

A REMARKABLE BODY OF WATER.

From the American Journal of Microscopy, by Prof. J. P. Stelle.

From an Oregon paper I take the following relative to a remarkable body of water known to exist in the Cascade range of mountains:

"This lake rivals the famous valley of Sinbad the sailor. It is thought to average two thousand feet down to the water, all round. The walls may be reported as entirely perpendicular, running down into the water and leaving no beach. The depth of the water is unknown, and its surface is smooth and unruffled, as it lies so far under the surface of the mountain that the air currents do not affect it. Its length is estimated at twelve miles and its breadth at ten. There is a beautiful island in its center, with luxuriant trees upon it. No living man has ever yet reached the water's edge, and it is not probable that any ever will. It lies silent, still, and mysterious in the bosom of the "everlasting hills," like a huge well scooped out by the giant genii of the mountains in the unknown ages of long ago, and all around it, great primeval forests an eternal watch and ward are keeping."

Remarkable as this body of water may seem, it is by no means the most remarkable one on our continent. I write this in Central Florida, where I have just examined a body of water which certainly excels the great sunken lake of the Cascades in very many particulars. As nothing has yet been published concerning it, I have concluded to give our readers of the *American Journal of Microscopy* a brief account of what I saw, believing that it will not prove wholly uninteresting, even to them.

In company with an experienced guide I reached the little lake in question at about the hour of ten in the morning. How large it was I could not tell, but I judge it must be of considerable size, from the fact that I could not see across it, although enjoying a kind of bird's-eye view from a location some distance above the level of the water.

Seeing nothing unusual about the place, I was on the point of expressing my disappointment to the guide, when he, having read my thoughts, cut all short by asking that I make a careful survey of the water, remarking, at the same time, that while there was really nothing extraordinary about the lake itself, it was strangely and wonderfully inhabited.

I turned my attention to the water, and was soon convinced that I had, undoubtedly, met with a phenomenon, for it was so clear, so very transparent, that I could see through it in every direction with as much apparent ease as if it had been the atmosphere itself. Presently I saw one of the inhabitants hinted at, a little creature of a light brown color, looking, as it glided here and there, through the pure element, not unlike a common chimney swallow. Then came another, and another, and another, until all the waters of the lake seemed to be thickly swarming with them. They were very busy and very swift in their motions, darting, whirling, and angling with the greatest ease and the most charming grace; the guide said that like birds of the air they were in quest of their prey, feeding upon animals too small to be seen by us from our standpoint.

Suddenly, while I was gazing in wonder upon these strange creatures, a new actor appeared in the person of a larger animal, about the size, shape, and color of a huge muskmelon. He was quite transparent, so much so that I could see through and through him as plainly as if he had been a glass jar; and as he moved leisurely about, I noticed that he was catching and devouring the little "swallows" without mercy. His interior, which seemed to be a huge cavity—nothing more—was literally filled with them, some still alive and swimming about in their strange prison. The entire mass held within his gigantic stomach kept up a rapid whirling round and round in one direction, from which I inferred that he had no regular digestive organs, but simply wore out his food; that is, reduced it by friction to a proper condition for his sustenance.

Scarcely had I got fairly interested in this extraordinary animal when along came something which looked, with its slim, arching neck, very much like a swan. Its course was so directed that ere long it was brought into contact with the "musk melon," and a fight was the consequence. It was a short fight, however, for neither of the parties seemed to relish the business, so they separated and struck off in opposite directions. A little distance, and the "swan" met another of its own kind, and they commenced billing and cooing like two mated doves; but their pleasures were destined to be of short duration, for just at that instant a large and hideous looking creature, with great horns and glaring eyes, pounced upon them from a covert hard by, seizing them both. A terrible struggle ensued, in the course of which one of the "swans" made its escape, but the monster gripped the other fiercely by its slender neck until it ceased to struggle, after which he settled down with it to the bottom of the lake, and very quietly began converting it into a meal.

About this time I noticed a second monster equally as frightful in appearance as the one just referred to, though evidently of a different species. He was moving along on the bottom of the lake, and, unless his course were changed, would pass very near the other. The first monster's treatment of the "swans" had made me his enemy, so I was well pleased with the turn affairs showed a prospect of taking; I desired that his banqueting should be disturbed. And it was. The new comer found him, and went in for a share of the prey. A battle, the most frightful that I had ever before witnessed between two living creatures, immediately commenced. They seized each other and rolled over and over in a real death struggle, for several minutes, in the course of which they actually tore each other limb from limb. Finally,

one of them yielded up and died, after which the other, with but two legs left out of six, dragged itself slowly away. And another instalment of animals, some like gigantic leeches, and others like Oriental turbans, and all effecting locomotion by stretching and pulling themselves into every conceivable shape, settled down and fell to regaling themselves upon the carcasses. They were, doubtless, the vultures of this remarkable body of water.

Half a day or more was spent by me in watching the inhabitants of this Florida wonder. In the course of that time I saw very many strange sights—more than I could hint at in a short article like this. Besides, a written description could convey but a faint idea of the reality; one must see for himself before he can appreciate. Every reader of this *Journal* who has not already examined the remarkable body of water under consideration should do so without fail before he dies, for it will give him new ideas attainable from no other source. If he cannot make it convenient to come all the way to Florida for that purpose, let him arrange to see the lake at home. A good microscope with a drop of impure or stagnant water upon the stage will enable him to have the same kind of lake at any locality he may select.

SPIRITUALISM AND SCIENCE.—We have received several communications on this subject. Both sides have had a fair hearing—two articles each—and we decline to continue the discussion at the present time.

WHY MAINSPRINGS BREAK.—The controversy upon this subject has exhausted its interest, and we propose to drop the discussion.

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Answers to Correspondents.

CORRESPONDENTS who expect to receive answers to their letters must, in all cases, sign their names. We have a right to know those who seek information from us; besides, as sometimes happens, we may prefer to address correspondents by mail.

SPECIAL NOTE.—This column is designed for the general interest and instruction of our readers, not for gratuitous replies to questions of a purely business or personal nature. We will publish such inquiries, however, when paid for as advertisements at 100 a line, under the head of "Business and Personal."

All reference to back numbers must be by volume and page.

TO TAN SHEEP'S PELTS WITH THE WOOL ON.—Let B. F. P. wash the pelts in warm water, and remove all fleshy matter from the inner surface; then clean the wool with soft soap, and wash clean. When the pelt is perfectly free from all fatty and oily matter, apply the following mixture to the flesh side, viz: For each pelt take of common salt and ground alum, one quarter of a pound each, and one half an ounce of borax; dissolve the whole in one quart of hot water, and when sufficiently cool to bear the hand, add rye meal to make it like thick paste, and spread the mixture on the flesh side of the pelt. Fold the pelt lengthwise, and let it remain two weeks in an airy and shady place; then remove the paste from the surface, wash, and dry. When nearly dry, scrape the flesh side with a crescent-shaped knife. The softness of the pelt depends much on the amount of working it receives.—J. S., of Minn.

CHEAP FURNITURE, VARNISH.—In reply to Query No. 2, page 9, present volume, the following recipe, I think, will answer. For a cheap article it is a good one. Take of the best raw linseed oil, 1 gallon, and boil it an hour; then add 2 pounds light colored rosin, finely powdered, stirring it thoroughly until dissolved; then take it from the fire, and add one pint spirits of turpentine. It should be strained before using, and kept from the air, and care also should be used, in making it, to prevent its taking fire.—B. E. W., of N. J.

CEMENT FOR LEATHER BELTING.—Let B. B. G. take of common glue and American isinglass, equal parts; place them in a boiler and add water sufficient to just cover the whole. Let it soak ten hours, then bring the whole to a boiling heat, and add pure tannin until the whole becomes rosey or appears like the white of eggs. Apply it warm. Buff the grain off the leather where it is to be cemented; rub the joint surfaces solidly together, let it dry a few hours, and it is ready for practical use; and if properly put together, it will not need riveting, as the cement is nearly of the same nature as the leather itself.—J. S., of Minn.

FILTER FOR RAIN-WATER CISTERN.—There is no better filter for a rain-water cistern, than a wall of soft-burned bricks, built up within it. I have one twenty inches square in the center of my cistern, from which the pump draws. It may be built in one corner as well. The water percolates through the substance of the bricks, which detain every impurity, except such as are chemically united with the water.—N. D., of Me.

BARKER'S MILL.—The cause of motion in Barker's mill is the pressure that there is on every part of the inside of the arms except where the orifices are; this destroys the equilibrium, and hence the motion. The recoil of a gun when fired, the rising of a skyrocket, and many other motions are due to the same cause. It would be difficult for "Curious" to calculate the speed of the water in the arms, since the centrifugal force generated in the machine would cause an increased flow of water.—L. G. M., of Ark.

OUT-DOOR GILDING.—If N. M. will take unrulid writing paper, and wax it, he will solve his problem. Let him first put on his size, then take his book of leaf, and laying it on any convenient surface, slip his waxed paper into the gold leaf, pressing it down with the hand so as to bring the waxed surface in contact with all parts of the leaf, then he may withdraw the paper and the leaf will adhere to it, so that he may almost defy a hurricane.—W. L. T., of Conn.

F. F. F., of Cal.—The explosive material in gun caps is composed of the following constituents, several of which are carefully made compounds, and dangerous to handle: Chlorate of potash, 26 parts, niter 30 parts, and fulminate of mercury 12, sulphur 18, ground glass 14, gum 1. Two to three grains of this composition are applied to the bottom of each cap.

A. R. S., of Ohio.—With cylinders of the same length and everything else, except the diameters of the cylinders, being equal, the same amount of steam used non-expansively will do the same work.

C. P., of Pa.—Crucibles for melting brass, gold, and other metals requiring a high heat, are generally made of plumbago, or graphite, commonly called black lead, mixed with clay. "Hessian crucibles" are also used; they are made of very refractory clays.

G. W. R., of Pa.—Your plan for boring out segments of cylindrical rings is impracticable. We shall shortly publish a correct way of doing this, with an engraving, and then drop the subject.

W. F. S., of Ind.—We should be glad to hear from you more at length on the subject of wooden railroads. Facts relative to this subject are valuable.

J. P., of Md.—An examination of the mineral you send shows that it is the hematite ore of iron. If plentiful it is of course valuable

H. F., of Ind.—We refer you for the information you seek to "Bacon's Revision of Porter's Treatise upon the Steam Engine Indicator," published by D. Van Nostrand, New York.

F. E. H., of Mass.—It is the impurities in coal that melt and form cinders. Bituminous coal will, however, often cake when allowed to cool before it is wholly consumed. Such cakes are not cinders, properly speaking.

P. P., of Pa.—If you will submit the drawing of the tool you would use to turn a plunger for the segment of a hollow cylindrical ring we will give it careful examination, and, if deemed worthy will publish.

N. H. E., of N. Y.—We do not wish to discuss the subjects of leveling and balancing millstones any further at present.

O. W. C., of Mo.—Davies' Practical Mathematics, published by A. S. Barnes & Co., of New York, contains rules for measuring bricklayers', plasterers', and carpenters' work.

New Patent Law of 1870.

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