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STATISTICAL REPORT

ON THE

SICKNESS AND MORTALITY

IN THE

ARMY OF THE UNITED STATES,

COMPILED FROM

THE RECORDS OF THE SURGEON GENERAL'S OFFICE;

EMBRACING

A PERIOD OF FIVE YEARS,

FROM JANUARY, 1855, TO JANUARY, 1860.

PREPARED UNDER THE DIRECTION OF

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STATISTICAL REPORT

ON THE

SICKNESS AND MORTALITY OF THE ARMY OF THE UNITED STATES.

For the purposes of this report, the military posts of the United States have been arranged in the following geographical divisions: the Northern Division, which includes that portion of the United States lying north of the fortieth degree of latitude, and east of the Rocky Mountains; the Middle Division, that portion lying between the thirty-fifth and fortieth parallels of latitude; the Southern Division, that between the thirtieth and thirty-fifth degrees of latitude. In addition to these, are the divisions of Florida, Texas, New Mexico, California, Oregon, and Washington Territory and Utah.

These principal divisions have been subdivided into regions, each distinguished by peculiar local or climatological features.

NEW MEXICO.

The military posts in New Mexico that have been garrisoned by troops within the period specially embraced in this report, that is, since January 1855, are the following: Fort Massachusetts, Cantonment Burgwin, Forts Union and Marcy, Albuquerque, Forts Defiance, Craig, Thorn, Fillmore, Bliss, Stanton, Garland, and Buchanan. The headquarters of this military department are at Santa Fé.

For the locality, topography, and diseases of many of these posts, reference may be made to the report of 1856. The most interesting and valuable of the sanitary reports received from this region since the publication of the statistical report of 1856, are here presented.

SANITARY REPORT—FORT BUCHANAN, (ARIZONA.)

Assistant Surgeon B. I. D. Irwin: February, 1859.

Fort Buchanan, Arizona, is situated about midway between the Rio Grande del Norte and the Rio Colorado of the West, in latitude 31° 40′ N., and longitude 111° 30′ W. of the meridian of Greenwich, and elevated about 5,350 feet above the sea-level. The so-called fort is placed on the western slope of a small irregular plateau, about one mile in length, and one thousand or twelve hundred yards broad, environed on three sides by a *cienega*, which varies in breadth from one to five hundred yards. On the north side, the plateau is continued to, and lost in a series of low broken hills and mesas; to the westward, extensive rolling hills intervene between it and the Whetstone mountains; on the south, the hills are broken, and extend themselves until they are merged into the Jachuca and Santa Cruz mountains; ten miles to the west, the lofty peaks of the Santa Rita rear their rugged heads to an elevation of almost 12,000 feet above the level of the ocean. The general aspect of the country is wild, picturesque, and bold; broken into the most fantastic shapes; the plains cut up and intersected by countless cañons, arroyos, ravines, and the dry beds of mountain torrents. The geological features of the country are as varied as they are interesting. Granite, syenite, gneiss, and primary limestone enter largely into the structure of the mountains; whilst the low hills and table-lands have a predominance of red and white sandstone, metamorphic sandstone, mountain limestone, (having fossils in abundance, such as terebratulæ, ammonites, encrinites, corals, &c.,) conglomerate, travertine, and drift. Extensive walls of trap are met with running east and west, with a northern dip.

The evidence of subterranean forces having played an important part in the production of the present physical peculiarities of the country, is particularly evident; at the same time, the immense strata of drift and debris show that water has been an important element in the production of those changes. Thermal springs are remarkably abundant, and particularly interesting from their special properties. On the southern side of the fort are some high limestone hills, amongst which are several of those hot springs, which are and have been constantly depositing immense beds of tufa and travertine, which has caused many physical changes in the vicinity. In some places subterranean forces have elevated these beds into considerable hills, or hurled them up into fragmentary masses of strange and uncouth appearance. Grottoes and caverns are scattered everywhere throughout these structures, where hot, vapor, and shower

baths, may be enjoyed amidst forests of stalactites of fantastic growth. The mountain ranges have a general north and south trend; the different chains being separated from each other by level plains, ranging from twenty to forty miles in width. Some of these plains are totally devoid of every trace of vegetation, being inundated during the rainy season. After evaporation has removed all the water from them, their beds become covered with an extensive deposit of salitra, (nitrate of soda,) which, when viewed from a distance, gives them the appearance of being vast lakes. Here can be seen the mirage, presenting all the strange and beautiful phenomena of a natural kaleidoscope. These fairy-like scenes are momentarily changing their enchanting beauties. The Playa de los Pimos, the most extensive of these plains, has all the appearance of having been at some remote period a great lake, which has been deprived of its waters by some internal convulsion of the earth, that has caused the elevation of its bed above its former level.

The mineral productions of the country are of the most abundant and varied character.

Granular gold has been found in many of the mountains, and recently this metal has been found in large quantities on the Rio Gila and its tributaries. Silver, lead, and copper have been found in almost every section of the country, in fabulous quantities. Iron, zinc, tin, bismuth, antimony, arsenic, graphite, and alum have also been found in different localities. Mining in gold, silver, lead, and copper is now carried on on a most extensive scale, and promises to prove a source of great wealth. The silver mines are reputed to rival in value and extent the famous mines of Peru and Mexico.

Forest Trees.—The sylva of the country is of the most diversified character. In the mountains fine timber is found in abundance of the following varieties: Pine, piñon, fir, cedar, and spruce; in the river valleys, ash, sycamore, buttonwood, cottonwood, hackberry, black walnut, elm, and mesquite of a very large kind; on the plains, live-oak in great abundance and of superior quality and size, white-oak, several varieties of mesquite, some of which yield an excellent kind of gum acacia, ironwood, cedar, and a variety of maple.

Plants.—Of shrubs there are great numbers, varying in each locality and according to the character of the soil in which they grow. Wild cherry, sumach, poison-oak, sage bush, elder, box-elder, creosote bush, scrub-oak, red willow, white willow, wild currant, manzanita, gooseberry, wild grapevine, a variety of oleander, mulberry, and *cowania stansburiana*. In a short sketch like the present, it is impossible to give a detailed account of the vast number of plants to be met with in this region, therefore the predominant orders only will be enumerated, which are as follows: Solanaceae, labiatae, cruciferae, violaceae, ranunculaceae, asclepiadaceae, liguminosae, polygalaceae, vitaceae, geraniaceae, oxalidaceae, rosaceae, cactaceae, grossulaceae, umbelliferae, caprifoliaceae, compositae, scrofulariaceae, convolvulaceae, gentianaceae, euphorbiaceae, juglandaceae, cupuliferae, salicaceae, urticaceae, coniferae, amaryllidaceae, liliaceae, gramineae, equisetaceae, musci, lichens, and fungi. Among this list many strange varieties are to be found, not a few of which are new and as yet unknown in natural history.

Mammals.—Like the flora, the fauna of this vicinity is of a highly diversified and interesting description. The following have been noticed: the panther, leopard, wild cat, lynx, grey wolf, coyote, red fox, grey fox, grizzly bear, brown or cinnamon bear, badger, pole cat, weasle, raccoon, beaver, rat, mouse, prairie dog, mole, gopher, ground hog, grey squirrel, brown squirrel, ground squirrel, antelope, white-tailed deer, black-tailed deer, peccary or Mexican hog, and the mustang or wild horse, which roams over the plains in vast herds.

Much might be written about the rare and beautiful birds that abound in this country, many of which are remarkable for the gorgeous beauty of their plumage. The following have been met with: wild turkey, (*Meleagris mexicana*,) swan, brent, mallard duck, greenwinged teal, bluewinged teal, diver, blue crane, white crane, white heron, grey heron, jack-snipe, sand-snipe, kildeer plover, curlew, bittern, kingfisher, water-hen, black hawk, grey hawk, reddish hawk, sparrow-hawk, Emory's hawk, night-hawk, chuck-willswidow, turkey buzzard, yellow-beaked buzzard, raven, crow, (two varieties,) magpie, hooting owl, white owl, prairie owl, three

varieties of jay, (*Cyanocorax maximilianus, C. ultramarinus, C. macrolopha,*) bluebird, blackbird, red-winged blackbird, yellow-winged blackbird, large redbird with crest, small redbird, mocking bird, bunting, yellow-hammer, meadow-lark, sand-lark, titmouse, (blue, with crest,) titmouse, (greenish, with crimson crest,) humming bird, (three varieties,) pisano or prairie pheasant, massena partridge, black-crested quail, speckled quail, crimson-headed woodpecker, large grey woodpecker with red crescent on breast, small grey woodpecker, bluish woodpecker with red spots all over the body, fly-catcher, cat bird, chaffinch, sparrow, wren, swallow, martin, golden oriole, dove, ringdove, and wild pigeon.

FISHES.—In the rivers and ponds are to be found trout, (*Gila robusta, G. elegans, G. gracilis,*) catfish, mullet, perch, minnow, and sun or pan fish.

REPTILES.—The number and varieties are considerable, embracing several possessed of the most deadly poisonous qualities, such as the large diamond-headed rattle-snake; the short prairie or ground rattle-snake; the coralito, a very small, delicate, and beautifully colored snake, the bite from which is fatally poisonous; the viper; the puff-adder; the moccasin; black-snake; and many other varieties the names of which are unknown to me. The "escupion" or spitter is a large variety of lizard, from twelve to twenty-four inches long, eight inches in circumference, beautifully marked with black and lemon-colored elevated spots, slow in its movements, and making a hissing noise when irritated, and thrusting its tongue from its mouth after the manner of a serpent. By the Mexicans and Indians it is reputed to be deadly poisonous; so much so that they never attempt to kill it, lest, during the act, the animal might spit on them, which they consider sufficient to cause a speedy death. I have every reason to doubt the truth of their belief, and presume that the ugly appearance of the creature has given to it its bad character. Those that I have taken alive showed no disposition to injure, their only efforts at protection against injury, or irritation, were an occasional hiss and frequent change of color, by the same power which others of this order possess and exercise when under the influence of fear or anger. The other varieties of lizard amount to about two dozen, some of which are very remarkable for their form, color, and swiftness of foot. Of chameleons there are two species. I have met with but two varieties of "horned frog"—doubtless there are many others. Frogs and toads are very numerous, and the horseleech is found occasionally. A variety of rattle-snake, found on the sand plains, has a fold of skin in the form of a hood over the eyes, capable of erection, which gives it the appearance of being a "horned snake," by which name it is known amongst unscientific people.

INSECTS.—Of this class of the animal kingdom there are many interesting and curious species, some of which are remarkable for the poisonous character of their defensive organs, while others are no less so from their strange and hideous appearance, not a few of which are new and undescribed in the scientific world. Of the coleopterous insects there are multitudes, of the most beautiful and variegated colors and form. Orthopterous, neuropterous, hymenopterous, lepidopterous, hemipterous, rhipipterous, dipterous, apterous, and myriapodous insects are found throughout the country, in the most varied abundance. The "vinagrilla" (or *Thelyphonus,*) an aptero-crustaceous insect, is specially remarkable for its hideous appearance and the venomous character of its bite. Its form is somewhat like that of a small cray-fish, of brownish-black color, hard shelly covering, large belly and thorax, small head, armed with powerful jaws and fangs; it has four pairs of legs, the anterior pair being prehensile and preternaturally large, like those of the lobster. It has a tail from one to three inches long, filiform, and formed by innumerable joints, which give it the power of being used in every direction. The animal grows to about two or two and a half inches long, and derives its Spanish name from the powerful odor of vinegar which it generates when irritated. These insects are very numerous during the warm seasons, inhabiting dark places under rocks and other protecting substances, and are dreaded much by the native population. Horses and other animals bitten by the vinagrilla present similar symptoms to those wounded by the rattle-snake. I have seen only one

person (an Indian boy) bitten by it. The patient suffered much, and ultimately died from the secondary effects of the injury. Centipedes, scorpions, and tarantulas infest the country in vast numbers during the hot seasons. It is needless to remark upon their poisonous character. I have not seen a fatal injury resulting from the wounds inflicted by these insects, but have witnessed injuries received from the centipede followed by inflammation of the most violent character, profuse suppuration, and low typhoid fever. In the neighboring State of Sonora I learn that many young persons lose their lives by the sting of the scorpion or *alacran*, of which there are two kinds found at this place. Centipedes have been secured here that measure ten inches in length and one in breadth. Tarantulas are frequently found measuring eight inches long, and having fangs an inch in length.

To persons interested in natural history, I respectfully refer to the collection made at this place by me for the Smithsonian Institution, as, in an article like the present, it is impossible to give more than a concise sketch of the many interesting features which this new and strange country presents to the naturalist.

CLIMATE.—The climate in the vicinity of Fort Buchanan is warm and agreeable throughout three fourth parts of the year. December, January, and February are the winter months; and, although cold, still the sharp morning and evening air is agreeable and bracing. During the warm months, June, July, August, and September, the thermometer frequently rises above 100° Fahrenheit in the shade, yet the air is not oppressively hot, as it is tempered with the cool breezes which constantly blow from the mountains.

The highest degree of the thermometer was at 2 o'clock, P. M., June 27, when it reached 107° Fahrenheit in the shade; the lowest at 7, A. M., January 5 and 15, when it descended to 18° Fahrenheit. January was the coldest month, mean temperature 39°; July the warmest, with an average temperature of 75°; mean temperature for the year, 59°; average difference between thermometer and hygrometer, 11°.

The quantity of rain that fell during the year was 16.08 inches, being 1.34 per month. May was the only month during which rain did not fall. In February, June, and November, the quantity that fell was trifling. July, August, and September constitute the rainy season. In the open country, snow falls but seldom, and only in small quantities; in the mountainous regions, it is more frequent and in greater abundance. Ice is seldom formed over half an inch thick. In the spring and summer, thunder and lightning of the most vivid kind are very frequent.

Fort Buchanan consists of a series of temporary *jacal* buildings, which have been erected from time to time, scattered over a distance of half a mile, and built without any regard to the permanent occupation of the present immediate location. The site of these buildings is irregularly elevated some thirty or forty feet above the level of the surrounding *cienega*, a swampy morass which encircles it on the east, south, and western aspect. The ground is cut up into innumerable hills, mesas, arroyos, and ravines, having a plentiful growth of fine stately live-oaks, which afford a most agreeable shade during the warm seasons. The structures used as quarters for the men, most of those used by the officers, the laundresses' quarters, storerooms, and workshops, are formed of pickets placed perpendicular to the ground, the chinks filled up with mud, and the roof covered with the same material. It is needless to say that such buildings present any other than a neat or comfortable appearance.

The chinking remains only long enough to dry, shrink, and tumble out, never to be replaced, lest it should destroy a new system of ventilation which its absence has established. During the wet weather the mud roofs are worse than useless—save it be for the purpose of giving dirty shower baths to the unhappy occupants. After a day of rain, the condition of the quarters of both officers and men is abominably miserable. The picket lines used for stabling purposes are in front of and close to the barracks. Stables, corrals, pig-pens, root-houses, open latrines, and dwellings, are indiscriminately scattered all over the camp, wherever the fancy of the owner

prompted him to squat. The physical nature of the ground renders anything like uniformity or regularity impossible. The police regulations of the garrison are as good as circumstances will permit. The hospital and two sets of officers' quarters are the only adobe buildings at the post. Water, which is hauled from a distance in carts made for the purpose, is supplied from one of the many springs to be found in the *cienega*. It it clear and palatable, but highly impregnated with calcareous salts and vegetable matter. This *cienega* consists of alluvial deposits and extensive beds of decaying organic matter, the result of the rank, forced vegetation of the hot season. Here several warm and cold springs pour forth their contents, which run over the surrounding level surface, forming a *peat* marsh of considerable extent, wherein there are several stagnant filthy pools, in which vast herds of swine may be seen constantly basking in the mud or rooting up the fœtid and miasmatic soil of the adjacent quagmires. The southern extremity of this delectable spot has been cultivated as a garden, and is constantly inundated for irrigating purposes during the summer; it lies between two hills which form a funnel-shaped gorge, through which blow the prevailing winds of the year from the south and southwest. The drainage from the swamp flows through this opening and yields its effluvia to the southern breeze, which, in due time, regales us with this poisonous compound.

Before speaking of the diseases, I will say a few words about the inhabitants of Arizona, particularly of those in the vicinity of the fort. Of the Indian tribes inhabiting this country, but little is known save what can be gathered from Mexicans who have escaped from captivity among them. They are divided into two classes, the semi-civilized or *tame* Indians—Pimos, Maricopas, and Papagoes, (Pueblos)—amounting to about eight thousand individuals, who cultivate the soil extensively, live in permanent habitations, and wage a perpetual war against their *wild* brethren. The Pueblos are a mild, inoffensive race, industrious and capable of being made good, peace-loving, law-abiding citizens. They now constitute the best laborers in the country, and are ambitious to improve their social condition. The superiority displayed by this class in the cultivation of their farms is strikingly manifest when compared with the efforts of their more civilized neighbors. Their houses are light, fragile structures, such as might be expected to be found among a rude people inhabiting a warm climate.

The savage Indians are the Mimbres, Chillicahuas, Coyoteros, Piñalenos, Mogollones, Tontos, and Yumas, all tribes of the Apaches, estimated collectively at ten or twelve thousand souls, who lead a barbarous, nomadic life, gaining their existence principally from plundering incursions unceasingly carried on against the Mexican States of Chihuahua and Sonora, where their ravages have laid waste whole districts. Some few among them raise a small quantity of maize, pumpkins, and melons; but during the winter, many of them subsist on the *mescal*, a variety of the "maguey," found in abundance all over the mountainous regions of the country. During this season the Indians collect in the mountains to feast on this plant which, when properly cooked, is a very agreeable and nourishing article of diet. They prepare it for use by placing vast heaps of it in pits lined and covered over with heated stones, upon which a large fire is kept constantly burning for three days. It is then taken out, allowed to cool, after which it is ready for use; it is very palatable, being exceedingly rich in saccharine matter, and will keep in good condition for months. The portions used are the petaloid portions of the leaves and the heart of the plant. While roasting, a large amount of sugar, in the form of coarse brown sirup is collected, and is esteemed as one of their greatest luxuries. They distil a nasty, filthy kind of liquor from corn, which is known among them as "*tiswing*," of which they are passionately fond, and never lose an opportunity to get gloriously drunk whenever a little corn can be procured to make it from. Their mode of distillation is as novel as it is simple. The corn procured by stealth, or as a "forced loan," is steeped for twenty-four hours, then placed between the scanty folds of the family couch to ferment beneath the bodies of the lusty warriors whose slumbers are soothed by bright dreams of the "good time coming" when all shall be assembled at the festive wigwam to partake of the intoxicating pleasures of this unpretending

beverage. The malt is now coarsely ground on the *matata*, a certain amount of water added to it, then placed in earthen vessels and allowed to ferment for forty-eight hours, at the end of which it is used without straining or any other process. The better to enjoy "the feast of reason and the flow of soul" these votaries of Bacchus prepare themselves by a solemn fast of forty-eight hours previous to the commencement of the festal joys, for the purpose of enjoying the most profound spiritual impressions; in other words, they get "right royally drunk" on empty stomachs. Were it not for this precaution on their part, the mild character of the beverage would fail to "make the drunk come." The liquor is slightly sweet and somewhat resembles what is known to distillers as sours. The saccharine fermentation is not allowed to pass to the vinous. Another article of food used by both the semi-civilized and nomadic Indians is the mesquite bean, of which they collect and store up large quantities during the summer. This they grind into a coarse kind of meal, mix it with "molasses" made from mescal or *cereus giganteus*, and make it into a kind of bread which is highly nutritious, as it contains a large proportion of gum. From the live-oak they procure abundance of acorns, (*bellotes*,) of which they are very fond, and collect a goodly supply for their winter consumption. This variety of acorn is very nutritious, much sought after by the Mexican population, and forms quite an article of commerce. The "bellote" is to Arizona what the "piñon" is to New Mexico.

The various tribes of the Apaches, one and all, are a cowardly, treacherous, thieving race of Indians, totally devoid of the few good qualities that mark some of their northern brethren. They are poorly clad, ill armed, and, taken as a whole, a most miserable race of human beings. Their arms are the lance, bow, and a few old flint-lock Spanish guns, of the most ancient pattern. Their bows are very inferior; the arrows are generally made very long, of light reed, with a point of hard wood a few inches long, topped with either flint, bone, obsidian, iron, or copper. In many respects the Apache is the southern prototype of the "thieving Pawnee" of the northern plains. The social condition of the female portion of these Indians is anything but pleasant; they are the slaves and drudges of their "red-skinned lords and masters." They are compelled to do all the labors of the camp, to till the fields, build the lodges, dress the peltries, make the clothes, cook the food, herd the flocks, and attend to the wants of their juvenile progeny, while the dusky warrior basks in the sunshine, smoking his cigarito, dreaming over the ruthless deeds of murder and rapine which he has helped to perpetrate upon the unfortunate "pale faces." They are patient and submissive under their miserable existence, industriously inclined, and have learned from their Mexican female captives how to make their own garments in the style of civilized woman. They are married at an early age, but have little or no choice in the selection of their husbands, who purchase them as they do any other article of commerce. Ten horses is the usual price paid for one of these dusky maidens.

Once married they are compelled to be virtuous, as any act of unchastity, outside of the family circle, is punished with the loss of the tip of the nose. I have seen some victims of this cruel and barbarous punishment, whose hideous appearance was only equaled by the misery of the poor unfortunate victim, who lives a life of wretchedness and sorrow; an object of universal scorn amongst her own people, she flees from the sight of her fellow creatures to live, as it were, by stealth. After marriage the husband has the right to take the sisters of his wife, and wed them to himself. Should he die his brother or next relative has to take unto himself the wife or wives of his departed kinsman, but not before twelve moons have been allowed to pass over the mourning widows. The hair is worn short as a token of mourning for a departed relative.

The Mexican population amounts to seven or eight thousand persons, who are chiefly engaged in agricultural, pastoral, and mining pursuits. They are a strange mixture of the Spanish and Indian races; of a polite, cheerful, but lazy disposition; poor, proud, superstitious, and almost wholly devoid of education. The men are of medium stature, robust and hardy; they are thriftless, addicted to gaming of all sorts, improvident, cunning, revengeful, and sadly imbued with a disposition to wander from truth. They are possessed of great natural

politeness, cheerful and mirth-loving dispositions, hospitable in an eminent degree, and devotedly attached to their religion and country.

The females are a little under the medium height, well formed, with graceful figures; and, when young, are possessed of pleasant, agreeable features, amongst which beautiful faces are not at all unfrequent. To delicately-formed hands, superb teeth, fine raven tresses, and magnificent black eyes, may be added the possession of the most exquisitely formed small feet of any other women. Even amongst the poor classes, the want of these natural beauties is the exception to the general rule. An enthusiast would pronounce their delicately but well formed little feet bewitchingly pretty. They are kind, affectionate, industrious, passionately fond of display and amusement, given to intrigue, and sadly deficient in chastity, resulting from a want of knowledge of the customs of more civilized nations, a lack of refined education, and chiefly because the "custom of the country" does not look upon such weakness in the female as anything but a passing cloud which time will efface from the character of the individual. This is the only drawback to the character of the Mexican female, who, did she possess the advantages enjoyed by her more fortunate sisters of the northern climes, would be acknowledged capable of cultivating and disseminating all the happiness and pleasures which flow from refined female character. Even now, the social and moral condition of the Mexican female places her high above that of her "better half." They marry at an early age—from eleven to fifteen, are kind mothers, and raise large families, which they frequently have to support by their own industrial efforts. The Europeo-American portion of the community may be reckoned at two thousand, who are chiefly of that class usually found in our frontier settlements; robust, hardy pioneers, who spend their lives in constant strife with misery, hardship, and privation. Of their manners, morals, or customs, the least said the better for their reputation. They are industrious, and that is all I can say in their favor.

Of the diseases of the Mexican population, but little reliable information can be had, as they have no regular physicians among them, and their few remedial agents are entirely of a domestic nature. I believe the State of Sonora, with a population of 200,000 souls, has only three regular physicians and one apothecary establishment. From such a statement, it might be inferred that the people were specially exempt from disease; on the contrary, a large number of traveling charlatans, designated by the people as "curers," are to be found, who administer their nostrums to the credulous multitude, who are as fond of swallowing medicines as some of your friends nearer home. Intermittent and bilious remittent fevers are prevalent during the warm seasons; venereal disease in its every form is constantly encountered; and phthisis and other scrofulous maladies are not at all unfrequent. Catarrhal ophthalmia is very common during the *wet* portion of the summer season. The therapeutic measures adopted in the treatment of fevers is very simple; a mild cathartic, followed by the free administration of decoction of the common red willow, warm ptisans of some simple kind, and frequent immersions in cold water. When these remedies fail to effect a cure, the patient has to bear patiently with his ills until the succeeding cold season brings relief to his protracted sufferings. It is needless to add that, under such circumstances, the mortality is very large amongst those affected. For the cure of syphilitic affections, much faith is placed in the efficacy of the waters of the numerous mineral springs scattered over the whole country. Patients suffering with tuberculosis are left to their fate. As consumption is looked upon by the majority of the people as being communicable by contact, especially amongst the family of the affected individual, the sufferer is left to drag out a miserable existence until death closes the dreary scene. Although I have attended considerable numbers of Mexican women during parturition, I have not been able to detect any special deviation from the phenomena incident to the physiological process as evinced in other females. There are some deviations from the customs of our lying-in-rooms that are of no interest beyond their novelty.

Amongst the Indians pulmonary affections are very common; also diseases of the eye, the result of exposure to severe vicissitudes of temperature. Intermittent fever is found to prevail

extensively amongst them. For the cure and prevention of this disease, they assemble in the spring season to prepare themselves at the "medicine feast," which consists in swallowing drafts of infusion of some powerful herb that produces violent purging and vomiting, which is kept up during three days, during which all present prepare themselves, as above, in anticipation of and as a preventive against attacks of this disease during the approaching summer and autumn. Some thirty years ago, when the Apaches first commenced their depredations against the Sonoreans, many of them contracted syphilitic disease from their female captives, which spread with fearful effects amongst their own people, who, to get rid of the dreadful scourge that was disseminating itself amongst them, either abandoned the unfortunate victim to die of starvation, or, as in many instances, deprived him of life. This has proved a most salutary lesson to them, as, since that time, the fear of again introducing the disease amongst their own families has been a wholesome restraint upon these barbarians in the treatment of their unhappy female prisoners. At certain seasons ophthalmic inflammation is exceedingly rife among them, and I have noticed large numbers of them with eyes either partially or totally destroyed. In the cure of their maladies charms and amulets are looked upon as important agents, and are found suspended round the neck of almost every individual. I have seen some remarkably *old looking* men and women amongst the Coyotero and Chillicahua Indians, but nothing precise as to their real age could be learned of them. War and disease are fast decimating the Indians of Arizona.

Owing to certain physical peculiarities, before alluded to, of the site of Fort Buchanan, it may be surmised that the place is unhealthy, which is the case in an eminent degree. Since the occupation of the place, the troops have suffered continually from malarial disease, which has attacked every person at the post during the last year, except the sutler's employés and an old negro woman. In the spring, catarrhal affections prevail extensively. During the autumnal months diarrhœa and dysentery of a very aggravated type are of frequent occurrence, having a special tendency to become chronic, and of a most intractable nature, as regards their control by hygienic and theapeutic measures. Throughout the whole year intermittent fever of a very severe form prevails extensively, especially during the autumn and winter months, at which time it constitutes almost the only prevailing disease. During this period it may be looked upon as endemic, as its presence produces almost complete immunity from all other maladies. Its causes are undoubtedly to be traced to the proximity of the swamps and quagmires before mentioned, and the phenomena attending a "rainy season" in a warm climate. To these may be added other local causes, such as immense heaps of stable manure, collected and carefully kept piled up within the camp since its occupation, almost two years ago, the presence of filthy pig-pens, cow-pens, and root-houses, wherein were often found heaps of decaying putrid garden vegetables. Of the quarters occupied by the two companies stationed at this post, one set were constructed of sound pine logs, having the bark removed; the others were built of oak, with the bark allowed to remain. The pine logs were sound and free from decay, while the oak in every instance, was rotten of the heart of the log. The quarters built of pine, although something like one hundred and fifty yards nearer to the swamp, were much healthier than those constructed of the decaying oak, the occupants of which showed a very marked proclivity to the malarial influence. The employés of the sutler's establishment, several in number, were entirely free from the disease, being protected from the influence of the marsh by a small knoll, which acted as a kind of screen to shelter them from the carrying influence of the southwest wind.

The most remarkable characteristic features observed in the course of the disease were its aggravated type, producing a train of symptoms approximating toward remittent fever; the almost total absence of chills or rigors; the protracted period of the febrile paroxysm; frequency of violent delirium; the liability to a recurrence of the disease, from the slightest exposure to fatigue, or imprudence in diet; and lastly, the pertinacity with which the malady clings to its victims, even during the season of cold when frost and snow are abundant.

In the treatment of the disease, it was found to yield readily to ordinary remedies when it was of recent accession, but after frequent attacks the usual therapeutic measures availed but little.

Preparatory to the administration of quinine, or other antiperiodics, emetics or cathartics were frequently found to be absolutely necessary, as, without their effects, quinine was found to be incapable of producing any check to a return of the paroxysm.

When the disease first became endemic amongst the troops, ten or fifteen grains of the sulphate of quinine, given two or three hours before the expected paroxysm, were generally found adequate to check it at once; later on in its course twenty to thirty were required, and latterly it became necessary, frequently, to administer this remedy in doses of from thirty to forty grains, the patient frequently having to take sixty grains daily for several days before any progress could be made in checking the disease. After using the remedy in every manner, I find that ten or twenty grains, given at bed-time, during the period of intermission, will produce a much more certain and better effect on the disease than double the amount administered during the day-time. This I have verified by numerous experiments upon myself and others. I have not met with any inconvenience from the administration of quinine in large doses; patients taking from forty to sixty grains presented no other symptoms of inconvenience than those produced by ten or fifteen. The preparations of arsenic, piperine, fluid extract of black pepper, and citrate of quinine and iron were used in the treatment of the disease when the sulphate of quinine was contra-indicated, or when that remedy was not procurable at the post; but little reliance can be placed in any of the former in preventing a return of or breaking up the disease—they are good adjuncts, but poor preventives, particularly when the malady is of a character as severe as that which has been prevalent at this place. At one time I was reduced to the necessity of using chloride of sodium, which I found to answer much better than most of the above-mentioned remedies. It was administered in doses of two drams every two hours, so as to have the patient take an ounce before the period of the expected paroxysm, and it succeeded in breaking up the disease in from one to four days in about one half the cases in which it was employed. In many of the cases wherein it proved useless, its administration was followed by violent emesis or catharsis, which may account for its want of efficacy in those cases. A strong objection to its use is, that patients cannot be made to view it as a remedy because of its domestic character. For my own part, I consider it as being possessed of superior power in quickly checking the disease over many of the remedies now generally used in the treatment of intermittent fever. When the cerebral symptoms were of a violent character, local depletion, blisters, and cold applications were constantly indicated and resorted to. It will be seen by the tabular statement of the diseases of this post, occurring during the past year, that of 769 cases of disease amongst the *soldiers*, 453 were fevers, of which 354 were quotidian and 96 tertian.

Next in frequency to intermittent fever stand diarrhœa and dysentery as diseases of this region. As before remarked, they are of a severe form, and have a persistent tendency to become chronic, yielding very slowly to treatment.

Towards the latter part of March, catarrh of a most severe kind prevailed as an epidemic, attacking nearly two thirds of the garrison and almost all the settlers in the vicinity. The number taken on sick report with this affection during February and March was fifty-five; a much larger number were attacked, but so slightly that it was not deemed advisable to include them on the sick list, as their cases yielded to gentle treatment.

The disease was ushered in with a chill, followed by high febrile symptoms, headache, pain in the eyes, back, and limbs, and, in every case, tonsillitic or pharyngeal inflammation. Mild antiphlogistic measures were resorted to, to which the disease yielded in from three to ten days. A brisk saline cathartic, followed by the administration of diaphoretics and expectorants, generally sufficed for the removal of the disease. The malady made its appearance with the vernal equinox, which was followed by strong south and southwest gales, accompanied by snow

storms. With an improved change in the weather the disease gradually disappeared. From subsequent inquiries, I find that the affection was equally rife amongst the inhabitants of Tubac, Tuczon, and the neighboring towns in Sonora. Here I must record the result of my observations on the effects of the climate and seasons on traumatic lesions: During the early months of the year, I found that the slightest injury was followed almost invariably by severe inflammatory action, accompanied by general disturbance of the system, and a remarkably slow process of healing. Such was specially the case with persons of intemperate habits. In the warm seasons the reverse was the case, nearly every variety of wound healed by first intention. Of gun-shot wounds, more than twenty came under my care, and I have found them in every case, save where a bone or internal organ was injured, to heal up by the first intention—*no suppuration.* This was so where the injury to the soft parts was of the most serious character. Even when the internal viscera, the bones or joints are wounded, this class of injuries do better, heal quicker, and are attended with less danger to life in this region than at any other place that I am aware of. This is mainly attributable to the benign influence of the climate.

The operations performed in the course of the year, were: resection of the body and part of the ramus of the lower jaw, amputation of the arm, and several other operations of minor importance; all of which recovered in the most satisfactory manner. The following table is the result of one year's careful observation at this place, during which everything that could influence the health of the troops has been carefully noted. Particular attention is called to the sanitary condition of the garrison during last year, and the state of the same men during the preceding year; particularly to the period of five months while the post was on the Santa Cruz river, at Camp Moore, Calabaza.

I. TABLE SHOWING THE DISEASES, &c., OF FORT BUCHANAN DURING 1858.

Month.	Temperature.			Diseases.											Strength of garrison.	Deaths.	Remarks.
	Thermometer.	Hygrometer.	Rain.	Fevers.	Digestive system.	Respiratory.	Nervous.	Urinary.	Serous.	Fibrous.	Ulcers.	Wounds.	All other diseases.	Total.			
January	39	34	1.97	9	13	8	3	2	1	2	3	12	2	55	188	....	
February....	45	38	0.51	6	4	1	....	1	....	3	4	5	2	26	177	....	75 men about three weeks on a scout.
March.....	47	38	0.29	10	5	40	1	1	....	4	8	6	6	80	233	....	
April.....	62	47	1.46	4	11	8	2	....	....	3	6	4	3	41	243	....	
May.....	68	52	.....	3	11	2	1	1	....	....	4	2	6	30	154	....	May 11, B and K companies First Dragoons left for California.
June.....	74	57	0.48	8	7	1	2	1	....	....	....	4	4	27	131	....	
July.....	75	64	3.21	23	3	1	2	....	....	....	1	2	4	36	126	....	
August.....	73	63	3.50	50	3	....	....	3	....	....	2	3	2	63	121	....	
September..	70	59	1.32	95	5	....	....	1	....	1	....	7	2	111	109	1	In hospital one year with lues venerea, died from dysentery.
October	65	48	0.60	139	5	....	....	1	....	....	....	1	2	148	114	....	75 men on detached service two weeks.
November...	45	39	0.16	74	10	2	....	1	1	....	1	2	1	92	117	....	
December ..	39	35	2.58	32	9	8	....	....	1	1	....	4	5	60	108	....	45 recruits added to mean strength.
Aggregate...	.....	.....	16.08	453	86	71	11	12	3	14	29	52	39	769	1,821	1	
Average	58.5	47.8	1.34	37.7	7.2	6	1	1	2	1.2	2.4	4.3	3	64.1	152	....	

II. TABLE SHOWING THE SANITARY CONDITION OF THE SAME TROOPS IN 1857.

Month.	Temperature.			Diseases.											Strength of garrison.	Deaths.	Remarks.
	Thermometer.	Hygrometer.	Rain.	Fevers.	Digestive system.	Respiratory.	Nervous.	Urinary.	Serous.	Fibrous.	Ulcers.	Wounds.	All other diseases.	Total.			
January	46	42	.....	.....	14	3	1	1	....	6	2	4	5	36	228	....	Post at Calabaza, twenty miles to southwest, on the Santa Cruz river; minimum of thermometer 25° at 7, A. M., 27th.
February ...	49	42	0.80	1	7	1	....	2	....	5	1	8	4	29	180	....	
March.....	62	49	.....	1	5	1	....	1	....	....	1	4	1	14	149	1	
April	64	50	0.20	3	4	2	2	2	....	4	1	3	4	25	151	....	
May.....	70	56	.....	5	3	....	....	1	....	1	2	3	1	16	138	....	Maximum of thermometer 100° at 2, P. M., on 31st.
June.....	Not t	aken..	.....	6	4	....	....	....	....	2	1	3	1	17	95	....	Took up position at present site of Buchanan.
July.....	Not t	aken..	.....	7	7	....	1	....	....	2	1	3	....	21	110	....	
August.....	78	68	10.60	41	11	....	....	1	....	3	5	9	4	74	171	....	Maximum of thermometer 97° at 2, P. M., on 27th.
September..	77	68	4.76	41	8	....	1	....	...	3	4	13	3	73	202	1	
October	67	58	1.70	40	9	2	1	....	....	2	4	8	8	74	199	....	
November..	48	42	1.97	17	10	....	....	....	....	2	1	1	4	35	192	....	
December..	43	36	0.69	10	4	3	....	2	....	5	6	13	4	47	208	....	
Aggregate...	.....	.....	20.72	172	86	12	6	10	....	35	29	72	39	461	2,023	2	
Average....	60.4	51.1	2.7	14.3	7.2	1	.5	.8	....	3	2.4	.6	3.2	38.4	168.6	.2	Mean of thermometer for ten months only.

This table has been compiled from the hospital records, kept by Acting Assistant Surgeon L. W. C. Kennon, the medical officer in charge of this post, up to January 1, 1858. By comparing the records of the two years it will be perceived that a very marked increase in the amount of disease has taken place during the last year; which increase has been principally in diseases of a malarial character. The number of deaths amongst those under treatment has been very small—one in 1858 and two in 1857. The death in 1858 was the result of constitutional syphilis of the most inveterate form, complicated with an acute attack of dysentery. Those that took place in 1857 were caused by hydrothorax and remittent fever.

It may not prove amiss to place on record my testimony in favor of the use of chlorate of potash as a therapeutic agent, which I have constantly used during the last two years in the treatment of gonorrhœa, both in my public and private practice, with the most gratifying results. I have found it to be such an admirable remedy that I seldom resort to any other in the treatment of urethral inflammation. My method of using it is as follows: one dram of the salt dissolved in eight ounces of water, of which an injection is given every hour for twelve hours, at the end of which the discharge will have become changed and diminished; allowing the remedy to be gradually discontinued until the second or third day, when the disease will generally be found to have ceased. So efficacious has this remedy proved in my practice, that I seldom deem it necessary to give any other medicine, save a Seidlitz draft or a dose of Epsom salt.

In concluding these few hurried remarks I must not forget to say that, although this post is unhealthy, owing, in a great measure, to the local causes of disease found in its vicinity, I consider the climate of Arizona very healthy, and particularly pleasant; in proof of which I may call attention to the fact that out of more than one thousand patients, (which includes women and children, civil employés and soldiers,) treated at this post during the past year, but one death occurred.

If, in the selection of the site for the post, any attention had been directed to the local

character of the place, it would have been apparent at a glance that it would prove unhealthy when occupied as a garrison. It is needless to add that no medical officer was consulted on the subject.

NOTE.—I will here take occasion to remark, that during the last two months much has been done by Captain Ewell to remedy the evil effects of the proximity of the offensive marsh, by establishing a thorough system of drainage, the good effects of which, I trust, will be manifested by a diminution of the amount of disease that may show itself amongst the garrison during the next warm season.

In the summer of 1859, Surgeon William J. Sloan, medical director of the department of New Mexico, made the following report in relation to the "health of Fort Buchanan and the adjacent country:"

MEDICAL DIRECTOR'S OFFICE,
Santa Fé, N. M., July 17, 1859.

SIR: I have the honor to make the following report, as the concise result of my observations and inquiries, during a recent tour with the commander of the department, relative to the health of Fort Buchanan and adjacent country:

The prevalence of intermittent and remittent fever at Fort Buchanan, a post situated in the elevated mountain region of Southwestern New Mexico, naturally excited surprise. For a period of almost three years, the increasing amount of sickness of this character, seemed to impose the duty of personal investigation into the cause, and efforts for a change of location, or other sanitary measures for its relief. A personal examination into the proximate cause of fever at that post has proved very satisfactory; yet, I confess that much remains unexplained, and with difficulty reconciled with all our received ideas of malarial fever.

In the latitude of Santa Fé, these fevers are unknown; as we proceed south and strike the Rio Grande, at Albuquerque, after a distance of sixty-seven miles, and a descent of 2,000 feet, we meet all the coincidences necessary for their development except a high range of temperature; that vicinity is considered healthy. Proceeding down the valley of the river, there is very little fever development until Fort Craig is reached. There, the river bottom presents all the indications necessary; but its well-selected site, on an elevated mesa, and its airy, ventilated quarters, prove a barrier to the inroads of the poison. From this point south to Fort Thorn, we find the fevers of a higher grade and fully developed, with no difference in the geological formation, or in the valley of the Rio Grande, but a much higher temperature. This state of things exists as we advance further south; and Dona Aña, and Cruces, with Fort Fillmore, and the Mesilla Valley, form the great centres of intermittent and remittent fever in the fall, after the drenching rains of July and August, and a high temperature of 107° in the shade; all these circumstances tending to an increased vegetable growth and its subsequent decomposition. One would naturally suppose that leaving the valley of the Rio Grande at Fort Fillmore, and proceeding westward for 300 miles, over arid plains, sandy playas, and high mountains, to Fort Buchanan, the boundaries and limits of fever would be passed. Yet the fact is undoubted, from all I could learn, that malarious fevers are common, and prevail along the whole length of the thirty-second parallel of latitude, wherever settlements are formed. During the last day's journey to Fort Buchanan, after leaving the overland mail route, the descent was very great, and the post itself is near the southern edge of a high table-land, from which the descent into Sonora is very abrupt. Forty or fifty miles south of the post, an almost tropical climate is reached, where oranges and figs grow in the greatest luxuriance, and where, I was informed, fevers of a most pernicious and congestive type prevail every fall.

Fort Buchanan is on the very border of this unhealthy region, but it is sufficiently elevated and mountainous to modify by its climate the type of febrile diseases to the milder forms of

intermittent and remittent. I have no doubt these fevers will prevail to some extent throughout the whole of that country, where there are frequent summer rains, subsequent luxuriant vegetation in the valleys, and a very high temperature. The post is situated at the head of a small valley, in the extensive, broken, foot hills of the southeastern slope of Santa Rita mountains. The scattered, ill-looking buildings are located upon broken, gravelly hills, close to the flat, narrow, meadow-like plain, which, tending south, widens somewhat, and forms the bed of the stream that heads near the post. This meadow-like flat, now dry, presents evidence of complete saturation during the rainy season, with a considerable depth of black loam and decomposing vegetable matter. Near the post a portion of the valley is boggy and swampy, and a source of malarious poison. This spot was considered a main cause of fever, and has been recently ditched and drained, with a decided improvement in the health of the troops. The principal temporary buildings of the post are on elevated ground, widely scattered among a dense growth of large evergreen oaks. The quartermaster's corral, dragoon stables, and sutler's store are on the level meadow-plain. At the present season of the year there is no apparent proximate cause of fever. The hospital was not crowded with such cases, nor did the appearance of the men, at inspection, present very great evidence of its existence. From January to July there is comparative immunity, the original cause not operating. Cases of course occur, from the habits of recurrence in this disease. When the rainy season sets in, the flat valley is deluged, and vegetation progresses vigorously. Upon the cessation of the rains, the intense heat of the sun facilitates the progress of vegetable decomposition, and cases of fever increase; while, at the same time, the prevailing winds from the south, passing up the valley through the gorges in the hills, add, with the cool temperature of the nights, to the causes already existing.

There are *existing* causes of disease at this post which deserve serious consideration. The water of the whole region is execrable, flowing through strata of rotten limestone, argillaceous clay, sulphate of lime, chloride of soda, and decomposing vegetable matter, (liberating sulphuretted hydrogen,) it presents at different points mineral or chalybeate characteristics, filled with impurities, becoming putrid upon standing, and producing disorders and derangements of the bowels. The troops are badly quartered, astonishing as it may seem, after nearly three years' occupation of the country. The houses are built of upright posts of decaying timber, and daubed with mud; the roofs are flat, and covered with dirt and grass, now in a state of decomposition; the rooms are very low, narrow, and without ventilation; the floors of mud, and in the rainy season covered with water. There is no real protection from the sun or rain, in a climate where it is essentially necessary for well men, and especially so for the restoration to health of those who have suffered from repeated attacks of fever. The hospital building is equally primitive and unsuitable as the others, the sick being crowded in one small, hot, unventilated ward.

Immediately northeast of the present site, is a high, dry, airy plain, near the border of the present timbered location, where, in my opinion, the troops would enjoy comparative health.

If Fort Buchanan be considered out of position, in a military point of view, it is scarcely necessary to enlarge upon the practicability of a healthy site in its immediate vicinity. But if it is considered desirable to maintain its present neighborhood, I believe that the requisites for health could be found upon this plain, provided comfortable quarters were erected, suitable storehouses built for the preservation of provisions, gardens established, and antiscorbutics furnished for the use of the troops. In a country so arid, so desolate, and so worthless, it is essentially necessary for man to provide what nature has refused to bestow to render life at all tolerable.

The valley of the Santa Cruz, extending north from the mouth of the Sonorita to Tuczon, I consider a miasmatic region, and productive of fall fevers; the same indications as at Fort Buchanan, are present in stronger force from the lower elevation above the sea, and increased grade of temperature. The testimony of the few residents goes to show that the whole region is sickly.

I visited, with the commanding officer of the department, a point about twelve miles north of Tuczon, near the base of the Tuczon mountain, which, unfortunately, was described by some persons as the only one in the vicinity suitable for a military post. The region is most desolate and arid, the calcareous rock approaching closely the surface, and the plain wooded with small mesquite timber. There is a small stream of water, whether permanent or not did not seem to me satisfactorily shown, but hardly in my opinion adequate to the wants of a post.

It is considered important to find a military position near Tuczon, and the great difficulty will be to combine in that desert region all the requisites necessary. Should no other be found, except the one now referred to, it will no doubt prove healthy. I could discover nothing in its vicinity calculated to engender fever to any extent. I would, however, seriously urge a critical examination of the Tuczon mountain, higher up its slopes, with a view to a suitable location. I believe Colonel Reeve has instructions to make this examination, and will I hope be successful.

In the valley of the San Pedro, which we crossed at two different points, we found abundant running water, known to be permanent in certain places, but of the usual character, impregnated with calcareous deposits. The stream runs through deep and precipitous banks, so that the good effect of the water upon the surrounding valley is lost, there being but little more verdure apparent than upon the neighboring mesas. I believe a good position for a post could be found, after a close examination of this vicinity. The object should be, especially, to find an elevated plain near enough to the water to secure its use, yet sufficiently distant and elevated to be beyond its malarious influence. Fevers will prevail until good quarters and other comforts are secured; but I would anticipate comparative freedom from disease subsequently, except what will always be developed to a greater or less extent on this parallel of latitude.

The whole country traversed is comparatively worthless as an agricultural region, but will at no distant day develop largely its mineral wealth. The importance of military protection is undoubted, and in selection of military sites I seriously recommend the following considerations, always secondary to the position in a military point of view:

1. That close preliminary examination be made, and high mountain regions be preferred, where the valley opens west to east, or from east to west, a great extent of surface not being subject to inundation in the wet season.

2. That in the erection of quarters in that latitude, strict attention should be given to their free and complete ventilation, to their position with regard to shade, and to the necessity of wide and cool portals.

3. That in a country where there are no natural advantages, particular attention should be given to the health and comfort of the troops, in their clothing, their food, and police.

4. That where positions are to be examined for military posts, a medical officer should be consulted and his report well weighed; and that in all sanitary arrangements after selection, his views and opinions should receive careful consideration; that the real responsibility may rest where it belongs.

Very respectfully, your obedient servant,

WILLIAM J. SLOAN,
Surgeon and Medical Director.

Lieutenant J. D. WILKINS,
Acting Assistant Adjutant General, Department New Mexico.

SANITARY REPORT—FORT UNION.

Assistant Surgeon J. Letterman: October, 1856.

In compliance with the directions of the department concerning the transmittal of quarterly reports of sick and wounded, I have the honor to submit a few observations, in a medical point of view, regarding this post:

In latitude 35° 54′ 21″ N., longitude 104° 57′ 15″ W., and at an altitude of 6,670 feet above the sea, Fort Union is situated in a valley running from northwest to southeast. This valley descends on both sides towards an arroyo, which, winding through it, drains it. At the spot where the garrison is placed this valley is shut in on the east by the Gallina mountain, seven miles distant, and on the west by a precipitous mass of sandstone, about 150 feet in height. A portion of the post is placed in immediate proximity to those rocks, and upon rapidly-descending ground; the remainder, being built nearer the arroyo, is on an almost level spot, and, receiving the wash from the higher part of the garrison, is not so well drained—the water during a heavy rain not unfrequently running into and through some of the buildings. The soil is composed of clay and sand, and is sparsely covered with gama grass. No timber is found near the post, all that is required for building and for fire-wood being brought from a distance of six and eight miles. There is no stream of water sufficiently near to be of any service. The Rio Mora, a fine stream, coming directly from the Taos mountains, about twenty-five miles distant, which for nine months of the year are capped with snow, enters the valley about five miles to the south of the garrison, and a few miles further on forms a junction with the Rio Sapillo, coming from the same mountains, and the waters of both pass on to empty into the Canadian. Quite palatable water is obtained by hauling from a spring near the post; it occasionally gives rise to diarrhœa when used by persons not accustomed to it; I am not able to state what are the mineral ingredients.

The entire garrison covers a space of about eighty or more acres, and the buildings being, of necessity, widely separated, causes the post to present more the appearance of a village, whose houses have been built with little regard to order, than a military post. Unseasoned, unhewn, and unbarked pine logs, placed upright in some and horizontally in other houses, have been used in the erection of buildings, and as a necessary consequence are rapidly decaying. In many of the logs of the house which I occupy, an ordinary sized nail will not hold, to such an extent has the timber decayed, although several feet above the ground. One set of the so-called barracks have lately been torn down to prevent any untoward accidents that were liable at any moment to happen from the falling of the building; and yet this building was erected in 1852. The unbarked logs afford excellent hiding places for that annoying and disgusting insect the cimex lectularius, so common in this country, which it is by no means backward in taking advantage of, to the evident discomfort of those who occupy the buildings—the men almost universally sleeping in the open air when the weather will permit. The building at present used as a hospital, having a dirt roof, has not a room which remained dry during the rain in the latter part of September last, and I was obliged to use tents and canvass to protect the property from damage.

The buildings have been during the past summer, and some are yet, undergoing repairs; and, so long as they are occupied, repairs will constantly be requisite to make them at all habitable.

Badly laid out and badly built, it is now essential that the post be rebuilt, and buildings erected with some regard to the welfare of those who are destined to occupy them, and not on the principle of short-sighted and extravagant economy.

As will be seen from the accompanying report of sick there have been no cases of sickness calling for especial remark, but I may say that none of the cases of fever originated here. Several cases of erysipelas of the face and head (among persons destitute of many of the comforts of life

and much exposed, not belonging to the command) I have attended, and the chief reliance was placed upon the exhibition of the tincture of chloride of iron in dram doses, (as suggested in the London Lancet,) and although some of the cases were quite severe, success attended in every case in which it was administered. The case of death was that of a man who was taken ill on the march of his company from Fort Thorn to this post after a debauch. The services of no medical officer could be procured until my arrival here, at which time little hope could be entertained of his recovery. He was kept alive for some time by the use of stimulants and such other remedies as the case from time to time required, but eventually to no purpose.

The troops have been chiefly occupied in the erection of temporary stabling, in repairing quarters, some as escort to a surveying party, and in working upon the arrival of stores from Fort Leavenworth and their transmittal to the different stations in this department.

The diet has been that usually issued to troops. As no gardens could be cultivated during the past summer in consequence of the want of water for irrigation, which is required in the spring and early part of the summer, and on account of the great abundance of grasshoppers, extra issues of pickles, &c., from time to time, were deemed necessary for the health of the troops who were liable at any moment to be called upon for hard service, and who at one time were ordered to hold themselves in readiness for field service.

In the clothing, the temperance, and cleanliness of the command, there is nothing to call for any particular remarks.

The climate of the country, from all that can be learned from those who have for some years resided in the Territory, seems to be changing, especially in regard to the increase of rain; and from the universality of the opinion, little reason for doubt can be entertained of its correctness. It is probable that this increase may, in a measure, be owing to the greater extent of land brought under cultivation, and as a consequence a much more extensive surface of upturned land, and of water used in irrigation exposed to evaporation, which at this altitude is very great.

Wounds in this climate do not readily heal unless completely protected from all external influences, being prone to erysipelatous inflammation, and even in many cases not healing quickly when such inflammation does not supervene. The use of collodion or some preparation of a similar character in the dressing of wounds is highly beneficial.

SANITARY REPORT—FORT THORN.

Assistant Surgeon T. Charlton Henry: September, 1856.

In consequence of the more than ordinary proportion of patients I have had to treat during the last quarter, I feel it my duty to make a special report accompanying my return.

The position of Fort Thorn is somewhat elevated above the level of the Rio Grande del Norte, whose waters pass within a mile of the post. Its distance is eighty-five miles below Fort Craig, on the western side of the river, and fifty-one miles above Fort Fillmore; the position of which latter post is on the eastern side of the Rio Grande. Two miles westward of Fort Thorn a llano of nearly thirty-five miles in width extends, but partially broken by a few undulating hills. This mesa forms an abutment of some thirty to forty feet upon the same elevation of ground on which Fort Thorn is situated. The river bottom is but a hundred yards in front of the post, with more or less growth of timber, principally the *salix viminalis* and *populus canadensis*. The broken and projecting portion of the mesa, to the westward, is mostly of red clay, and mingled with it is found a comparative abundance of native gypsum in laminated conglomerations and very scattered. The soil between the fort and the mesa westward is sandy, abounding in a low growth of prosopsis and artemisia.

The post itself is on ground composed of a mixture of clay and sand, the former being uppermost.

Eastward and across the river, five miles distant, is a chain of mountains, beyond which lies the Jornada del Muerto, through which passes the principal wagon road from Santa Fé to El Paso del Norte.

At periods of overflow of the river, and during the early fall months, standing pools are formed about the vicinity of the post. Many of these pools are shaded by trees of the cottonwood species; only now, however, partially, much of the timber having been cut away.

To the presence of these pools, and the thinning out of the trees about them, must be attributed, to a certain extent, the miasma which is the cause of the exceeding prevalence of remittent and intermittent fevers at this station.

The garrison of Fort Webster was first located in this spot, in November, 1853. Upon reference to my quarterly reports for the year 1854, you will observe my sick list exceedingly small; indeed, there was scarcely any sickness at the post the first year of its settlement.

But now *quantum mutatus*. About the 10th of September, last year, ague appeared and a large proportion of the command here were victims of its influence. That fall also was somewhat prevalent, though but to a small extent, bilious remittent fever. But, sir, this year how vastly exaggerated is the sick list; and reasoning *à priori*, what may it not be the ensuing year, subsequent to the advent of warm weather. For about the 5th of July of the present year bilious remittent fever made its accession, and continued to prevail till about September 8, when ague seemed in a great measure to succeed it. The month of July last, seventy-eight men out of ninety (the entire command) were sick with remittent fever. In the latter portion of August, Major Blake, of the First Dragoons, encamped near here with one company of recruits and the regimental band, and was in a fortnight subsequent joined by two more companies. Sickness, especially ague, commenced very soon after among his men, cases of camp dysentery and throat affections, the latter during rainy weather; but the two latter are rare affections here.

The character of the ague here is much the same as elsewhere—quotidian being the commoner form; as elsewhere, too, the functions of the liver are deranged. Quinine is by no means always effective as a remedy, even in ten-grain doses; twenty grains during the remission will often fail. In many cases, a combination of this drug with piperine I have found to act with more energy.

Fowler's solution in the usual doses succeeds, I have found, in about one third of the cases; but does not appear to effect any more permanent cure.

The bilious remittent fever met with here, with no preceding chill, varies much in character. Exacerbations are from three to ten, or twelve hours daily, as regards duration. Night sweats are a characteristic accompaniment.

For the cure of these cases, quinine and bark are the principal remedies I have used with success. But in nearly every case after the fever has been broken, very slow convalescence results; to hasten which I have had recourse to infus. serpentariae, combined with which I generally make use of from ten to fifteen drops of the acid sulph. aromat.

I should have mentioned that obstinate diarrhœa is not very rare as a sequence of bilious remittent; also should have stated that the combination of sub. mur. hyd. is exceedingly essential, with quinine, to check the latter affection. I have found nothing so effectual in obstinate diarrhœa, where the discharges are of a light, watery character, as a combination of sulph. cupri. with mass. hyd. and ipecac.

The cases of dysentery I have treated, with the exception of two, have resulted in recovery. The two who died had been exposed to wet and cold sometime after contracting the disease, and after the advent of the disease, and I was not called upon to treat them till a late hour. One had been long affected with chronic diarrhœa, and his symptoms seemed to show an extensive inflammation of the mesenteric glands. From the earliest period they were brought to my hospital they were obliged to be nourished by nutritive injections. Although a cure in one case seemed about to be effected, yet nature, too exhausted, would not react, and death was the result.

These two men are the only cases in the line of my practice I have for four years had the ill luck to lose.

In conclusion, sir, let me urge on the powers that be that the position of this post be removed, and let me suggest that it be not far from the old station of Fort Webster. In a military point of view it would be fully as effective. Does any one for a moment believe, and would any one of good sense urge, that it would promote "the good of the service" to retain troops *precisely* in this position, when a removal of only ten or twenty miles westward (the site of old Fort Webster is fifty) would tend to keep the command in nearly perfect health all the year, instead of remaining here, two thirds of the command being perfectly unable to do service nearly one half of every year.

Were there no surgeon at this, the sickliest post in the Territory at this time, and the prevailing malady not properly treated, every man here, very nearly, would, after a series of attacks of ague or fever be seized—as the Mexicans about us and below us are—with a congestive type of fever, and die off like so many sheep with the rot.

SANITARY REPORT—FORT THORN.

Assistant Surgeon P. A. Quinan: September, 1858.

Fort Thorn is in latitude 32° 46′ 54″ N., and longitude 107° 20′ 48″ W., is elevated 4,500 feet above the sea, and is located upon the right bank of the Rio Grande river. The post is, by an air-line, seventy-five miles west of Santa Fé, and 201 miles south of that place. By the wagon road, which follows the sinuosities of the river, the distance is estimated at 350 miles.

The post is opposite the Jornada del Muerto, from which it is separated by the river and a lofty range of mountains, a continuation of the Sierra San Mateo. The Mexican village of Santa Barbara is in the neighborhood of the garrison.

Fort Thorn is located upon the immediate edge of an extensive marsh, the river making a considerable bend at this point, leaves exposed to the right, a crescentic flat, intersected by numerous sluices, and at times completely inundated. The buildings constituting the fort are placed within a stone's throw of the swampiest portion of this flat or bottom, and in the most admirable manner, if the object be that the garrison shall inhale, for an average period of five months, the pestilential effluvia arising therefrom. The bottom referred to, presents during the hottest months, a surface of oozy mud, covered with green slime, and interspersed with pools of stagnating water, which surface is during these months gradually drying up. During the same time, a rank vegetation of weeds and grasses undergoes the process of germination, advancement to maturity, and decay. As might be expected, fevers of a malarious character, have greatly afflicted the command during this quarter. These diseases have prevailed to even a greater extent than in former seasons, which may possibly be due to an unusually continued elevation of temperature, and the absence of rain, which serves to prevent the fall of the river and stagnation of water, in the neighboring sluices. Fevers began to manifest themselves about the middle of July, and have continued with much virulence until the present time. The command then consisted of two companies, and the sick report numbered seventy cases. The garrison was reduced on the 1st September, to one company of infantry, half of which has since been removed to Fort Fillmore on detached service. Scarcely a man of this command can be considered fit for the performance of ordinary garrison duty, so debilitated are they by disease. The prevailing fever during July and a part of August was of the simple intermittent type, the cold, hot, and sweating stages, being accurately defined. It was treated with mild mercurials and moderate doses of quinine. Later, gastric and severe biliary complications were marked, and a tendency to inflammation of the lower bowels very manifest. Excessive vomiting and purging in the gastric form of the disease, was checked by small doses of creasote and morphia. Cups were generally applied to the abdomen. In the remittents, which showed

themselves later in the season, it was found necessary to support the strength of the patient by tonic infusions; quinine being frequently given in effective doses, without reference to the periodicity of the disease, and with the happiest results. At a time when the supply of this useful article was exhausted, the liquor potassæ arsenitis (Fowler's solution) was effectively substituted. It was found difficult to check the later intermittents with the usual doses of quinine. Upon examination, enlargement of the spleen was invariably found existing in these cases. The treatment resorted to was blistering the region of the spleen, and the administration of iodine in three-grain doses, followed by quinine; this generally proved successful.

It is worthy of remark, that not a single case of tertian intermittent appears upon the report.*

DISEASES.

The general abstracts for New Mexico and the statistics of the following tables cover a period of eleven years, from January, 1849, to January, 1860.

TABLE EXHIBITING THE RATIO OF SICKNESS AND MORTALITY.

Quarters.	Mean strength.	Number treated.	Deaths.	Ratio per 1,000 of mean strength.	
				Treated.	Died.
First quarter	13,783	8,356	106	606	7.6
Second quarter	12,235	7,340	61	600	4.9
Third quarter	13,069	9,140	53	699	4
Fourth quarter	14,693	10,280	69	699	4.7
Annual ratio	13,445	35,116	289	2,611	21.4
Gunshot wounds excluded	.....	34,823	249	2,590	18.5

It is shown by this table that the average annual proportion of cases of disease occurring among troops stationed in New Mexico to the number of officers and enlisted men is 2.61 to 1, and that the corresponding ratio of deaths is 1 in 46.52, or 2.14 per cent. The proportion of deaths to cases of disease is 1 to 121.50, or 0.82 per cent.

Excluding gunshot wounds and deaths therefrom, the proportion of cases treated to the number of troops is 2.59 to 1; of deaths to troops, 1 in 54, or 1.85 per cent; and of deaths to cases of disease, 1 in 139.85, or 0.71 per cent.

* In consequence of the representations made by the Surgeon General to the Department of War, in regard to the extreme unhealthfulness of Fort Thorn, it was abandoned. R. H. C.

FEVERS.

Quarters	FIRST.		SECOND.		THIRD.		FOURTH.		YEAR.		Proportion of deaths to cases.	Ratio of cases per 1,000 of mean strength.
Strength	13,783		12,235		13,069		14,693		13,445			
Diseases.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.		
Febris congestiva	0	0	0	0	2	0	2	2	4	2	1 in 2	0.3
Febris continua communis	58	0	43	0	69	0	57	1	227	1	1 in 227	16.8
Febris intermittens quotidiana	322	0	273	0	991	0	936	1	2,522	1	1 in 2,522	187
Febris intermittens tertiana	276	0	364	0	562	0	494	0	1,696	0	0 in 1,696	126
Febris intermittens quartana	3	0	11	0	6	0	5	0	25	0	0 in 25	1.8
Febris remittens	126	0	145	0	422	2	480	0	1,173	2	1 in 586	87
Febris typhus et typhoides	13	6	7	2	36	10	22	6	78	24	1 in 3.2	5.8
Febris typhus icterodes	0	0	0	0	0	0	0	0	0	0	0 in 0	0
Total	798	6	843	2	2,088	12	1,996	10	5,725	30	1 in 191	425

DISEASES OF THE ORGANS CONNECTED WITH THE DIGESTIVE SYSTEM.

Quarters	FIRST.		SECOND.		THIRD.		FOURTH.		YEAR.		Proportion of deaths to cases.	Ratio of cases per 1,000 of mean strength.
Strength	13,783		12,235		13,069		14,693		13,445			
Diseases.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.		
Cholera Asiatica	0	0	0	0	0	0	0	0	0	0	0 in 0	0
Diarrhœa	735	5	781	3	1,232	3	1,154	7	3,902	18	1 in 217	290
Dysenteria acuta	136	1	181	2	215	3	225	3	757	9	1 in 84	56
Dysenteria chronica	17	6	25	2	40	4	37	2	119	14	1 in 8.5	8.8
Enteritis	2	2	5	0	6	0	6	3	19	5	1 in 4	1.4
Hepatitis acuta	8	1	7	0	9	0	3	0	27	1	1 in 27	2
Hepatitis chronica	8	1	4	0	5	0	1	0	18	1	1 in 18	1.3
Obstipatio	229	0	238	0	274	0	195	0	936	0	0 in 936	69
All other diseases of this class	293	5	258	4	365	1	342	1	1,278	11	1 in 116	95
Total	1,428	21	1,499	11	2,166	11	1,963	16	7,056	59	1 in 119	524

DISEASES OF THE RESPIRATORY SYSTEM.

Quarters	FIRST.		SECOND.		THIRD.		FOURTH.		YEAR.		Proportion of deaths to cases.	Ratio of cases per 1,000 of mean strength.
Strength	13,783		12,235		13,069		14,693		13,445			
Diseases.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.		
Bronchitis acuta et chronica	143	2	89	1	34	0	88	1	354	4	1 in 88.5	26
Cartarrhus	1,094	0	578	0	255	1	997	0	2,924	1	1 in 2,924	217
Phthisis pulmonalis	8	2	8	1	6	0	3	1	25	4	1 in 6.2	1.8
Pleuritis	68	1	64	0	49	0	57	0	238	1	1 in 238	17.7
Pneumonia	59	11	45	10	24	1	39	7	167	29	1 in 5.7	12.4
All other diseases of this class	50	2	36	0	17	0	29	0	132	2	1 in 66	9.8
Total	1,422	18	820	12	385	2	1,213	9	3,840	41	1 in 93	285
Rheumatismus	668	1	486	1	478	2	667	1	2,299	5	1 in 460	171

ABSTRACTS

OF THE

PRINCIPAL DISEASES AND DEATHS

OCCURRING AMONG THE TROOPS

IN

NEW MEXICO.

ABSTRACT OF THE PRINCIPAL DISEASES AND DEATHS OCCURRING

CLASSES OF DISEASES.		FIRST QUARTER.													
	YEARS	1849 to 1854.		1855.		1856.		1857.		1858.		1859.		TOTAL.	
	MEAN STRENGTH	5,887.		1,038.		1,490.		1,736.		1,833.		1,799.		13,783.	
	SPECIFIC DISEASES.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.
Fevers	Febris continua communis..	28	.....	2	.....	2	.....	12	.....	9	.....	5	.....	58	.....
	Febris inter. quotidiana	63	.....	1	.....	6	.....	49	.....	40	.....	163	.....	322	.....
	Febris intermittens tertiana.	63	.....	12	.....	14	.....	43	.....	82	.....	62	.....	276	.....
	Febris intermittens quartana	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	3	.....
	Febris remittens	13	.....	9	.....	15	.....	19	.....	23	.....	47	.....	126	.....
	Febris typhus et typhoides..	7	5	.....	.....	.....	.....	.....	.....	2	1	4	.....	13	6
	Febris typhus icterodes.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eruptive fevers	Erysipelas.....	19	2	.....	.....	1	.....	3	.....	1	.....	3	.....	29	2
	Rubeola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Scarlatina	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Variola	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....
	Varioloides.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
Diseases of the organs connected with the digestive system.	Cholera Asiatica.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Diarrhœa.....	203	4	36	.....	105	1	133	.....	128	.....	130	.....	735	5
	Dysenteria acuta.....	44	.....	5	.....	4	.....	21	.....	23	.....	39	1	136	1
	Dysenteria chronica.....	5	4	2	.....	.....	.....	4	.....	6	.....	.....	2	17	6
	Enteritis.....	.....	1	.....	.....	2	.....	.....	.....	.....	1	.....	.....	2	2
	Hepatitis acuta.....	3	1	2	.....	.....	.....	2	.....	1	.....	.....	.....	8	1
	Hepatitis chronica	5	.....	1	.....	.....	.....	.....	.....	.....	.....	2	1	8	1
	Obstipatio.....	83	.....	11	.....	6	.....	45	.....	50	.....	34	.....	229	.....
	All other diseases.....	106	2	16	1	30	1	50	1	42	.....	49	.....	293	5
Diseases of the respiratory system.	Bronchitis, acuta et chronica	36	1	9	.....	23	.....	15	1	32	.....	28	.....	143	2
	Catarrhus.....	293	.....	69	.....	105	.....	127	.....	216	.....	284	.....	1,094	.....
	Phthisis pulmonalis.....	2	2	1	.....	1	.....	1	.....	... ..	.....	3	.....	8	2
	Pleuritis.....	32	.....	1	.....	6	.....	15	.....	8	1	6	.....	68	1
	Pneumonia.....	18	3	9	1	7	2	6	.. ...	11	2	8	3	59	11
	All other diseases	26	2	2	.....	8	.....	11	.....	3	.....	.....	.....	50	2
Diseases of the brain and nervous system.	Cephalalgia	12	.....	5	.....	19	.....	7	.....	18	.....	3	.....	64	.....
	Delirium tremens.....	13	1	4	.....	3	.....	3	.....	3	.....	5	.....	31	1
	Epilepsia	5	.....	1	.....	1	.....	.....	.....	1	.....	.....	.....	8	.....
	Neuralgia.....	16	.....	4	.....	9	.....	13	.....	14	.....	5	.....	61	.....
	All other diseases.....	12	4	4	.....	.....	.....	2	.....	4	.....	4	.....	26	4
Diseases of the urinary and genital organs.	Gonorrhœa	109	.....	36	.....	20	.....	43	.....	72	.....	74	.....	354	.....
	Strictura urethræ	4	.....	.....	.....	.....	.....	1	.....	.....	.....	4	.....	9	.....
	Syphilis primitiva.....	58	.....	18	.....	4	.....	17	.....	18	.....	13	.....	128	.....
	Syphilis consecutiva.....	60	.....	6	.....	11	.....	6	.....	34	.....	25	.....	142	.....
	All other diseases.....	57	.....	16	.....	13	.....	12	.....	28	.....	19	.....	145	.....
Diseases of the serous and exhalent vessels.	Ascites.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
	All other diseases.....	4	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	7	.....
Diseases of the fibrous and muscular structures.	Pernio.....	10	.....	5	.....	18	.....	5	.....	10	.....	43	.....	91	.....
	Podagra	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
	Rheumatismus.....	187	1	47	.....	42	.....	113	.....	142	.....	137	.....	668	1
Abscesses and ulcers....	Fistula.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....
	Phlegmon et abscessus.....	129	2	19	.....	28	.....	63	.....	67	.....	46	.....	352	2
	Ulcus	79	.....	9	.....	30	.....	29	.....	26	.....	17	.....	190	.....
Wounds and injuries....	Ambustio	16	.....	2	.....	4	.....	3	.....	6	.....	1	.....	32	.....
	Amputatio	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
	Contusio	173	1	49	1	68	.....	108	.....	98	.....	95	.....	591	2
	Fractura.....	19	1	3	.....	4	.....	7	.....	8	.....	3	1	44	2
	Luxatio	3	.....	.....	.....	3	.....	6	.....	13	.....	2	.....	27	.....
	Punitio.....	3	.....	.....	.....	.....	.....	9	.....	7	.....	1	.....	20	.....
	Sub-luxatio	44	.....	11	.....	7	.....	28	.....	27	.....	42	.....	159	.....
	Vulnus incisum.....	62	1	10	.....	24	.....	24	.....	25	.....	24	.....	169	1
	Vulnus laceratum	64	.....	12	3	13	.....	22	.....	38	.....	35	.....	184	3
	Vulnus punctum.....	16	1	10	.....	8	.....	7	2	7	1	4	.....	52	4
	Vulnus sclopeticum	59	28	6	.....	6	.....	13	.....	5	.....	11	.....	100	28
Miscellaneous	Debilitas.....	14	1	.....	.....	8	.....	12	.....	5	.....	2	.....	41	1
	Ebrietas	13	.....	16	.....	7	.....	16	.....	18	1	20	.....	90	1
	Hæmorrhois	25	.....	6	.....	3	.....	6	.....	14	.....	14	.....	68	.....
	Hernia	8	.....	.....	.....	2	.....	2	.....	3	.....	2	.....	17	.....
	Morbi cutis.....	9	.....	2	.....	1	.....	4	.....	5	.....	3	.....	24	.....
	Morbi oculi.....	61	.....	13	.....	26	.....	29	.....	26	.....	29	.....	184	.....
	Scorbutus	36	3	3	.....	5	.....	11	.....	17	.....	25	.....	97	3
	Suicidium	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	1	1	3
	All other diseases.....	108	2	30	.....	56	.....	86	.....	110	.....	97	1	487	2
	Total	2,552	73	537	6	779	4	1,266	6	1,547	7	1,675	10	8,356	106

AMONG THE TROOPS AT POSTS IN NEW MEXICO.

CLASSES OF DISEASES.		SECOND QUARTER.													
	YEARS	1849 to 1854.		1855.		1856.		1857.		1858.		1859.		TOTAL.	
	MEAN STRENGTH	5,285.		903.		1,477.		1,314.		1,519.		1,737.		12,235.	
	SPECIFIC DISEASES.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.
Fevers	Febris continua communis	24	.....	5	.....	3	.....	6	.....	5	.....	.....	.....	43	.....
	Febris inter. quotidiana	49	.....	2	.....	21	.....	23	.....	49	.....	129	.....	273	.....
	Febris intermittens tertiana	89	.....	2	.....	26	.....	76	.....	64	.....	107	.....	364	.....
	Febris intermittens quartana	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	.....
	Febris remittens	15	.....	8	.....	43	.....	21	.....	33	.....	25	.....	145	.....
	Febris typhus et typhoides	6	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	7	2
	Febris typhus icterodes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eruptive fevers	Erysipelas	5	.....	.....	.....	2	.....	1	.....	.....	.....	7	.....	15	.....
	Rubeola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Scarlatina	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Variola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Varioloides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diseases of the organs connected with the digestive system.	Cholera Asiatica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Diarrhœa	278	2	34	.....	111	.....	96	.....	104	.....	158	1	781	3
	Dysenteria acuta	82	1	13	1	10	.....	8	.....	24	.....	44	.....	181	2
	Dysenteria chronica	7	1	5	.....	.....	.....	3	.....	6	1	4	.....	25	2
	Enteritis	.....	.....	.....	.....	1	.....	3	.....	1	.....	.....	.....	5	.....
	Hepatitis acuta	3	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	7	.....
	Hepatitis chronica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	4	.....
	Obstipatio	80	.....	25	.....	12	.....	30	.....	51	.....	40	.....	238	.....
	All other diseases	117	1	6	1	31	.....	36	1	40	.....	28	1	258	4
Diseases of the respiratory system.	Bronchitis, acuta et chronica	28	1	3	.....	8	.....	11	.....	21	.....	18	.....	89	1
	Catarrhus	144	.....	14	.....	59	.....	42	.....	186	.....	133	.....	578	.....
	Phthisis pulmonalis	4	1	.....	.....	.....	.....	3	.....	.....	.....	1	.....	8	1
	Pleuritis	34	.....	3	.....	.....	.....	10	.....	5	.....	12	.....	64	.....
	Pneumonia	17	5	3	.....	5	.....	9	1	5	2	6	2	45	10
	All other diseases	18	.....	1	.....	7	.....	8	.....	2	.....	.....	.....	36	.....
Diseases of the brain and nervous system.	Cephalalgia	21	.....	7	.....	20	.....	15	.....	15	.....	22	.....	100	.....
	Delirium tremens	16	4	3	1	7	.....	7	.....	3	1	2	.....	38	6
	Epilepsia	8	.....	.....	.....	1	.....	2	.....	2	.....	5	.....	18	.....
	Neuralgia	26	.....	3	.....	6	.....	5	.....	8	.....	7	.....	55	.....
	All other diseases	12	2	2	1	4	.....	1	.....	.....	1	3	1	22	5
Diseases of the urinary and genital organs.	Gonorrhœa	156	.....	36	.....	26	.....	96	.....	59	.....	60	.....	433	.....
	Strictura urethræ	11	.....	1	.....	.....	.....	1	.....	9	.....	2	.....	24	.....
	Syphilis primitiva	58	.....	6	.....	2	.....	24	.....	17	.....	11	.....	118	.....
	Syphilis consecutiva	69	1	16	.....	6	.....	17	.....	17	.....	19	.....	144	1
	All other diseases	50	1	8	.....	6	.....	28	.....	23	.....	18	.....	133	1
Diseases of the serous and exhalent vessels.	Ascites	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
	All other diseases	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	4	1
Diseases of the fibrous and muscular structures.	Pernio	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	3	.....
	Podagra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Rheumatismus	172	.....	29	.....	42	.....	62	.....	82	.....	99	1	486	1
Abscesses and ulcers	Fistula	.....	.....	.....	.....	1	.....	1	.....	1	.....	1	.....	4	.....
	Phlegmon et abscessus	103	.....	8	.....	32	.....	32	.....	41	.....	54	.....	270	.....
	Ulcus	66	.....	5	.....	14	.....	10	.....	17	.....	11	.....	123	.....
Wounds and injuries	Ambustio	13	.....	.....	.....	4	.....	4	.....	2	.....	.....	.....	23	.....
	Amputatio	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
	Contusio	162	.....	23	.....	49	.....	82	.....	80	.....	74	.....	470	.....
	Fractura	9	.....	1	.....	3	.....	3	.....	1	.....	2	.....	19	.....
	Luxatio	6	.....	1	.....	.....	.....	1	.....	3	.....	2	.....	13	.....
	Punitio	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	3	.....
	Sub-luxatio	41	.....	8	.....	17	.....	7	.....	19	.....	14	.....	106	.....
	Vulnus incisum	31	.....	8	.....	8	.....	13	.....	11	.....	9	.....	80	.....
	Vulnus laceratum	35	.....	15	.....	7	.....	15	.....	20	.....	22	.....	114	.....
	Vulnus punctum	14	.....	4	.....	5	.....	7	.....	4	.....	8	1	42	1
	Vulnus sclopeticum	21	3	10	1	5	.....	16	.....	5	.....	3	1	60	5
Miscellaneous	Debilitas	11	1	1	.....	6	.....	6	.....	3	.....	8	.....	35	1
	Ebrietas	24	1	7	.....	3	.....	12	.....	15	.....	17	.....	78	1
	Hæmorrhois	46	.....	3	.....	3	.....	7	.....	14	.....	12	.....	85	.....
	Hernia	2	.....	2	.....	7	.....	3	.....	4	.....	1	.....	19	.....
	Morbi cutis	14	.....	.....	.....	7	.....	4	.....	7	.....	5	.....	37	.....
	Morbi oculi	64	.....	14	.....	19	.....	27	.....	30	.....	30	.....	184	.....
	Scorbutus	144	5	10	.....	13	.....	31	.....	7	.....	128	.....	333	5
	Suicidium	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1	1
	All other diseases	102	4	39	1	73	.....	75	.....	95	.....	100	2	484	7
	Total	2,523	36	397	6	738	.....	1,001	3	1,211	5	1,470	11	7,340	61

ABSTRACT OF THE PRINCIPAL DISEASES AND DEATHS OCCURRING

CLASSES OF DISEASES.		THIRD QUARTER.													
	YEARS	1849 to 1854.		1855.		1856.		1857.		1858.		1859.		TOTAL.	
	MEAN STRENGTH	6,126.		1,134.		1,379.		1,382.		1,413.		1,635.		13,069.	
	SPECIFIC DISEASES.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.
Fevers	Febris congestiva	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	2	.....
	Febris continua communis	54	.....	1	.....	3	.....	7	.....	4	.....	.....	.....	69	.....
	Febris inter. quotidiana	53	.....	10	.....	20	.....	123	.....	526	.....	259	.....	991	.....
	Febris intermittens tertiana	66	.....	7	.....	92	.....	239	.....	62	.....	96	.....	562	.....
	Febris intermittens quartana	5	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	6	.....
	Febris remittens	52	1	48	.....	167	.....	86	1	42	.....	27	.....	422	2
	Febris typhus et typhoides	20	7	1	.....	7	1	2	1	3	.....	3	1	36	10
	Febris typhus icterodes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eruptive fevers	Erysipelas	21	.....	.....	.....	2	.....	2	.....	1	.....	2	.....	28	.....
	Rubeola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Scarlatina	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Variola	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
	Varioloides	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....
Diseases of the organs connected with the digestive system.	Cholera Asiatica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Diarrhœa	557	2	98	.....	124	1	150	.....	138	.....	165	.....	1,232	3
	Dysenteria acuta	110	.....	24	.....	9	.....	31	1	3	.....	38	2	215	3
	Dysenteria chronica	15	2	.....	.....	6	2	6	.....	3	.....	10	.....	40	4
	Enteritis	3	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....	6	.....
	Hepatitis acuta	2	.....	2	.....	.....	.....	4	.....	1	.....	.....	.....	9	.....
	Hepatitis chronica	1	.....	1	.....	2	.....	1	.....	.....	.....	.....	.....	5	.....
	Obstipatio	120	.....	18	.....	14	.....	26	.....	53	.....	43	.....	274	.....
	All other diseases	191	.....	22	.....	29	.....	58	.....	30	1	55	.....	385	1
Diseases of the respiratory system.	Bronchitis, acuta et chronica	7	.....	4	.....	5	.....	2	.....	6	.....	10	.....	34	.....
	Catarrhus	86	.....	17	.....	20	.....	17	.....	60	.....	55	1	255	1
	Phthisis pulmonalis	.....	.....	.....	.....	.....	.....	4	.....	1	.....	1	.....	6	.....
	Pleuritis	30	.....	2	.....	3	.....	8	.....	3	.....	3	.....	49	.....
	Pneumonia	8	1	4	.....	2	.....	1	.....	2	.....	7	.....	24	1
	All other diseases	10	.....	3	.....	3	.....	.....	.....	1	.....	.....	.....	17	.....
Diseases of the brain and nervous system.	Cephalalgia	36	.....	3	.....	3	.....	7	.....	26	.....	10	1	85	1
	Delirium tremens	16	1	1	.....	7	.....	6	.....	3	1	10	.....	43	2
	Epilepsia	7	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	9	.....
	Neuralgia	19	.....	6	.....	4	.....	11	.....	11	.....	4	.....	55	.....
	All other diseases	12	2	3	.....	1	.....	3	1	7	.....	2	1	28	4
Diseases of the urinary and genital organs.	Gonorrhœa	176	.....	23	.....	35	.....	59	.....	74	.....	52	.....	419	.....
	Strictura urethræ	8	.....	1	.....	1	.....	.....	.....	3	.....	.....	.....	13	.....
	Syphilis primitiva	97	.....	16	.....	7	.....	11	.....	35	.....	13	.....	179	.....
	Syphilis consecutiva	64	.....	14	.....	4	.....	30	.....	16	1	24	.....	152	1
	All other diseases	60	.....	11	.....	17	.....	23	.....	29	.....	24	1	164	1
Diseases of the serous and exhalent vessels.	Ascites	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1
	All other diseases	7	.....	1	.....	.....	.....	2	.....	.....	.....	1	.....	11	.....
Diseases of the fibrous and muscular structures.	Pernio	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....
	Podagra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Rheumatismus	157	1	20	.....	38	.....	83	.....	75	1	105	.....	478	2
Abscesses and ulcers	Fistula	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
	Phlegmon et abscessus	160	1	11	.....	33	.....	40	.....	34	.....	29	.....	307	1
	Ulcus	80	1	8	.....	25	.....	18	.....	15	.....	10	.....	156	1
Wounds and injuries	Ambustio	16	.....	3	.....	8	.....	5	.....	4	.....	6	.....	42	.....
	Amputatio	3	.....	2	.....	4	.....	.....	.....	1	.....	.....	.....	10	.....
	Contusio	208	1	43	.....	78	.....	61	.....	72	.....	60	.....	522	1
	Fractura	11	.....	3	.....	1	.....	4	.....	2	.....	5	.....	26	.....
	Luxatio	4	.....	.....	.....	6	.....	6	.....	.....	.....	6	.....	22	.....
	Punitio	.....	.....	1	.....	6	.....	.....	.....	.....	.....	.....	.....	7	.....
	Sub-luxatio	48	.....	12	.....	3	.....	14	.....	23	.....	13	.....	113	.....
	Vulnus incisum	55	.....	19	.....	13	.....	19	.....	14	.....	4	.....	124	.....
	Vulnus laceratum	48	1	9	.....	9	.....	10	.....	20	.....	19	.....	115	1
	Vulnus punctum	23	1	6	.....	5	.....	10	.....	4	.....	9	.....	57	1
	Vulnus sclopeticum	37	2	4	1	5	.....	19	.....	8	.....	3	.....	76	3
Miscellaneous	Debilitas	18	.....	1	.....	7	.....	11	.....	2	.....	4	.....	43	.....
	Ebrietas	42	.....	8	.....	3	.....	16	.....	26	.....	24	.....	119	.....
	Hæmorrhois	44	.....	6	.....	6	.....	11	.....	12	.....	6	.....	85	.....
	Hernia	7	.....	.....	.....	3	.....	.....	.....	6	.....	1	.....	17	.....
	Morbi cutis	12	.....	4	.....	4	.....	1	.....	11	.....	13	.....	45	.....
	Morbi oculi	66	.....	20	.....	23	.....	35	.....	39	.....	38	.....	221	.....
	Scorbutus	85	2	18	.....	4	.....	19	.....	5	.....	62	.....	193	2
	All other diseases	149	2	57	1	59	.....	89	2	88	.....	84	1	526	6
	Total	3,195	29	598	2	934	4	1,392	6	1,605	4	1,416	8	9,140	53

AMONG THE TROOPS AT POSTS IN NEW MEXICO.

CLASSES OF DISEASES.		FOURTH QUARTER.													
	YEARS	1849 to 1854.		1855.		1856.		1857.		1858.		1859.		TOTAL.	
	MEAN STRENGTH	6,195.		1,338.		1,810.		1,651.		1,915.		1,784.		14,693.	
	SPECIFIC DISEASES.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.	Cases.	Died.
Fevers	Febris congestiva	.....	.....	.....	.....	.....	.....	1	1	1	1	.....	.....	2	2
	Febris continua communis	41	1	4	.....	1	.....	11	.....	.....	.....	.....	.....	57	1
	Febris inter. quotidiana	103	1	71	.....	51	.....	107	.....	332	.....	272	.....	936	1
	Febris intermittens tertiana	87	.....	27	.....	5	.....	152	.....	149	.....	74	.....	494	.....
	Febris intermittens quartana	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	5	.....
	Febris remittens	68	.....	72	.....	184	.....	66	.....	80	.....	10	.....	480	.....
	Febris typhus et typhoides	10	5	.....	.....	3	.....	1	1	1	.....	7	.....	22	6
	Febris typhus icterodes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eruptive fevers	Erysipelas	31	3	2	.....	2	.....	.....	.....	2	.....	1	.....	38	3
	Rubeola	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Scarlatina	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Variola	6	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	.....
	Varioloides	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	.....
Diseases of the organs connected with the digestive system.	Cholera Asiatica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Diarrhœa	513	6	86	.....	193	.....	145	.....	113	....	104	1	1,154	7
	Dysenteria acuta	139	2	9	.....	24	.....	29	.....	22	1	12	.....	225	3
	Dysenteria chronica	25	1	1	.....	1	.....	6	1	4	.....	.....	.....	37	2
	Enteritis	2	1	2	1	.....	.....	2	1	.....	.....	.....	.....	6	3
	Hepatitis acuta	1	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	3	.....
	Hepatitis chronica	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
	Obstipatio	86	.....	7	.....	18	.....	25	.....	31	.....	28	.....	195	.....
	All other diseases	144	.....	26	.....	43	.....	29	1	38	.....	62	.....	342	1
Diseases of the respiratory system.	Bronchitis, acuta et chronica	20	1	10	.....	6	.....	15	.....	28	.....	9	.....	88	1
	Catarrhus	350	.....	59	.....	171	.....	136	.....	159	.....	122	.....	997	.....
	Phthisis pulmonalis	2	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	3	1
	Pleuritis	29	.....	2	.....	9	.....	7	.....	5	.....	5	.....	57	.....
	Pneumonia	11	3	4	2	8	.....	6	1	8	1	2	.....	39	7
	All other diseases	13	.....	6	.....	5	.....	1	.....	1	.....	3	.....	29	.....
Diseases of the brain and nervous system.	Cephalalgia	24	.....	12	.....	.....	.....	8	.....	4	.....	8	.....	56	.....
	Delirium tremens	15	.....	5	.....	3	.....	4	1	2	.....	3	1	32	2
	Epilepsia	7	2	2	.....	2	.....	5	.....	1	.....	1	1	18	3
	Neuralgia	16	.....	4	.....	11	.....	15	.....	8	.....	5	.....	59	.....
	All other diseases	15	3	2	1	18	.....	3	1	1	.....	3	.....	42	5
Diseases of the urinary and genital organs.	Gonorrhœa	165	.....	24	.....	34	.....	63	.....	67	.....	62	.....	415	.....
	Strictura urethræ	4	.....	.....	.....	4	.....	.....	.....	3	.....	3	.....	14	.....
	Syphilis primitiva	86	.....	22	.....	9	.....	14	.....	13	.....	13	.....	157	.....
	Syphilis consecutiva	71	.....	9	.....	2	.....	20	.....	31	.....	26	.....	159	.....
	All other diseases	55	.....	14	.....	13	.....	15	1	50	.....	21	2	168	3
Diseases of the serous and exhalent vessels.	Ascites	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
	All other diseases	3	.....	.....	.....	1	1	.....	.....	4	.....	1	.....	9	1
Diseases of the fibrous and muscular structures.	Pernio	30	.....	15	.....	10	.....	3	.....	6	.....	16	.....	80	.....
	Podagra	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
	Rheumatismus	231	.....	34	.....	65	.....	107	1	94	.....	136	.....	667	1
Abscesses and ulcers	Fistula	3	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	4	.....
	Phlegmon et abscessus	193	1	30	.....	63	.....	50	.....	47	.....	37	.....	420	1
	Ulcus	81	.....	23	.....	17	.....	33	.....	12	.....	5	1	171	1
Wounds and injuries	Ambustio	12	.....	2	.....	3	.....	7	.....	4	.....	4	.....	32	.....
	Amputatio	3	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	4	.....
	Contusio	298	.....	69	.....	101	.....	107	.....	102	1	84	.....	761	1
	Fractura	18	1	3	.....	5	.....	8	.....	5	1	4	1	53	3
	Luxatio	8	.....	4	.....	8	.....	1	.....	4	.....	2	.....	27	.....
	Punitio	.....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	3	.....
	Sub-luxatio	45	.....	16	.....	4	.....	11	.....	20	.....	28	.....	124	.....
	Vulnus incisum	68	.....	19	.....	27	.....	23	.....	22	.....	20	.....	179	.....
	Vulnus laceratum	73	.....	16	.....	15	.....	33	.....	28	.....	26	.....	191	.....
	Vulnus punctum	18	2	4	.....	4	.....	9	.....	14	1	3	.....	52	3
	Vulnus sclopeticum	12	1	3	.....	13	2	13	.....	8	.....	8	1	57	4
Miscellaneous	Debilitas	12	.....	7	.....	13	.....	5	.....	4	.....	6	.....	47	.....
	Ebrietas	35	.....	9	.....	8	1	24	.....	20	.....	12	.....	108	1
	Hæmorrhois	47	.....	6	.....	12	.....	15	.....	10	.....	13	.....	103	.....
	Hernia	7	.....	2	.....	10	.....	8	.....	6	.....	.....	.....	33	.....
	Morbi cutis	10	.....	1	.....	3	.....	1	.....	1	.....	3	.....	19	.....
	Morbi oculi	79	.....	10	.....	20	.....	38	.....	30	.....	15	.....	192	.....
	Scorbutus	40	.....	1	.....	9	.....	11	.....	17	.....	17	.....	95	.....
	All other diseases	120	1	38	.....	55	.....	135	1	88	.....	62	.....	499	2
	Total	3,597	35	797	4	1,290	4	1,535	11	1,702	7	1,359	8	10280	69