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The Canadian Entomologist.

VOL. XVI. LONDON, ONT., OCTOBER, 1884. No. 10

MEETING OF THE ENTOMOLOGICAL CLUB OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

(Continued from Page 179, Sept. No.)

Mr. Saunders said *Hyphantria textor* had this season been found in great abundance on all kinds of trees. *Var. progne* had been sent from one locality in West Ontario, where it was so common on currants that fears had been entertained for the crop. No great damage had been done, however.

Mr. Graef exhibited some species of Lepidoptera, rare, or typical of recently described forms.

On motion, the meeting adjourned to Monday, Sept. 8, at 2.30 p. m., same place.

Sept. 8th, 1884. Pursuant to adjournment, the Club met at 2.30 p. m., President Morris in the chair. The minutes of the previous meeting were read, corrected and adopted.

Prof. Martin exhibited some insects imbedded in copal, all representing types of post-tertiary forms, mostly small Hymenoptera and Diptera, but some Coleoptera, Lepidoptera and Hemiptera. The specimens were obtained by seekers of the resin of which copal varnish is made, not far from the sea coast, a little north and south of the equator. The same sort of gum is now found on growing trees, but soft, and not good for varnish, used only for the purposes of adulteration. The true gum in which these insects were found was obtained in districts where the trees had long been extinct, and was found only by digging. All the species were post-tertiary forms, and he had especially noted types of *Cleri.*

The specimens, which were very clear, were handed to the members for examination.

Dr. Horn said that the Coleoptera all represented existing generic types: 1 Carabid, allied to *Callida;* 2 Chrysomelids, 2 Clerids, *Clerus ocymatodera;* 2 Longicorns allied to *Clytus* and *Leptura,* and an Elaterid much like one of our species of *Cardiophorus.*

Mr. Smith said the Lepidoptera were all of very recent types; one specimen was almost surely a *Mamestra*. The Hemiptera were also very like species known to him, and at least one Dipteron represented a very common Muscid type.

Prof. Lintner gave some notes of observations made during the past year.

Orgyia leucostigma, else very common and destructive at Albany, was this season very rare, and did no damage. Usually they defoliated the elms and horse chestnuts, and sometimes when a heavy storm came on so many were destroyed that they became offensive. This rarity is explained by a severe frost which occurred in spring just as the larvæ were hatching.

An interesting note came from Prof. Cook, of Michigan, where thousands of a Noctuid larva created fears for crops. The larva was bred, and proved to be *Agrotis fennica*, usually considered rather a rare insect. So common were they that they were called the black army worm.

From Jamestown, N. Y., an Hemipterous insect, *Podisus cynica*, has been received, and it was there observed destroying the currant worm in numbers. Its variety, *P. bracteata* Fitch., was associated with it.

From the vicinity of Rochester *Lygus lineolaris* has been recorded as injurious to young peas, piercing and blotching them, a fact not previously noted.

At Geneva, N. Y., *Poecilocapsus lineatus* has seriously injured gooseberry plants, stinging the branches at tip so that they died off two or three inches downward.

In Coleoptera, the Clover-leaf Beetle has spread westward, and has nearly reached the western limits of the State. Some three years since it was recorded from Yates and adjoining counties, and since has spread rapidly; moreover a new habit has been acquired, *i. e.*, it now has attacked beans. The insect is *Phytonomus punctatus*, an imported species.

The Asparagus Beetle, *Crioceris asparagi*, has made its appearance at Geneva, N. Y Heretofore it has been confined pretty closely to the sea shore, and though known for many years on Long Island, it has never before manifested any tendency to spread.

From Sycamore, Oswego Co., an interesting attack of *Otiorhynchus ligneus* was reported; there a house which for four years had been closed, was opened and found swarming with these beetles; they were everywhere, and in many rooms nearly a quart was swept up. What did they feed on? There was nothing eatable in the house; they had been re-

corded as feeding on the roots of strawberries, but what they could find in the house puzzled him.

The Elm-leaf Beetle, *Galerucella xanthomelaena*, has been very destructive in Long Island and in West Chester, many of the noble elms being so entirely stripped that their death is expected. Nothing entirely new has presented itself during the year.

From Mexico had been received specimens of a seed, probably of a *Euphorbia*, known as the jumping seeds. The seeds apparently are formed in a pod, three in one inclosure. When placed on a hard surface they begin a series of the most erratic movements, tumbling from side to side, and sometimes making leaps of an inch or more. Inclosed in the seeds is a white, somewhat flattened larva, and the seed itself, a mere shell, is lined with reddish silk. Westwood has raised the larva to maturity and found an insect very closely allied to *Carpocapsa pomonella*, which he called *C. saltitans*. At about the same time Mr. Lucas, in France, also received the insect, and not knowing of Westwood's work, re-named the species. The entire life history of the species is not yet known; it is supposed that the insect deposits its egg on the young seed, and the larva when very small makes its way into it. No trace of an opening was now visible. Westwood and Lucas report the insect as obtained in February, but only a few days ago a specimen was caught flying in the room. The curious thing is the close resemblance to our *C. pomonella*, which has no such habits. Referring to Mr. Smith's remarks on tuftings of the feet of Noctuidæ, *C. saltitans* is peculiar in having the tarsi hidden by long tufts of scales.

Mr. Dimmock says that *O. leucostigma* has not been abundant near Boston, and that the spring frosts affected the eastern rather than the western portions of the State.

Mr. Smith replied that on Cape Cod he had found the larvæ so abundant that they stripped the trees everywhere, and there had been frost enough to kill a large quantity of vegetation.

Dr. Horn said it is a remarkable fact that all of the Coleoptera mentioned by Prof. Lintner are imported species, and for the most part they have kept pretty close to the sea shore. It is interesting that they have commenced their journey toward the interior; it was to be expected, however, that eventually they would travel along the lines of their food plant, as did the potato beetle from west to east. At Washington he had noticed the elm trees stripped of their leaves. Another species, *Crioceris*

12-punctata, has of late been taken by Mr. Lugger around Baltimore. It is rather curious that the neighborhood of Baltimore and Alexandria, with comparatively a very limited commerce, should still have yielded a proportionately very large number of imported species. Two species of *Blaps* have been introduced and first found near those cities, one *mortisaga*, and another not yet determined. Of *B. mortisaga* a friend said that a bushel could be taken from a single cellar in Alexandria. Another very curious matter is the very sudden spread of insects. When working over the Rhyncophora some years since with Dr. LeConte, every collector was applied to for material, and from Mr. Fuller was obtained a little species, marked Montana, which was named *Aramigcs Fulleri*, and was then the only known specimen. Suddenly, a year or two afterward, specimens were received for determination from all parts of the country, and everywhere complaint was made of injury caused by the species, especially in hot houses. How happened it that for ages the beetle was unknown, an inhabitant of some remote locality, and suddenly it should spread all over the States?

Prof. Lintner said he had known the species since 1876; that year it was abundant in green houses.

Mr. Dimmock had known the species for some years as very destructive to roses in hot houses.

Dr. Horn said he first obtained the beetle in 1874, or perhaps a little earlier.

Mr. Hulst, referring to Prof. Lintner's remarks on *O. leucostigma*, had noticed its comparative scarcity on Long Island. The elm beetle was common. Another pest not mentioned was a small insect apparently of the frog spittle nature on maple. Sometimes the trees were white with it, and many appeared dying off. A species of *Chrysops* was also common, and seems to have been destroying the pest.

Prof. Lintner had noticed the same insect; it is a Coccid, *Pulvinaria innumerabilis*.

Prof. Osborn said it is very abundant on maple. It can be subdued by cutting the infested branches before July. The young go first to the leaves. The female lives until spring, the male dies in the fall. No less than seven different species of insects prey upon this form.

Mr. Saunders said the insect had appeared in Canada and Michigan in large numbers, the trees being sometimes completely covered. On some trees the larvæ of *Chilocorus bivulnerus* were found feeding on them

in such numbers that they had caused alarm; persons finding them supposed that they were the parents of the pest.

Mr. Underwood inquired whether this insect was not also found generally on elm. Mr. Rathvon had published an article on the subject, and had referred to its feeding on elm as a rarity. It had been observed also on grape and *Ampelopsis*.

Mr. Saunders had not observed it on elm in Canada.

Dr. Horn made some observations on secondary sexual characters of Coleoptera. He had been interested in Mr. Smith's studies on the external anatomy of Lepidoptera, and especially in the remarks on secondary sexual characters. Somewhat similar antennal structures were sometimes found in Coleoptera, but their uses in this order seemed better known. In *Collops* was a structure closely resembling that of *Renia*. Here there was the same excavated curved joint, at the base of which was an articulated slender spine-like appendage, and the upper part of the antennæ was capable of being folded backward. The use of this was in copulation; the ♀ antennæ were grasped in this curve, the articulated spine closed the curve by being directed forward, while the anterior part of the antennæ was folded backward, thus tightly holding the ♀ antennæ. The form in *Meloe* is similar to that of *Herminia*, and without the articulate spine still serves the same purpose. In *Sphalera* and *Tomoxia* there is a double jointed appendix to the last joint of the maxillary palpi which probably served the same purpose. These structures are explainable. Others are more obscure and not yet explained. For instance, *Lebia* has a notch on the inside, near the end of the middle tibia in the ♂. A species of *Aphodius* has a very curiously hooked first tarsal joint to the hind leg. Another species has a peculiar club-shaped appendage to the inner side of the fore tibiæ. What use these served was not yet satisfactorily ascertained.

Mr. Cresson said that except in the parasitic forms, there were no such characters in the Hymenoptera, and that group he had not studied.

Mr. Osborn stated that very interesting characters occurred in the Mallophagidæ, and especially one in *Lipeuris*, which much resembled that of *Tomoxia*.

Mr. Smith moved the appointment of a committee of three to arrange a programme and secure papers for the next meeting; seconded and carried. The committee appointed consisted of Mr. J. B. Smith, chairman;

and Messrs. Herbert Osborn and B. Pickman Mann. On motion the Club then adjourned, to meet again under the rules at the next meeting of the A. A. A. S.

(The above has been compiled chiefly from the excellent report of the Secretary, Mr. John B. Smith.—ED. C. E.)

COLEOPTERA IN SEPTEMBER ON BRIGANTINE BEACH, N. J., ON THE ATLANTIC COAST.

BY JOHN HAMILTON, ALLEGHENY, PA.

Coleopterists accustomed to collect on the sea shore may find little that is new to them in this article; but to those from the interior, making only occasional short visits, it may be useful in directing attention to some of the less common insects, and to some not likely to be found by one unacquainted with their habits. Brigantine Beach is somewhat insular, being six or seven miles off from the main land, yet none of the Coleoptera mentioned are peculiar to it, and, being mostly maritime species, probably occur in suitable situations all along the coast from New York southward indefinitely.

This beach is nothing more than a succession of sandhills elevated from five to ten feet above the line of high tide, two or three hundred yards wide, fronting on the ocean and extending from inlet to inlet about six miles. Some of these hills are thinly overgrown with coarse grasses; and others with thickets of *Myrica cerifera* (Bay berry), interspersed with *Rosa lucida* and clumps of *Baccharis halimifolia*, so conspicuous in this month by its abundant, very long and white pappus. Back of these hills to the Bay are the salt meadows, from five to seven hundred yards in width; they are overflowed by the high tides in spring and autumn, though several inches above the ordinary ones of winter and summer; they are always damp, and support a growth of coarse grass, sedge, etc. At first sight this does not appear to be a very promising field for the Coleopterist, and yet the catalogue contains nearly three hundred species.

Panagæus crucigerus Say annually rewards the careful searcher with a few specimens, occurring mostly on the little circular elevations on the meadows under pieces of wood and the debris left by the high tides.

Philhydrus reflexipennis Zimm. is found in the shallow fresh water pools that are formed at the base of the sandhills, together with *Hydro-*

philus glaber, while *P. ochraceus* is abundant on the meadows under boards and pieces of wood.

Emplenota maritima Casey. This minute insect has only recently received a name, generic and specific. It is found in moderate abundance on the coast under the debris cast up by the waves and left by some of the higher tides along the high-water line, after it has remained undisturbed for three or four days. It is readily recognized by its great resemblance to a small Aleochara; length, .12 to .16 inch; head deflexed; sides of abdomen strongly margined; color piceous black with the anterior border of the abdominal segments pale. It is usually found in company with *Cafius bistriatus* and *Phaleria testacea*, without vigilance it will be overlooked. (See Number I., Contributions to the Descriptive and Systematic Coleopterology of North America, by Thos. L. Casey, Lieut. of Eng'rs, U. S. A.)

Quedius brunnipennis Mann. is sparingly found under the debris left by the high tides along the margins of the meadows. *Staphylinus prælongus* Mann. occurs in the same situations much more abundantly. *S. vulpinus*, *S. tomentosus* and *Ocypus ater* are found with it rarely, and more properly belong to the main land.

Cafius bistriatus Er. is met with as stated under *E. maritima*, and is rather abundant. The debris should be shaken over the white sand, on which the insects may readily be seen as they fall. It is easily known by its brown color and bistriate thorax.

Bledius mandibularis Lec. is exceedingly abundant in the meadows on bare sandy places not often covered by the tide, but kept constantly damp by capillary attraction. One, as in the case of the writer, might pass over them for years unconscious of their presence till discovered by accident. They live in galleries at a depth of from six to ten inches beneath the surface, the entrance to which is surrounded by castings similar to those made by earth worms. The upper portion of these openings is used by two or three species of small crustaceans for a retreat, and when the novice scoops over the wet sand, finding these and considering them the excavators, he goes no further, and the real architect several inches deeper escapes detection. The species is one of the finest of the genus.

Bledius cordatus Say, though existing in countless multitudes, is not often found, being small, and mostly inhabiting the grassy parts of the meadows. They occasionally fly at night in swarms, but whether this

occurrence is periodically habitual, or accidental from some local cause, is not known. I obtained nearly an ounce bottle full of them on the night of Sept. 28th, 1883, and could easily have procured half a pint. The evening was warm and sultry, and exceptionally calm. When the central chandelier in the parlor of the hotel was lit, my attention was directed to a fall of small insects from the lights to a marble-topped table beneath. I saw they were brachelytra, and in a couple of hours (the duration of the flight) had taken from this table the quantity stated. They invaded all the lower parts of the hotel where there were lights, occasioning no small annoyance. They proved to be of this species. No one connected with the hotel had ever noticed them before; none occurred the next, or subsequent evenings. This year I left on the 26th without having observed a single one, though they were doubtlessly present in millions.

Rhypobius marinus Lec. is met with abundantly on the elevated places on the meadows under debris that lies on dryish sand. It is interesting chiefly on account of being so minute. The only other species of the genus known to me is found here on leaves, generally hickory and walnut; it is much larger and as yet undescribed. With *marinus* is found in great abundance *Anthicus formicarius* and *Bembidium constrictum*.

Anisosticta seriata Mels. is usually taken about the remains of dead animals, but not plentifully. Whether it is carnivorous, or only resorts to such places for shelter, is not known, but I never found it elsewhere. The ornamentation of the elytra is a little variable. Normally there are three large common sutural spots connected by a line, and three marginal spots slightly connected on the margin, black; these spots, however, may all be isolated; or the marginal ones become confluent, and also unite with the posterior sutural spot which usually extends to the margins of the elytra. The amplification of Melsheimer's description by Mr. Crotch in the Trans. Am. Ent. Soc., vol. 4, p. 369, is quite misleading.

Dermestes Frischii Kugel occurs on the sandhills among the refuse of fish. This year only a few specimens were obtained on account of the food supply having been minimized.

Hister arcuatus Say. Specimens of this beautiful species are occasionally taken on the sand, but I could never find its habitation.

Monotoma producta Lec. occurs in the same situations as *R. marinus*, where it is difficult to see, as it feigns death, and then resembles fine particles of the debris. A good way to obtain it is to examine the underside

of chips and pieces of wood, to which it often clings in considerable numbers, and where also will be found *Mantura Floridana.*

Aphodius phalerioides Horn is rare, for during eight years only three specimens were found, and the circumstances of their occurrence were not noticed, as they were in the collecting bottle with the superabundant *Phaleria testacea*, from which they can only be separated by careful examination.

Ataenius. An undescribed species is found on the meadows under moist decaying debris. This species is about the size of *stercorator*, and one of the finest of the genus. It may be known by its fine, narrow elytral striæ, with small, close tranverse punctures; broad, flattish intervals, and deep piceous black color.

Trox scabrosus Beauv. is rare, being met with in dry sand under desiccated human excrement, or under boards in its vicinity; and here it may be remarked that no Coleopterous insect in any stage seems, on this island, to inhabit the ejectamenta of herbivorous animals. *T. asper* and *T. suberosus* may be found sparingly about the remains of dead animals, but such are rare.

Ligyrus gibbosus DeGeer comes at night to light in vast numbers. In the office of the hotel in less than one hour, one evening, over a hundred specimens were taken. It seems to be distributed in the United States from the Atlantic to the Pacific.

Euphoria areata Fab. is likewise a widely distributed species in the warmer arenaceous districts, but not recorded as occurring west of Texas. What its habits are in other places and at other times is unknown to me, but my experience with it is this: Sept. 9th, 1877, about ten o'clock in the forenoon, five specimens were taken flying about a small sand hill crowned with wild rose bushes; next day about 100 were taken from ten to twelve, and the succeeding day five or six at the same hours, but none on any subsequent day. The next year I reached there on the 15th, but saw none that season. The third year I came on the 5th, but none appeared till the 10th, when about thirty were taken, and on the next twenty, but none thereafter. From that year till the present I was never there previous to the 12th of September, and no specimens occurred. The present year I came on the 9th, and took two specimens at the usual hour on the 11th, but none thereafter. Back of this sand hill, in 1877, was about half an acre of cultivated ground, which was abandoned three years ago. I infer from all this that the insects I met with were bred in

that garden; that they completed their transformations annually about the same day, and emerging from the earth about the same hour immediately resorted to the nearest sand hill to find a place suitable for social hybernation.

Galeruca maritima Lec. is more abundant on the meadows earlier in the season, though a number may still be found under any stick or board that affords them shelter. Their color varies from pale to brownish black.

Epitragus arundinis Lec. is found in warm days on the sand, or on the board walks, but not plentifully.

Anthicus pallens Lec. is rarely found. It occurs on the sand hills in the loose sand under or near human excrement that has dried up, or been partly consumed by *Saprinus Pennsylvanicus*, *Sphæroides fraternus*, &c. By carefully scooping over the sand to the depth of five or six inches a specimen may rarely be taken, though it requires patience and close watching, as they are few and far between, and white like the sand.

Anthicus confusus Lec. is met with frequently in cultivated places under decaying vines and weeds. Three or four other species of this genus are likewise found here, but are not determined.

Sphenophorus retusus Gyll. frequents dry sandy mounds that support a sparse growth of coarse grass, where it may be found sparingly on very warm sunny days. It is easily known by the smooth rhomboidal figure on the thorax, and the elytra no longer than the head and thorax together.

S. costipennis and *S. pertinax* are sometimes found in dry places under sods, and *S. placidus* occurs in large numbers under logs that have drifted upon the meadows and become embedded in the wet soil.

Except incidentally, is omitted all mention of such maritime species as are abundant, and the many that are likewise found inland, besides a large number of no particular interest at present. Species often find their way there accidentally, being blown by the wind and otherwise transported from the main land, or cast up by the waves. At this season among the former is *Cicindela modesta* Say.; among the latter, *Calosoma scrutator*, *Purpuricenus humeralis* and *Pachylobius picivorus*.

The *Carabidæ* and *Staphylinidæ* are in general well represented, while the *Elateridæ*, *Buprestidæ*, *Lampyridæ* and *Cerambycidæ* seem to be entirely absent as regular inhabitants.

THE MELSHEIMER FAMILY AND THE MELSHEIMER COLLECTION.

BY DR. H. A. HAGEN, CAMBRIDGE, MASS.

The Melsheimers have been considered by Th. Say to be the fathers of Entomology in the U. States. Nevertheless very little is known about them, and that little is not perfectly accurate. In fact, concerning the older Melsheimer there exists only a note in A. W. Knoch's "Neue Beitraege zur Insectenkunde," 1801, p. 18, and concerning his second son only the necrology by the late Dr. John L. LeConte in the Proc. Acad. Nat. Sci. Phil., 1873, p. 257, reprinted in the CAN. ENT., vol. vi., 1874, p. 39.

Through the courtesy of Dr. Geo. H. Horn, the manuscript diary of Dr. Carl Zimmerman is before me, which contains the following statements :—

"From York, Pa., I walked 18 miles to the S. W. to Hanover, where I arrived Jan. 7, 1834. Introduced to a Mr. Lange, the owner of the only press in the town, and editor of the Hanover *Gazette*, I was informed that the older Melsheimer died 20 years ago. Mr. Lange had been well acquainted with him, and the widow and several children are still living in the town. The following I copied out from the obituary in the Hanover *Gazette* at the time of Melsheimer's death :—

"'Friedrich Valentin Melsheimer, minister of the Evangelic-Lutheran Church in Hanover, died June 30, 1814, in consequence of a lung disease of 30 years duration, 64 years, 10 months and 7 days old. He was born Sept. 25, 1749, at Negenborn, in the dukedom of Brunswick. His father, Joachim Sebastian Melsheimer, was superintendent of forestry to the duke. F. V. Melsheimer was sent in 1756 to school in Holzminden; in 1769 he went to the university in Helmstædt. He received, 1776, the appointment as chaplain to a regiment, which he accompanied to America, and arrived July 1st in Quebec. In 1779 he came to Bethlehem, Pa., and married, June 3, Mary Agnes Man, by whom he had 11 children. From August 19, 1789, he was minister in Hanover, Pa.'"

Dr. Zimmermann called on Mrs. Melsheimer, and was told by her and her daughter that after his death his eldest son, Johann Friedrich Melsheimer, succeeded his father as minister, whose love for natural history he had inherited, together with his collection and library. This J. F. Melsheimer is the entomologist quoted so often by Th. Say. The year of

his death is not known to me; at least it was some time before 1834 and after 1824, where he is quoted by Th. Say in his Amer. Entomology by *Anthicus bicolor*. The father, F. V. Melsheimer, was in correspondence with the well known German entomologist, A. W. Knoch, in Brunswick, who states in the volume before mentioned that up to 1801 he had received from him over 700 American insects. He gives still very valuable descriptions of 23 species.

F. V. Melsheimer published, besides some papers on religious matters, the well known catalogue, "A Catalogue of Insects of Pennsylvania," by Fred. Val. Melsheimer, Minister of the Gospel, Hanover, York County; printed for the author by W. D. Lepper, 1806, Part I., small 8vo., pp. 60.

The catalogue (I am indebted for a copy to my friend, Ph. R. Uhler, of Baltimore), is now very rare, and contains the names of 1,363 species of beetles, among them 460 named by Knoch. It seems that at this time Melsheimer had not received Knoch's book, published 1801, as his names do not coincide with those described by Knoch. As the dedication copy of Knoch's book to Melsheimer is in the library of the Museum in Cambridge, it came probably to Melsheimer after 1806. This catalogue contains the first list of American beetles, but without descriptions, and has therefore only an historical value. Of the 1,363 species, only 205 are now surely known, and only 134 are quoted in Dr. F. E. Melsheimer's catalogue.

After the death of the eldest son, the second, Ernst Friedrich Melsheimer, inherited the collection and the library. He was a country physician and lived near Dover, 14 miles north of Hanover. Zimmermann visited him the next day, and his diary contains the following statement:—

"The house, rudely put together with boards, painted red, stood all alone in the middle of a forest, and looked more like a hut. His wife was at the spinning wheel. The reception was indeed very cordial, and when he heard that his father's book was well known and mentioned in German, English and French works, which he never had dreamt of, he became animated and talked with great interest on entomological matters and books.."

Zimmermann wondered how he was able, in his isolated position, to keep up such a lively interest in natural science, to collect so industriously, and to study his small library, in which the magazines of Illiger and Germar were the most prominent and most valued. Though he

could not claim to equal the stars among the entomologists in Europe, he filled very well the place of a first rate entomologist in America. The next day was spent with the collection, which contained chiefly Coleoptera and Lepidoptera, and only little of the other orders, apparently on account of the want of books about them. The collection was kept in good order, and all labels in his father's handwriting were on the pin of the same specimen to which they were originally attached.

"Melsheimer," says Zimmermann, "lives with his family on a very plain but good fare, as is generally the case in America. Many little and cheap comforts were wanting, but their absence was not felt. Indeed there was no drinking glass in the house; cans or dippers served for the purpose. The cordial hospitality made one forget the lack of comfort."

Twice more, July 12, 1839, Zimmermann visited Melsheimer in company with Pastor D. Ziegler, and August 20, 1839, with Rev. Morris, of Baltimore.

Already in 1832, Dr. Melsheimer had the plan, as Zimmermann states in 1834, to publish, with Th. Say, a new catalogue of the Coleoptera of N. America, which was prevented by Th. Say's premature death in 1835. Dr. LeConte says in the obituary that his father (the name E. F. Melsheimer is an error for F. V. Melsheimer) has been an active collaborator with Th. Say. This could not have been, as the father died 1814, and Th. Say began to work in 1817. This active collaborator was the eldest son, J. F. Melsheimer, quoted often by Th. Say, and later the second son, Dr. Melsheimer. The work advanced slowly. In a letter to Th. W. Harris, Nov. 24, 1842, Dr. Melsheimer states that "a few literary gentlemen in Pennsylvania and Maryland have entered into an association for the advancement of entomology in our country (the Entomological Society of Pennsylvania). Their first object in view is the publication of a catalogue of the known Coleoptera of the U. S. The members of the Club have prevailed on me to compile the work and have it ready for the press against the ensuing spring!!" Dr. Melsheimer was elected President of this Club, of which, as far as I know, Rev. John G. Morris, of Baltimore, is now the only survivor. Dr. Melsheimer complains to Th. W. Harris that the work, though only a compilation, is very difficult, and advances slowly. It was published only ten years later, as it had been determined that the unknown species should be described. In the meantime Rev. David Ziegler, in York, Pa., seems to have been a very active collaborator. He has published in Proc. Ac. N. Sc. Phil., 1844, v. ii., p.

43-47, p. 266-272, 36 new species. Nothing more is known about him, but he must have been in very kind relations with Dr. Melsheimer, to judge from the contents of his collection, which is now in the Museum in Cambridge. It seems that they divided between them every lot of exotic species received by each, and for American species it is nearly the same. Dr. Melsheimer also published in the Proc. Ac. N. Sc. Phil., 1844-47, vol. ii. and iii., 431 species (vol. iii., p. 181, it is erroneously stated, 600) of Coleoptera hitherto not described. Only 172 of them have been retained in Crotch's Catalogue. Finally the Catalogue of the described Coleoptera of the U. S., by Fried. Ernst Melsheimer, M. D., revised by S. S. Haldeman and J. L. LeConte, Washington, 1853, 8vo., pp. 174, was published by the Smithsonian Institute. The revision had necessitated a long delay after the delivery of the manuscript. Nobody can say now how much belongs to the revisers, but it is to be presumed that their task was not a small one. "It was the first work," says LeConte, "of bibliographical importance in the modern history of that branch of science, and gave a powerful impetus to its development in the U. S., and has greatly diminished the labor of those who have continued the study of that department."

Dr. Melsheimer was then 71 years old, and has probably later done no more entomological work, except that he arranged his collection in accordance with his new catalogue. When 82 years old he sold the collection to Prof. L. Agassiz, and died March 10, 1873, in Davidsburg, York Co., Pa., aged nearly 91 years. His birthday is not known to me; it must have been in 1782.

I cannot refrain from giving here again Dr. LeConte's kind parting words: "Living an isolated life on his farm, remote from usual lines of travel, dependent almost entirely on letters for the sympathy and counsel of his fellow students, separated from libraries containing the results of modern research, and therefore dependent on the traditional knowledge received from Europe, which constituted in fact most of the intellectual capital of the founders of natural history in the United States, Dr. Melsheimer must be considered as a very remarkable instance of one who, with very limited opportunities, has worked honestly, to the extent of his abilities, to develop the powers of usefulness which were given him. Modest, unpretending, affectionate to his family, devoted to his friends, industrious to the limit of human usefulness, his death at such an advanced age can only leave, with those who have enjoyed his acquaintance, a satis-

faction that they have known so good a representative of the purer qualities of humanity."

THE MELSHEIMER COLLECTION.

As stated before, Dr. Melsheimer, when 82 years old, sold in 1864 his collection to Prof. L. Agassiz, who also bought at the same time Rev. Ziegler's collection. Dr. Melsheimer had preserved, as LeConte states, the only authentic types of many of Mr. Say's species for later investigators. Prof. L. Agassiz has told me that he had invited LeConte to take over into his collection all types and species out of both collections which he needed for his studies; these have been returned to the Museum now with LeConte's collection. In his letter which promised the donation of his collection to the Museum, (Ann. Rep. of the Museum for 1875, p. 35) LeConte says: "My collection contains specimens carefully compared with those described by Say, Harris, Melsheimer, Haldeman and Ziegler, and *all the unique types* of the three last named authors."

The Melsheimer collection filled 41 home-made wooden boxes, painted outside with light gray color. They are 10½ by 14 inches, and 2 inches high. Inside lined with white glazed paper; the bottom of the apparently older ones of plain wood, the newer ones lined with Helianthus pith. The cover is a board with the margins around planed off half an inch, to trim into the box. The beetles were arranged on transversal lines parallel to the smaller side of the box. On those lines were pasted the printed labels of the genera and species cut off from the catalogue published in 1853. The labels of the exotic species were written on colored paper and also pasted in. By this arrangement, after the publication of his catalogue, he had removed nearly all labels from the pins, also those of his father. Only exceptionally some labels of Say and some foreign authors were retained. Indeed the old beetles of his father are to be recognized by short common pins, and the beetles of Dr. Melsheimer by German pins from Carlsbad, a little shorter than those now used. I am often able to recognize in LeConte's collection the specimens taken out of the Melsheimer collection.

The contents of the collection are taken from the receiving book of the Entomological Department of the Museum, recorded with scrupulous accuracy by Mr. Ph. R. Uhler (Ann. Report of the Museum for 1864, p. 35):—

"The collection was received Sept. 1, 1864; bought for $150. It

contained, netto, 4,941 species, with 14,474 specimens. Coleoptera, 4,674 species, with 14,075 specimens, of which belong to U. S., 2,200 species, with 10,272 specimens; from Europe, 1,894 species; Brazil, 422; Mexico, 8; West Indies, 9; Siberia, 4; China, 74; Java, 8; Africa, 39; Australia, 14. The other insects were, Hymenoptera, 148 species; Hemip- 28; European Diptera, 90; Lepidoptera, none."

The contents of the Ziegler collection were, after the same Report, netto, 5,302 species, with 11,837 specimens. U. S. Coleoptera, 1,794 species, with 6,262 specimens. From Europe, 1,729 species; Brazil, 378; Mexico, 34; West Indies, 40; Siberia, 21; China, 55; Java, 12; Africa, 110; Australia, 14, besides Lepidoptera, Orthoptera, Neuroptera, Hymenoptera, Diptera. The Ziegler collection filled a cabinet with 45 boxes in three rows. The boxes are a little smaller than the Melsheimer ones, the bottom of plain wood, the cover with a pane of glass. Every species had a square written label on the pin, with the name and the locality.

When I arrived here in 1867, both collections were in their original state. As the boxes were far from being safe, they needed a very careful supervision, being more easily entered by pests than all other ones. How much had been destroyed before I arrived, I do not know; but it could not have been more than a small number of specimens, to judge from the gaps in the series of specimens. LeConte has not retained in his collection the somewhat cumbersome labels of Ziegler, nor labeled the Melsheimer specimens.

In 1872, after LeConte had decided to present his collection to the Museum, we had together a serious consultation if it was of any importance to science that both collections should be retained for ever in their original shape. LeConte was decidedly of opinion that it would not be of any scientific value, the more so as all specimens of importance had been transferred into his collection. As the original boxes were unsafe, and as by a transfer of both collections into new safe boxes, the originality of the collections would be lost to a considerable extent, we agreed that the insects would be better incorporated into the collection of U. S. Coleoptera of the Museum. This decision was approved by Prof. L. Agassiz, as in this way a permanent centre of infection and danger for the other collections of the Entomological Department would be abolished. I have myself put on every pin a small printed label—Melsheimer or Ziegler—to record the former proprietor. Nevertheless, some time later,

when I had no control of the Coleoptera, a somewhat cranky assistant threw away labels by the bushel, without any consideration whether they were types or in the handwriting of the most eminent entomologists, and replaced the labels by numbers referring to a carelessly written catalogue. A number of families of the Melsheimer and Ziegler collections shared the fate of this destruction.

NOTES ON MALLOPHAGA AND PEDICULIDÆ.

BY HERBERT OSBORN, AMES, IOWA.

[Read before the Entomological Club of the A. A. A S.]

Identical or very similar species of these parasites occur on the closely related birds and mammals of Europe and America, as is shown by the following list of species collected at Ames :—

DOCOPHORUS.

D. platystomus N. On *Buteo swainsonii*, differs slightly from Denny's description and figure. In Europe occurs on *Buteo vulgaris*.

D. cursor N. On *Otus vulgaris* var. *Wilsonii*, differs from Denny's description in having lateral fasciæ on seven segments, the eighth being entirely dark, the ninth white ; foveolæ arranged differently on the fasciæ. But these points agree well with Piaget's figures, so there may be a discrepancy in Denny's work. In Europe occurs on *Strix (Otus) brachyotus*, according to Piaget, and *vulgaris* and *brachyotus*, according to Denny.

D. testudinarius D. On *Numenius longirostris*, agrees quite perfectly with Denny's description of specimens from *Numenius arquatus*, also with Piaget's figure.

D. cygni D. On *Cygnus buccinator* (?) Identical with descriptions of European specimens from *Cygnus musicus*, according to Piaget, and *C. Bewickii*, according to Denny.

Specimens belonging to this genus were also taken from Shrike, Hairy Woodpecker, Tern, Crow, Blackbird, Finch, House Martin and Coot, but are as yet undetermined.

NIRMUS.

N. fuscus N. On *Buteo swainsonii*. Differs slightly from Denny's description and figures of specimens from *Buteo vulgaris*.

N. brachythorax G. On *Ampelis garrula.* Agrees very closely with descriptions and figures of specimens from the same bird in Europe.

N. candidus N. On *Colaptes auratus;* also same species, probably, from *Picus villosus.* Differs from descriptions of specimens from *Picus canus* and *P. viridis* of Europe in some details, and further material may perhaps establish it as a variety.

Also undetermined *Nirmi*, from Crow, Meadowlark, Pelican, Yellow-headed Blackbird, Duck and Avocet.

ONCOPHORUS.

O. minuta N. On *Fulica americana.* Occurs in Europe on *Gallinula actinopus, orientalis* and *haematopus*, according to Piaget, and probably equals Denny's *N. fulicæ* from the *Fulica atra.*

LIPEURUS.

L. baculus, N. On domestic pigeons. No apparent difference from European specimens.

L. squalidus, N. On *Anas boschas.* Apparently here, as in Europe, common to many species of ducks. Also undetermined *Lipeuri* from Crane, Avocet, Bittern and Snipe.

ORNITHOBIUS.

O. bucephalus G. On *Cygnus buccinator.* Agrees closely with descriptions of specimens from *C. musicus.*

TRICHODECTES.

T. retusus N. On *Putorius ermineus.* Occurs in Europe on *Mustela vulgaris.*

T. scalaris N. Common to cattle the world over.

T. parumpilosus. Common to horses.

Also specimens in this genus from the Pocket Gopher, *Geomys bursarius*, apparently undescribed.

MENOPON.

M. pallidum N. Common to domestic fowls.

Also several undetermined species.

COLPOCEPHALUM.

C. flavescens N. On *Nauclerus furcatus.* In Europe said to occur on various Raptores.

Also undetermined *Colpocephali* from *Scops asio*, *Junco hyemalis*, *Bubo virginianus*, *Melanerpes erythrocephalus*, and a duck.

NITZSCHIA.

N. pulicare N. On *Chætura pelasgia.* Abundant on every bird of this species that I have examined. The eggs were always found attached to the feathers on the back of the head, and on no other part of the body. Apparently no difference between these and those on *Cypselus apus* in Europe.

TRINOTON.

T. luridum. On *Anas boschas.* Occurs in Europe on many species of ducks.

PEDICULIDÆ.

Pediculus capitis and *vestimenti* and *Phthirius inguinalis* naturally present no variations.

HAEMATOPINUS.

H. piliferus. On dog. Has not been found common.

H. eurysternus. On cattle. Common, and without any noticeable variation. A related species, though quite different, has also been secured from cattle, but as yet not harmonized with any European species.

H. acanthopus. On *Arvicola.* Agrees closely with European.

Specimens of undetermined *Haematopini* presenting very marked characters, have been taken from five different species of Rodentia, the specimens from one of these *(Geomys bursarius)* differing so greatly as to necessitate a revision of the generic characters, or else the forming of a new genus.

The author desires to make a careful study of these groups, and would be very glad to obtain specimens.

ENTOMOLOGICAL NOTES.

BY DR. P. R. HOY, RACINE, WIS.

Racine, Wis., is situated on the west shore of Lake Michigan, at the southern extremity of the heavily timbered district, where the great prairies approach near the lake from the west. Latitude, 42° 46″ N.; longitude, 87° 48″ W.

This is rather a remarkable point for entomological, as well as ornithological collecting. Many insects usually found much further south, east of the great lakes. are met with here not unfrequently. A few such I here indicate :—

Nathalis iole *Bd.* Not abundant.
Callidryas eubule *L.* Common.
" philea *L.* 1883.
Terias nicippe *Cram.* Four specimens taken.
" mexicana *Bd.* One, 1883.
Junonia lavinia *Cram.* Common.
Argus labrusca *Hub.* Occasionally.
Dilophonota ello *Linn.* Not common.
Thysania zenobia *Cram.* Four specimens taken here.

CORRESPONDENCE.

Dear Sir: Prof. Kellicott's inquiry in Sept. number of the ENTOMOLOGIST as to whether *Thyridopteryx ephemeræformis* Haw. has been reported from Canada, leads me to make some explanations. Last Feb'y I visited Mr. Kellicott, taking a box of moths for identification. Among them was a pretty little moth with clear wings. The specimen was somewhat abraded. Mr. Kellicott pronounced it, provisionally, the male of the basket worm above named. On June 28th I captured another male specimen, and the next day I found a pair of the same insect copulating on a leaf of basswood. This last discovery precludes the idea of its being the basket worm of Haworth, for in my specimens both sexes are winged; the female is thickly clothed and expands one inch; the male has transparent wings and expands ¾ inch; whereas in the true basket worm the female is wingless, cylindrical, and does not leave her case.

Packard says (Guide to Study of Insects, p. 289):

"*Phobetrum* has narrow wings; the male is very unlike the female, which has been raised by Mr. Trouvelot, and was *confounded by us* with *Thyridopteryx ephemeræformis* of Haworth. The wings of the male are partly transparent."

I have no doubt, therefore, that the insect in question is *Phobetrum pithecium* A. & S.

A. H. KILMAN, Ridgeway, Ont.