

the year 1904. Upon motion by the Society to increase the membership of the Publication Committee, the Chair appointed, in addition to the present members, Mr. D. W. Coquillett and Mr. Otto Heidemann.

In the absence of Mr. Coquillett the annual address of the President was then read by the Recording Secretary.

## ANNUAL ADDRESS OF THE PRESIDENT.

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### A BRIEF HISTORY OF NORTH AMERICAN DIPTEROLOGY.

By D. W. COQUILLETT.

In searching for a topic that promised to be of some interest to the members of this Society, it occurred to me that perhaps a brief history of the science of Dipterology as it applies to this country might not be wholly devoid of interest, the more so as nothing of this kind has been attempted within recent years.

In so far as this science affects our fauna, it had its inception in the year 1763; in that year the immortal Linné described a single Dipteran from Pennsylvania under the name of *Asilus æstuans*, a species now placed in the genus *Erax*. Not only was it the first member of this order from our fauna to be honored with a name and description, but it also enjoys the distinction of being the first Dipteran described from any country outside of Europe.

The time extending from the year above mentioned down to the present may be conveniently divided into three epochs. The first of these was terminated by the advent of the first published description of a North American Dipteran by an American author; this occurred in the year 1817, when the equally immortal Thomas Say published a description of a single new species of Diptera, likewise from Pennsylvania, under the name of *Diopsis brevicornis*, for which he later erected the new genus *Sphyracephala*. This first epoch, covering a period of 54 years, witnessed an even dozen foreign writers describe new forms of Diptera from the United States. Among these are such noted authors as Linné, Fabricius, De Geer, Drury and Olivier.

The second epoch comprises the time from the appearance of

this first paper by Say to the advent of a distinctively American Dipterologist in the person of Dr. S. W. Williston, whose initial descriptive paper appeared in the year 1880 and contained descriptions of three new species—*Rhynchocephalus sackenii*, *Silvius pollinosus* and *Chrysops discalis*—all of them inhabitants of the western half of this country. During this second epoch, which covered a period of 63 years, no less than 40 different authors published descriptions of new forms of Diptera from the United States. Of this number, fifteen, or more than one-third of the whole, were Americans. In making this calculation I have included those who, although of foreign birth, have taken up their residence among us and remained here during the balance of their natural lives. Of this latter number are B. D. Walsh and Dr. H. A. Hagen, both of whom, during the latter part of their lives, were essentially citizens of this country. Students of all the orders, but more particularly those engaged in the study of our Diptera, could wish to include Baron Osten Sacken in this category; his long residence among us, his active interest in all branches of entomology, but especially in our Diptera—as is evidenced not only by his published writings, but also by the presence in this country, within easy reach of our students, of the collection containing the type specimens of the species described by Dr. H. Loew and himself, for which we are indebted to his careful foresight and unremitting efforts in our behalf—have combined to give to that distinguished Dipterologist a place among us not enjoyed by any other citizen of other lands.

While, during this second epoch, our Dipterological literature has been enriched by contributions from the pens of such masters as Say, Wiedemann, Schiner, Osten Sacken and Loew, we have also been inflicted by such indifferent workers as Desvoidy, Bigot and Walker. Among the Dipterologists of this period who have completed their earthly careers, the name of J. R. Schiner, of Austria, must be accorded a very exalted place; not only did he possess in a marked degree the faculty of discerning the most striking differences existing between the different objects which he described, but he also had the happy faculty of expressing them in words that admitted of no misunderstanding of the idea he intended to convey, while his conscientiousness was

apparent in all of his acts. On the other hand, at the very bottom of the list, one would be inclined to place the ubiquitous Robineau-Desvoidy; while his larger groups show some approach to a natural arrangement, his conception of a genus and species and his futile attempts at describing them, are as unsatisfactory as they well could be, and it is therefore not at all surprising that Rondani (a genius in his way, as is more particularly evidenced by his masterly treatment of the family Anthomyidæ, one of the most obscure and difficult groups in the whole order), after recording the names of several of Desvoidy's supposed species as synonyms of some well-known form, not infrequently placed a suggestive "etc." after the last one, indicating that several more names from the same source could be added *ad libitum*.

Wiedemann, who was a contemporary of Say, was the first writer to pollute our nomenclature of the Diptera by changing several of the valid specific names imposed by Say; sometimes this pollution was simply a matter of one or two letters, at other times the entire name was changed for no other apparent reason than that the new one was more descriptive of the species than was the original. Loew followed Wiedemann in this unfortunate respect, and, being a more prolific writer, the mischief which he wrought was correspondingly greater. Unfortunately, these polluted names have been given the place of the valid ones in Osten Sacken's otherwise excellent catalogue of our Diptera, and later writers, with few exceptions, have followed the catalogue as a matter of expediency.

This polluting of the nomenclature comes down to us from the very beginning of our binomial system. It was the custom of Linné, in the subsequent editions of his works, to occasionally change the names which he had previously bestowed upon certain species, sometimes simply changing the manner of spelling, but at other times an entirely different name was substituted, and in rare cases the old name was transferred to a totally different species. Considering the fact that he wrote at a time when science was just beginning to free itself from fiction, his actions can perhaps be condoned; but at the present time there would appear to be no excuse either for polluting the valid names imposed by the original describers or for using such polluted names

in preference to the valid ones. The name of the genus or species as imposed by its first describer is a matter of much historic and scientific moment; what any person's opinion is as to what the name ought to have been is a matter of no importance, and belongs rather to the realm of fiction than to pure science. Students in this country almost without exception are agreed that only in the case of preoccupation is there a valid excuse for changing the name of a genus or species, and then, in the case of a genus, the name to be changed must be identical—letter for letter—with the earlier name.

Shortly after the advent of Dr. Williston upon the scene, quite a number of our students began to seriously study our Diptera and to record the result of their studies in our various journals and other publications; in fact, nearly all that has been published on our species within recent years has been the work of our own students. This is certain to result in a better understanding of these insects than was possible under the old regime, since it must be apparent to all that the student who studies his subjects in the field as well as in the laboratory, and who is in a position to collect the specimens in large numbers, will obtain a more correct idea of the limits of a species and is also in a position to more accurately interpret the older descriptions which relate to his fauna, than any student in a distant land. This latter fact is clearly set forth in a comparison of two monographs which deal with our Diptera, the one written by Doctor Loew, an author who had never even visited our shores, the other by Doctor Williston, who was born and brought up among the objects of which he wrote. In the first work, a "Monograph of the Dolichopodidæ," of the 60 descriptions of species from the United States published by previous authors, only 8, or less than one-seventh of the entire number, were recognized by Loew, while the remaining species he described as new. There is, of course, no grounds for doubting the fact that a large proportion of the latter are identical with those described by the older authors, and consequently these species have ever since been sailing under false colors, while their valid names have been permitted to encumber our lists as a useless, meaningless mass, and thus they must remain until some conscientious student from this country again gives this family a careful revision, as a result of which a large per-

centage of these old names will be restored to their rightful places. In strong contrast to this makeshift and unsatisfactory method is the result obtained by Doctor Williston, as indicated in his "Synopsis of the North American Syrphidæ;" of the 223 descriptions of species from the United States, to the type specimens of which he did not have access, he succeeded in identifying 170, or more than three-fourths of the whole number, as compared to less than one-seventh, in the case of Dr. Loew. After due allowances are made, the result is very much in favor of the man upon the ground.

There is an unfortunate tendency, particularly among new recruits, to describe at once as new all forms that do not agree in all respects with existing descriptions as they interpret them. The identifying of species from published descriptions is always attended with a certain degree of uncertainty, and unless one has access to representatives of all the species described in a given group it is advisable to label the specimen with the name of the species with the description of which it most nearly agrees, placing a question mark before the specific name. It is only when one has access to practically all the forms occurring in a given region that he is in a position to correctly interpret the published descriptions of species from that region. In several cases the descriptions contain actual misstatements—a fact that should not be overlooked when identifying species from descriptions only.

The present epoch has also witnessed a notable advance in our knowledge of the early stages of at least a portion of our Diptera; this was inaugurated by Dr. L. O. Howard in his studies of our mosquitoes, a work in which he has been ably seconded by the patient labors of Dr. H. G. Dyar, Dr. J. B. Smith, Prof. O. A. Johannsen, and a few others. Dr. Dyar has described and figured the early stages of nearly every kind of mosquito that has come within his reach, while Dr. Smith informs me that during the last two seasons he has obtained the early stages of 31 of the 33 species known to inhabit New Jersey—a remarkable achievement, indicative of what may be accomplished in other groups by continuous, well-directed efforts. In the list of the insects of New Jersey, published only three years ago, only ten

species of Culicidæ were credited to that State—less than one-third of the number now known to occur there.

This increased interest in the early stages of our Diptera is certain to result in a better understanding of these insects; no matter how expert a student may become in separating the adults into their proper species, it is not until we obtain a knowledge of all of the early stages of any given form that its status as a species becomes fully established, and it is to be hoped that investigations in this direction will be continued until the early stages of every Dipteron in our fauna has been made known.

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The presidential address was favorably commented upon by Messrs. Ulke, Kotinsky, Ashmead, Schwarz, Gill and others. Mr. Ulke stated that he was indebted to Dr. Loew for his first knowledge of real insect collecting, the latter having, some seventy years ago, visited his father's home, in Germany, and shown him the method of using the various implements employed in insect collecting. Dr. Gill said that he agreed with Mr. Coquillett that a generic name should be considered as preoccupied only when the previously proposed name agreed with it exactly, *letter for letter*. He remarked, however, that many, perhaps the majority, of systematists would take issue with him on this point.

—Dr. Hopkins read a paper entitled "Notes on the Scolytidæ of the Fitch Collection," and exhibited specimens from the Fitch collection in the National Museum. He referred to the notebooks examined by him in the library of the Boston Society of Natural History, and called attention to Fitch's method of numbering and labeling specimens. The collection represents twenty-four species, including five which are still undescribed. The species were identified and arranged by Dr. Hopkins, in his paper, according to his manuscript Synopsis and Check-List of the Scolytidæ of America north of Mexico. He thought best, therefore, to withhold the paper from publication until the synopsis shall have been published.

Mr. Ulke said that he saw Fitch some fifty years ago. The reason there were so many wrongly named Coleoptera in the Fitch collection was because Fitch had been unable to secure any help from coleopterists. Fitch told him that he had written repeatedly