its own decisions when with its human handler, and (b) it must respect the handler's personal space. According to Dr. Miller:

"Your horse wants proof every single day that you are still a competent leader and won't get him killed. He may even ask for proof rather than waiting for you to offer it. He asks with little tests. Will my human let me get away with crowding him a bit today? Okay, what if I turn my hindquarters toward him? And what if I pin my ears and act aggressively? Without clear, consistent, instantaneous response from the human, the horse may conclude that at least that day there are no boundaries for his behavior. A horse understands that a leader who doesn't establish and enforce boundaries in space and behaviour is no leader at all and deserves exactly what other less dominant horses would get in the herd: regular reminders of who is really in charge. This may take the form of biting, kicking, bolting, striking, refusing to move, or pushing, to name just a few."

Groundwork is essential for young and unknown horses for rider safety, and any smart

rider will not get on a horse until the horse has demonstrated that it is willing to follow the requests made of it. The best place to find out if there's any problems or if the horse woke up on the wrong side of the corral is before you get on, not once you're on its back. As Anderson says, "The more times you get dumped on your head, the better your groundwork will get."

B. Operant conditioning. Natural horsemanship is based on the behavior modification principles formulated by the famous psychologist, B.F. Skinner. **Principle:** When a behavior is reinforced, it is more likely to be repeated. Conversely, a behavior that is punished is less likely to be repeated. ("Punishment" is Skinner's technical term for an uncomfortable stimulus, not pain, and should not be confused with the more common usage of the word mentioned earlier.)

Four types of operant conditioning.

1. Negative reinforcement is the scientific term that means that something unpleasant is subtracted to encourage the desired behavior. For example, pressure is released when the horse complies with a request, such as to back away from pressure on the bit. This form of operant conditioning is the cornerstone of natural horsemanship and can be summed up with the term, "pressure-and-release." With pressure-and-release techniques we apply pressure until we get the desired response and then release, which teaches the horse that it responded in the desired way. It's important to understand that it is the release that teaches, not the pressure. The pressure is the incentive to do something; the release from the pressure is the reward for responding in the right way.

2. Positive reinforcement is the scientific term that means that something pleasant is added to encourage the desired behavior. For example, the horse is stroked (not patted) when it responds correctly. Craig Cameron says that "Correction is good, but encouragement is better." And Ray Hunt says to "Praise often."

3. Negative punishment is when something pleasant is subtracted to discourage unwanted behavior. For example, the rider withholds praise, treats, stroking, or simply ignoring it. In fact, Tom Dorrance advises ignoring the negative behavior, focusing on the desired positive behavior, and the negative will often go away by itself. Animal behaviorists call this "extinction," which means that a behavior is weakened and eventually eliminated by the absence of any reinforcement.

4. Positive punishment is when something unpleasant is added to discourage the undesired behavior. For example, if a nippy horse runs into a swift backhand, that behavior will

be discouraged.

C. Desensitization. To make a horse safe it must be desensitized to the scary things in the human's world that it may come into contact with, and it's best to do that early in a horse's life and before you ever get on its back. The primary technique used by natural horseman is one called "approach-and-retreat." Specifically, present a scary object to the horse, and if it gets nervous (but short of being overwhelmed and moving away), hold the object at that distance until the horse relaxes, then retreat. Next, approach with the object again but closer, then retreat. The object might be a slicker, a plastic tarp, a saddle blanket, or anything else. The same principle can be applied to desensitizing a horse to crossing a bridge or other scary things when riding. It also can be used when teaching a horse to be comfortable with picking up its feet.

D. Lateral and longitudinal flexion. It's of extreme importance in natural horsemanship that horses be soft and flexible, as contrasted with stiff and braced. One reason for this is that a soft and flexible horse has a soft and flexible mental set and is receptive to learning. Another reason is that in order for a snaffle bit (the primary teaching tool of natural horsemen) to work well, the horse must be very sensitive to bit pressure, and the way to build that sensitivity is through developing lateral (side-to-side) and longitudinal (vertical) flexion. Therefore, natural horsemen use several techniques to teach their horses to flex their necks both laterally and longitudinally. By contrast, a stiff and braced horse, which unfortunately is often the product of traditional horsemanship, is stiff and braced because of fear and lack of trust; its primary concern is its safety and survival, not learning.

E. Mounted exercises. After doing a series of groundwork exercises or lessons--which are all based on the different forms of operant conditioning--and desensitizing the horse and getting it flexible, the natural horseman progresses to a series of mounted exercises or lessons which simultaneously reinforce our leadership role--by controlling the horse's movement--while teaching the horse basic skills, such as turning, stopping, backing, changing gaits and leads, upward and downward transitions, circles and serpentines both forwards and backwards, and many others.

F. Problem solving. Traditional horseman tend to revert to force and coercion or mechanical devices (e.g., get a more severe bit for a horse that won't stop). Natural horsemen try to understand why the horse is behaving the way it is and then find a behavioral solution. As Tom Dorrance says: "I have helped riders who thought they had a horse problem, but I tell them the horse is having a 'people problem.' These riders don't seem to realize that the horse thinks he is

supposed to do just what he is doing; even though the horse doesn't know why or what it is for. He is sure he is *supposed* to do it and does all he possibly can to do it. When this is happening, often the rider feels just as sure that the horse is doing what he is doing because he doesn't want to do what the rider is asking. The rider may completely miss that the horse is doing just what he has been trained to do."

The point is that, as Ray Hunt says, "The horse is never wrong," and riders must take responsibility for everything the horse does, including its problems. From the natural horsemanship perspective, there aren't any problem horses, only inexperienced or unknowledgeable people trying to work them, so problems are viewed as opportunities to advance our knowledge and skills with horses.

5 Characteristics of a natural horseman

Is willing to train himself or herself to train the horse.

Understands the horse's nature and is willing to work with that nature instead of against it.

Listens to the horse and responds according to what the horse needs.

Genuinely cares and likes horses.

Does things for and with the horse, rather than to the horse.

5 Responsibilities of the human to the horse

To treat the horse fairly and gently.

To keep the horse safe.

To communicate clearly, consistently, and decisively.

Act like a partner, not a predator.

Ride with an "independent seat."

5 Responsibilities of the horse to the human

To face up and allow itself to be caught.

To respect the human's personal space.

To travel in a straight line until asked to change direction.

To travel in the same gait until asked to change gait.

To be gentle, obedient, and respectful.

5 Do's

Be confident and act with conviction, but without being overbearing.

Consistently and clearly enforce the rules.

Think and act like a horse.

Give the horse a fair chance to comply with the request before increasing pressure.

Have clear boundaries of acceptable behavior and space.

5 Don'ts

Predate on your horse.

Nag your horse.

Be indecisive.

Ride the saddle.

Let the horse take you for a ride.

5 Rules

I never get hurt, and the horse never get hurts.

Your personal safety comes first, then the horse's.

Once a lesson begins, you must see it through to the end.

However, if what you're doing isn't working, try something else.

Always ask yourself "Why?"

5 Laws

There are no shortcuts or quick fixes.

Always quit a training lesson on a positive note.

Horses know when we know and when we don't know.

Repetition is your greatest friend when you're doing things right, but it's your greatest enemy when doing things wrong.

Slow and right always beats fast and wrong.

5 Things horse's really want

To feel safe and comfortable.

For the rider to ride with an "independent seat."

For their handler to be sensitive to their needs.

For their handlers to not be loud, abrasive, rough, and unkind.

A good leader.

5 Things I want my horse to think about me

My human is a good leader.

I trust my human to keep me safe and comfortable.

I like to do what my human asks.

My human gives me clear instructions that I can understand.

I like to be with my human.

Thoughts from the masters

"Offer the horse the best deal, always." Ray Hunt

"Listen to the horse, and operate from where the horse is instead of from where the rider is."

Tom Dorrance

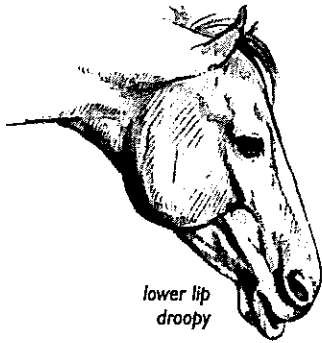
"You must be clear and confident--black and white--for your training to be effective." Clinton Anderson

"The goal of a good horseman is to have the horse become a willing partner who performs through understanding, not coercion, pain or fear." Craig Cameron

"I try to be respectful of my horse because he's doing way more for me than I'm doing for him. If I treat my horse right, he'll look forward to being with me." Curt Pate

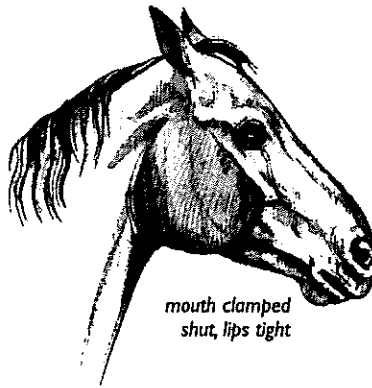
"To be a good horseman, you must have a passion for horsemanship." Buck Brannaman

Talking 'Horse': Body Language*



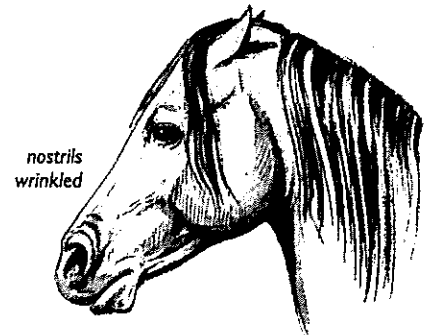
lower lip
droopy

■ Very relaxed, dozy



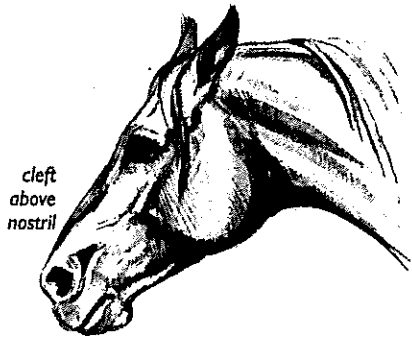
mouth clamped
shut, lips tight

■ Tension



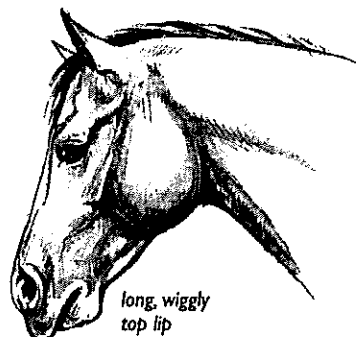
nostrils
wrinkled

■ Irritation



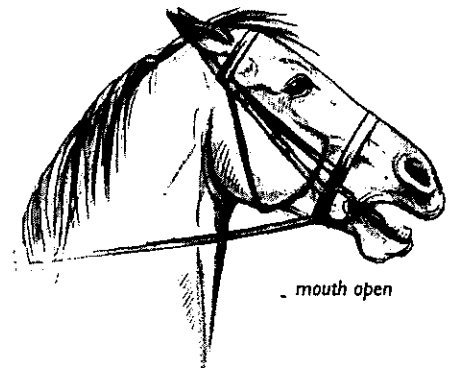
cleft
above
nostril

■ Pain, discomfort



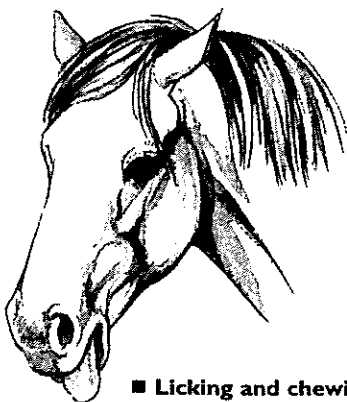
long, wiggly
top lip

■ Enjoyment of grooming/scratching



mouth open

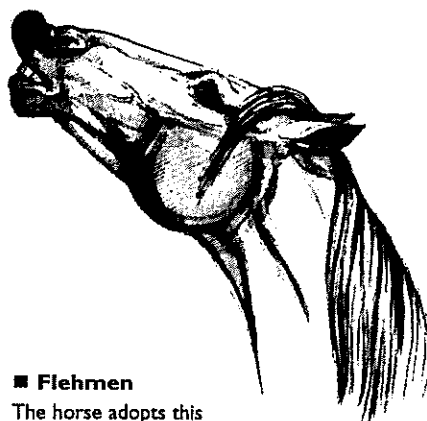
■ Discomfort from the bit



■ Licking and chewing

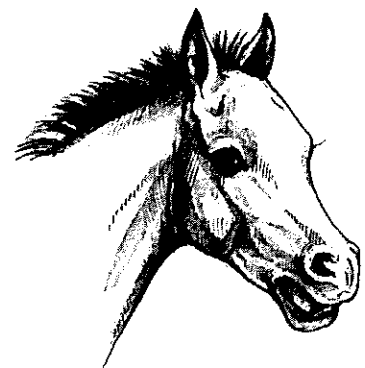
Possible interpretations:

- Preparing to drink
- Relaxation after tension
- Stereotyped behaviour



■ Flehmen

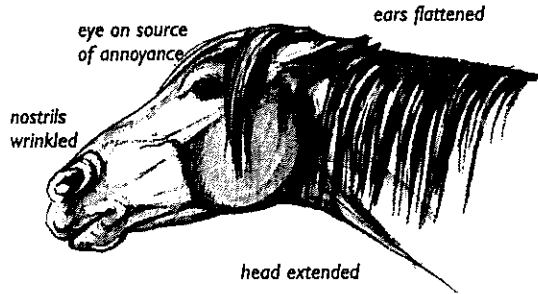
The horse adopts this posture when analyzing an unfamiliar smell or taste.



■ Champing/mouthing/snapping

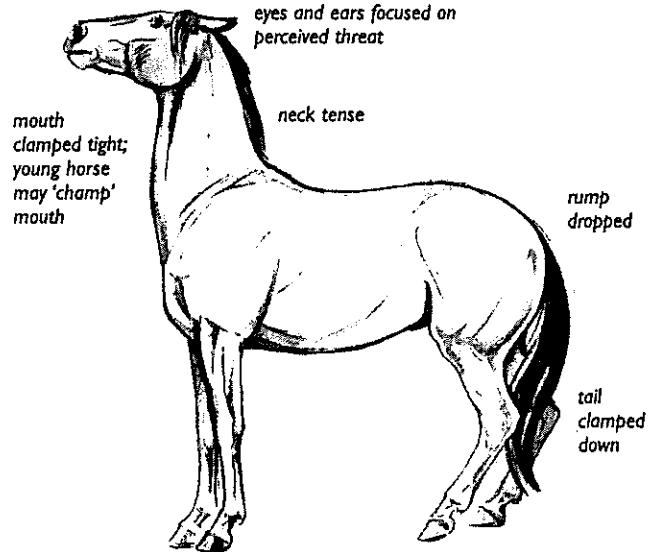
A young horse will demonstrate this behaviour when approaching an older and/or aggressive horse.

* From: The Horse Behaviour Handbook, by Abigail Hogg



■ **Head threat**

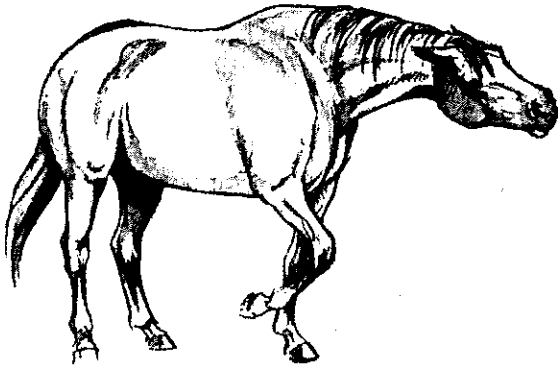
The horse is indicating 'Go away' or 'Stay away from me'. This may be followed by a lunge and bite.



■ **Defensive and unable to run away**

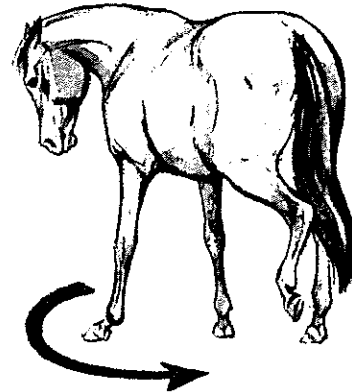
The hindquarters are turned in threat and the horse may kick if pressured further.

■ **Forward threat**

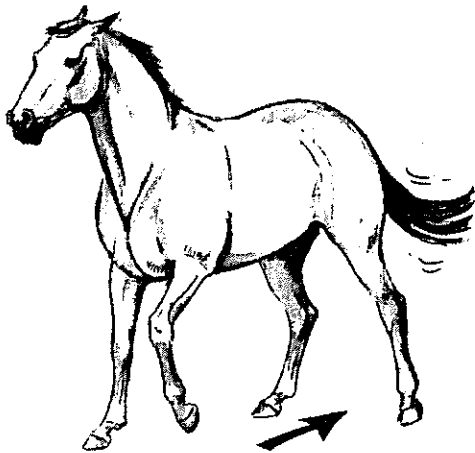


■ **Aggressive kick threat (right and below)**

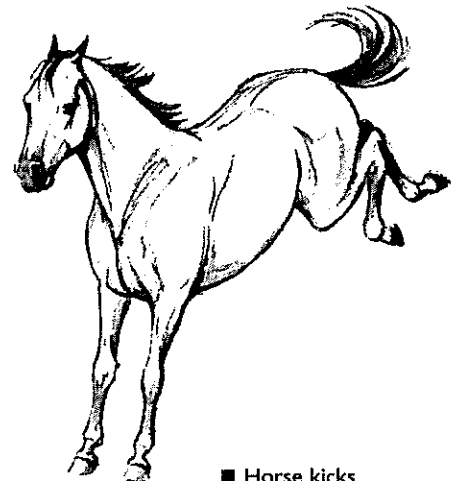
This usually follows an ignored head threat.



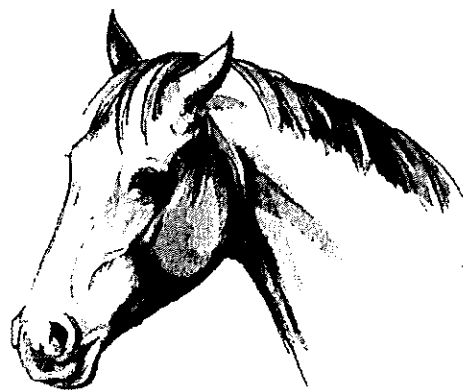
■ **Horse turns**



■ **Horse reverses and swishes tail**

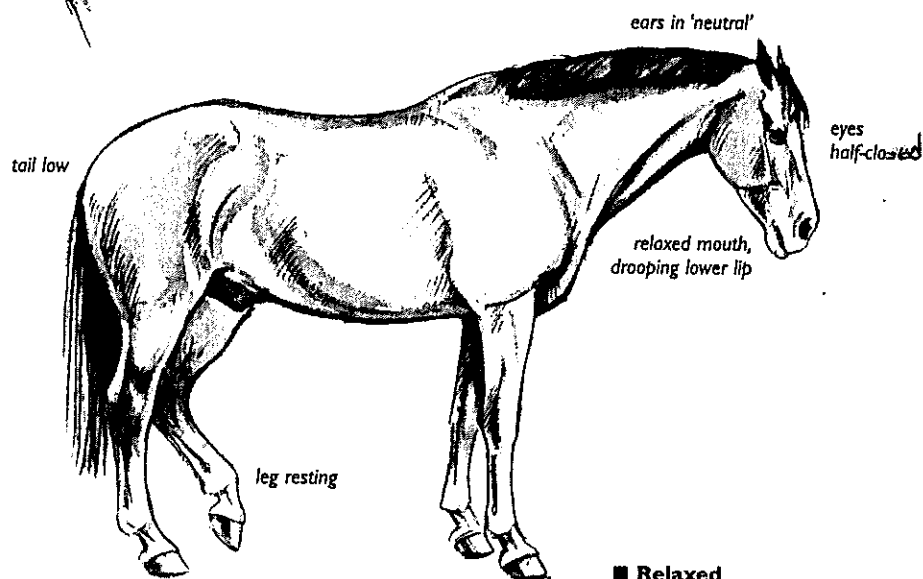


■ **Horse kicks**

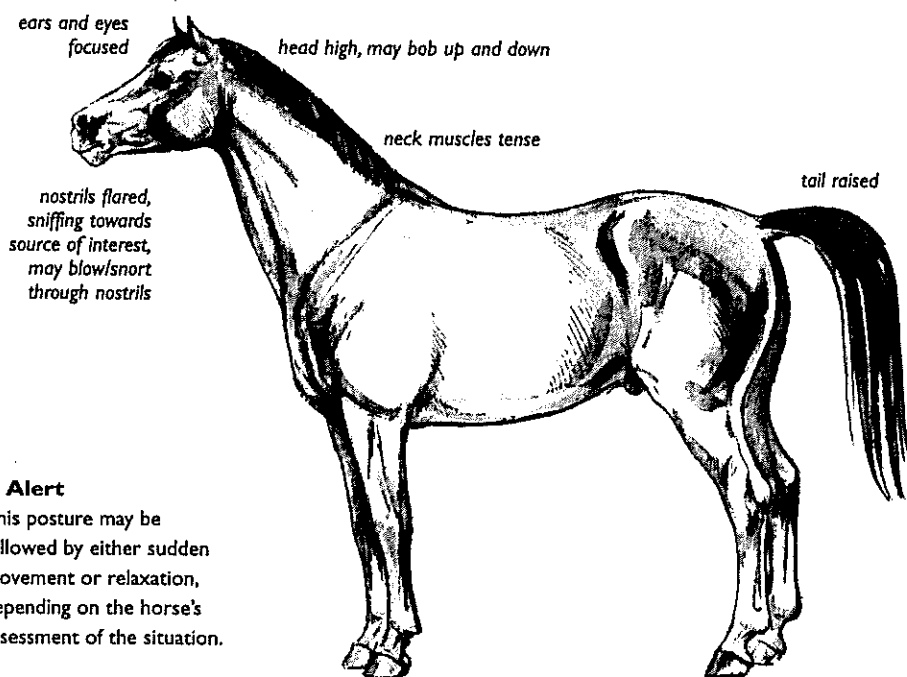


■ **One ear forward, one ear back**

This indicates that the horse's attention is divided into two directions.

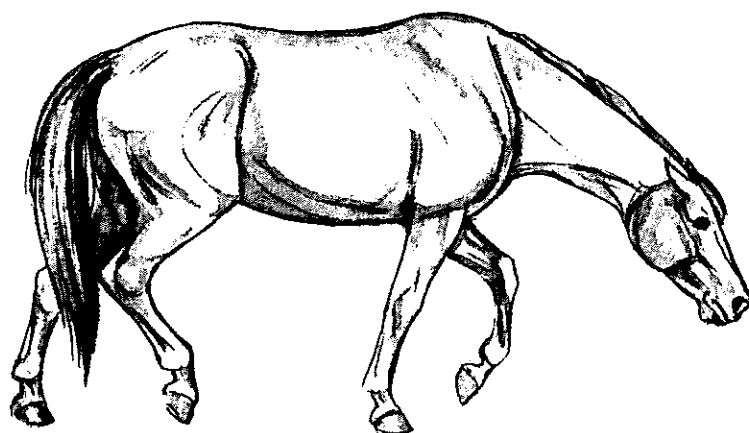


■ **Relaxed**



■ **Alert**

This posture may be followed by either sudden movement or relaxation, depending on the horse's assessment of the situation.



■ Dropped head

Possible interpretations:

- Smelling – ears relaxed
- Stretching back and neck muscles due to tiredness – ears relaxed
- Stallion behaviour when driving other horses – ears flattened

■ Swinging head round

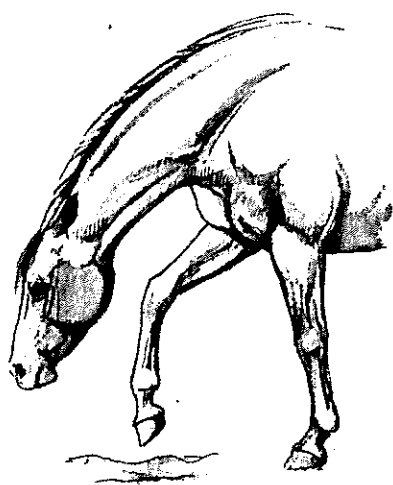
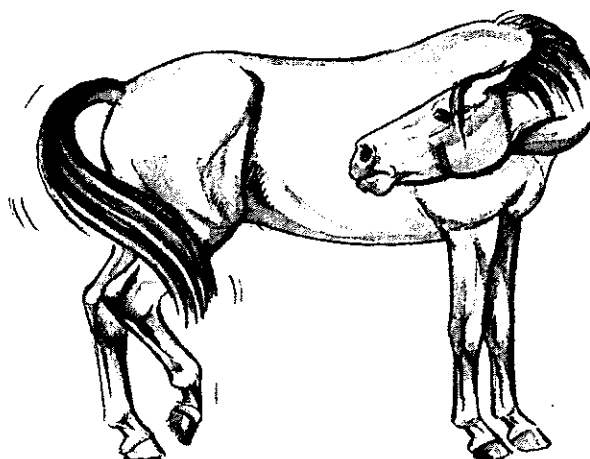
Possible interpretations:

- Removal of flies
- Threat to other horse/human to stay away
- Pain or irritation, eg from girth or colic

■ Tail swishing

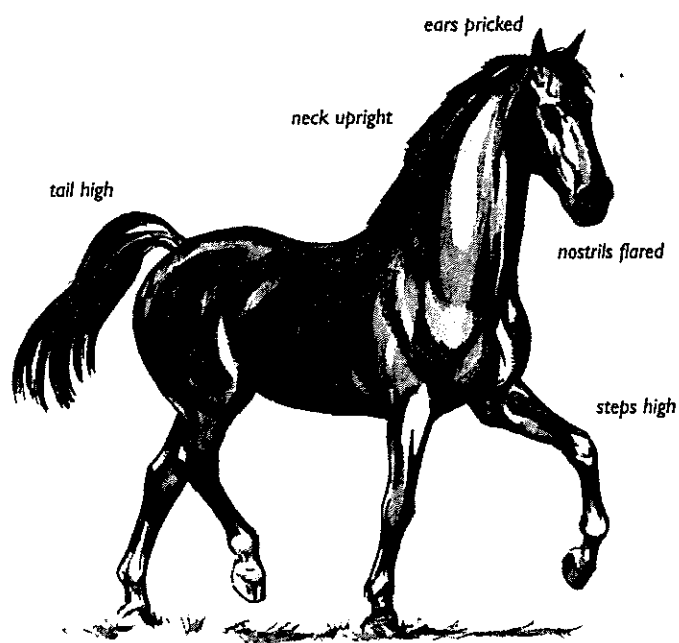
Possible interpretations:

- Removal of flies
- Irritation with presence of person or horse
- Threat to kick
- Sign of discomfort, eg from spurs or colic



■ Pawing

- Clearing snow/moving food
- Investigating a smell
- Frustration



■ Excitement/play

1 Ears

Ear movement: attentiveness and "willingness to cooperate", auditory orientation, watchfulness
No ear movement: great fear, pain



(a) Turned forward:
"Unison" with the
rider's aids
"Willingness to
cooperate"
Attentiveness
directed forwards



(b) Turned sideways:
Insecurity
Attentiveness directed
sideways



(c) Turned backwards:
Fear and subordination
Discomfort and
defensiveness
Pain, e.g. due to mistakes
in use of the reins ("see-
sawing")
Attentiveness directed
backwards



(d) Laid back flat:
Aggression
Massive defense against
the rider's influence
Great fear

2 Nostrils and mouth region

Slight chewing movements with a closed
mouth: looseness, inner relaxation



(a) Mouth closed with
lengthened nostrils:
Attentiveness
Fear



(b) Mouth tightly closed
with lengthened and
widened nostrils:
Fear



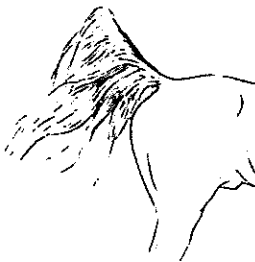
(c) Widened nostrils:
Great effort
Excitement
Fear



(d) Narrowed
nostrils with pulled
back corners of the
nose:
Pain
Discomfort

3 Tail

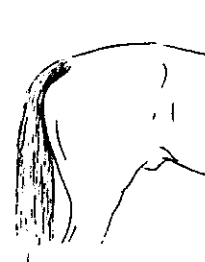
Violent tail lashing: fear, pain, defence against rider's influence



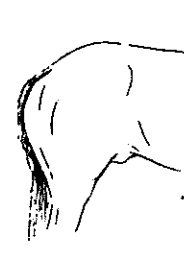
(a) Raised tail:
Great excitement
Great need for exercise
Signal function for play
(bucking)



(b) Tail carried:
Moderate excitement
Need for exercise
Attentive



(c) Tail hanging:
No excitement
No need for exercise
Pain



(d) Tail tucked
under:
Fear

From: Horse Behaviour Explained, by Margrit Zeitler-Feicht

**Natural Horsemanship Skills for Level III Riders
& Low-Stress Livestock Handlers**

1. Approaching. Ask horse to “face-up”
2. Catching. Lower and tilt horse’s head towards handler during haltering
3. Leading. Horse leads at a set distance on a slack lead rope in time with handler
4. Two-minute pre-ride check.
 - a. lunge in a circle, stop, change direction
 - b. disengage hindquarters
 - c. disengage frontquarters
 - d. back up
 - e. lateral flexion
5. Round-pen basics (loose horse).
 - a. establish consistent direction and gait (trot or canter)
 - b. draw horse off fence
 - c. change direction (turning inward)
 - d. draw horse to center
6. Lunge-line basics.
 - a. establish consistent direction and gait (trot)
 - b. change direction
 - c. “send by”
 - d. disengage hindquarters
 - e. disengage frontquarters
 - f. back up
7. Lateral flexion.
 - a. head and neck (nose to girth)
 - b. turn around center (with lunge-line behind hocks)
8. Desensitizing. Principles and procedures
9. Saddling.
 - a. untied horse with “hip throw”
 - b. from off-side

10. Bridling.

- a. lower and tilt horse's head towards handler during bridling/unbridling
- b. horse willingly takes bit

11. Mounting.

- a. front and rear, both sides
- b. mounting without cinch
- c. back up after mounting

12. Mounted exercises.

- a. one-minute pre-ride check
 - (1) lateral flexion with rein before and after mounting
 - (2) longitudinal flexion at standstill
 - (3) disengage hindquarters at standstill
 - (4) disengage frontquarters at standstill
 - (5) back up
- b. snaffle bit basics
 - (1) understand purpose and function
 - (2) lateral flexion
 - (3) longitudinal (vertical) flexion
 - (4) one-rein "emergency" stop (at walk, trot and canter)
 - (5) disengaging hindquarters (build to 360 degrees at walk and trot)
 - (6) disengaging frontquarters (build to 180 degrees)
 - (7) disengaging hindquarters then bringing frontquarters across (at walk and trot)
 - (8) backing (longitudinal flexion first, then time pressure-and-release with each step)
 - (9) reining (using proper hand, leg, and weight shift cues)
 - (10) stopping (say "whoa," apply soft bit pressure and "hunker down"; if horse doesn't stop, do one-rein stop)
 - (11) rollbacks (at walk and trot)
 - (12) side-passing
- c. transitions: walk>trot>canter>trot>walk>stop>back>rollback>repeat
- d. figure-eights with correct lead changes
- e. equitation: riding with "independent seat"

13. Low-stress livestock handling maneuvers

- a. zig-zag: walk, stop, back, turn
- b. in and out: pressure in, back out
- c. back and turn: back up, step frontquarters left or right

14. Trailer loading. On lunge line

15. Releasing.

- a. face horse away from other horses
- b. lower and tilt horse's head towards handler during unhaltering
- c. horse stands quietly once halter is off
- d. handler disengages

Natural Horsemanship: Principles & Formulas

Introduction

What follows are some basic horsemanship principles and formulas for you to keep in mind when dealing with park horses. The principles and formulas should remind you of things learned during your Horsemanship Certification training, and can be used to facilitate your own continued self-learning process; that is, if you understand the principles, you can figure out ways to apply them.

Principles

1. First and foremost, horsemanship involves seeing things from the horse's point of view. This is necessary in order to understand and communicate with them. If you think and act like a horse, it will understand you. If you think and act like a human, it won't.
2. Until you learn what a horse wants you can't communicate with it. And what do horses want? They want to be comfortable, therefore, they will move away from discomfort. Pressure makes them uncomfortable, so they move away from it. The horse thinks: What do I have to do to relieve this?
3. Horses are prey animals. Humans are predators. It is your responsibility to convince the horse that you are not a predator. Therefore, don't act like one. You don't want a horse afraid of you; afraid horses are unsafe.
4. Horses are herd animals; they are natural followers, but you have to establish yourself as the leader. If you don't, the horse will assume leadership and won't respect you.
5. View your interaction with horses as an on-going process of communication, a conversation. Horses communicate with humans nonverbally. They will tell you what you need to do to make them comfortable. A comfortable horse is a safe horse. Also, they continually ask, "Is it okay if I do this?" Or, "Do you want me to keep doing this?" You need to learn to be sensitive to their question, and to respond quickly with the answer. If you don't answer their question, they end up doing what they want, which is tantamount to their taking control.
6. Timing is important. Do something about the situation when it needs to be done without getting mean or mad. Be fair and just. A horse is really asking, "Can I act this way/do this?" Therefore, you need to give it an immediate answer.

7. Consistency and persistence is important. Whatever your answer is (e.g., “No, you can’t eat when under saddle.”), be consistent and persistent with it. Likewise, when asking for a particular response (e.g., respecting your personal space), be consistent and persistent until you get it.
8. Cause the undesirable things to be difficult and the desirable things to be easy. It will soon become the horse’s idea to do what’s easy.
9. Set every situation up for the horse to succeed. Go for understanding, not submission
10. Reinforce correct responses (e.g., release pressure, voice approval, a stroke on the neck). That tells the horse that it made the right choice, that it has the correct answer.
11. Horse “problems” are better viewed as learning situations. If a horse has a problem, diagnose the cause (most are rider caused), and take remedial action; ignoring it won’t make it go away.

Formulas

Ask, tell, promise. Begin with the most subtle cue (ask), followed immediately by the next less subtle or stronger cue (tell) if necessary, followed by the strongest cue (promise) if the horse still hasn’t responded. For example, in asking your horse to go forward, pick up on the reins and lean slightly forward. This should be enough for the horse to move forward. If it does not respond, squeeze with the legs (“I’m telling you to go forward). If it still does not respond, press or kick with your heels (“I promise you that you’re going to go forward!”).

Look, open, squeeze, rein. Whether riding with a curb bit (hence neck reining) or a snaffle bit (hence direct reining) use the following sequence of cues: When turning left, for instance, first **look** in the direction you want to go; then **open** a space for the horse to go through by turning your left toe outward; then squeeze slightly with your right leg in the girth area (which applies pressure to the frontquarters that the horse will move away from); then apply **rein**. Do the reverse when turning to the right. The whole sequence should take between one and two seconds. Sensitive horses that have been trained consistently with this sequence will learn to turn with just the leg cues.

Read, adjust, evaluate. Read the horse’s nonverbal behavior (it will tell you how it’s feeling about a situation and what you need to do to make it comfortable); adjust your behavior accordingly; and evaluate the response. Always ask yourself: “Why is the horse responding this

way? What am I doing that makes it act this way?"

Firm, fair, friendly. Be as gentle as you can, but as firm as necessary. Be a friend to your horse, but also the leader. Resist the temptation to spoil your horse. You don't want to teach a horse that it can do what it wants; its function is to do what you want.

Communication, cooperation, and trust. Old school horsemanship is based on fear, coercion, and force. New school horsemanship is based on communication, cooperation, and trust. That is, your relationship with your horse is a non-stop, on-going, two-way communication in which you develop a cooperative partnership ("horse" and "rider" should really be one word) built on trust (you trust the horse to serve and work for you, while the horse trusts that you will treat it fairly and not hurt it). Every time you work with your horse you get a new opportunity to build trust.

Pressure-and-release. Horse training is largely based on pressure-and-release. As mentioned, horses respond to pressure by moving away from it. Therefore, if you want a horse to do something, apply pressure until it responds, then release pressure once you get the proper response. For instance, if you're standing beside a horse and you want it to move over, (i.e., to step sideways), apply pressure on its side with your hands until it moves, then release the pressure. The release is the reward; that is, it tells the horse that it made the right move. Apply only the amount of pressure necessary. Start with minimal pressure, but if the horse doesn't respond, apply more until it becomes uncomfortable enough that it will move. With successive trials, the horse should respond with less and less pressure. In effect, the pressure on the side becomes a cue for the horse which means: Move over.

BBNP Horses

<u>Horse</u>	<u>Behavior "problem"</u>	<u>Solution</u>
Jeep	eating when mounted	anticipate and "anchor" reins on saddle horn with just enough slack so he "runs into the bit" when diving for grass
Poncho	crowding	set the boundary and insist that he respect your personal space
	nipping	firmly let him know that this is not acceptable; back him up
	head-tossing	use a snaffle bit; work on lateral flexion
Lefty	charging	circle until he walks
	separation anxiety	ride away from the other horses in increments to build confidence; ride proactively (keep his attention and feet busy)
Commanche	respecting personal space	establish boundary and maintain it
Rascal	picking up hind feet	desensitize with approach-and-retreat

Behaviors to enforce for all park horses by all riders

1. Respecting personal space
2. Not eating out of wheelbarrow and going to assigned feed station before feeding
3. No eating when under saddle (i.e., mounted)
4. Walking across arroyos (i.e., no charging)
5. Trailering:
 - (a) tie all or tie none
 - (b) if tied, untie before opening doors
 - (c) back only out of trailer
6. Ride on a loose rein
7. Ride one horse-length behind the horse in front when on trails
8. Don't "trail ride" but spread out to reduce herd-bound behavior
9. Maintain consistent direction and gate of rider's choice (if horse breaks gate--e.g., from walk to trot--"check" with one rein--i.e., pull it straight up; if that doesn't work, circle until horse walks)

Introduction to Ranch Roping

I. Introduction

Just as there is a radical difference between traditional and low-stress livestock handling, and traditional and natural horsemanship, there is an equally radical difference between “team roping” and “ranch roping.”

The purpose here is to introduce the latter because it is hand-in-glove with both low-stress livestock handling and natural horsemanship, whereas team roping is hand-in-glove with both traditional livestock handling and traditional horsemanship. In short, team roping is high-stress whereas ranch roping is low-stress. Consequently, ranch roping is congruent with low-stress livestock handling and natural horsemanship, whereas team roping is not.

II. History

Some trace the origins of the two styles of roping to post-Mexican War, claiming that the Texas cowboy wanted to divorce himself as much as possible from anything Mexican. Consequently, whereas the Mexican vaquero used long, soft lariats with big loops, dallied on big saddle horns, and tried to work cattle slowly and with minimal stress, Texas cowboys developed their own style of roping which involved using short, stiff lariats tied hard-and-fast to small saddle horns, then chase cattle and rope them with small loops. The Texas tradition migrated north with the cattle drives of the 1880s and the vaquero tradition migrated into California and the Great Basin (where it is carried on by the “buckaroo”--an Americanization of “vaquero”).

III. Team roping v. ranch roping

As noted, there are two distinct styles of roping: team roping and ranch roping. Team roping is what we see in competitive rodeos. The technique involves a “header” who chases after a steer and ropes the head, thus securing it for a “healer” who catches the heels, then both stretch the critter out until it falls over. Team roping is the predominant roping method used by the working cowboy from Texas to Montana. Team ropers generally know only two basic shots, a head shot and a heal shot. Consequently, team ropers have limited versatility. Furthermore, since they use short ropes they must be very close to their target, which more often than not invades the animal’s flight zone which causes it to run.

Ranch roping, as it has come to be called, is practiced by the buckaroo, who takes great pride in his horsemanship and roping skills. Ranch ropers learn multiple shots so they can rope a critter from any angle. Furthermore, their long ropes allow them to catch animals at a distance, at either a standstill or walk, because the roper is outside of its flight zone. Consequently, ranch roping tends to be slow and low-stress.

IV. Practical Applications

There are several practical applications for ranch roping in BBNP.

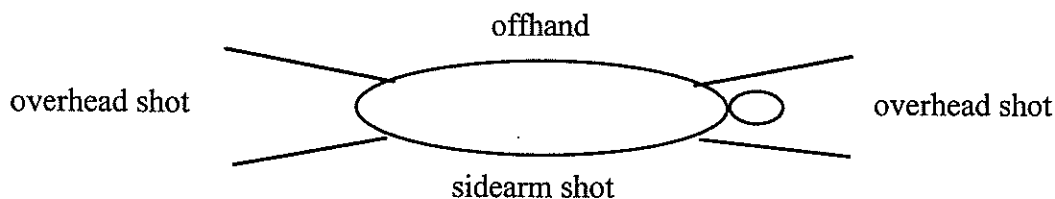
- A. Catching solo animals in campgrounds and temporary catch pens and corrals.
- B. Catching chemically immobilized animals. Experience has demonstrated that many darted animals run away before they can be caught. If the animal can be roped at a distance outside its flight zone, however, this problem is solved.
- C. Rodears (see Introduction to Low-Stress Livestock Handling VI. F.).
- D. Trailer loading (see Introduction to Low-Stress Livestock Handling VI. E. 2.).

V. Techniques

Ranch ropers learn at least a dozen different shots to handle all circumstances. However, there are three “bread-and-butter” shots for low-stress livestock handlers in BBNP that will cover most roping situations likely to be encountered.

- A. Sidearm. The sidearm shot (for right-handed ropers) is designed for a head catch from the right side of the animal.
- B. Overhead. The overhead shot is designed for a head catch from either in front or behind the animal.
- C. Offhand. The offhand, or over-left-shoulder shot (for right-handed ropers), is designed for a head catch from the left side of the animal.

(For specifics, see Buck Brannaman’s Ranch Roping Series, tape 1.)



VI. How to Practice

As the saying goes, practice doesn't make perfect, only perfect practice makes perfect.

To practice perfectly:

A. Study. Watch Brannaman's video series (especially Tape 1).

B. Master the basics. Be particular about form and practice until it becomes locked in muscle memory.

C. Practice sequentially. Start with (1) rope handling (coil management and building a loop), then (2) throwing an open loop with honda facing you on the ground, (3) progress to roping an inverted bucket or traffic safety cone, (4) then and only then, progress to a roping dummy. Start close (e.g., 10 feet). When you can repeatedly catch your target take a step back. When you can repeatedly catch your target at that distance take another step back. Build to at least 30 feet. If you start to miss at a greater distance take a step closer. Once consistent at the closer distance take a step back. At greater distances "drop a coil" (see Brannaman's tapes).

D. Practice while wearing the gloves. Use the same gloves that you will use in the field, ideally a snug, thin pair of leather gloves that you can still get a good feel of the rope with. If you only practice without gloves, and then go to rope a real critter with gloves, your accuracy will suffer because gloves give you a whole different feel than barehands.

E. Make your practice realistic. Vary the number of twirls before throwing a loop (e.g., don't get in a habit of "having" to twirl five times before throwing). Vary the distance to your target. Vary the angles. Practice on livestock at every opportunity; it is relatively easy to get good at roping the practice dummy, but roping a live animal that is often moving is a whole different deal.

5 Success Tips

A. Practice your swing; use a lot of shoulder, minimal wrist.

B. Open your hand wide on the release.

C. Cover the target with your hand after the release.

D. Focus on your target.

E. Think slow, smooth, consistent swing.

5 Safety Considerations

- A. From-the-ground roping. There is plenty of opportunity for roping trespass stock from-the-ground (e.g., in the campground, catch pens, or chemically immobilized animals). Roping from horseback is not recommended without personal instruction and coaching.
- B. Get animal really settled first. Before roping an animal, make sure that you have shrunk its flight zone until you are within your accurate roping range and that the animal is calm. Also, it would be helpful to have the animal rodeared or penned in (e.g., either in a catch pen, three-sided temporary pen, up against thick brush) to limit its avenues of escape.
- C. Try to rope high on neck. This gives you much more leverage if the animal decides to take off.
- D. Let go if things go south. If you see a wreck coming (e.g., the animal takes off and you have a “crows nest” in your coils) let go. It’s better to drop the rope than get wrapped up in it. Then, using low-stress handling methods, you stand a good chance of getting close enough to pick up your rope and trying again.
- E. Where gloves. You can get serious rope burns fast with an uncooperative animal in your loop.

5 Rules

- A. Set up shots. Maneuver yourself so that you are in an optimal position to make a catch.
- B. Don’t pass up a good shot. If you have a good shot, take it. There is a tendency to wait for an even better shot, which usually never happens, and you lost your best chance. Also, animals only have so much patience with us trying to rope them.
- C. Don’t waste shots. In other words, don’t take shots that are risky (i.e., that aren’t set up right for you and therefore have a high likelihood of missing).
- D. Think safety. Things can go south in a hurry when roping live animals, so try to set up everything to your advantage and don’t take unnecessary risks. Keep your coils neat, of consistent size, and in laying in order in your hand.
- E. Practice, practice, practice. Remember, perfect practice makes perfect. Also, when you’re facing that animal that needs to be caught but doesn’t want to, you’ll wish you had.

X. Resources.

Buck Brannaman's Ranch Roping video series custodiated in the East District Ranger Station.

XI. Conclusion

There is a place and opportunity for ranch roping here in BBNP, whereas there is no place for team roping. Team roping is a sport and belongs in the rodeo arena. Furthermore, team roping is dangerous, relatively ineffective, stressful, often inhumane, and unnecessary.