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War Relocation Authority
Central Region
Denver, Colorado

Moore
BULLETIN NO. 5

SUBJECT: Treatment of Rattlesnake Bite

A considerable infestation of rattlesnakes in the area surrounding the Heart Mountain and Granada relocation centers makes advisable a reliable knowledge of the habits of the reptile and methods of treating its bite. The article which follows has been written by one of America's foremost authorities on the subject of snake bites.

Jos. H. Smart
Jos. H. Smart
Regional Director

Distribution: All Regional Office manuals and all project personnel members

9/5/42

(Sheet 1)

THE MANAGEMENT OF SNAKE-BITE

By Dudley Jackson, M. D.

Fear of the rattlesnake is so great in many people that constant apprehension prevents their enjoyment of an outing, and I have known persons who refused to make any camping or woods trip for this reason. They are depriving themselves unnecessarily of some of the greatest pleasures life has to offer. I say unnecessarily, because when all the facts of our painfully-acquired knowledge of the rattlesnake and his bite are spread before us and studied, our panic disappears and we do not hesitate to walk through a rattlesnake paradise if necessity or desire takes us there.

This peace of mind is worth much and is possible to everybody. I shall tell you how to acquire it. First dismiss from your mind any stories you may have heard in the past of odd, unusual, or bizarre antics of snakes. Snakes are reasonable creatures, having dispositions much like those of people; some good, some bad, some vicious, and some almost angelic. There died recently in the snake garden at the Witte Museum in San Antonio "Pan-nical Pete", a gentlemanly old rattlesnake who in a long and kindly career had won the affectionate regard of all the employees. His favorite trick was to open his mouth in a prolonged and frightening yawn of boredom when tourists admired him over-long or too closely. His passing was sincerely mourned. There have been others, in the same garden, that were as trustworthy as the modern bandit.

The rattlesnake rarely strikes without warning, and this is only common sense. He is comfortable and does not wish to be disturbed. When you heed his warning and move on, he does not pursue you. There is an evil and vicious threat in the whirr of a snake's rattle that is sensed by the greenest dude, and he jumps instinctively--in the opposite direction.

The length of a snake's reach or strike is seldom more than a third the length of his body. Thus he strikes below the knee, usually at the foot or ankle; and often the lightest protection--khaki pants or canvas shoes--will catch enough of the venom to prevent the bite from being serious. Leather shoes and leggings insure that no fangs can touch flesh.

If he makes a glancing strike leaving only one fang mark, or hangs on only half a second or so, the chances are that the bite will not be serious. If, however, as rarely happens, he hangs on long enough to contract the muscles around the poison sacs several times, he empties a full load of the poison into your clothes or you. It takes two weeks to replenish the venom in his poison sacs, so if he has struck recently there is small danger to you even in a firm bite.

(Sheet 1 & reverse)

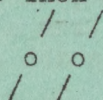
Small children should not be taken into snake country, since they cannot be easily protected, and snake venom is more dangerous to them, killing as it does by body weight. However, there is practically no danger to an adult wearing high leather shoes or boots if he is thoughtful of stooping to pick up things, and of bringing his face or body near the ground. He should not sleep on the ground, as snakes like to prowl at night (a hair rope is no protection), and he should use a flashlight at night on the trail or around camp.

If in spite of protection and care a member of your party is struck by a rattler, it is well if you have a definite procedure in mind which you can follow methodically and accurately. A calm patient means much, and you can truthfully assure him that there can be no immediate danger. There will be plenty of time for careful treatment, and if these directions are followed there is only one chance in a hundred that the result will be fatal.

1. Tie a rubber band, hankerchief, or scarf around the arm or leg several inches above the wound, not too tightly. Snake venom does not spread through the venous system, but very slowly by means of the lymph spaces or 'lakes' under the skin. Firm but light pressure cuts off this spread but does not affect the blood supply.

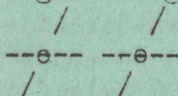
2. Make skin cuts. If possible, sterilize the skin with iodine, alcohol, or even whiskey. Failing these, use soap and water. Sterilize a sharp knife or razor blade by holding in a flame. Now make quick, firm cuts one-quarter inch long through the skin across each fang mark,

like this:



Without waiting for argument, make similar cuts at right angles to these,

Thus:



3. Apply suction. If nothing better is at hand, use your mouth. An ulcerated tooth or sore mouth, contrary to popular opinion, does not provide a means of venom entering the system, and large amounts of venom have been swallowed without other results than a slight nausea. Be sure the cuts go through the skin, and well into the tissues underneath. Internes and even practicing physicians have been known to labor for hours over a patient using suction cups with no results, only to find that their cuts had not gone entirely through the skin. There is no danger in having a cut even deeper than necessary, so if you measure one-fourth inch on the knife or razor blade, and cut that deeply, you are safe. Do not fear an infection following the incisions, for the flow of serum is outward for several hours afterward, and a wide cutting helps to prevent infection by tetanus and gas gangrene which depend upon air for growth, and both of which have repeatedly been found in cultures from rattlesnakes' mouths.

The sooner after the bite that suction is applied, the more highly toxic the venom removed, and the greater the good accomplished. So do not be discouraged at the few innocent looking drops of serum first withdrawn; they contain almost pure snake venom. Gentle suction is best, and any device that causes drastic painful pressure should not be used.

After an hour or so a great outpouring of serum around the bite causes swelling and a dilution of the venom. Now you are encouraged by being able to withdraw larger amounts of blood-tinged fluid. This dilution of the venom is necessary before any of it can be absorbed into the body, and it is necessary for you to follow the spread of the swelling with your cuts. Thus at the end of an hour or so, if a physician has not been reached, make a circle of cross cuts around the wound, about like

this:



and, having done so, continue suction from these incisions as well as from the two original ones. If in making these cuts a small vein is opened, or you get blood instead of bloody serum, plug the small wound with a bit of cotton, and make another cut nearby. After the first two hours apply suction for only twenty minutes out of each hour, continuing this for the next fifteen hours. While the wound is resting, the whole limb is kept wrapped in heavy towels kept hot and very wet from a strong solution of epsom salt, or failing that, table salt, to help the outflow of serum.

4. Treat the pain. Intense pain is a symptom always present in the bite of a poisonous snake, the undilute venom being a violent irritant, much too violent in fact to be absorbed as it is. As venom is sucked out the pain lessens to some extent, but it should have some relief at once. It is better to give a narcotic such as morphine or codeine by hypodermic or by mouth. If these drugs are not at hand give fairly heavy doses of a sedative, such as aspirin, anytal, or any headache medicine.

5. Do not give whiskey, brandy, coffee, or any other stimulant as early as this. They may do actual harm. The gathering of serum at the site of the bite serves to dilute the venom and makes it more quickly absorbable. This serum is taken from the blood, and thus if circulation is increased the venom is more quickly diluted and more quickly absorbed. Do not allow the patient to walk if it can be avoided. Do not allow kerosene or potassium permanganate to touch the wound. All these and many other often-used remedies have been found to be not only of no benefit, but some of them, especially potassium permanganate, are actually harmful.

6. Hospital service is always best. Most patients do fairly well following snakebite for the first fifteen to twenty-four hours. When deaths do occur they come usually in from twenty-four to forty-eight hours after the accident, and collapse is likely to be sudden. Therefore, secure hospital service and a competent surgeon; and here is his procedure:

Without loss of time several relatives and friends should be typed for possible blood transfusion. Those matching the patient should be kept on call, preferably in the hospital so as to be ready in case collapse is threatened. Extra cuts are made above the wound as the swelling spreads, always following the edge of the swelling, and suction is kept up from all the incisions for fifteen or twenty minutes out of every hour. Every hour, colonic irrigations of hot salt and soda solutions are given, and if symptoms of shock begin to appear, blood transfusions are in order, these to be repeated at the doctor's discretion.

These transfusions have been known to turn the tide on several occasions, and save a life. Each snake-bite confers some immunity on the victim, and if it is possible to obtain blood from a person who has recovered from one or two bites, so much the better. Such persons often can be found around carnivals or snake gardens. Intravenous glucose solutions may be given, and if the heart needs stimulation, hypodermics of digitalis or adrenalin.

These directions, as you see, presuppose a vicious and malignant bite. The average one required less treatment. However, since it is often difficult to tell in less than fifteen hours how severe the wound really is, it is in order to be prepared for the worst. And if these orders seem pre-emptory, they have been arrived at by long and careful experimentation on animals, and painstaking and anxious care of human victims, for many years in a snake-infested country. Probably our most interesting experiment was one wherein a dog was injected with ten times a fatal dose of venom. Using suction, the accumulated serum was withdrawn, divided, and then injected into four other dogs. All four of these dogs died with all the symptoms and autopsy findings of typical snake-bite poisoning, while the original dog recovered.

We have seen the death-rate from rattlesnake bite lowered from fifteen out of a hundred, under the old methods of treatment, to a possible one per cent or less. But the snake-bite patient cannot be neglected. He must have constant, conscientious, and back-breaking care for forty-eight hours. He must not be attended by a lazy, indifferent, overoptimistic, or ignorant doctor or nurse. His doctor must be within a few minutes' call for forty-eight hours, and his nurse must be alert and almost constantly at work. I have never seen a case over-treated, but am convinced that under-treatment has been the cause of death in several instances.

If, as often happens, your physician has had little experience in the treatment of snake-bite, it is not out of order to call his attention to these directions, as the day when the doctor stood on his dignity went

out with the frock coat and high hat. It is the habit of the medicine man of today to put progress and efficiency above all other considerations.

If the rattlesnake has been in mind throughout this article it is because practically all of our work has been with the diamond-back rattler of southwest Texas, and his victims. The same procedure is in order following the bite of any of the three other poisonous snakes of America--the cotton-mouth moccasin, the copperhead, and the coral snake. The coral snake, though deadly, probably bites less often, due to the two facts that his bright color advertises his presence and his jaws do not open at the same wide angle as the others. Thus he usually requires a finger or a toe as the object of his strike.

We have found, by repeated experiments that anti-venine, unless given in much larger quantities than those recommended by the manufacturers, is of small value. One ampule alone is of no clinical value. Snake venom kills by body weight, a lethal dose requiring one mg. of venom per pound of the victim. The average Texas diamond-back rattler is capable of discharging 250 mg. in a good firm bite. (We have known one to discharge 600 mg. when forced to bite several times through a rubber dam over a glass container.) One ampule, or ten cc., of anti-venine neutralizes less than thirty mg. of venom in a glass tube, and a much less quantity (less than ten mg.) in the body. Thus is seen the futility of relying on one or two ampules of anti-venine. When used at all, as many as five ampules should be injected in and around the site of the wound, and left for an hour before suction is again used. In severe cases five or ten more ampules should be used, and always of course as an adjunct to the above treatment.

Often even the experienced woodsman cannot collect his wits in the face of an unusual accident, but this accident should never find us at a loss, it is so easily prepared for. It is good insurance to carry narcotics, razor-blades, and suction cups along on hunting trips. Type the outline of this treatment and keep it at hand, pasted in some kit or bag, and walk the woods with the assurance that in case of this accident you will know at once what to do.

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War Relocation Authority
Western Plains Area
Field Bulletin No. 1
February 12, 1945

FIELD BULLETIN NO. 1

WESTERN PLAINS AREA OFFERS GOOD RELOCATION OPPORTUNITIES

The Western Plains Area offers many relocation opportunities for evacuees in various fields of work. The area embraces Colorado, New Mexico, West Texas, and parts of Nebraska, Montana, Wyoming and North and South Dakota. The climate is favorable for farming and healthful for human beings. Throughout the area advance approval is required for evacuees desiring WRA assistance.

BILLINGS DISTRICT

Billings, Montana is an unusually attractive, clean city of approximately 25,000 population. It is located in Southern Montana, a few miles from the Wyoming boundary, and has a comparatively mild climate, not unlike that of Denver, Colorado. The summers are temperate with occasional thermometer readings in the 90's, and the falls are ordinarily pleasant. Wintry weather may begin early in November. Sub-zero temperatures are rare, although there is considerable snow, most of which falls in the early spring.

Most of the job opportunities in Billings are for domestics. Evacuees who wish such employment may obtain it in good homes at wages ranging from \$50 to \$60 monthly. Usually a private room with bath is available and special privileges are accorded.

UPPER YELLOWSTONE VALLEY

Although the upper Yellowstone Valley of Montana is a labor surplus area, there are numerous share-cropping opportunities in that region. Although share-crop contracts vary, it is always possible to make an agreement under which the evacuee can farm profitably. Each of several evacuee families in the valley netted more than \$5,000 in 1944 on a share-crop basis.

The Yellowstone Valley is 800 miles long and from one to ten miles wide, with an area of approximately 4,000 square miles. The valley is largely devoted to stock growing and agriculture, although produce can be and has been successfully grown there. The upper Yellowstone Valley extends roughly from Billings, 55 miles east of Hardin, thence 140 miles northeast from Miles City to Glendive -- a stretch of approximately 200 miles from Billings to Glendive.

The growing season lasts from 110 to 120 days, usually from April 10 to September 20. The coldest season is from January 1 to March 1. Once or twice during the winter the temperature drops to 30 degrees below zero, although that is unusual. The sun shines on most days; January and February thaws are not infrequent. There is considerable rainfall in the spring. Summers are cool, although the mercury occasionally rises to 90 to slightly above in August. Falls are pleasant. Wintry weather usually begins about September 1. The altitude varies from 3,000 feet above sea level to as low as 2,300 feet.

Two crops of alfalfa can be harvested during the season and one crop of most other agricultural commodities. The planting season is from April 1 to May 20, except for beans, flax and a few other crops which can be planted up to June 10. The area is well irrigated under the Big Horn River, with water selling at an average of \$1.00 an acre foot. There is ample water for growing purposes.

In the past there have been a large number of seasonal jobs for farm laborers. The wage scale is set by the Department of Agriculture. These farm workers are used in the beet fields and between beet growing seasons are usually employed in general farm work such as irrigating, fencing, hauling manure, and cleaning ditches. Sometimes these workers are used on an exchange basis; that is, where there is insufficient work for them on one farm, there may be work for them on another.

Sentiment generally in the upper Yellowstone Valley is good. Several Japanese families have lived in that vicinity for twenty years or more and are accepted on the same social and economic level as Caucasians.

WEST TEXAS DISTRICT

The principal West Texas relocation opportunities thus far are in Deaf Smith County, in the vicinity of Hereford, the county seat, which has a population of about 3,000. Deaf Smith County has been widely publicized because most of the residents have exceptionally sound teeth. The Readers Digest has published two articles on this subject within the past two years and there have also been articles in Colliers Magazine and in other publications of nation-wide circulation, in addition to numerous newspaper articles. The reason for this exceptional state of dental health has been ascribed to the presence in the soil of certain minerals which are absorbed by crops grown in the county. Therefore food crops produced there find not only a ready market, but often are sold at a premium.

Dry farming in the area is now beginning to be replaced by the well irrigation method of farming. In 1944 six hundred carloads of potatoes and other vegetable crops were shipped from Hereford. There is available in the community much good land which should be devoted to intensive cultivation. There are now an insufficient number of persons in the vicinity to work the land and therefore residents doubtless would welcome experienced evacuee truck farmers.

The greater majority of farming opportunities for evacuees so far appear to be of the share-lease and share-crop variety. Leasing land on a cash-rent basis is not the general custom there. Many farmers who desire to go into vegetable production do not have the implements for that type of farming but in some cases they are willing to purchase such equipment. Hence, the territory can absorb some evacuees who have their own farming tools as well as some without the equipment.

One wealthy land owner near Hereford has from 100 to 120 acres of irrigated land available for vegetable production on a share-crop basis. There are four sections (2,560 acres) in this ranch, virtually all under well irrigation. There are several sets of modern improvements on the tract now occupied by Caucasian employees, but no housing for evacuee families has been constructed. However, the owner has said that he would build enough temporary housing to shelter evacuee families. The owner has about 200 acres of alfalfa which is to be irrigated and harvested by evacuee workers on a share-crop basis. The vegetable production would be worked in with the haying. The owner is agreeable to accepting a percentage of the vegetable proceeds as rental on the land. He has the power and machinery for haying operations and is

willing to purchase implements for vegetable production if such an arrangement should be desired by the evacuee, although the exact terms would depend upon whether the tenant furnished the machinery, power, fuel, etc., or whether it was to be furnished by the landowner. The owner added that he was willing to make any kind of fair and reasonable agreement on the vegetable part of the contract.

Potatoes, onions and carrots are now produced in commercial quantities in that section of the state. Celery, cabbage and other vegetables also do well there. The land is rich and well adapted to intensive cultivation. Up to now the ranch has not been used for vegetable production but devoted largely to wheat crops and alfalfa. Alfalfa yields an average of about five tons to the acre. The growing season ranges from 200 to 230 days.

The owner would prefer to contract with some experienced evacuee farm operator who would be responsible for the entire enterprise, selecting the other evacuee families and making his own arrangements with them. If a satisfactory contract could be made on that amount of land for 1945, additional land would be made available in 1946 if desired.

Another farmer in the same vicinity has 25 acres on which he would like to produce potatoes or cabbage. He has a 640-acre ranch with one good irrigation well. There is no housing for evacuees at present but the owner says he would construct a good two-room house if he got the right kind of tenants. This also is a share-crop deal. The owner would prefer that the evacuee provided his own implements, but if necessary would purchase the needed tools.

Hereford is located in the panhandle section of Texas bordering on the New Mexico line. The Hereford Chamber of Commerce said that the soil in the area was classed as 90 percent tillable. The country in all directions is a flat plain sloping gently toward the southeast. The soil is a deep chocolate loam; no timber, minerals undeveloped.

It is probable that other similar relocation opportunities can be developed in the Hereford area and in other sections of West Texas provided evacuees expressed sufficient interest.

ALBUQUERQUE, NEW MEXICO DISTRICT

The Albuquerque, New Mexico district, which is administered presently by a relocation office at Amarillo, Texas, offers a number of vegetable farming share-crop propositions. Onions, carrots, lettuce and celery are among the principal crops being produced in this territory, although tomatoes and other crops have been successfully raised. About 25 evacuee families now live in the immediate vicinity of Albuquerque. There are occasional hail storms in that section of the Rio Grande River Valley in which Albuquerque is located but hail damage is not a major hazard. Wind damage is almost unknown; tree plantings in the valley offer protection from north and south winds and mountain ranges offer protection from east and west winds. Most of the land available is on small tracts although some larger tracts are now being made ready for production. The labor supply is adequate and fairly stable from year to year. Many of the Spanish-American families who depend on farm employment for livelihood own their own homes in the valley and do not migrate. The water supply is adequate for a much larger acreage than is now being planted, although the ditch system in use is not too efficient in some localities.

The 1940 population of Albuquerque was 35,449; its 1945 population is estimated to be almost double that figure. Albuquerque is almost 5,000 feet high, and has one of the most attractive climates to be found in the entire country. It is only some 200 miles north of the Mexican border and has a long growing season characteristic of southern latitudes -- about 200 growing days on the average. Its high-altitude insures cool summer nights -- almost as cool as those of Denver. Because of its size and central location in the state, and its excellent transportation facilities, Albuquerque is the chief distribution point in New Mexico. Texas is the principal outlet for fruit and produce grown in the area.

Albuquerque is the cite of New Mexico State University. It has an excellent system of public and parochial schools. Public elementary schools are conveniently located in various parts of the city and county so that smaller children may attend school near their own homes. Through an unusual school transportation system, it is possible for children of high school age living anywhere in the county to attend the Albuquerque High School, the only institution of its kind in the county. Public sentiment as a whole is good. We feel that no evacuee resettling in this section would have difficulty in obtaining community acceptance.

FORT MORGAN, STERLING, JULESBURG AREA

Evacuees interested in resettling in the Fort Morgan - Sterling - Julesburg area in northeastern Colorado would have no difficulty in obtaining favorable share-crop offers. The area covers roughly a 100-mile strip in the South Platte Valley. Fort Morgan is 76 miles northeast of Denver, Sterling 50 miles northeast of Fort Morgan, and Julesburg, which is virtually on the Nebraska border, is 46 miles northeast of Sterling. The South Platte Valley begins at Denver and extends approximately 300 miles to North Platte, Nebraska where the South Platte flows into the North Platte river. Through most of its course, the South Platte meanders through plains country, part of which rises into low hills. It is sparsely wooded, the cottonwood being virtually the only indigeneous tree.

Logan County, of which Sterling is the county seat, borders Nebraska and Wyoming. Sedgwick County, of which Julesburg is the county seat, lies in the extreme northeastern part of Colorado and is bordered by Nebraska on the south and on the east. Fort Morgan is the county seat of Morgan County.

Climatically there is little variation in the Fort Morgan-Sterling-Julesburg area. The annual mean temperature is 46.4 degrees Fahrenheit. Summers are never oppressive, although temperatures occasionally go as high as 106 degrees for brief periods. Lack of humidity makes even the highest temperature bearable. Maximum temperatures usually are attained in the latter part of July and in the first three weeks of August. The falls are almost invariably pleasant. Cool weather ordinarily begins about the first week of September, although the earliest killing frost in autumn, according to a 32-year record, was on September 30. Wintry weather, with temperatures which occasionally descend to 20 degrees below zero, usually starts in the latter part of October or the first part of November. Springs are late but snow is expectable up to the middle of May and sometimes thereafter. There may be warm sunny days at any time during the winter and spring. The growing season begins on an average early in May and lasts until early in September.

Sentiment toward evacuees in the area runs from fair to good. Throughout that section there have been a number of families of Japanese ancestry for from 20 to 30 years.

The number of land-leasing opportunities in the vicinity is so negligible as to be ignored. Share-cropping agreements vary. Under the customary arrangement on irrigated farms, the landlord supplies the land only and the tenant keeps all but 1/6 to 1/3 of the crop. In the case of corn or wheat, where labor is a comparatively minor consideration, the landlord may get 1/3 of the crop, supplying nothing but the land and implements, including a house. Housing varies from poor to good. Available houses are rarely, if ever, completely furnished. It should be emphasized that share-cropping arrangements are an individual matter between owner and tenant. Often a tenant can work out a better than average agreement with the owner.

Sugar beets are perhaps the major cash crop in the Fort Morgan-Sterling-Julesburg area. Another important crop is wheat and others are corn, barley and alfalfa. Most of the feed crops are used for livestock feeding and only a limited amount is shipped directly to market. Beans are also a considerable cash crop. All through the area potatoes are being grown in increasing quantities. There is no reason why truck vegetables could not be grown on a fairly large scale. Hail is a crop danger but that threat may be met through diversified farming. If hail damage comes early enough in the season, it is usually possible to plant another crop.

Many farms in the three counties are now under rural electrification. There is adequate water for irrigation purposes at a reasonable rate. The principal shipping points are Chicago, Omaha, and Denver.

SIoux ORDNANCE DEPOT

An excellent relocation opportunity for evacuees with families is offered by the Sioux Ordnance Depot, which is about ten miles from Sidney, in western Nebraska. Applicants are required to start as munitions handlers at a wage of 75 cents an hour on a minimum 48-hour-work-week basis. There are usually opportunities for overtime if desired which, of course, would increase the weekly wage. Adequate housing is supplied at reasonable cost. Workers live on a federal housing project near the depot. The units consist of a living room, kitchen, large closet, bath, and one, two or three bedrooms. There also are some units without bedrooms which have a living room, kitchen or bath. The no-bedroom units rent at \$29.00 a month unfurnished and \$32.50 a month furnished. One-bedroom units rent at \$30.50 unfurnished and \$34.50 furnished. Two-bedroom units are \$33.00 a month unfurnished and \$39.00 a month furnished. Three-bedroom units, very few of which are available, rent for \$35.00 a month unfurnished. Furnishings are not supplied for the three-bedroom units. Included in the rent are such utilities as lights, water and garbage service. Coal and kindling may be obtained from the depot. Coal is ordered through the post engineer in ton loads at \$9.00 a ton. A garbage receptacle is furnished each unit and garbage is picked up every other day. Basically unfurnished units have coal cooking and heating stoves and a seven-foot capacity electric refrigerator.

Although everyone who accepts employment at the Sioux Depot must start as a munitions handler, such special skills as he has will be utilized after he has been on the job for a time. For instance, if he is a garage mechanic it probably would be possible to employ him in the depot shops, or if he is a draftsman or the like, he could obtain a job in line with his abilities. All Sioux Depot workers are under Civil Service. There are now about seventy evacuee families living at the depot.

PUEBLO DISTRICT

There are a number of jobs available to evacuees in and near Pueblo in southern Colorado. Domestics may obtain work at wages ranging from \$50.00 to \$60.00 per month with board and room. A hospital in Pueblo can use several domestics at a wage of \$40.00 per month with the noon meal free. Housing is not furnished. Sentiment in Pueblo and in surrounding territory is excellent.

A Colorado Springs Hotel has a number of openings available, including some for women employees at \$75.00 per month with room. Men employees may earn from \$80.00 to \$140.00 per month, with housing for those working on the inside of the hotel. Typical jobs are those for bus boys, vegetable men and cooks. Those employed on the hotel grounds are paid fifty cents per hour and room.

There are numerous share-cropping opportunities in the Arkansas Valley in southern Colorado. Contracts vary, depending upon the land and type of crops. Housing is usually furnished. The chief crops in that vicinity are corn, sugar beets, potatoes, tomatoes, melons, onions, small grains and hay, and some fruit. The growing season is from 120 to 125 days. The elevation ranges from 3300 feet to 4600 feet. Virtually all farm lands are under irrigation with good water rights. Sentiment is fair.

In the Trinidad, Colorado area there are also share-cropping opportunities. As in the Arkansas Valley, the contracts vary. Some farms are cash-rented. Housing is usually furnished. Crops include sugar beets, onions, potatoes, some tomatoes, vegetable crops, small hay and grain. The growing season is about 100 days. The approximate elevation is 6000 feet. All lands are under irrigation, with good water rights. Sentiment is fair.

Land in the San Luis Valley may either be cash rented or farmed on a share-crop basis. Principal crops are small grains and hay, potatoes, garden peas and beans, cauliflower, lettuce and a good deal of cabbage and some spinach and carrots. The growing season is approximately ninety days. The elevation is 7600 feet. The valley is about 100 miles long by 60 miles wide. All land is under irrigation with good water rights. There is a number of native Japanese families in the valley, especially in Costilla County. There are many artesian wells in the counties of Alamosa, Rio Grande, Saguache and the northern part of Conejos. Sentiment ranges from fair to good.

Seasonal labor is always needed in the Arkansas Valley, in the Trinidad area, or in the San Luis Valley. Wages are usually on an hourly basis. The season runs from July through October. Evacuees who plan to take jobs in Pueblo and Colorado Springs without some assurance of housing may encounter considerable difficulty in obtaining living quarters.

GRAND JUNCTION DISTRICT

Grand Junction is a town of about 15,000 population on the western slope of Colorado. It is the heart of a large fruit growing area. Perhaps the best peaches in the United States are grown around Fruita, which is only a few miles from Grand Junction. The growing season ordinarily begins early in May and lasts into November. There is seasonal employment in the area in sugar beets, tomatoes, peaches and pears. Wages are fixed by contract. A number of evacuees who own land in the Grand Junction area are returning to the West Coast and offer a variety of attractive share-cropping opportunities.

Domestics may obtain work in Grand Junction at \$50.00 per month; plus room and board. Some students may obtain work for board and room while attending the Mesa Junior College in Grand Junction. A large seed company in Grand Junction usually has employment opportunities at prevailing wages. Sentiment is fair but is becoming steadily better.

GREELEY DISTRICT

A large number of evacuees have settled in the area around Greeley in northern Colorado, usually under share-crop arrangements. Up to now the WRA has not been encouraging any considerable number of evacuees to settle in the Greeley vicinity, but there are usually numerous job opportunities of one sort or another which evacuees can easily develop. A large quantity of potatoes is grown around Greeley. Other crops include grains, hay, sugar beets and truck vegetables. Virtually all the land is under irrigation and water rights are good. Sentiment is good. Quite a number of native Japanese families live in the Greeley district.

CHEYENNE, WYOMING

A leading hotel in Cheyenne, Wyoming needs fry cooks, \$7.00 for an 8-hour day, six days a week, with time and a half for overtime. Dishwashers and miscellaneous kitchen help also are needed at a wage of \$3.64 for an 8-hour day, six days per week. Board is furnished. The obtaining of housing might present some difficulties since Cheyenne, a city of about 25,000 population, is now badly overcrowded.

LARAMIE, WYOMING

From 20 to 25 construction workers are needed by a Laramie contractor engaged in building an aluminum plant. The wage is 80 cents an hour on a 54-hour per week basis. Board and room are available at the home of a Japanese in Laramie for \$11.00 per week. Laramie has a population of about 15,000 and is fifty miles northwest of Cheyenne and about 160 miles north of Denver.

DENVER DISTRICT

Denver has always been particularly attractive to evacuees. It now has an evacuee population of approximately 3,000. There are many good job opportunities in Denver which may be obtained without WRA aid. A limiting factor, however, is the lack of housing. Denver, like most such communities, has a heavier population at present than it can conveniently provide for. Some sort of housing usually can be obtained. There is a wide field for domestics in Denver at wages ranging from \$50.00 to \$130.00 per month with room and board. Bus boys and various kinds of hotel employees, waiters, laborers, as well as evacuees having special skills, would have no difficulty in obtaining work in Denver.

The United States Bureau of Reclamation in Denver has the following positions open:

Chairman on Survey Party (SP-3) - Salary \$1,752 per year including overtime. Applicants must have had three months of practical full-time technical experience in civil engineering, successful completion of an ESMWT course in civil engineering,

or successful completion of at least five semester hours of study in physics, mathematics and engineering sciences in a recognized college or university, or a technical institute above high school grade, or successful completion of four full years of study in high school including at least two years of mathematics courses, exclusive of arithmetic, and one year of courses in any one or in any combination of the following: Physics, chemistry, mechanical drawing, or other subjects closely allied to the physical sciences.

Engineering Aide (SP-4 to SP-8) - For the higher grade positions the experience must be progressively more difficult and responsible and to be qualifying must be full-time technical engineering experience. Eligibility for any position will be conditioned upon an affirmative showing that the applicant's experience and training clearly indicate abilities requisite to the successful performance of the duties and responsibilities of the position. Possession of the required amount of experience will not, in itself, be accepted as proof of qualifications; the requisite quality of experience must be shown also.

For the grades SP-4 and above, applicants must show experience as follows:

<u>Grade of Position</u>	<u>Civil Engineering Experience Required</u>
SP-4 Rodman on Survey Party, Salary \$1971 P.A. (incl. overtime).....	6 mo.
SP-5 Levelman on Survey Party, Salary \$2190 P.A. (incl. overtime).....	1 yr.
SP-6 Transitman on Survey Party, Salary \$2433.33 P.A. (incl. overtime).....	2 yrs.
SP-7 Instrumentman on Survey Party, Salary \$2798.33 P.A. (incl. overtime)....	3 yrs.
SP-8 Chief of Party, Salary \$3163.33 P.A. (incl. overtime).....	4 yrs.

Following are some typical job offers in the Denver vicinity:

MEN

Night Janitor

Full or part time. To collect trash throughout building; clean offices; clean lavatory. Responsible for locking main door on first floor after business hours, and closing windows. Salary \$27.50 per week straight (full-time) 57 cents per hour (part-time).

Farm Workers

- (1) Share-crop. Six people needed. May be one or two families. Thirty-five acres or more in vegetable crops. Equipment furnished. Tenant to furnish all seed and labor. New ground, plenty of irrigation water, and very good housing. Equipment includes trucks. 60 percent of crops for tenant, 40 percent for landlord.
- (2) Share-crop. Family of five workers. Forty acres in vegetable crops. Landlord pays all expenses. Tenant to do all hand labor and harvest crops. Landlord does all the marketing. Fifty-fifty basis. Housing furnished.

Helper

One man (may be married) for stencil cutting and sand blasting. Some draft work. Can work through apprenticeship. Seventy-five cents per hour to start. No housing available.

RELOCATION ADJUSTMENT ADVISOR

To assist evacuees in solving problems arising from unusual situations, Mr. Dorsey F. Richardson has been added to the district office of the War Relocation Authority in Denver as relocation adjustment advisor. Mr. Richardson has worked with the physically handicapped for the past fifteen years as Colorado Supervisor of Vocational Rehabilitation, giving to that group counsel and vocational guidance, arranging for medical examinations, medical and surgical care, hospitalization, and training in schools, shops, offices and factories necessary to give skills and abilities to overcome these handicaps. He is available to discuss with any person who has a physical disability the possibility of his becoming employed, the types of jobs available, and the procedures to follow in obtaining the necessary aid to overcome the physical disability and to become permanent employed.

UNITED STATES DEPARTMENT OF THE INTERIOR
WAR RELOCATION AUTHORITY
Midland Savings Building
Denver 2, Colorado

WESTERN PLAINS AREA

June 18, 1945


FIELD BULLETIN

The following letter was recently sent to all Project Directors by the Denver Chamber of Commerce:

"There is an urgent need in the Denver area for workers in the movement of vegetables from Colorado to out-of-state markets. Men are needed in vegetable sheds, ice servicing and ice warehouses."

To further implement the statement made by the Chamber, we are furnishing information on the major job offers in Denver and Colorado. Housing, we realize, is the most difficult problem and it is recommended that the primary wage earner of the family come to Denver first and locate housing for his family. It is possible to get rooms in local hotels until such time as housing is made available. Some of the concerns mentioned in these job offers are endeavoring to secure housing for their labor needs. It is possible that complete information will be had on the success of this in the very near future.

For those individuals not interested in the particular jobs outlined, there are other jobs available; professional and white-collar jobs where evacuees have been able to work. For those individuals it is suggested that they take short-term leave to this community and make their own selection.


Everett R. Lane
Acting Relocation Supervisor

Attachment

C O P Y

Office for Emergency Management
WAR MANPOWER COMMISSION
201 Chamber of Commerce Building
Denver 2, Colorado

June 15, 1945

Mr. Everett Lane
War Relocation Authority
Midland Savings Building
Denver 2, Colorado

Dear Mr. Lane:

In accordance with our telephone conversation this afternoon, we are herewith submitting pertinent information on the major job openings within Colorado.

DEHYDRATING PLANTS

Carruthers and Clark, the leading dehydrating plant in Denver need approximately 125 female dehydrating plant workers. Other smaller employers are trying to secure 20 to 50 each, making a total of 250 dehydrating plant workers needed in the Denver area. The major operation is new. It is very spick and span with pleasant working conditions. All rooms are air-conditioned with radio loud speakers in each room, and working conditions are better than normally expected in such an operation. This employer is paying 55¢ per hour during the orientation period (approximately 10 days); at that time, workers advance to 60 or 65¢ according to their aptitude. At the end of 30 days, they are on an incentive pay status that will permit the workers to make 70 to 75¢ per hour according to their speed and dexterity in operation. This employment is strictly for female workers, as very few male workers are used in the operation. The work-week is 48 hours with time and one-half over 40 hours. • Shift work can be arranged to permit the mother of a family to work on shifts that will be satisfactory to household needs.

VEGETABLE PACKING SHEDS

The Denver vegetable packing sheds will start processing in car-lots of vegetables within the next week. By July 1, 1945, these employers will be demanding an increased labor supply of approximately 500 workers. This labor need, while commencing next week, will gradually pyramid to the above mentioned number. Work on these sheds will vary according to the skill of applicants. Packers, car loaders and many other classifications of workers will be needed. Workers with former experience will be utilized in their highest skill. The pay bracket on this type of employment will be from 80¢ per hour up, according to the task performed. As the season progresses, workers will be permitted a greater number of hours per day in accordance with the receipt of fresh vegetables from the farms. This employment will carry on until about October 15, 1945, at which time we can assure the workers of employment in warehouses, ice harvest, and other tasks until next spring.



ICE DISTRIBUTORS

Our major ice distributors in the Denver area will be in need of approximately 150 workers to assist in the distribution of ice to the vegetable packing sheds. The labor demands on the ice docks will synchronize with the employment in the packing sheds, with the exception that these employers have winter employment in the harvest of natural ice. Wages in this type of employment vary from 70¢ to \$1.00 per hour according to the skill of the individual worker, with time and one-half over 40 hours. Throughout the season, workers will average approximately 60 hours weekly.

LUMBERING

As a result of meetings held with lumber operators in all parts of Colorado, we have developed openings for approximately 350 workers. This employment is group employment with an average of 15 to 30 workers per operator. Operations of this type are in remote areas; however, housing is available with schools nearby. Wage rates on an hourly basis vary from 75 to 82¢ per hour for common labor or contract for various tasks, such as \$4.00 per M for falling, limbing and bucking. Piece rates for other tasks will permit experienced workers to earn \$1.00 per hour or more according to the task.

SHEET METAL

At the present time, the Denver area is in need of approximately 50 sheet metal workers. This labor bracket comprises laborers at 65¢, sheet metal helpers at 80¢, and sheet metal workers at \$1.05. In all instances, workers will be advanced from laborers to helpers as rapidly as the workers adjust themselves to the operation. Most workers have advanced in a period of one to two weeks. The above wages are based on a 40-hour week with time and one-half over 40 hours, with a minimum work-week of 48 hours.

FOUNDRY WORKERS

Denver foundry employers are in need of approximately 200 workers. Classification cover molders, chippers, grinders, etc. All of these skills are on a basis of \$1.05 per hour; helpers on each job 80¢ per hour and laborers 65¢ per hour. It is the policy of all foundry employers to advance their workers from laborers to helpers as quickly as the workers have become orientated. In most instances, this increase occurs in 1 to 2 weeks of employment. Naturally, former experience is recognized. American Japanese now employed by foundries have advanced to helpers, and, at this time, are employed in many of the above mentioned skilled positions.

Very truly yours,

L.A. West
State Manpower Director
/s/

By Emmett W. Cloughesy
Rural Industries Supervisor