GREATEST CAVERN IN THE WORLD

MAMMOTH CAVE, the largest of all known caverns of the world, is situated in Edmonson county, Kentucky, about eighty-five miles by railway southwest of Louisville and not far from Green river, into which the cave's subterranean waters empty. This section of Kentucky, where may be found limestone beds frequently reaching a thickness of 500 feet, is noted for its rocky grottoes, sink holes and caverns. The rocks in the vicinity of Mammoth cave give evidence of but little disturbance by the dynamic forces of past ages. It is such areas of limestone deposits, showing comparatively level strata and located somewhat above a drainage level, with small crevices or joints, that furnish the conditions for the formation of underground passageways and enlarged chambers by the chemical agency of underground waters, says the Spanish edition of the Bulletin of the Pan-American Union.

From a geological viewpoint the Mammoth cave is of comparatively recent origin, its formation having begun something less than 1,000,000 years ago, in the Pliocene age. The cave action began after Green river had cut its channel down into the limestone stratum which underlies this section. The rain water, with its carbonic acid content, seeped through the overlying earth and passing into and through the crevices and joints of the stone, at that time above the level of the river, began the work of solution and erosion. These underground waters naturally gathered along the planes of least resistance, and by the process of solution and subsequent erosion gradually formed what are now the passageways and chambers of the upper levels of the cave. As the crevices grew in size more and more of the surface water drained into

"VIOLET CITY", MAMMOTH CAVE

them through the sink holes, and as Green river cut its bed deeper into the limestone underlay the cave waters kept pace with the process until what had once been mere subterranean rills grew into that remarkable underground stream which is responsible for the immensity of the cave's development, Echo river. This stream now flows through the lowest levels of the cave, no less than 195 feet below the highest level, and empties into Green river.

Entrance Is Picturesque.

The cave is reached by means of a branch railway from a small station on the Louisville & Nashville railroad called Glasgow Junction, about ninety miles south of Louisville. This spur of the railroad was built to accommodate the thousands of tourists who visit this natural wonder during all seasons of the year. Eight and a half miles from the junction the railway stops close to a picturesque old hotel, portions of which were built early in the nineteenth century.

The hotel is located on a bluff directly over the main portion of the cave, the entrance to which is reached by means of a pathway leading down into a wild and rocky ravine in a primeval forest. At the foot of the bluff, in the midst of a picturesque tangle of tulip, maple and butternut trees, in a setting of grapevines, fringing ferns and green mosses, is this entrance formed by a natural arch having a span of 70 feet. From a frowning ledge above leaps a cascade of water which disappears among the rocks below without leaving a visible stream.

To describe in detail the vast interior of the cave with its succession of narrow passageways, broad avenues, vaulted chambers and domes, its deep abysses and high peaks, its flowing rivers, placid lakes and leaping cataracts would necessitate the writing of a book, so only a few of the most important features may be briefly touched upon.

A winding flight of 70 stone steps conducts the visitor around the cascade into what may be termed the antechamber of the cave. At the end of this is a grated iron doorway which can be opened only by the key of the guide. Upon entering the cave a strong current of air greets the visitor, blowing outward in summer and inward in winter. This is due to the marked difference in temperature of the air within and that without the cave. The temperature of the cave is uniformly 54 degrees Fahrenheit the year round. Naturally, when the air outside is hotter and constantly rising the cold air of the cave rushes out to take its place.

Wonders of the Cavern.

Passing through the iron doorway, the visitor finds himself in the Rotunda, the first great vaulted room of the cave. The diameter of the entire cavern area is about ten miles, while its known and numbered avenues are in excess of 225, and their added length is estimated at over 150 miles. The various ramifications of the cave are so extensive that the entire area has been divided into four different routes for the benefit of visitors, through which they are taken by the official guides provided by the management of the hotel and cave, each route having its own attractive features. From the Rotunda the Main Cave, or Grand Gallery, is entered. This splendid gallery, whose arched ceiling is 80 feet high, must be traversed to reach any other part of the cavern. In it are found many of the remarkable features. Among them may be mentioned the Giant's Coffin, a rock shaped like an enormous sarcophagus, 40 feet long, 20 feet wide and about 8 feet deep, which has become detached from the wall and ceiling and rests on what appear to be its stone trestles. Its weight is estimated at 2,000 tons, and it rivals in size the celebrated blocks of Baalbec in Syria.

By the burning of chemical fires many singular and beautiful effects are produced by the guides in the various rooms and galleries of the cave. One of the beautiful sights is to be found in the Star Chamber, a hall 70 feet wide, 60 high and 500 long. The lofty ceiling is coated with black gypsum, studded with thousands of white spots caused by the efflorescence of the sulphate of magnesia. These spots look exactly like stars in the artificial light thrown on them, and by moving the light behind the jutting rocks the guides produce the effect of clouds moving across what seems to be the starry sky above. Various statuesque effects are also produced by the light on the walls, one of which is known as Martha Washington's statue.

Among the many deep abysses perhaps the most interesting is what is called the Bottomless Pit. For many years no one dared to venture to cross this dangerous chasm, but in 1840 a guide threw a long, slender cedar tree across its black depths and discovered a new portion of the cave. Since then a bridge has been constructed over it, and it has been found that the abyss is really only 105 feet deep. One enlargement of the cave is known as Revellers' Hall, and here tables and benches are provided and visitors may enjoy a banquet down in the dark depths in a magnificent banquet hall large enough to seat a thousand people.

Among the many marvels of the cave perhaps none is more beautiful than the magnificent passageway known as Cleveland's avenue, extending a distance of nearly two miles, spanned by an arch of 50 feet and having an average central height of about ten feet. From end to end this avenue is encrusted with the most beautiful formations of a thousand varied shapes. The base of the whole is sulphate lime, some parts of dazzling whiteness and perfectly smooth and in other places crystallized into forms of beautiful flowers, leaves and wreaths. In the flickering light of the torches the walls and ceiling seem to be covered with diamond roses, camelias, chrysanthemums and all the delicate floral beauties of a botanist's paradise. One of the great chambers is knows as the Temple, having an area of about five acres covered by a single dome of solid rock 120 feet high; another known as Lucy's dome, is over 300 feet high and 60 feet in diameter.

TO MAKE WITH CHESTNUTS

Variety of Good Things That Will Be Appreciated by Those Fond of the Edible.

Chestnuts are liked by almost everybody, although they are sometimes found indigestible. If they are boiled, they are easily digested. This is a good way to boil them: Cut each chestnut with a cross on the stem end, and tie them in a piece of cheesecloth or put them in a cheesecloth bag. Boil them until tender in salted water. Then serve them with butter and salt, as they are, or prepare them more elaborately.

Chestnut custard is a delicious dessert, and can be made either from roast or boiled chestnuts. Remove the shells and skins from the cooked chestnuts—a pound and a half of them. Rub them through a sieve and mix with a cupful of butter, to a paste. Add the yolks of six eggs beaten creamy, three-quarters of a cupful of powdered sugar and half a cupful of cream, whipped stiff. Then fold in lightly the whites of the eggs, beaten stiff, and heat in a double boiler until it thickens. Do not boil. Chill thoroughly before serving.

For chestnut salad, boil 20 chestnuts, as directed above, and drop into cold water to harden. Then peel and cut into pieces the size of the chestnut quarters. Serve with French dressing on crisp leaves of lettuce.

Chestnut souffle calls for a pint of cooked chestnuts rubbed through a sieve. Thicken six tablespoonfuls of hot milk with four level tablespoonfuls of flour rubbed smooth with two of butter. Add the yolks of three eggs beaten, two tablespoonfuls of sugar, and stir in lightly the stiff whites of four eggs. Bake 20 minutes.

For chestnut pudding boil a pound and a half of chestnuts and work them to a paste. Cream half a cupful of butter with half a cupful of sugar and add the beaten yolks of six eggs stiff and fold them in lightly. Pour in a buttered mold and steam for an hour and serve with a sweet pudding sauce.

Stewed Shoulder of Mutton.

Choose a small shoulder of mutton, as lean as possible, have all the bones removed and broken up, and roll up the shoulder very tightly; put in a saucepan one or two sliced carrots, two medium-sized onions with two cloves in one of them, 1½ pints of stock made from the bones, a bunch of herbs and a rind of bacon; put in the shoulder, cover down, and place the pan over a good fire, bring it to the boil, then draw the pan to one side and let the contents simmer very gently for three to four hours; when half cooked turn the shoulder, when cooked lift it out and keep it hot. Skim the gravy, strain it, put it back in the pan with the shoulder, and let them simmer for another ten minutes, or, if there is too much liquid, let the simmering continue for a short time longer. The vegetables should be carefully saved, for if they are passed through a sieve they make an excellent soup with the addition of a little stock, so that nothing need be wasted.

Dutch Stew.

Use two pounds of stew beef, cut up raw into small pieces, one-half can tomatoes, one can of peas, one onion cut up fine, one small carrot cut fine, four whole cloves, one-fourth cupful tapioca, one-fourth cupful of bread crumbs, salt and pepper to taste. Put all in a bean pot or deep casserole, cover with water and bake (covered) for four hours. A delicious and convenient dish when one is to be busy or away from home till meal time.

Cranberry Punch.

Seed one-fourth cupful raisins, cover with two cupfuls boiling water and simmer one-half hour. Wash three cupfuls cranberries and add to drained liquor; boil ten minutes; force through a sieve. Add one and one-half cupfuls sugar, three tablespoonfuls lemon juice and a pinch of salt. Freeze to a mush.—Woman's Home Companion.

Grape Conserve.

Seven pounds grapes, four pounds sugar, one pound walnut meat, two pounds raisins, five or six medium-sized apples. Pulp the grapes and boil with the apples until soft. Press through a sieve and add to the chopped skins and walnut meat. Add the sugar and raisins (cut fine) and boil until it is thick enough. Rhubarb conserve may be made the same way.

Candied Apples.

Put a cupful of brown sugar with a little water on to boil and when it threads dip sound, tart apples in the candy and cover thickly. Put a stick in the apple to hold by; you will have something to please the little ones, and it won't harm them, either.

To Clean Sweeper.

Remove the brush and after rubbing off all the hairs and lint, rub with kerosene. Let the brush stand in the air until all the odor has evaporated. The sweeper will do much better work after this treatment.

Chicken Soup.

Three pints chicken broth, ten peppercorns, two slices carrot, one slice onion, on blade mace. Cook one-half hour, add one pint milk, three tablespoonfuls each butter and flour. Salt and pepper to taste.

Bird's-Nest Salad.

Color cream cheese a light green with pistachio coloring; roll into balls the size of bird's eggs, arrange on lettuce leaves and serve with mayonnaise.

Saying Farewell to the Pet

Photo by Frank Fournier.

There is a dawning in the sky
Which doth a world of fate imply,
And on each casual passing face
A look expectant you may trace.
The signs the veteran turkey sees
And with a deep and mournful sigh
He calls his numerous family nigh
And murmurs, pointing to the trees,
"Roost high, my little ones, roost high."
—Eugene Field.

Gratitude

I AM thankful that I have the power to feel the glorious sunshine or the gray rain. My heart fills with joy that I can see the leaves and the sky and hear the music of the brook. Grateful am I that I can appreciate the height of the mountain or steeple and the depth of the shadows, and I am glad that I can be uncomfortable in the intense heat or cold, for that means a joyous sense of relief when it comes.

WHICH one of us is not glad of the power to judge? From the many recurrent cases we can induce a rule, a law, a generality. And from this we can make applications to specific instances. Is it not wonderful, and are you not glad?

FOR my power to decide for myself I am thankful. My freedom of will is a precious jewel that I pray I may duly treasure. No one can say what I shall think, for that is my heritage. My thoughts concerning life, death and the hereafter, are mine, and I am glad.

THEN there is this country in which I live. I am grateful that it is here, with water around it, and other lands on the east and west. The lure of the distant country will prevent us from a narrow insularity. I am glad that we can govern ourselves in matters that affect ourselves. I am filled with joy that men are born free and equal and can keep on living that way.

FOR the position of woman in this country may I ever be thankful. She is not the draft animal of the fields in some countries beyond. She is not the chattel of the middle ages. She is not the spineless creature that was a well-trained echo of another. A woman is the equal of man now, except at the polls. For small favors I am deeply grateful.

A NUMBER of institutions of learning are letting us in at the front doors. If I wish to study sociology or medicine or the languages, I am not beaten into a pulp by scornful deans. If I wish to write a book, I need not be ashamed and hide it under a sampler if I hear anyone coming. Thanks, awfully!

GLAD am I that I can earn money to clothe, feed and shelter myself. Father and mother should not support an adult woman until another man offers to take up the burden. I am not a hanger-on in the political economy march, and I give thanks.

OF A power of self-expression let me never be forgetful. Let me be glad that I can sing when I feel like it, cry when I am inclined to, walk when I want to get away, play when I forget how old I am and write or draw or carve when the great impulse toward beauty stirs in my soul.

I AM thankful that at some times I can be extremely miserable. Psychologists tell us that that implies a power to be intensely happy. Think it over.

ESPECIALLY glad am I for the year 1911. It is so much better than 1811. I am glad that I am living now. The heritage of the past is here. The greatness of science and art is too good to miss.

AND oh, how thankful I am that I can laugh! How much does a sense of humor ease the way! The happy phrase, the clever story, the quick parry and thrust—all are necessary to balance the heavy parts in the life play.

I AM grateful for the bumps that I have had in this life. The retort courteous, the cut direct, the infamous lie, the cruel knock—all have done something. The world is a great teacher.

FOR my friends, let my heart be always grateful. One can't help relatives; a mere accident placed a great aunt in the same family, but friends are chosen. I am glad that I have dear, congenial souls on my visiting list.

MEMORY, my constant companion, makes me grateful. Whether it be a little verse of sunshine, a book, a play or some past joy or sorrow, I must give thanks for the gift of remembering. It doubles life.

AND I am glad that today I am not fearful of the Great Beyond.

BARBARA LEE.

To the Harvest Lord.

Heap high the board with plenteous cheer
and gather to the feast,
And toast the sturdy Pilgrim band whose
courage never ceased;
Give praise to that All-Gracious One by
whom their steps were led,
And thanks unto the Harvest Lord who
sends our daily bread.
—Alice Williams Brotherton.

Fortunate Americans.

When the American citizen looks abroad he feels inclined to give thanks for the possession of a system of government which, despite partisan differences, commands universal respect and confidence. The exceptionally high standard of intelligence which here prevails is a guaranty against sudden movements in opposition to the established order. The vast majority of the American people are capable of analyzing conditions. They keep in close touch with the affairs of the world and with the circumstances of their own land. They are growing steadily in political acumen and are becoming more and more efficiently independent in their determinations. With every peaceful political revolution they strengthen the national foundations by providing outlets for sentiments and dissatisfactions.

Mistake Too Many Make.

If, on this Thanksgiving season, you feel a great melancholy, a lack, a sense of loss or of life's injustices, take this to heart: The cure for every loss and lack is in your own power. The great mistake of the whole world is the belief that some supernal happiness comes with the money to buy and to do certain things. A year is a short time, but set out if you please, today, with the definite intention of finding by next November the secret of happiness.

OLD PRESCRIPTION FOR WEAK KIDNEYS

A medicinal preparation like Dr. Kilmer's Swamp-Root, that has real curative value almost sells itself. Like an endless chain system the remedy is recommended by those who have been benefited to those who are in need of it.

Dr. Kilmer's Swamp-Root is a physician's prescription. It has been tested for years and has brought results to countless numbers who have suffered.

The success of Dr. Kilmer's Swamp-Root is due to the fact that it fufills almost every wish in overcoming kidney, liver and bladder diseases, corrects urinary troubles and neutralizes the uric acid which causes rheumatism.

Do not suffer. Get a bottle of Swamp-Root from any druggist now. Start treatment today.

However, if you wish first to test this great preparation send ten cents to Dr. Kilmer & Co., Binghamton, N. Y., for a sample bottle. When writing be sure and mention this paper.—Adv.

Gentleness succeeds better than violence.

To keep clean and healthy take Dr. Pierce's Pleasant Pellets. They regulate liver, bowels and stomach.—Adv.

Sizing Up Lippy.

A Broad street lawyer was describing an acquaintance. Said he: "Lippy is a man who will ostentatiously buy a box of cigarettes and let you pay for the dinner."—Newark News.

REAL SKIN COMFORT

Follows Use of Cuticura Soap and Ointment. Trial Free.

By bathing and anointing these fragrant supercreamy emollients impart to tender, sensitive or irritated, itching skins a feeling of intense skin comfort difficult for one to realize who has never used them for like purposes. Cultivate an acquaintance with them.

Sample each free by mail with Book. Address postcard, Cuticura, Dept. XY, Boston. Sold everywhere.—Adv.

His Vulnerable Point.

"A war expert says Achilles would cut a sorry figure in the present conflict."

"Maybe so. I fear he wouldn't last long with the Russians."

"No?"

"He'd be sure to get shot in the heel while making a 'strategic move' to the rear."

A Million Miles of Work.

In the years 1905 to 1913 inclusive the survey vessels of the department of terrestrial magnetism of the Carnegie institution covered 160,000 miles, determining the magnetic elements at average intervals of 175 miles. Its land expeditions covered 800,000 miles and established about 2,500 stations. Thus by land and sea they traveled approximately a million miles, or forty times the circumference of the earth.

Medical Examination Day.

During tuberculosis week, which will be celebrated throughout the United States from December 6 to December 12, a national medical examination day will be observed on December 8. Groups and individuals will be urged to make arrangements for physical examination on that day. A circular describing in detail how the advantages of medical examination day may be obtained and indicating certain physical impairments which everyone should look for will be sent on request from the office of the National Association for the Study and Prevention of Tuberculosis, 105 East Twenty-second street, New York city.

It is cheaper to go by way of the water wagon, and that will account for a number of the fares.

CHANGE

Quit Coffee and Got Well.

A woman's coffee experience is interesting. "For two weeks at a time I have taken no food but skim milk, for solid food would ferment and cause such distress that I could hardly breathe at times, also excruciating pain and heart palpitation and all the time I was so nervous and restless.

"From childhood up I had been a coffee and tea drinker and for the past 20 years I had been trying different physicians but could get only temporary relief. Then I read an article telling how some one had been helped by leaving off coffee and drinking Postum and it seemed so pleasant just to read about good health I decided to try Postum.

"I made the change from coffee to Postum and there is such a difference in me that I don't feel like the same person. We all found Postum delicious and like it better than coffee. My health now is wonderfully good.

"As soon as I made the shift to Postum I got better and now my troubles are gone. I am fleshy, my food assimilates, the pressure in the chest and palpitation are all gone, my bowels are regular, have no more stomach trouble and my headaches are gone. Remember I did not use medicines at all—just left off coffee and used Postum steadily." Name given by Postum Co., Battle Creek, Mich.

Postum comes in two forms:

Postum Cereal—the original form—must be well boiled. 15c and 25c packages

Instant Postum—a soluble powder—dissolves quickly in a cup of hot water, and, with cream and sugar, makes a delicious beverage instantly. 30c and 50c tins.

Both kinds are equally delicious and cost about the same per cup.

"There's a Reason" for Postum.

—sold by Grocers