room, Tuesday, January 10, 7:30 P.M., the following program being rendered:

PROFESSOR WILLIAM CAIN: 'The Theory of Metal or Reinforced Concrete Domes.'

PROFESSOR J. H. PRATT: 'Steel Hardening Metals.'

ALVIN S. WHEELER,
Recording Secretary.

DISCUSSION AND CORRESPONDENCE.

THE BITING POSITION OF ANOPHELES.

IT is a curious fact, as shown by Dr. J. B. Smith's communication in SCIENCE for January 13, 1905, that no observer, from the number cited, has noted the exact position of this mosquito when biting. The writer, in his communication in the December 2, 1904, issue, based his statement upon observations made in 1903 in the northern woods of Minnesota, where a number of individuals of *A. maculipennis* were allowed to fill themselves with blood from the hand, in an endeavor to see how long a time was required by them to digest a full meal (page 170 Eighth Annual Report of the State Entomologist of Minnesota). As I recall the experiment, my impression is that these mosquitoes, when biting, took a position somewhat resembling their resting position, with body and beak more nearly in line, and not at right angles as seen in *Culex*. I shall have to include myself in the army of non-observants to the extent of saying that I am not absolutely sure of this. This was made clear in my communication on page 170 of the issue of SCIENCE referred to, where I said, 'While we may be mistaken, we are under the impression that this genus, in biting, etc.' As Dr. Smith very rightly says in his letter 'I do not understand him (Washburn) to say positively that the figure is inaccurate, only that it had been his belief that the biting position resembled the resting position more nearly.'

As I remember the chart at St. Louis taken from an illustration of Nuttall & Shipley, the biting *Anopheles* is shown with body horizontal. This may be correct, but I note that Dr. Herbert Johnson, who worked on *Anopheles* for Dr. Smith, and who is quoted in the latter's communication, says with reference to the position of the body of *Anopheles* when biting, 'It is always somewhat oblique.' It was, I believe, this horizontal position with beak at right angles, which caught my eye in looking at Dr. Smith's most complete and excellent exhibit.

At the same time it will possibly occur to many that there may be individual variations in the position of biting mosquitoes, due to different configurations, greater or smaller, of the surface at the immediate point where the insect is working. The time is not far distant when this feature in the activities of *Anopheles* can be put beyond question. In the meantime it is to be hoped that some more observant workers, following Dr. Smith's suggestion, will let us hear from them on this point.

F. L. WASHBURN.

MINNESOTA STATE EXPERIMENT STATION,
January 19, 1905.

UNIVERSITY REGISTRATION STATISTICS.

TO THE EDITOR OF SCIENCE: The registrar of the University of Wisconsin has called my attention to a discrepancy that occurs in the figures furnished by him for the article on 'University Registration Statistics,' published in SCIENCE, December 30, 1904. In former years the short course and dairy students, who do not enter the university until December 1, were reported, whereas they were not included in the 1904 table. Four hundred and thirty-nine short course and dairy students were enrolled on December 1, 1904, and inasmuch as none attended the summer session of 1904, 439 should have been added to the total, giving a grand total for the University of Wisconsin of 3,370 instead of 2,931, and consequently showing a normal increase instead of the decrease represented by the figures in the table. These additional students were reported a fortnight after the appearance of the article, but it seems only fair to call attention to the omission.

RUDOLF TOMBO, JR.

SPECIAL ARTICLES.

GENERIC NAMES OF SOFT-SHELLED TURTLES.

IN a recent paper 'On the Existing Genera of the Trionychidæ' (*Proc. Amer. Philos.*

Soc., XLII., pp. 268–274) Dr. O. P. Hay, among other questions, endeavors to show that Wagler's *Aspidonectes* must stand for the large genus of soft-shelled turtles typified by the species *Testudo triunguis*, and that *Amyda* must be regarded as a synonym of the former. As I shall show below, the case must be reversed so that *Aspidonectes* becomes a synonym of *Amyda*.

Dr. Hay proceeds from the assumption that Wagler (1830) was the first author to subdivide the genus *Trionyx*, and if that were the case his reasoning would undoubtedly hold good. Unfortunately the subdivision was undertaken as early as 1816 by Oken. In his 'Lehrbuch der Zoologie,' volume II., p. 348, the latter divided the genus in two, one containing the majority of the species, which he called *Amyda*, and one for the single species *T. granosus*, which he expressly calls *Trionyx granosus*, thus evidently reserving the generic term *Trionyx* in a restricted sense for this species. He thus anticipated Wagler by fourteen years in limiting *Trionyx* to the genus which afterwards has been currently known as *Emyda*. The part of Dr. Hay's argument which relates to the latter is, therefore, not affected by Oken's action. But *Amyda* and *Aspidonectes* are not exactly coextensive, inasmuch as Oken does not definitely place *T. subplanus* in either of the two genera, being uncertain as to its affinities and referring to it both as *Amyda subplana* and as *Trionyx subplanus*. Consequently it can not with any show of reason be made the type of any of these genera.

The next man to adopt Oken's name *Amyda* was Fitzinger, who in 1835* restricted it to three species, viz., *T. subplanus*, *T. muticus* and *T. euphraticus*. As shown above, *T. subplanus* can not be Oken's type, neither can *T. muticus*, which was described long after Oken. There remains consequently for type *T. euphraticus*.

It thus becomes unnecessary to discuss Bonaparte's subsequent employment of *Amyda* in 1836, but it may not be out of the way to observe that his arrangement can not be made to differ from Fitzinger's of the previous year, inasmuch as it is a paraphrase pure and simple of this author using his characters verbatim and quoting all the subgeneric names as '*Aspidonectes*, Fitz.,' '*Platypeltis*, Fitz.,' '*Pelodiscus*, Fitz.,' and '*Amyda*, Fitz.,' the only difference being that Bonaparte does not mention more than one of the species Fitzinger included.

As Dr. Hay has clearly shown, the type of Wagler's *Aspidonectes* by elimination is *A. triunguis*. He does not mention in his article in which genus he would place *T. euphraticus*, but I think there can be but little doubt that the two species are strictly congeneric, and that consequently *Aspidonectes* becomes a synonym of *Amyda*.

If *T. subplanus* is generically distinct it must retain the name *Dogania* given it by Gray in 1844. Dr. Hay considers it congeneric with *Aspidonectes* (now *Amyda*), but I wish to call attention to the fact that it is not only unique in having all the pleuralia separated by the neuralia, but also in lacking the median process of the hypoplastron, as shown recently by Dr. Siebenrock. Altogether it possesses so many peculiar characters that it seems more worthy of separation than the North American species which Dr. Hay would recognize as *Platypeltis*.

LEONHARD STEJNEGER.
U. S. NATIONAL MUSEUM,
January 19, 1905.

* There is no reason for quoting his paper in the first volume of *Annalen des Wiener Museums* from 1836. It was certainly published before Bonaparte's 'Tabula analytica,' as he quotes Fitzinger throughout.

A NEW FIELD FOR LANGUAGE STUDY.

THE latest form of instrument in which a spoken language is magnetically recorded in a steel piano wire, was shown to the members of Section B at the recent meeting of the American Association for the Advancement of Science at Philadelphia. The wire is carried on two spools driven electrically, and can be reeled from either to the other. During this operation the wire passes between the poles of a small magnet, and by magneto-induction the spoken words are reproduced in the receiving instrument. If the motion of the wire is direct you hear the words as they