

Death Valley and Its Borax Mines.

dust. At all times the aspect of the valley is superlatively desolate. No spot on earth surpasses it in aridity or tophet-like heat.

During the heated term an hour without water means death. Meat becomes putrid in an hour. Eggs are cooked in the blistering sand. Water is only palatable by means of large porous earthenware jars, common to all

Death Valley is probably the most unique natural feature in California. It is located in the southeast corner of Inyo County, and is inclosed by the Panamint Mountains on the west and the Funeral Range on the east. It is seventy-five miles long, and at its narrowest point but eight miles wide.

At one time, most probably, it was the bed of an ancient river. The lowest depression is 200 feet below sea-level, but above this rises Telescope Peak, 11,000 feet high, of the Panamint Range, and directly opposite the Funeral Peak, which reaches an altitude of 8000 feet. During the winter these peaks are covered with snow.

This remarkable valley was discovered in 1850 by a party of immigrants, many of whom lost their lives in the attempt to cross it. The name has been given to it, also, as being the scene of numberless tragedies. Early in its history traditions of gold and silver deposits of wonderful richness within its boundaries persuaded many adventurous persons to undertake the hazardous experiment of its exploration. The number who have lost their lives in this desolate field is undoubtedly great. Pursuing the mirage of rich deposits of precious metals these adventurous prospectors succumbed at last to the intolerable heat and the agonies of thirst.

The range of the thermometer is probably greater in Death Valley than anywhere in the Western Hemisphere. In winter the temperature is very below zero, while in July and August the thermometer ranges for weeks at 117 degrees above, frequently rising several degrees higher. For weeks at a time the lowest level temperature observed exceeded 100 degrees. The deadly heat burns every vestige of vegetation. The Spanish bayonet, a

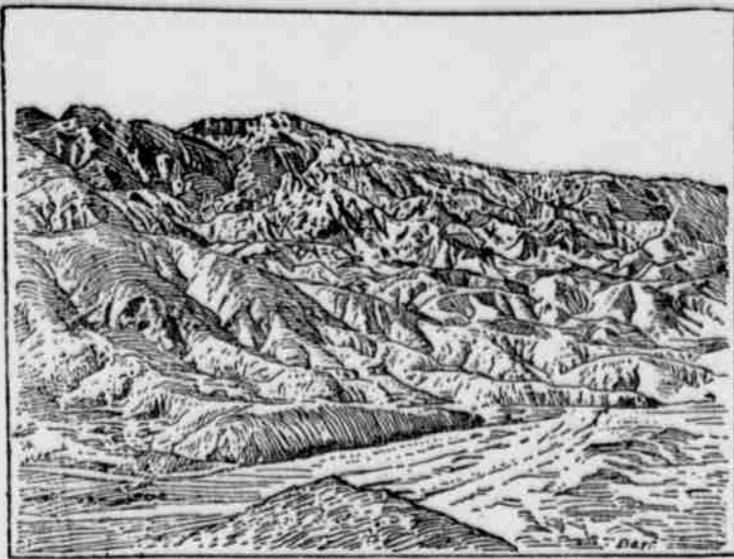
plant that flourishes under the most arid conditions, here barely survives, while the mesquite, with its long roots penetrating deep into the earth in search of scanty moisture, just manages to exist.

A party of enterprising agriculturists once experimented with growing fruit and vegetables in this region, anticipating large profits in the early marketing of their crops. The attempt was a complete failure, the intense heat withering the plants, notwithstanding copious supplies of water and the most skillful cultivation. In the higher altitudes of the Panamints there are numerous valleys with flowing streams. In these fruits are cultivated, and reach the market two months before the California products mature.

The prevailing winds in Death Valley are from the west. Though originating in the Pacific Ocean and saturated with humidity in traveling the infinite distance, they are intercepted by the lofty peaks of four ranges of mountains, which absorb all their moisture, so that by the time they reach the valley all humidity has disappeared, and no living thing can survive the intense heat. Even birds, indigenous to the region, die.

It is in the months of greatest heat

pletely divorced. The carbonic acid unites with the lime, which yields boric acid, the latter with a small portion of soda and the result is borax in solution. The liquor is then drawn off into tanks, where the borax in crystallizing attaches itself to small steel rods and hooks altogether like great sticks of rock candy. The sediment contained in the mixing tanks is com-

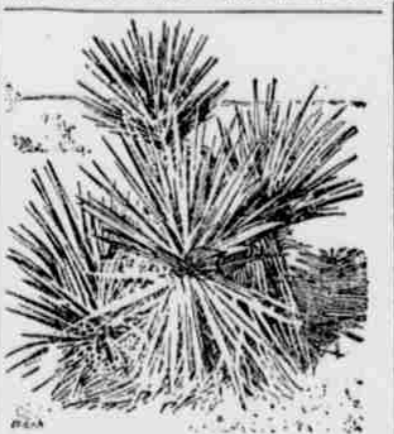


MOUNTAINS ENCLOSING DEATH VALLEY.

hot countries, suspended in drafts and reduced in temperature by means of the rapid evaporation of the moisture from the outside.

The belief that the borax marshes are the remains of the vast lake which once filled the valley is supported by traces of water-line found 600 feet above, on the mountain sides.

In general appearance all borax marshes are alike. They are located



SPANISH BAYONET PLANT, DEATH VALLEY.

at the point of greatest depression and from a distance look like deposits of salt or snow. Under the surface is common wet clay or water of varying depths. These deposits are generally circular in form and appear as though once they were craters. Borax was created by contact of boric acid in gaseous form, with the lime and soda of the surface. At Teels Marsh, Nevada, borate of lime appears in the form of balls imbedded in clay along with soda, salt, etc., but at Columbus these are found in sandy soil. Sometimes these balls are decomposed, underlying the soil which is removed, and the borate shoveled out. Deposits of crude borate of soda are found in Nevada and in Death Valley, at the Monte Blanco mines. These mines are



THE CRYSTALLIZED BORAX ON THE RODS.

located in a region the most forbidding, remote from the railroad and offering almost unsurmountable difficulties in the reduction and marketing of their product, but their richness and extent, compared to all other fields, soon caused them to be regarded as the principal source of supply for the future production of borax in the United States.

The works employ from 400 to 1600 men. The crude borate of lime is first passed through rock breakers and is



BORATE MINES IN DEATH VALLEY.

then ground to the fineness of flour by means of rolls and our stones. It is then, with a small proportion of carbonate of soda, thrown into a digester, where under heat, pressure and agitation the existing affinities are com-

posed largely of sand and dirt with considerable borax mixed. The deposit is passed through a filter press, which presses the dirt and allows the borax liquor to pass away to be utilized again. Repeated over and over again, the last remnant of borax is finally secured by this process.

A Very Successful Venture.

An abnormally generous woman went to Europe last summer, leaving her horses in entire charge of her coachman. The coachman, of a practical turn of mind and with his mistress's full consent, turned a pretty penny by renting the teams out. Before long she had a letter from him—would she object to his setting up a hearse? There was a great demand for something of the sort, new and smart, in the town, and he knew of such a nice hearse to be had at half-price; if she wouldn't mind his putting her horses to it, his fortune would be made. The abnormally generous woman wrote back that she was perfectly willing. A few weeks later she was rewarded by a letter from the coachman saying that the hearse, as run by her horses was the greatest success; "people are just dying to get into it," he added.—New York Sun.

Father's Horrible Discovery.

While trying to save George Denison, an eight-year-old companion, from drowning in the Floyd River at Sioux City, Iowa, George Lewis, aged thirteen, was also dragged down and died with his friend. Denison was bathing in the stream, and was supposedly seized with a cramp. Lewis plunged in after him when he called for help. At first it was not known who the lads were, and the father of Lewis offered to dive for the bodies. He first brought up Denison, and on diving a second time rose with his own son in his arms. He was nearly crazed with grief when he recognized his child.—Cincinnati Enquirer.

Where the Y. F. S. C. E. Will Meet.

The Young People's Society of Christian Endeavor opens soon a world's session in London, and will hold its convention in the Alexandra Palace, which resembles the Madison Square Garden, New York City.

The palace is just beyond the outskirts of London proper and has a capacity for lodging and boarding 5000 Endeavorers, as well as giving ample room for their meetings. The banquet hall of the palace will be divided off into dormitories, enough of them to hold 1200 young women. This ar-



ALEXANDRA PALACE.

range ment left 3800 young men to be cared for, but 800 tents have been provided for them, and they will occupy these, five to a canvas.

The kitchen of the palace is large enough to prepare food for 2500 persons, who can sit down at one time in the dining hall and be served. All Endeavorers not provided for in the palace will have accommodations secured for them in near-by private houses and hotels. It has been settled that all visitors will pay their own expenses.

The total number of delegates expected in London is 60,000, of which 8000 come from America. The delegates represent a membership of 4,000,000 Endeavorers, scattered all over the world.

Easy to Pick the Winner.

They made a wager as to which could give a story the widest circulation in the shortest time.

One of them had it manifolded on the typewriter and sent it to every newspaper in the town.

The other merely told it to his wife "in strict confidence."

FARM TOPICS

Good Poultry Food.

One of the best poultry foods for inducing egg production is cow peas. They may be fed whole to adult stock or cracked for chicks. They are highly nitrogenous and are superior to corn or wheat. Another excellent poultry food is rape, which may be grown on all kinds of soil.

To Cure Collar Galls.

At night rub air-slacked lime on the sore. The next morning apply grease or sweet oil. For hardening horses' shoulders, nothing equals a strong tea made by steeping white oak bark, being careful to peel the bark down to the wood. Apply frequently, say twice a day.

Plan For a Henhouse.

In a henhouse twenty-four feet by twelve feet, the height of the posts should be nine feet on the front, sloping back five feet in the rear. Matched boards fourteen feet long can be used on these posts, each board making a siding for both front and rear. With care in cutting these boards may be used for the sides of buildings, and the fourteen-foot boards will lap over a little if used as roofing. It is better to lath and plaster the inside of the building, as this makes it much warmer. The building paper used for sheathing the insides of houses is cheaper than laths and plaster, and except that it does not repel the lice as the lime does, the paper sheathing is just as good as the lath and plaster. No matter which is used, the interior should be whitewashed, with enough glue mixed with the whitewash to make it stick.

Bleached Rations For Milk Production.

Most farmers now understand the necessity of giving milk-producing food to the milk cow if she is to keep up her production, but many do not pay any attention to the food given to ewe; and sows when they are suckling young, and they go to one of the two extremes, as may have been their previous habit of feeding, or as may be the food they have or can buy at the lowest price. The result is that while one man will have the lambs and pigs are not growing at all, because they do not have milk enough, another will have them looking plump and round at the expense of the dam who turns all her food into milk. There is as much need of a balanced ration for them, that will cause a good milk production, and at the same time keep up a fair amount of flesh and strength, as there is for the milk cows.

Report of a Co-Operative Creamery.

A co-operative creamery makes a report of ten years' work in Denmark, of which the following figures may be of interest, as it is well to be posted on the conditions of our competitors.

The creamery started ten years ago with ninety-two patrons, 400 cows, and received about two million pounds of milk. Last year the patrons numbered 210, the cows 1070 and the milk received was 4,784,190 pounds.

The average net price paid to patrons on the farm per 100 pounds of milk for all ten years was 98.04 cents. (Remembering the ten per cent. heavier weight of a Danish pound.) Both butter and skim cheese were made and the working expenses averaged 14.53 cents per 100 pounds, and of this milk-hauling amounted to 3.44 cents, salaries to 3.08 cents and coal to 1.20 cents per 100 pounds of milk handled. These expenses include, as will be noticed, not only the hauling of the milk, but cheesemaking.

The average price for the ten years per pound of butter was 24.8 cents and for the skimmilk returned to the farmers was, as a rule, charged at the rate of twenty cents per 100 (Danish) pounds, but sometimes when cheese was very low it was reduced to seventeen and even fourteen cents.

The cost of "creamery" was \$11,074, of which more than half has been paid out of the profits.

Two-Year Potato Rotation.

A system of potato growing is gradually being adopted in Monroe County, N. Y., which produces good crops and maintains the fertility of the land, states G. F. W., in the New England Homestead. Two fields only are needed for the rotation and they should be pretty level and of good soil. Potatoes, rye and clover are the crops grown and every second year each field has a potato crop. After the potatoes are dug, the field is harrowed and rye sown. The following spring the rye is seeded with clover. The crop of rye is usually large, yielding from twenty to thirty bushels per acre. The clover is allowed to grow without being pastured until about June 5 of the second year. Barnyard manure may be spread upon it during the winter or early in spring. By early June it is usually knee high and is then plowed under, the ground fitted and the potatoes planted.

If planting is finished by June 25 it is satisfactory. Before marking and planting from 500 to 1000 pounds of fertilizer per acre is drilled broadcast. The potatoes may be planted in rows both ways or in drills. Moderate hilling is usually done, but it is all done one way, so that the field is left in ridges. No hand hoeing is done. If need be, some weeds in the hills may be pulled by hand before the hilling. Some growers prefer level culture, but the potatoes must be planted deeper, and the digging is more difficult and costly. Rye is worth nearly as much per bushel as wheat, and under this system yields as well and furnishes lots of straw. Then it is hardy and sure.



THE EDICTS OF FASHION.

New York City (Special).—The new shapes in dress sleeves are legion. The foundation or basis of most of the popular styles is a trim shape, en-



—Harper's Bazar.
WHAT THE LATEST FASHION EDICTS DECREE AS TO SLEEVES.

casing the arm like a long, tight glove, either flat and snug, if the arm is plump, or wrinkled its whole length, if over-slender. The best of the summer models are lined with a firm but thin pliable silk and have as a rule an under-arm piece. The sleeve is made with two seams.

The majority of sleeves are tight up to the top of the arm. There they expand somewhat to allow of being properly adjusted to the armhole, and any

vas tops and white heels, and laced them with white silk."

The Little Turned-Up Cuff.

A new waist finish has been introduced in the shape of the "little turned-up cuff." "Just as we have provided all our bodices with the deep flaring turn-down cuffs which ripple becomingly about the palm of the hand. It would be too bad if the remedy were not so easy. Have a new bodice made with the little turn-up cuff. It is very neat and folds back like the flap of a very small envelope. It has a sharp point in the middle, and looks as if it was the result of folding back one of the old-fashioned deeply pointed sleeve-wrists. Three rows of stitching border the neat new cuff which snuggles of a tailored origin. It is particularly appropriate to a jacket sleeve, and once seen, will no doubt become a general favorite.

A Boon to the Mother.

Eton jackets and boleros are a boon to the mother who likes to dress her half-grown girl becomingly. There is nothing more jaunty and becoming to her immature figure. It is like as becoming to her as to the older sister.

With a Yoke, E. et.

One of the longer capes has a yoke effect around the shoulders and from that hangs side pleats stitched part way down, as in the skirts of gowns.



A LILAC LINEN. (With tucked bolero braided in white.)

A BIEGE GOWN. (The bodice in horizontal tucks, with sash and undersleeves.)

extra fullness is taken up by short darts, which are pressed flat. The bottom of the sleeve extends beyond the wrist, whether it is cut in points, rounded, flared or simply left plain and straight.

Two Charming Summer Costumes.

"Duck things and shirt waists are what very seriously engage my attention at this moment," confessed the girl from Chicago, reaching for a fan. "I've already gone to the expense of ordering one at my tailor's. I suppose I ought to know that the linen things are to be very much made with extremely brief bolero coats and skirts quite plain. My first excursion into this experimenting with washable things is a dove's breast lilac linen, the skirt most severe and the little coat laid in the very cunningest deep overlapping tucks that run around the body. On every tuck a charming wreath of white braid lace is laid across the bust; over my shoulders fall two broad collars of cream-white linen, fastening half way between chin and waist with smart gilt chains and buttons. Under the coat I have ordered for wear a completely tucked white lawn shirt waist and a very deep girde of Parma violet liberty satin takes the place of the usual belt.

"Some girls will wear anything. I saw one the other day in a really charming little gown spiced by her frivolous shoes. The gown was nun's veiling in beige brown, plain of skirt, but the waist very sweetly laid tucks running from shoulders down. It had revers of brown silk embroidered in plain blue violets turned back upon the shoulders, and it opened front to reveal a vest arrangement of embroidered lawn upon brown silk, whence fell in front two long brown silksashes embroidered in violets. Her sleeves were charming, opening below the elbow to admit of white lawn undersleeves and embroidered brown silk cuffs. Even her parasol was a bit of novel gaiety, the handle of gold in the form of a fierce eagle head with ruby eyes. But, do you believe it, the girl wore brown leather walking ties with cream cat-

The New Skirt.

When the pleated skirt is made to lie flat over the hips it is now further supplemented by a jacket that is also in pleats, and which in shape is between a bolero and an Eton. It has a turned-down collar and small lapels, and is fastened either with a jeweled clasp, a strap of black satin or velvet with gilt buttons, or with rosettes and long ends of chiffon. In shape it is much shorter at the back than in front, and the pleats are sewed so that the figure does not, as might be supposed, appear thick and clumsy. This style is very much used now with the silk gowns as well as



THE ABSOLUTE CORRECT MORNING DRESS FOR A QUIET COUNTRY PLACE.

with those of soft wool, but it must not be attempted in heavy cloth, for that would look quite too heavy and cumbersome.—Harper's Bazar.