Nebraska. Their occurrence so far north seemed so unlikely that at first little attention was given to these rumors. At length specimens of this fern were received which were said to have grown wild at Cascade, in the edge of the Black Hills. A personal investigation was the only thing which could settle the matter, for it still seemed very likely that some mistake had been made, and that the specimens received had come from some more southern station. Accordingly I visited the locality August 24, 1898, in company with Dr. F. E. Clements, and we were astonished to find this fern in great abundance along the banks of Cascade Creek. This stream is a couple of metres wide and twenty to thirty centimetres deep, and is fed by several large springs of warm water, having a temperature of about 26° Cent. We very carefully examined the locality and satisfied ourselves that this fern is indigenous and that it has not been introduced by human agency. Since this discovery I have seen specimens of the same species collected at Cascade in 1892, and a fragment collected in 1890 at Hot Springs, ten miles distant, along the banks of Fall Creek, another warm stream. Mrs. Alice M. Crary, a keen observer who has lived many years in the Black Hills, assures me that they grew abundantly along Fall Creek at Hot Springs, 'before that place was settled.'' All this tends to corroborate our conclusion that these ferns were not transplanted by human agency, and that we have here a curious problem in the distribution of a species.

### THE FUNCTION OF BLOOM.

As is well known to botanists but not so well known to the general public, the white powdery coating on some leaves and fruits is waxy in nature and is called 'bloom' in technical works on Botany. Its function has received some attention, Mr. Darwin having made it the object of some studies in his later years. In a recent number of the *Laboratory Bulletin*, of Oberlin College, along with papers by the lamented Professor H. L. Jones, is a short one by his assistant, Miss Roberta Reynolds, giving the results of a series of experiments which show that when the bloom is removed from the epidermis the transpiration of water is greatly increased. Thus in case of *Agave utahensis* the loss was about two and a-half times as much from the leaf which was without bloom as from that with the bloom. With *Echeveria peacockii* it was two and a-third times as much; with *Agave verschaffelti* one and four-tenths; *Agave americana* about two and a-half; an undetermined *Agave*, two times as much; two unnamed species of *Cotyledon*, about one and one-third. It was observed, also, that on damp days the difference between the leaves was less than on dry days; so, too, there was less difference in the case of young leaves than when old ones were used.

### A TINY PINE TREE.

Last summer I climbed Green Mountain, near Boulder, Colorado, and found growing from a crevice in one of the rocks at the summit a small tree of *Pinus albicaulis* Engelm., about thirteen centimeters high and five millimeters in diameter. It was unbranched, and bore a single, terminal tuft of leaves. And yet this tiny tree, when carefully examined, was found to have twenty-five distinct annual rings. I know of no other case of natural dwarfing carried to such an extreme, and, therefore, place this one on record.

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## *CURRENT NOTES ON ANTHROPOLOGY.*

### BOTANICAL KNOWLEDGE OF THE ANCIENT AZTECS.

Students of ancient Mexico are acquainted with the work of Dr. Hernandez, who was sent by Philip II. to study the plants and

minerals of New Spain. His 'Natural History' was printed in 1651 and is a storehouse of the knowledge of the Aztecs on that subject. In describing a plant he always gave its native name and how employed by the Indians.

In the *Anales del Instituto Medico Nacional*, Tom. II., No. VI., 1898, is an article by Dr. F. Altamirano, in which he endeavors to identify the plants mentioned by Hernandez and give their modern botanical names. He quotes fifty-one, assigning most of them to genera and species, and adds the modern uses to which they are applied. The article forms a useful appendix to Hernandez.

### SEXUAL DIMORPHISM IN MAN.

IN a pamphlet of about forty pages Prof. Dr. Giuseppe Marina sums up the results of his measurements of 22,755 adults, Italians, Slavs and Germans. His studies tend to diminish the value of the skull-form as a criterion and to cast doubt on the 'criminal type.' But the most novel of his results relate to the relation of the sexual characteristics in general to the pelvic diameters. He formulates the law that in proportion as the pelvic index in the one sex approaches that of the other, this similarity will be correlated to a cranial form and capacity, and to a number of traits, physical and mental, which belong to the other sex. Feminilism in the male, for example, is displayed by the length of the iliac crests, the shortness of the inferior extremities, a wider pubic angle, ampler cotyloid cavities, greater distance of the umbilicus from the pubis, development of the mammæ, etc. Dr. Marina points out that these traits are racial, sexual dimorphism being much more marked in some than in other stocks. The point is of wide-reaching significance. (*Studii Antropologici sugli Adulti.* Torino, 1897. Fratelli Bocca.)

### HEREDITY; A CONTRAST.

IN the *Revue Scientifique* for April last Dr. Cesare Lombroso, in an able discussion of the relative influence of heredity and environment, announced the conclusion that "the influence of environment is potent enough to annihilate all ethnic traits."

At the meeting of the German Anthropological Society in August of this year Professor Kollmann, of Basel, in an address on the same subject, stated the dictum of science to be that "the influence of heredity is far stronger than that of environment. The ethnic traits are immortal and persist, though the peoples who bear them may disappear from history." (*Globus*, Aug. 27, 1898.)

These are two of the most eminent authorities among European anthropologists. As the traditional circus man said: "You pays your money and you takes your choice."

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## *SCIENTIFIC NOTES AND NEWS.*

### THE CONFERENCE ON AN INTERNATIONAL CATALOGUE OF SCIENTIFIC LITERATURE.

THE Second Conference on an International Catalogue of Scientific Literature began its sessions in the rooms of the Royal Society on October 12th. On the preceding evening the President and Council of the Society gave an 'At Home' to meet the delegates, and a dinner followed on the evening of the 12th. The foreign delegates in attendance at the opening of the Conference were: France, Professor Darboux and M. Deniker; Austria, Professor Weiss and Professor Boltzmann; Hungary, Dr. A. Heller and Dr. Theodore Duka; Holland, Professor Korteweg; Belgium, M. Descamps, M. Otlet and M. Lafontaine; Switzerland, Dr. J. Henri Graf and Dr. Jean Bernoulli; Japan, Professor Einosuke Yamaguchi; Norway, Dr. J. Brunchorst; Sweden, Dr. E. W. Dahlgren; United States, Dr. Cyrus Adler. Men of science throughout the world are greatly interested in