SEPTEMBER 7.

The President, Dr. RUSCHENBERGER, in the chair.

Thirty-one members present.

On Mermis acuminata.—Prof. LEIDY exhibited a living specimen of *Mermis acuminata*, which had been sent to him for examination, the 8th of last August, by Mr. P. H. Foster, of Babylon, Long Island, N. Y. It was one of two specimens which Mr. Foster had taken from apple worms found concealed in a woollen rag tied around the trunk of an apple tree in his garden. The Mermis is $7\frac{1}{2}$ inches long, and had been retained alive in a box with moist sphagnum. It exhibits a condition which Prof. L. had observed on several previous occasions in other species of Mermis. An intermediate portion of the body, apparently from injury, had died and was decomposed, while the extremities held together by the integument were still alive and active. This condition has been observed to be maintained for some time, that is to say, for some weeks.

SEPTEMBER 14.

The President, Dr. RUSCHENBERGER, in the chair.

Thirty-six members present.

SEPTEMBER 21.

Dr. CARSON, Vice-President, in the chair.

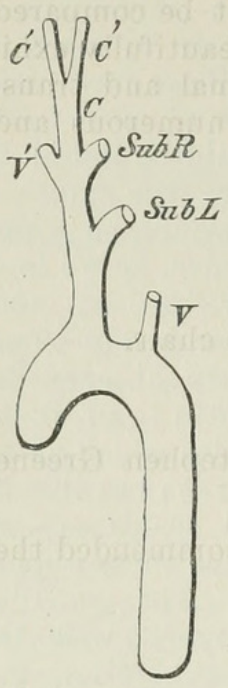
Forty-nine members present.

Variations in the Stipular Spines of Robinia Pseud-acacia.—Mr. THOMAS MEEHAN referred to the thorns of the yellow locust, which, as usually seen, were about a quarter of an inch long, and nearly as wide at the base; triangular in shape. At the meeting of the American Association at Detroit he collected specimens, one of which he exhibited, with slender spines, about three-quarters of an inch long. Since then, in the vicinity of Chicago, he had noticed that there was considerable variation in the direction of long and slender spines. In his own vicinity he had since noted a large number of trees, and some variation, but only to-day had he found one with long, slender spines, and that was even longer than the case from Detroit, being in some cases a full inch in length. The fact of this great variation was probably new;

but it was also interesting from its bearing on a physiological question of importance. The first suggestion made by most of his botanical friends, to whom he had mentioned these facts, and he believed the first that would occur to the minds of most botanists, would be that these extra strong spines would be found in connection with extra strong shoots. If these were true spines—that is to say, abortive branches—the inference would be a fair one; but these thorns were the analogues of stipules, as we look for in allied leguminous plants, and would, therefore, be most likely to follow the laws which influenced stipular productions. One of those laws was, at least so far as his own observation went, that stipular development was in inverse ratio to ordinary growth force. For instance, we say that the scales which cover the buds of trees in winter are metamorphosed leaves; but this is, in many cases, certainly not strictly true. Bud scales are, in many cases, but modified stipules where leaves have these appendages, and dilated petioles where they have not. This peculiar development of the stipules, of course, only commences with the decline of growth force in the axis in the fall, or before it has achieved great power in the spring.

The specimens of *Robinia* exhibited illustrated the same law. In the one from Detroit—the three-quarter inch slender stipular spines—it would be seen by the members, were not from a very vigorous branch, but from a very slender one; but the best illustration was on the strong branch which he exhibited, cut to-day, and with the inch spines before referred to. This was from the upper portion of a branch of this year's growth, 6 feet long. On the lower portion of the part exhibited, produced when the growth force would be at its maximum, the spines are of the normal size, about one-quarter of an inch in length; and these spines increase in length gradually to an inch in proportion as the season's growth becomes weaker. But there is a still stronger illustration in the secondary branchlets which have grown from the main one. These are no thicker than straws, but the spines are about three-quarters of an inch in length, and slender, and much larger, in comparison with the axis to which they are attached, than the largest on the strong main branch.

On the Anatomy of the Giraffe.—Dr. H. C. Chapman remarked that, although the anatomy of the giraffe has been well described in the Phil. Trans. by Prof. Owen, as the opportunity of dissecting it does not occur often, and the literature of the subject is not very full, it does not appear superfluous to call attention to one or two facts noticed in a dissection of the male animal that died some time since in the Zoölogical Garden, and whose stuffed skin makes a valuable addition in our museum. He had pleasure in saying that he found the internal organs as described by Prof. Owen, save in reference to the manner in which the great bloodvessels



spring from the aorta. In the example dissected by Dr. Chapman, there was an innominate artery, which gave off the left subclavian, *sub L.*, the right subclavian, *sub R.*, the right vertebral, *V'*, and the common trunk of the carotids, *C*; the left vertebral, *V*, springing alone from the aorta; whereas in Prof. Owen's example, according to the description, the left subclavian, as well as the left vertebral, came off separately from the aorta, while the right vertebral came from right subclavian. It is possible that in the former the disposition of the bloodvessels was an anomalous one. He would also mention that there was an entire absence of a gall-bladder, which was noticed twice out of three times in the cases studied by Prof. Owen. For the reason above given, he did not refer to the brain, alimentary canal, etc.; to those who may be interested, he would simply state that these organs may be seen in the museum of the University of Pennsylvania.

Post-mortem Examination of an Elephant.—Dr. CHAPMAN remarked that, while the organization of the elephant is pretty well known to naturalists, as the opportunity of dissecting it does not often present itself, he would call the attention of the members to a few points noted in his *post-mortem* of the Empress, which recently died at the Zoölogical Garden. On account of the heat of the weather, the examination was necessarily a limited one. For some months before death the animal had been gradually failing, having reached an extreme old age. Numerous abscesses in the skin (rendering it useless for stuffing) had been a continuous source of irritation; while the trouble exhibited by the generative organs was seen to result from fibro-osteoid tumors, which involved the uterus, ovaries, broad ligaments, etc. These tumors, of which there were as many as 25, varied very much in size, the smallest having the diameter of an orange, while the largest would not go into a horse bucket. The remaining organs were healthy—the heart was enormous—the aorta and pulmonary arteries looking like hose plugs. As regards the stomach, the cardiac portion was much developed, and the peculiar transverse ridges were observed. The greater curvature of the stomach measured 65 in.; the circumference in its greatest part 54 in. At the entrance of the œsophagus into stomach, in the specimen now preserved in the museum of the University of Pennsylvania, may be seen a valve extending half way across the aperture. The circumference of the small intestine was 14 in., while that of the large measured 41 in. The colon was thrown into deep folds. The liver was bilobed—but there was no gall-bladder. The kidneys exhibited the lobu-

lated type of structure. The great omentum might be compared to a large sheet—in it the lymphatics were most beautifully exhibited. The trunk was seen to consist of longitudinal and transverse muscles, while the nerves supplying it were numerous and large.

SEPTEMBER 28.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty-four members present.

Samuel G. Lewis, Eugene Santee, M.D., and Stephen Greene were elected members.

The Committee to which it had been referred recommended the following paper to be published :—