highest point reaching only 132 feet above the sea.

The flora is poor, embracing some 350 or 400 species, the relatively numerous cacti in the genera *Opuntia, Cactus, Melocactus* and *Pilocereus* emphasizing the desert-like conditions prevailing on the islands. Five plant areas were differentiated: (1) That of the strand; (2) the scrub, where nearly all the endemic species of the islands have been found; (3) the white sand or white land, as it is called locally, characterized by a species of *Coccothrinax;* (4) the salinas, characterized by the shrub *Avicennia nitida* Jacq., and (5) the savannas, where *Conocarpus sericea* Forst. is the characteristic shrub and *Sporobolus virginicus* the common grass. In the numerous salt holes is found the only fern of the islands, *Acrostichum aureum.*

Excellent photographs were exhibited showing the dwarfing effect of the sharp winds of the southern coast, where the vegetation, elsewhere six or eight feet tall, is reduced to a foot or two in height and becomes widely spreading.

One of the results of Mr. Nash's trip was the extension of the range of *Pseudophœnix sargentii* about 350 miles to the southward; another the collection of a number of new species.

Numerous photographs, and specimens from each of the plant areas, illustrated the speakers' various points.

Edward W. Berry,
Secretary.

THE SCIENCE CLUB OF NORTHWESTERN UNIVERSITY.

The Science Club of Northwestern University held its regular monthly meeting Friday evening, January 6, 1905.

The program was furnished by the department of mathematics of the university, Dr. W. M. Strong, of Chicago, presenting a paper on 'Some Points of Interest in Mortality Tables.'

Floyd Field,
Secretary.

DISCUSSION AND CORRESPONDENCE.

THE EPIDIASCOPE.

To the Editor of Science: With reference to Professor Todd's query in the last issue of Science, 'Who saw the Epidiascope at St. Louis?' I am happy to say that the apparatus has recently been installed in the anatomical laboratory of Brown University, a much appreciated gift from physicians of Providence and other cities. I had an opportunity of seeing the epidiascope in operation at Jena in 1903 through the usual courtesy of the Carl Zeiss management.

In actual use in the laboratory it surpasses expectations both in respect to convenience in handling and to range of capabilities. Lantern slides or other transparent objects up to about twelve inches in diameter and microscopic slides are projected with good effect. The new feature which especially distinguishes the apparatus—the projection of opaque objects—is of course the most remarkable. In this as in other respects we find that the claims put forth in the prospectus are, indeed, very modest. The color, texture, motion and third dimension of objects are beautifully reproduced. Colored lithographs in bound periodicals or reprints may simply be placed upon the carrier of the machine while the book is held open with the hand, and the whole page appears with the colors and lines of the figures perfectly reproduced. It is a great advantage that the image is not reversed. A manuscript or page of text can be read from the screen directly. Original water color or oil paintings are reproduced altogether too faithfully, for the effect is that received when standing close to the picture. Insects of various kinds have been tried; they lose nothing in the reproduction. The metallic luster and iridescence of the beetles show better because of the brilliant light than when viewed directly. On the other hand, moths or butterflies with bright colors and soft texture appear with as much naturalness as do the beetles. Such natural objects of course do not suffer from the magnification of details. A small adder and a newt when placed on the carrier appear on the screen as a boa constrictor and a giant salamander. Embryos or dissected

specimens in water or in alcohol give good images. A pithed frog, cut open, shows the beating of the heart and the peristaltic movements. Furthermore, the demonstrator can not only point to the parts on the object itself, but can further separate the organs with the forceps and each movement may be distinctly observed by all in the room.

It is obvious that the apparatus is of the highest value in demonstrating before an audience a great variety of solid or opaque objects which could not be shown by lantern slides even were the time and money for preparing them available.

A. D. MEAD.

ANATOMICAL LABORATORY,
BROWN UNIVERSITY,
January 10, 1905.

QUOTATIONS.

ANOTHER CANCER SERUM.

THE newspapers last week reported, with scare heads, photographs, photomicrographs, and editorial comments, a new cancer discovery from the Gratwick Pathological Laboratory at Buffalo. It is asserted that a number of cures of cancer in mice have been effected by means of a serum prepared at the laboratory and the hope is suggested that the treatment will be equally efficacious in man. According to the New York *Herald* the cancerous mice used for the experiments were obtained from Professor Jensen of Copenhagen. They survived the Atlantic voyage, but expired between here and Buffalo. The cadavera were preserved and inoculations from one of them 'took' on several live mice, and by repeated transplantation a large number of the animals with cancer became available for further experimentation. Many of these mice recovered spontaneously, and the experimenters conceived the idea that this fortunate result was brought about by the elaboration of an antitoxin. Having in mind the possibility of a successful serum treatment of cancer, they conducted a series of experiments which they think have proved beyond question that the blood of mice which have recovered from cancer possesses an antitoxic quality. This blood, when injected into mice suffering with cancer, arrested the growth, and when the tumors were not too large caused their disappearance.

We have no reason to doubt the accuracy of the observation of the workers at the Buffalo laboratory as regards the fact of the disappearance of the tumors in mice treated with serum, and we earnestly hope they may be able to develop their discovery so that it may become applicable to man. But the plans of mice and men are proverbially uncertain in their outcome, and it is deplorable that the secular press should have prematurely reported these incomplete results. Even if the highest hopes of the experimenters are eventually realized the announcement of their discovery at this time can but do much harm by inducing many present sufferers to cast away the plank of surgical excision to grasp at what is yet but the straw of serum therapy. Schmidt, Doyen, Adamkiewicz and others whose names we have forgotten have elaborated antitoxic cancer sera, and they have failed to cure. This, of course, is no argument against the possibility of the Buffalo serum being efficacious, but in a matter of such momentous importance to mankind it behooves one to proceed with extreme caution and not to ignore the lessons of the past and the present even while dreaming of a glorious future. Many mountains have been in labor at various times, but, alas, many little white mice have been born.—*New York Medical Record.*

SPECIAL ARTICLES.

A MODEL ILLUSTRATING HITTORF'S THEORY OF THE MIGRATION VELOCITIES OF IONS.

As an aid in explaining the conception of Hittorf* the model shown in Fig. 1 has been found so satisfactory that a brief description is here given in the hope that it may be of service to those teaching the mechanism of electrolysis.

Upon a base-board, 50 cm. $\times$ 7 cm., two upright supports, *FF* (3 cm. $\times$ 1 cm. — 15 cm.), are fastened. Through these supports pass two cylindrical wooden rods, *EE*, 6 mm. in diameter and 47 cm. long. Upon these

* *Pogg. Ann.*, 89, 177; 98, 1; 103, 1; 106, 337, 513.