The Lepidopterists' News

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PREPARATIONS FOR THE 1948 NORTH AMERICAN SEASON SUMMARY

As the fall collecting approaches for Southern Hemisphere members, North America is slowly emerging from one of the severest winters on record. In the East the snowfalls have been the heaviest ever known and the cold waves have reached deep into the southern states. The Southwest has continued one of the most terrible droughts it has known, but recent rain relieved it somewhat. Thus the main Lepidoptera collecting season for 1948 is rapidly approaching and has in fact begun in Florida and the Southwest. The effects of this winter on Lepidoptera will be particularly interesting. This seems a propitious time to discuss the Society's Summary of the 1948 Season in North America which will be published at the end of the year as a NEWS supplement. In order to make this and future Season Summaries wholly successful it will be necessary for several members in each of the eight areas to keep careful records of their local Lepidoptera throughout the season. Many members have already kept a record book for enough years to generalize accurately on comparative conditions as each new season proceeds. We hope many others will begin such regular records this year.

Again this year, the points we hope to have answered are: 1) Was the flight period of the various species earlier or later than the average? 2) If either early or late, did it return to normal or otherwise change as the season progressed? 3) Did unusual climatic events [cold, drought, excessive rain, hurricanes, etc.] occur, and if so, what was their effect on Lepidoptera? 4) Did biological or human agencies [parasitism, fires, birds, etc.] affect Lepidoptera this year in an unusual way? 5) Did any individual species show very unusual changes - rare species suddenly common or vice versa? 6) Occurrence of migrants and "strays".

The last can yield important information immediately, whereas the significance of much of the first five will result primarily from the accumulation of information during several years. Many North American Lepidoptera are well-known as migrants - e.g. Eurema mexicana, Phoebis sennae, Danaus plexippus, Dione vanillae, Vanessa cardui, Herse cingulata, Celerio lineata, Erinnyis ello, Erebus odora, Thysania zenobia, and Alabama argillacea, to mention a few of the best known species. Some have occasional or regular mass migrations - plexippus, cardui, lineata, argillacea. Others seem to appear individually and infrequently - odora, zenobia, mexicana, ello. Exact date records are needed from a large number of different observers in order to gather material for understanding the movements. D. plexippus is reputed to have a northward migration in spring. Several veteran collectors have never seen a spring migrant. Information on this important point is urgently needed.

It is hoped that 1948 will show reports from many regions weakly represented in 1947. The region from Maryland to Florida, westward to New Mexico and Nebraska was unsatisfactorily reported. The same was true of Oregon, Idaho, Montana, Wyoming, the Dakotas, Minnesota, and most of Canada west of Quebec. Alaska, Labrador, and Newfoundland were unrepresented. It is hoped that the West Indies and Mexico eventually will become included regularly. In general, the butterflies were thoroughly treated. Very little information on moths was reported, and the "micros" were nearly ignored, M.O. Glenn rescuing them from complete oblivion.

This is the call for heavy participation and thoroughness of records. Your regular observations and prompt noting of them can give a genuine boost to our knowledge of seasonal changes in the Lepidoptera of the continent.

C.L.R.

Mr. P. Siviter Smith, Siviter House, Ludgate Hall, Birmingham 3, England, is revising the genus Lycaena (= Chrysophanus). He is anxious to settle the long-standing question as to whether L. phlaeas of Europe and L. hypophlaeas of No. America are one species. The test is whether the two will mate and produce fertile offspring. Mr. Smith will send living eggs of phlaeas by airmail to N. Am. Lepidopterists willing to rear them and attempt the cross-mating with hypophlaeas. Since hypophlaeas is abundant throughout eastern No. America and the host plant, Sheep Sorrel (Rumex acetosella), grows as a weed in city lawns as well as in fallow fields, the problem should not be difficult. A significant contribution to science can be made by one or preferably several members wishing to undertake the test. Members who wish to participate should write directly to Mr. Smith. We will be pleased to have a card from any members who undertake the experiment. It is hoped that through cooperation of European and American members similar breeding tests will be made with Papilio machaon and P. aliaska and zelicaon, Colias chrysotheme and C. eurytheme and philodice, Lycaenopsis argiolus and L. pseudargiolus, and other Lepidoptera.

PRINCIPLES OF TAXONOMY - I.

In response to requests from several members a series of brief discussions on elements of taxonomy will be presented, with special stress on definitions of terms used commonly in Lepidoptera taxonomy. A few introductory definitions are necessary in launching these remarks. BIOLOGICAL NOMENCLATURE is the regulated system of naming species of plants and animals and of naming the categories into which they are grouped. CLASSIFICATION is the grouping of these species into higher categories. The scientist who names and defines the species and then classifies them is known as a TAXONOMIST or SYSTEMATIST. The distinction between the last two terms is now indefinite, but in general the taxonomist is concerned with species and the systematist with their grouping into a natural classification.

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At the end of the Dark Ages when the quest for knowledge began to escape from the suppression of theology it was natural that men interested in living things sought to give standardized names to the organisms they saw around them. Aristotle had classified the animals, but the flaws in his system were increasingly apparent. Previous to the time of Linnaeus the systems were clumsy and none was found acceptable universally. A species might, for example , be named The Orange Butterfly Of The Alpine Meadows, although of course it would have been written in Latin, virtually the only scholarly language prior to 1800.

Carl von Linné (Carolus Linnaeus) was a brilliant Swede interested in plants and animals. He had a remarkable mind for arranging and classifying, and he published several revisions of his Systema Naturae and Species Plantarum, each one modified from its predecessor. Finally he settled on the BINOMINAL system for naming species of animals in the tenth edition of Systema Naturae and its date of publication, 1758, is the starting point of our modern system known as binominal nomenclature. It is surprising that such a method was not adopted much sooner, since it is so similar to the occidental system of human names.

In this manner every species has 2 names, one its generic name, which it has in common with other closely related species, and the other its specific name which it alone has within its genus. Thus the Alpine orange butterfly became Colias palaeno, belonging to the genus of yellow or orange black-bordered butterflies, Colias, and being a special member, palaeno, of that genus. The plural of "species" is "species". The plural of "genus" is "genera". The adjectives are "specific" and "generic". The spellings "specie" and "genuses" are never correct in biology. A generic name must always be spelled with an initial capital letter. The specific name of any animal is nearly universally written with a small (lower case) initial letter, although the International Rules permit capitalization of names derived from names of persons. Virtually all taxonomists, except many French workers, have abandoned the clumsy practice of capitalizing specific names.

TYPE NOMENCLATURE

There are so many different names applied to types of species that members may find helpful a list of the 13 most common and useful names, with a brief definition of each. Type species of genera will be considered later. A much more detailed list prepared by Professor C.P. Alexander will be found in Annals Ent. Soc. Am. 32: 689-702, 1939. Many of the following definitions were obtained there.

1. Primary Type: A specimen on which the description of a new species is based. Includes Type, Holotype, Allotype, Lectotype, Cotype, Syntype, Paratype. Possibly a better use of this term is for the one specimen of each sex which stands as the type. Thus Neotype would become primary and Paratype secondary.
2. Secondary Type: A specimen considered to deserve a type name but not included in the original series on which the description of a new species is based. Includes Plesiotype, Metatype, Topotype, etc.
3. Type: Strictly construed, this term equals the preferable Holotype (see below).
4. Holotype: The one specimen, selected by the original author at the time of describing a new species, standing as the type of the species. May be of either sex.
5. Allotype: The type of the opposite sex from the holotype. If the original type series contained only one sex, the allotype could be described by the same or another author when the opposite sex was found, subsequent to the original description. Many careful workers prefer to use the term only for a specimen used in the original description or for a topotype.
6. Cotype: Any specimen of the author's original series when no holotype was designated. Syntype is a synonym of Cotype.
7. Paratype: Any specimen of the original series after the holotype and allotype have been selected.
8. Lectotype: The holotype selected by the original or a later author from the series of cotypes (syntypes) when no holotype was originally selected. This is the "type by subsequent designation".
9. Neotype: A specimen designated to replace a destroyed or lost holotype or lectotype. Should be selected from paratypes if possible; otherwise should be a topotype.
10. Metatype: A specimen from the original locality (topotype) identified by the author of the species, after the original description. A metatype is really as valuable as a paratype, but is not usually so regarded.
11. Topotype: Any specimen from the original locality (type locality). The type locality is the locality where the holotype was taken and is to be narrowly construed as the exact locality.
12. Plesiotype: A specimen used for any redescription, supplementary description, or figure published by any author after the original description of the species.
13. Homoeotype: A specimen identified by another than the original author on comparison with the type. A homoeotype identified by an excellent taxonomist is almost as valuable as a metatype.

C.L.R.

THE CARE OF A COLLECTION AND LIBRARY

by Cyril F. dos Passos
Mendham, New Jersey

The capture, preparation, and determination of specimens of Lepidoptera are the primary steps in the formation of a collection. The proper maintenance of the insects is as important as the other steps. Unless it is attended to carefully, the preceding work is wasted.

The greatest dangers to a collection are from light, the larvae of Dermestes beetles, and mold. The first results in fading but is the easiest peril against which to guard. All that is necessary is to keep the insects in closed boxes or cabinets,except when under examination. Dermestes is an enemy against which one constantly must be on the watch. All acquisitions, no matter from what source received, should be fumigated immediately upon their receipt and before they are placed in the collection. This is done easily by placing them in an airtight container, such as a tin box, in which there is a liberal amount of paradichlorobenzene, and leaving them there for several days. But the collection itself must be guarded against this persistent pest. For a number of years the author has done that by means of creosote fumes. It is not claimed that the fumes of creosote will kill Dermestes, but the odor repels them and they seldom, if ever, enter boxes that have been treated in this manner.

The creosote is placed in a gelatine capsule filled with cotton and pinned into each insect box. These gelatine capsules may be purchased at any drugstore. For use in the collection remove the cap and place it over the long end. This reinforces the bottom of the capsule. Roll a small amount of cotton into the shape of a cylinder and insert it in the capsule. This must not be packed tightly, because room must be left for the creosote. Hold the capsule at each end with the thumb and index finger. Then insert a no.0 insect pin diagonally, entering at a point just above the rim of the cap as reversed, and coming out just below so as to pass through a single layer of gelatine on entering and through a double layer on emerging, thus locking the cap to the long end of the capsule. Pin the holder so made into the box. With a medicine dropper fill the capsule with creosote. The opening of the capsule should point toward the upper part of the box when the latter is placed in its permanent position. Originally the author replenished the creosote once a year, but for reasons presently stated once every two years is now deemed sufficient. In several years the bottom of the capsule will partially dissolve or rot through. When that occurs the capsule should be replaced or nested into the next larger size of capsule.

Since the end of World War II an insecticide known as "DDT" has become available for civilian use in the U.S.A. The author has experimented with this and found it most effective. DDT is used as a residual insecticide,killing when the insect touches it, rather than by fumigation as a gas or in an aerosol. A thin coating should be sprayed in solution form on any surfaces which wandering ♀ Dermestes might touch. Indoors, a coating is effective for nearly a year if not wiped off in dusting, etc. Also it has eliminated all clothes moths, silverfish, and flies. Since its use it has been found necessary to replenish the creosote only every two years. This year not a single Dermestes was found in the writer's collection of butterflies contained in some seven hundred and fifty boxes.

During World War II the author was unable, because of the fuel oil shortage, to heat his entomological laboratory. As a result a thick, white, fuzzy mold formed on some of the insects in boxes placed against the north wall. This has presented a problem to which no entirely satisfactory solution yet has been found. However, the following steps have been taken to overcome this difficulty. Their description may prove useful to other collectors. All insect boxes standing on shelves against the north wall have been moved away from the wall by about three inches, thus creating an air space between the wall and the boxes. The wall has been sprayed with "Mil-Du-Rid", a preparation manufactured by the Interchemical Corporation of Fair Lawn, New Jersey. Finally, some heat from a nearby radiator has been directed into this open air space. It is believed that these steps will prevent the formation of additional mold. Mold can never develop in dryness. Specimens which are already moldy are apparently beyond repair. No method tried thus far has succeeded, but perhaps the author will have something further to report another year.

The only enemy to a collector's library appears to be silver-fish. Fortunately old and valuable books are not attacked by silver-fish, because the food habits of these insects do not attract them to fine rag paper. They prefer to eat the cheapest paper made from wood pulp and articles such as window shades where attached to the roller or end by starch. The control of silver-fish with DDT is easy. If the reader has any fine leather bindings, they should be treated twice a year with some such product as "Lexol", manufactured by the Martin Dennis Co., Newark, New Jersey. Unfortunately, the heat in modern homes dooms such bindings anyway, but their life may be prolonged by the foregoing treatment.

Too great care cannot be given to collections. After all the time and trouble devoted to their creation, it is a pity to have them ruined. Somehow or other it always is the rarest and most valuable material that suffers first and most severely. The author even has seen types in museums reduced to nothing but a pin and label! Such happenings are inexcusable. They could have been prevented by slight care.

Editor's note: John Abbot, of Georgia, was the earliest important contributor in America to the knowledge of Lepidoptera, although he never published his fine drawings and notes directly, these appearing under the authorship of Smith and Boisduval & Leconte. Any authoritative biographical material is valuable. His life has been an intriguing mystery to American Lepidopterists for nearly a century, and much speculation has appeared in print. I was startled and delighted to discover in the locked files of the Museum of Comparative Zoology (Harvard University) a detailed account of the first part of his life handwritten by Abbot, himself. It is a pleasure to be able to present it verbatim in this issue of the NEWS. This is the account mentioned by Oemler in his letter to Thaddeus W. Harris, reproduced by R. P. Dow. The most detailed biography of Abbot previously published was written by Dow in the Journal of the New York Entomological Society, vol. 22. There one reads: "If Francillon was uncommunicative, Abbot was more so, especially concerning the first forty years of his life." The following account shows this to be untrue.

"Notes on my Life

I was born in the Year 1751, the first of June Old Stile at the West end of the Town London, in Bennet Street S^{t} James, my father was an Attorney at Law, I was his 2^{d} Son my brother dying before I was born, at the time of my leaving England I had 2 Sisters, Elizabeth & Charlotte, and a brother Thomas then 7 Years old. I had a very early love for Books laying out my pocket money for little Story books, and an early taste for drawing, which might be much increased by my father having a large & valueble collection of prints, of some of the best Masters, he had also many good paintings,

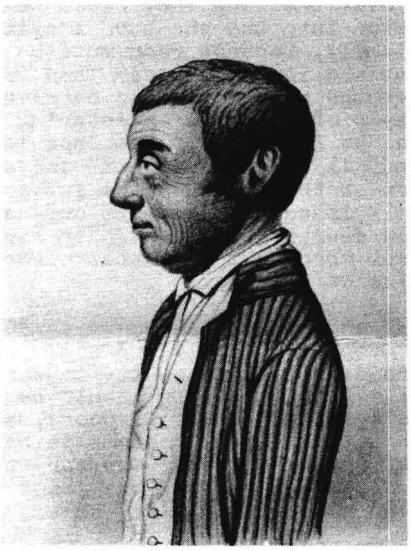
My peculiar liking for Insects was long before I was acquainted with any method of catching or keeping them I remember knocking down a Libella & pining it, when I was told it wou'd sting, as bad as a RattleSnake bite

My Father had a Country house, at Turnham Green 5 miles from London at £25 a Year rent, at the early part of my Life, I remember breeding some there, when I had no method of keeping them after I had done it when the Lease expired my father gave it up, as the grounds & house was divided, between the heirs of it I have a drawing of the house, which I will send you some time hence

In one of my Walks after Insects I met with a M^{r} Van Dest the famous flower painter, he invited me to come & see him, he had been a small Collector, showed me a pattern of the large Net, & gave me some rare Insects, I got me immediately a Net made & begun to understand keeping them better

My father got a M^{r} Boneau an Engraver, & Drawing Master, to give me lessons of Drawing at our own house, he was acquainted with a M^{r} Rice a Teacher of Grammer, who had likewise been a Collector of Insects, M^{r} Boneau, did not paint in Water Colours, he only understood the Rules of Drawing & perspective, he praised my Drawings of Insects, & got me through M^{r} Rice introduced to M^{r} Drury who had been president of the Linnean Sosiety & who then was allowed to have the best Collection of Insects both English & foreign of any one

I leave You to Judge my pleasure & astonishment at the sight of his Cabinets the first I had ever seen of the kind he very politely offered to lend me Insects to Draw, & we immediately became well acquainted That hour may be said to have given a new turn to my future life I had immediately a Mahogany Cabinet made of 26 Draws, covered with sliding tops of Glass, it cost me 6 Guineas, & begun to collect with an unceasing Industry I met with soon after & purchased a parcel of beautiful Insects from Surinam I soon begun to have a respectable Collection but not Satisfied with it I craved more



John Abbot. Self Portrait.

One Day a M^{r} Smeathman a young Man introduced himself to me, by saying he understood by M^{r} Rice, I was a brother Flycatcher, and had come to see me, I am not fond of Strangers, but his Address & discourse, soon settled an immediate acquaintance, he had a small collection, among them an English Purple Emperor, it is rare, I never met with any myself, I gave him a Guinea for it On the other hand in one of my walks I met with a hornet Moth, not larger than a hornet, a Gentleman offered me 2 Guineas for it, I thought the offer so liberal I let him have it, I also sold my duplicate English Insects at a good price This M^{r} Smeathman went to Africa on an intention chiefly to collect Insects, he staid 2 or 3 Years, & returned to England after I left it, he made a publication on it, particular an account of the Ants, & the large hillocks they make there, he was agoing out there again, as Depety Governor, to a British Establishment there, but was taken with a fever & died

I now began to entertain thoughts of going abroad to collect foreign Insects myself

I had bought Albins history of the changes of Insects coloured which was great use to me he had also published 3 vols of Birds, my father went to purchase it, at an Auction of Books, but did not & instead of it bought 4 Vols of M^{r} Edwards Birds, but so much superior to Albins, I was much pleased with the change but there was 3 more he bublished later, we went together to his house to buy them I carried some of my Drawings with me, he praised them much & desired me by all means to continue drawing, saying no doubt I wou'd be a bublisher hereafter of some work on Naturalhistory

About this time Lady Honeywood, widow of Gen^{l} Honeywood made me a present of Catesby's Nat. hist. of Carolina, a subscription Copy £20 price all this you may suppose increased my love in general for Nat. history

(cont. on next page)

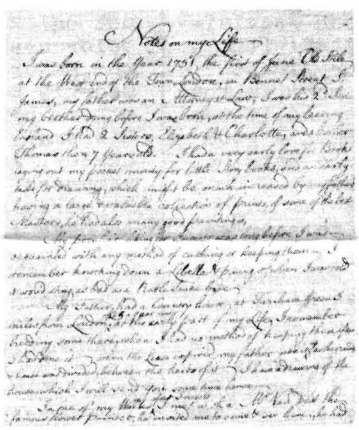
I was Articled to my Father as his Clerk for 5 Years to be an Attorney, but Deeds, Conveyances & Wills &c. was but little to my liking when my thoughts was ingrosed by Natural-history

In the beginning of the Year 1773, I was determined to come to America, but what part to choose was the only matter to determine on A Frenchman & his Son & come from Orleans, they praised that very much but I had met with a hist of Virginia painted in such glowing Colours, & the Voyage there being much shorter, I determined on Virginia, I sold my Cabinet of Insects, Drawings &c. had 3 smaller Wainscot Cabinets made to bring with me and engaged my Passage in the Royal Exchange, Captn. Woodford the Ship had undergone a thorough Repair & was to sail in April but through delays did not sail untill July. In the Summer thro' the recommendation of a Mr Humphreys I was employed in making Drawings of Nat. history shells &c. at a good price, on Vellum at a Guinea apiece, A Gentleman I drawed for purswaded me delay my departure & draw for him, but it was to late

One Morning I went to the Coffee house to know when the Ship wou'd sale, was told she had sailed, but might perhaps overtake her in the River, before she got out to Sea.

I was a good deal surprized and alarmed, I had payed for my passage 25 Guineas, & my clouths & baggage was on board

I hired a post chaise & in Company with my father & mother & my brother Tommy then 7 Years old, we started to overtake the Ship before it got out of the River to Sea Uppon a point of Land on the River we got in sight of the Ship, but far a head, all the chance then was to go to Deal on the Sea coast, from whence She was to take her final Departure


Notes on my Life
I was born in the Year 1751, the first of June Old Stile at the West end of the Town London, in Bennet Street St. James, my father was an Attorney at Law, I was the 2d ... my brother dying before I was born, at the time of my leaving England I had 2 Sisters Elizabeth & Charlotte, and a brother Thomas then 7 years old. I had a very early love for Books laying out my pocket money for little Story books, and an early taste for Drawing, which might be much increased by my father having a large & valuable collection of prints, of some of the best Masters, he had also many good paintings,

Upon our arrival at Deal we saw with pleasure the Ship lying off, which had got there before us, I immediately hired a boat & got on board her I took leave of my Mother in tears, but my brother Tommy pleased with his Tour I suppose said he was sorry I was going to leave him, but hang him if he cou'd Cry

The Ship did not Sail till 3 days after, the wind not being fair- the Captain & some of the passengers next day went on shore, but I was determined to stay on board as I had got there There was 8 Cabin Passengers of us- among them was a Mr Goodall & his Wife an English woman who he had married during his stay in England, he was furnished by his Uncle a rich Merchant in London England, with a Cargo of Goods to set up a store in Virginia in Hanover County where he lived about 100 miles from the mouth of James River

In about a fortnight we got to Madeira, where we stop a day or to two to take in some Wine I landed there walked about the Town & dined at a hotel Altho it was a fine day I did not meet with any Butterfly or Moth

About the 9th of Sepr. we made James River & anchored near the mouth, being 6 weeks on the Passage

I had a Letter of Recommendation from Mr Drury to a Minister in Dinwiddee County, but I had commenced an Acquaintance with Mr Goodall, & with his consent agreed to board with him the Parson being a total Stranger & living still much farther back in the Country

Mr Goodall got acquainted with a Mr Balflour who had a small Sloop & was going up James River on a commission to buy up a large quantity of Wheat to ship to England, he very politely offered to carry us up the River as far as old James Town, the first settlement in Virginia

Upon my landing there I found it was now deserted as a Town we there hired 2 Chairs, one for myself & the other for Mr Goodall & his Wife, with an Attendant who was to bring them back again

Soon after my arrival at Mr Goodalls it became very sickly in the neighbourhood, with fevers & fluxes, one of Mr Goodalls Negroes died of the Flux, & many of the neighbours; in one family 22 died in 2 years white & black leaving only a little Girl heir to the Estate

I was very fortunate in not being sick at all during my 2 Years stay in Virginia, and escaping a seasoning to the Country, & it was not till the 2d. year in Georgia before I had the Ague & fever

During the next Summer I was much disappointed in not meeting with the variety of Insects I expected, I was likewise very unlucky, I shipped a Cabinet of Insects for London, but the Ship was lost on the English coast, together with my Insects, I got much dispirited, & come to the resolotion to return to England again, the times likewise becoming alarming I was told that a Captain of a Ship bound for London was to be at the Court house, I went there with Mr Goodall, but the Captain not coming, I gave it out

In the mean time I got acquainted with one William Goodall, a Cousin to the former, a Young man, who had lived in Georgia, with his Relations, but who had married in Virginia he talked much in praise of Georgia, & wanted to go back there but had not the means to bear his Expences

The Colinies having appointed a day after which all Intercourse with England, was to be stopped, I fixed up another Cabinet of Insects to send to England, they was on board the boat in the River to the Ship, when a terrible September storm arose in the night, and the boat was lost together with my Insects again but to make me amends I have not lost any I have sent from Georgia

The times now becoming very troublesome, & hearing that Georgia had not then joined the other Colinies, I joined Wm Goodall to come to Georgia together I furnished 2 horses & was to bear all our Expences, he one & a Cart, to carry his Wife & child & a little negro boy & our baggage

Thus fixed we started one day early in

(concl. on next page)

Decr. accompanied by a Cousin of his who lived in North Carolina, I must confess I parted with my Virginia friends with some regreet I felt much more depressed in my mind for some hours than when I left England

When we got to the Tar River N.C. we stopped at his Uncles where we was entertained & rested ourselves a week we continued our Journey, & early one day conversing with a Man that lived on the road, he found out that it was a cousin of his, we were then invited to stay till next day we continued on to Roanoke River, the ferry was kept by one Sprowles an Irishman, the cold set in so severe that we cou'd not cross the River for the Ice for sevl. days, Sprowles out of regard for my being a Countryman only charged us 14 shillings C.currency for houseroom, the snow also lay deep on the road, & the next night after crossing the River, had to scrape away the snow to lay our beds down by a light wood fire, but still sleept very comfortably

Early the next morning as we travelled the road forked & not unluckably we took the wrong one, we soon came to a deserted store & out buildings, we immediately took up Camp & stayed about a week till the snow melted, & the weather cleared up, we obtained here, being near a Scotch Settlement, some fresh provisions,& some good Cyder Thus recruited with fresh Spirits we got again into our direct road, & travelled for 2 or 3 days more,in the evening we came to a house on the road,it was very cold, & our horses had performed a good days travel, we was very desirous to take up, it was kept by an old woman, her son,& 2 or 3 daughters, the old Woman wou'd not let us stay, she said it was but 2 miles to another house where we might stay her son & daughters entreated for us, but the old hag was enexorable, we had to travel on full five miles more, we stopped, had a good fire & supper, to make amends for our late nights travel We traveled on to Peedee River, here Wm. Goodall had another Cousin an Overseer to a large plantation, We stayed here 2 or 3 days, I had now got a bad cold, but upon taking some stewed liquor, it cured it, & then continued our Journey on the road to Augusta we crossed the ferry, & Wm. Goodall sent word from Augusta by some persons he knew, for Wm. Moore his brother in law & pleasant Goodall his half brother,to meet us next day with fresh horses,which they did, and about dinner time got to Wm. Moores house, about 30 miles below Augusta about the beginning of February, performing our journey in about 2 months, in the middle of Winter but I arrived in good health & Spirits, had seen a good deal of the Country,& many amusing passing scenes, We took up our abode with pleasant Goodall who then kept bachelors house, till a house cou'd be built of logs for Wm. Goodall, on a part adjoining of Wm. Moores land When that was finished we moved there, & I took up my board with him for some time after

I was now settled in Georgia for a season I might now take leave of my notes, but as the first Years of my living in Georgia, contains much more of Adventure, than the former part of my life, and continued through such bad & terrible time, that I often reflect, upon the goodness of providence, in bringing me safely though them

When I am again settled I will continue them, with many curious Anexdotes of the Times, Indeed I often think if I had the Genius of a Scot or Bulwar, to colour some parts highly, & some occasional additions, It might make an amusing Novel of 2 vols"

In the above autobiographical notes the exact spelling, punctuation, and capitalization have been reproduced. The figure on page 29 is a photograph of the first of the ten pages written by Abbot. It seems unlikely that the expected account of his experiences in Georgia was ever written. However,this later period is much better known than the period covered in the above narrative. It is of interest to note that Abbot's biographers, S.H. Scudder and R.P. Dow, believed Abbot came to America about 1790, fully 17 years later than the actual date revealed above. Further, Dr. H. Hagen wrote that he was "privatlehrer" - private tutor -,an assumption that seems surely incorrect, since all of Abbot's writing reveals a very unfinished education. His actual means of livelihood remains unknown, but it is not unlikely that the sale of his fine water color drawings to John Francillon of London and Major John E. Leconte of Georgia and of Georgia butterflies to Francillon and several others provided him with an important part of his small income. His Savannah friend, Dr. Oemler, wrote with indignation of the unfair remuneration Abbot received from Leconte for his drawings- only sixpence each. He is known to have lived and collected, while in Georgia, principally in Screven and Bulloch Counties.

There can be no doubt that he never carried on any scientific research beyond his drawings and field notes on life history. However, he kept a collection of Lepidoptera and Coleoptera and his first letter to Dr. T.W. Harris was for the purpose of exchanging Georgia specimens for New England material. Dr. Oemler wrote in a letter to Dr. Harris: "You will be astonished when you hear that a man so long amusing himself with Natural History, should never have been inclined to pursue it scientifically, he, although now 83 years of age, is still in the simplicity [unadvanced state of scientific knowledge] of a School boy. He has been drawing plants since his boyhood and never knew any thing of Linnaeus' Classification till I demonstrated it to him and created his astonishment." It was Dr. Oemler who persuaded Abbot to write the biographical notes we are here publishing for the first time - a posthumous paper over a century late! Oemler forwarded them to Dr. Harris.

The last reference seen by us is a letter from Abbot to Harris dated "15th Novr. 1834", when he was 83 years old. For the last several years of his life he was completely deaf and hampered by corpulence. It seems certain that Abbot never married. Oemler went to the man with whom Abbot had been boarding shortly after Abbot's death, in order to save the last few drawings, but the children of the house had already destroyed them in play.

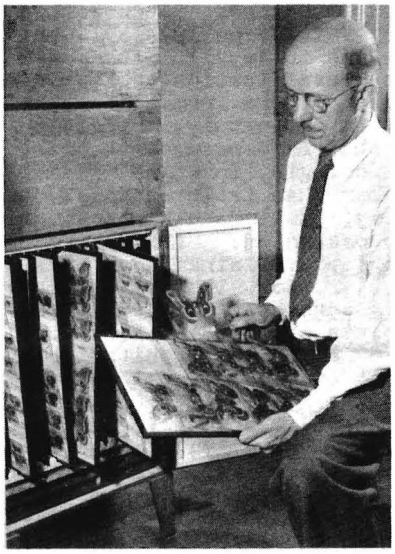
C.L.R.

PLASTIC MOUNTS FOR BUTTERFLY AND MOTH COLLECTIONS

by Otto Ackermann

The processes used in handling collections of Lepidoptera have undergone hardly any changes in the last 100 years or more. Tradition, rooted in the fact that many collections have sprung from other older ones, and the availability of standardized supplies are probably the main reasons for this unprogressive condition. Considering the ravages to which collections without constant care are subjected one wonders why concerted efforts were not made long ago to utilize some of recent technological advancements. A beginning was made some time ago with plastics after the pattern of nature's amber-embedded insects, but this process is too expensive for large scale use, and the mounts do not lend themselves to efficient storage.

The writer demonstrated a small collection of Lepidoptera in new plastic mounts devised by him at the 1939 convention of the Entomological Society of America at Columbus, Ohio. In the subsequent years he developed the method farther by applying, testing, and modifying it while building up a full scale collection in the new mounts. The original samples are now almost ten years old and show a constancy in shape and transparency which warrants the statement that the mounts possess the characteristics required for a permanent collection. The material employed is cellulose acetate which is chemically more stable than cellulose nitrate (celluloid). The mounts are produced commercially under the name "Transpar Mounts".



The author with part of his collection.

These mounts are completely transparent, easily assembled, airtight containers for individual Lepidoptera. Each casing consists of two identical halves made from sheet material having a center depression to provide space for the body of the insect. The assembling is accomplished by pressing together two edges by means of a specially designed clamping tool, and passing a brush saturated with acetone along the seam. The liquid is drawn into the contact area to a depth of about $\frac{1}{4}$" and fuses the surfaces together. The process requires about 15 seconds for each seam. The two parts of the mount are curved so that, after the first seam is formed, the halves spread apart, leaving ample room for inserting the specimen. These mounts lend themselves readily to permanent labelling. The label, consisting of ordinary paper, is placed against the underside of the mount and is coated with acetone. The latter penetrates the paper and fuses it instantly to the surface of the transparent model.

Space economy obviously is a primary requirement for mounts if they are to be used in a collection. Therefore the series of mount sizes has been so chosen that closely fitting containers are available for all types of specimens. It was found that 16 sizes, suitably proportioned, adequately cover the whole range of the North American Lepidoptera. The smallest container is $1\frac{1}{4}$" x $1\frac{1}{4}$", the highest one (for Luna moths) 5" x $5\frac{3}{4}$", the one for the largest wingspread $6\frac{1}{2}$" wide. Recently the writer built some special mounts for a collector in the tropics; the dimensions were 9" x 11", with 3" body depression.

A satisfactory collection lay-out in which the specimens may be arranged in a manner permitting convenient inspection and favorable display is achieved by standardized panels 12" x 20". The panels consist of sheets of composite structure with white front surface and black trimming. They carry strips of transparent material, each fastened to the panel along its lower edge by means of staples. The bottom edges of the mounts are inserted between the strips and the panel. The mounts are thereby firmly held in place and yet can easily be removed. Overlapping of mounts permits a large number of them to be placed on one panel. A set of five panels, one each with 6,7,9,12 and 16 strips respectively, has been found to answer all requirements. The 6 strip panel holds 12 of the largest mounts while the 16 strip type accomodates as many as 128 of the smallest ones. The display panels are best stored in book case type cabinets with shelves spaced slightly more than 20" apart, and are kept separated by 1" wide wooden strips on the bottom shelf and by small pegs at the top. The total width per panel is $1\frac{3}{8}$". With this type of collection nearly twice as many specimens can be stored in a given space than with the conventional glass-topped cases.

His own experience as well as the enthusiastic reception which the new system has been given by the few collectors to whom it so far has been made available, have convinced the author that the time for general application among Lepidoptera collectors is at hand.

Editor's Note: A notice which will guide NEWS readers wishing to obtain Transpar Mounts is on page 35. We have seen a sample of the mounts and especially urge Lepidopterists who occasionally or often show their collection to laymen to investigate this innovation.

95. Antram, Chas.B., "Note on the Butterflies of the New Forest Area in 1947, in Connection with Weather Conditions." Ent.Rec. & J. Variation, vol.59: pp.128-130. Nov.1947.
96. Balland, René, "Une Migration de Pieris brassicae L. (Lépidoptères)." (In French). La Feuille des Naturalistes (Paris), vol. (n.s.) 2: p. 106. Nov.-Dec. 1947.
97. Beall, Geoffrey, "The fat content of a butterfly, Danaus plexippus Linn.,as affected by migration." Ecology, vol.29: pp.80-94. Jan.1948. The fat content just before migration in Ontario is very high and of course diminishes greatly in migration,specimens in Louisiana having 2-15% of dry weight, while in Ontario it was 30-210%. In Feb. in California it was 40%. In Ont. ♂♂ were heaviest, in Calif. ♀♀, in La. equal. Summer Ont. populations had 20%. Illustrated by many tables.
98. Blackie, J.E.H., "Frequency and Distribution of the Commoner British Butterflies." The Entomologist, vol.80: pp.256-258. Nov. 1947.
99. Brandt, William, "Note on some Harmodia species (Lep. Agrotidae)." Notulae Entomologicae(Helsinki), vol.27: pp.1-4, pls.I, II. 20 Nov. 1947. Describes as new: H. canescens(Afghanistan), H. drenowskii ssp. khorassana(Iran), H.wiltshirei(Afghanistan), H. compta ssp. kashgaia(Iran), H. compta ssp. afghana(Afghanistan), H.imitaria(Iran), H. paghmana(Afghanistan), and H. macilenta (Afghanistan). All very briefly described. Gives notes on H.ignicola Warr. and H.drenowskii Rbl. Photos of H. lucida and all above except wiltshirei and typical drenowskii. Figures ♂ genitalia of ignicola, lucida, and luteocincta tristis and all the new entities except the 2 races of compta.
100. Bryk, Felix, "Über die auffindung einer unbekannten Linnéschen "Papilio"-Type im Riksmuseum von Stockholm(Lep:Brassolidae)." (In German). Entomologisk Tidsckrift(Sweden), vol.68: pp.196-198. 1947. The type of Caligo teucer (L.) rediscovered.
101. Campbell,J.O.,"Some Notes on Lepidoptera collected at Darwin during November, 1945." Australian Zoologist (Sydney), vol.11: pp. 159-160. 20 June 1947. Gives a list of 27 spp. of butterflies taken.
102. Champie, Clark, "Tomato Worm Invaded." Natural History, vol.56: p.466, ill. Dec., 1947. Popular account of parasitism of Protoparce larva by braconid wasps. Rather poor photos.
103. Darlow, H.M., "Observations on Variation and Hybridisation in Zygaena lonicerae, Esp., and Zygaena filipendulae,L. (Lep.)." Ent. Record & Journ. Variation, vol.59: pp. 133-136. Nov. 1947.
104. Goodson, F.W., "Notes on the Genus Eumaeus Hübner (Lep., Lycaenidae)." The Entomologist, vol.80: pp.273-276. Dec. 1947. Studied the 700 specimens in British Mus., and recognizes 5 spp., aside from "Theorema group": childrenae, toxea, minyas, toxana, atala. No new names.
105. Gould,George E., "Some Notes on the Biology and Control of Tomato Hornworms." Proc. Indiana Acad. Sci., vol.56: pp.157-167. 1947. Excellent biological notes, distinguishing characters of Phlegethontius sexta and quinquemaculata.
106. Hovanitz, William, "A Graphic Method of illustrating ecological and geographical distributions." Ecology,vol.29:pp.121-122, fig.1. Jan. 1948. Gives a chart showing altitudinal and latitudinal distribution of North and South American Pieridae genera. A very useful form of graphic illustration.
107. Kaisila, Jouko, "Euzophera fuliginosella (Hd.) Hein. (Lep., Pyralidae) in Finnland gefunden." (In Finnish & German). Ann. Ent. Fennici(Helsinki),vol.12:p.76. 15 Dec.1946.
108. Kanervo, Veikko, "Sporadic observations concerning diseases in certain species of insects. 3.Diseases attacking Plutella maculipennis Curt." (In Finnish). Ann. Ent. Fennici (Helsinki), vol.12: pp.143-153, 2 figs. 30 Jan. 1947. Found 3 spp. of Entomophthora(fungus) and Fusarium and Penicillium in Plutella, excercising good control of the moth. (English summary).
109. Kiriakoff, S.G., "Bemerkingen over het phylogenetisch Lepidopteren-Systeem van Auguste Lameere." (In Dutch). Natuurwet. Tijdschr. (Gent), vol.29: pp.159-169. 12 Nov. 1947. Explains in detail, with comments, Lameere's classification of Lepidoptera, which hardly differs from most other extant systems. Unfortunately, this is the same confused method Lameere used in the great Précis de Zoologie, in which names have French, rather than Latin endings.
110. Krogerus, Harry, "Zwei neue Kleinschmetterlinge aus Fennoskandien." (In German). Notulae Entomologicae (Helsinki), vol.27: pp.4-8, figs.1-4. 20 Nov. 1947. Describes as new Endothenia adustana(Lake Ladoga,Finland)and Blastobasis obsoletella(N.Finland) and gives photo of each and ♂ genitalia of adustana and venation of obsoletella.
111. Krogerus,Harry,"Argynnis laodice Pall. i Finland." (In Finnish). Not.Ent.(Helsinki), vol.27: pp.30-31. 20 Nov. 1947.
112. Lempke, B.J., "A Hereditary Form of Spilosoma lutea, Hufn." Ent. Rec. & J. Variation, vol.60: pp.4-5. 15 Jan. 1948. Describes as new: form benesignata, a dominant sex-controlled form appearing in a series of ♀♀ in the F_1 and F_2 reared from a normal wild ♀ from Holland. A significant discovery,but not properly receiving a Latin name.
113. Muspratt, Vera M., "The Migration of Celerio lineata livornica Esper (Lep. Sphingidae) in Europe in 1946." The Entomologist, vol.80: pp.249-252. Nov. 1947. 1946 was a year of heavy migration in western Europe. This paper reminds us that we know little of N.Am. migrations of lineata.
114. Neves, C.M.Baeta, "La Dioryctria splendidella H.S. (Lepidoptera- Pyralidae) espèce nouvelle pour l'entomofaune Portugaise." (In French). Bull.Soc.Portugaise Sci.Nat., vol.14: pp.65-69, 2 figs. Jan. 1943.
115. Palmen, Ernst, "Ein auffallender Massenflug von Phytometra gamma L. und Pyrameis cardui L. (Lep.) in Südfinnland." (In German). Ann. Ent. Fennici (Helsinki), vol.12: pp.122-131. 30 Dec. 1946.
116. Querci, O., "Zygaena ignifera." Ent.Rec. & J. Variation, vol.59: p.95. July/Aug. 1947. Brief note.
117. Querci, O., "The Variations of Anthrocera carniolica ssp.magnaustralis, Verity." Ent. Rec. & J. Variation, vol.59:pp.97-98. Sept. 1947.

RECENT LITERATURE (cont.)

118. Réal, M.P., "Capture d'un Gynandromorphe Hybride." (In French). Bull. Mens. Soc. Linn. Lyon, vol.16: pp.56-58, fig. Mar. 1947. Describes and figures a bilateral gynandromorph (left side ♂, right ♀) which is a hybrid between Augiades sylvanus and A.comma, taken in Ain,France.(See #119).

119. Réal, P., "À propos du Gynandromorphe d'Augiades Capturé dans la Nature." (In French). Bull.Mens.Soc.Linn.Lyon, vol.16: p. 201. Dec. 1947. Reports that the gynandromorph is not actually a hybrid, but is only A. comma. (See #118, above).

120. Rougeot, P., "Note sur les Papillons Gabonais du Genre Drepanoptera Roths." (In French). Bull. Mens. Soc. Linn. Lyon, vol.16: pp.74-75. Notes on D. rectifascia, vacuna, albida, ploetzi.

121. Siverly, Russell E., "A Morphological Study of the Male and Female Genitalia of Heliothis armigera (Corn Earworm Moth)." Am. Midland Naturalist, vol.38:pp.712-724, figs.1-11. Nov. 1947. The drawings show the details of male and female genitalia from several angles. The procedure for genitalic preparations is given(mostly after Busck, 1932), all terms used are defined. The paper gives an extensive bibliography.

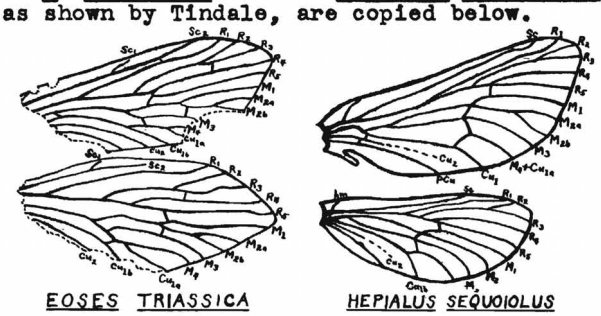
122. Stempffer,H., "Note sur les Ornipholidotos du groupe de muhata Dewitz (Lepid. Lycaenidae)." (In French). Rev. Zool. & Bot. Africaine (Belgium), vol.40: pp.165-174, figs.1-7. 6 Nov. 1947. Describes as new: O. gabonensis (Gabon), O. ugandae(Uganda), O. katangae (Katanga), and O. overlaeti (Belgian Congo), and redescribes O. kirbyi and O. muhata. Figures pattern and ♂ genitalia of all 6 spp.

123. Testout, Henri, "Révision des Catalogue des espèces françaises du genre Erebia(Lépid.Satyridae)." (In French). Bull. Mens. Soc. Linn. Lyon, vol.16: pp.67-71, 83-86, 202-206. Apr., May, Dec. 1947. Notes on the Erebia pronöe group, including pronöe, lefebvrei, scipia, stirius, montanus, neoridas and the E. pandrose group, including oeme. To be continued. Lists all aberrations as synonyms, but goes into painful detail on named "formes individuelles".

124. Testout,Henri,"Révision des Saturnioïdes Macroures (Actiens de Sonthonnax)." (In French). Bull. Mens. Soc. Linn. Lyon, vol. 16: pp.99-116, 6 figs., map. June 1947. Treats in great detail with photos of ads.& genitalia Graellsia isabelae and its French race, galliaegloria. Gives 186 references.

125. Testout, Henri, "Contributions à la Connaissance des Parnassius Latreille (3e partie)." (In French). Bull.Mens.Soc.Linn. Lyon, vol.16: pp.170-173. Oct. 1947. Describes as new race anneciensis of P.apollo, from Upper Savoy. Redescribes race debilis.

126. Tindale, Norman B., "Triassic Insects of Queensland. 1. Eoses, a Probable Lepidopterous Insect from the Triassic Beds of Mt. Crosby, Queensland." Proc.Roy.Soc.Queensland, vol.56: pp.37-46, pl.V. 27 Apr.1945. Describes as new the genus and species Eoses triassica and the family Eosetidae and suborder Eoneura to contain it. The bed from which the fossil wings were taken is considered to be of Upper Triassic age and is probably 180 million years old. The oldest definite Lepidoptera are from the bottom of the Tertiary of Colorado (Green River) and are 100 million years younger than Eoses. Thus,if Eoses is a true Lepidopteron its discovery is of unsurpassed interest, showing the point of separation of Lepidoptera from Mecoptera. Tindale shows clearly that it should be so considered and has venation very close to the modern Hepialidae, The fore and hind wings are almost identical. The venation of the fossil is strikingly close to the forewing of an aberrant male of Hepialus sequoiolus from Calif., in which vein M_2 is forked. Another character known elsewhere only in aberrant hepialids is the separation of M_4 and Cu_{1a}. To the reviewer Tindale's placement of Eoses in the Lepidoptera seems sound, but the erection of a special suborder is questionable. Eoses seems to necessitate no shocking modification of the Homoneura. The fore wings of E. triassica and the Hepialus sequoiolus, as shown by Tindale, are copied below.



EOSES TRIASSICA HEPIALUS SEQUOIOLUS

127. Turner, A. Jefferis, "A Revision of the Australian Cossidae (Lepidoptera)." Proc. Roy. Soc. Queensland, vol.56: pp.47-70. 19 June 1945. Describes as new the genera: Catoxophylla, Nepiomorpha, Brachycyttara, Trigonocyttara, all monotypical, and the species: Catox. cyanauges (W.Austr.), Nep. cineraria (N.Queens.), Brachy. cyclospila (W. Austr.),Trig. clandestina(Queens.), Xyleutes zophospila(W.Austr.), X. plocistis (S. Austr.), X.arachnophora(Vict.), X. epicycla (Queens.), X. episticha (Queens.), X. reticulosa (Queens.), X. coscinophanes (W. Austr.), X. euplecta (W.Austr.), X. polyspora (S.Austr.), X. tanyctena (Queens.), X.pycnosticta(S.Austr.), X.nubila(Queens.), X.diaplecta(Queens.), X.euryphaea(Queens.), X. leucolopha (Queens.), X. didymoplaca (W. Austr.), X. platyphaea (Queens.), Dudgeonea lychnocyla (Queens.), Culama dasythrix (W. Austr.), Macrocytta pamphaea (Queens.). Redescribes sev. spp. and gives some new synonymy. Gives key to all Australian genera. In all, lists 15 genera and 76 spp., with all spp. and 12 genera endemic in Australia. The complete lack of figures is to be regretted in this extensive revision. Index to genera and spp. given.

128. Wheeler, L.Richmond, "Butterflies around Montreux, Switzerland." Ent. Rec. & J. Variation, vol.59: pp.130-133. Nov. 1947. Annotated list of 40 spp.

Erratum: Recent Lit.#24, line 21 should read "was not .. a mediocre entomologist". This slip in preparing copy changed Stempffer's meaning entirely, for which we apologize.

EREBUS ODORA & THYSANIA ZENOBIA IN WISCONSIN.- Back in 1938 in August while "sugaring" for Catocalas, two males and one female E. odora were captured in a SINGLE NIGHT, in a woods near here. One very large male was in nearly perfect condition, the other more torn. In July of 1942 we observed a large male on bait and on June 17 of this year (1947) we missed capturing another male.

In Sept. of 1945 a farmer friend of mine brought in a large moth he found in a whey barrel on his farm. It turned out to be a very torn male T. zenobia. In August 1940 I observed a large specimen on bait. In September 1942 a very fine male T. zenobia was attracted to light on my back stoop. I captured it by the simple method of opening the back door and letting it fly in. It displayed one of its habits of turning head downward very quickly whenever it alighted on a vertical surface.

I find it difficult to believe that these moths can be blown by winds this far north and still be in quite perfect condition and also occur so frequently. We are located on the west shore of Lake Michigan only about 200 miles south of the Canadian border. Could they perhaps breed farther north than the tropics or near tropics?

- S.E. Ziemer, Kewaunee, Wis.

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OENEIS CHRYXUS IN WISCONSIN. L.W. Griewisch has reported having collected Oeneis chryxus strigulosa in northern Wisconsin in 1947. The identification was made by Mr. C.F.dos Passos who reported this to be the first record known to him of chryxus from Wisconsin.

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ADDITIONS FOR THE 1947 SEASON SUMMARY.- A.G. Lauck, of Alton, Illinois, has sent additional records from the weakly-represented northern Rocky Mt. area, as well as Colorado. In the Grand Teton Mts., July 8 to 11, he found Parnassius smintheus, Pieris napi, Anthocharis sara, Boloria myrina, Speyeria mormonia and callippe, Euphydryas gillettii, Oeneis jutta and chryxus. This is another late record for A. sara. The B. myrina appeared to be race tollandensis. The Speyeria were abundant. E. gillettii were almost through flying for the year and specimens were very worn. The O. chryxus were very large and approached O. nevadensis. Neophasia menapia were sought but not out at this time.

On Black Tail Butte near Kelly, Wyo., on July 12 he took a large series of fresh Eumenis ridingsii. The Speyeria were also common and Limenitis weidemeyerii was found.

In Rocky Mt. Nat'l Park, Colo., from July 15-18 Lauck found P. smintheus, Nymphalis milberti, Melitaea arachne, Erebia magdalena, Oeneis lucilla, and Lycaena snowi quite common. E. magdalena was at its peak and was flying with the much scarcer L. snowi, whereas O. lucilla was just beginning to come out. Erebia epipsodea and callias, and the alpine Colias and blues were not flying on the high ridges on those dates.

Lauck reports the summer and fall very poor for butterflies in Illinois, with some of the usual fall species not found at all.

(Other additions to the 1947 Summary are on p.22 - Wyatt & Guppy.)

WINTER COLLECTING IN CALIFORNIA IN 1947-48. The mid-winter collecting was only slightly retarded by lack of rain. It seems that most of our November to February fliers feed on evergreens or fall-blooming composites neither of which depends much upon the weather for its life cycle. In November the Euxoa are at their height. About 17 different species were taken. December brought several species of Orthosia which range thru 'til February. Engelhardtia ursina was seen for the first time in quantity. Engelhardtia appeared for the first time on the western Mojave last year. The Rancora and allied cuculliids are on the wing in January with R. serraticornis and R. comstocki common and Lathosea pulla not so common. C. Henne took the grand prize of a Lathosea dammersi ♂ about three weeks ago near Warner Hot Spring, San Diego Co. We made a return trip after this rarity without success due to a combination of our late arrival(practically all of the mid-winter Heterocera are on wing from dusk to an hour and a half later only) and a sudden cold snap. Starting the later part of January and running thru February Graptolitha longior and G. georgii holocinerea are flying but quite rare. All in all we manage to keep our mounting boards filled during the winter.

Claude I. Smith, Garvey, Calif. - 7 Feb.1948.

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LIFE HISTORIES OF NORTH AMERICAN LEPIDOPTERA

North American Lepidopterists interested in life histories of N. Am. Rhopalocera are referred to the following detailed bibliographies which also give host plants:

1. Edwards, Henry, "Bibliographical Catalogue of the Described Transformations of North American Lepidoptera." Bulletin, U.S. Nat. Museum, no.35. 1889. (Includes moths).
2. Davenport, D. & V.G. Dethier, "Bibliography of the Described Life-histories of the Rhopalocera of America North of Mexico 1889-1937." Entomologica Americana, vol.17(n.s.), no.4. 1938. (No duplication with Edwards. Butterflies only).
3. Dethier, V.G., "Supplement to the Bibliography of Described Life Histories of the Rhopalocera of America North of Mexico." Psyche, vol.53:15-20 (No.1). 1946.

The Edwards paper is available at a reasonable price from Sherman, 132 Primrose Ave., Mt. Vernon, N.Y. The Davenport & Dethier paper is obtainable from R.R. McElvare, Treasurer, 76 Ivy Way, Port Washington, N.Y. The Dethier supplement is probably obtainable only by purchasing the entire number of Psyche. Single copies from the editor, Prof. F.M. Carpenter, Biological Labs., Harvard Univ., Cambridge 38, Mass., cost $0.85 each.

If one or more members with extensive library facilities available will undertake to bring up to date the moth section of Edwards' bibliography, the Lep. Soc. will endeavor to publish it. A check list of host plants, rather easily assembled from the above three papers, will also be welcome for the NEWS.

C.L.R.

NOTICES BY MEMBERS

"TRANSPAR MOUNTS": The material for starting a collection in Transpar Mounts is available in the "Transpar Mount Butterfly Collection Kit". This contains 116 mounts of all sizes, five display panels and tools; price $32.50. Additional packages of mounts and individual display panels can be ordered separately. Further information on request. Otto Ackermann, 639 Walnut Street, Irwin, Pa.

BRAZIL MACROLEPIDOPTERA offered in exchange for North American Papilios and Saturniidae. Will gladly collect Noctuidae and Geometridae for exchange. H. R. Pearson, Postal Box 2206, Rio de Janeiro, D.F., BRAZIL.

Can offer Callosamia angulifera, Citheronia regalis, etc. for uncommon Sphingidae and Catocala needed for my collection. A very large set of duplicates of commoner Lepidoptera available in exchange for commoner species from elsewhere. C.W. Baker, P.O. Box 455, Waynesburg, Ohio.

Mr. Heinz Jensen, 54 Hyltebjerg Alle, Vanlose, Copenhagen, DENMARK, wishes correspondence with U.S.A. Lepidopterists, especially in the Southeast. He is willing to collect any Scandinavian Lepidoptera and is interested in exchanging books and journals on Lepidoptera.

BUTTERFLIES & MOTHS OF THE HIGH ALPS - All Lepidoptera of the Austrian Tyrol offered. Special rarities are species such as Colias palaeno, Argynnis thore, Erebia glacialis & epiphron, Orodemnias quenselii, Plusia spp. Prices according to Staudinger & Bang-Haas List. Send list now of species desired. Some material on hand. Extensive collecting planned for the coming season.
Dr. H. Wilcke, Kössen/Tyrol, Nr.199, AUSTRIA.

RHOPALOCERA AND ZYGAENIDAE OF SOUTHERN FRANCE offered in exchange for North American Rhopalocera, Zygaenidae (including Procris = Ino), etc. Write in English. F. Dujardin, 25 rue Guiglia, Nice (A.M.), FRANCE.

Large quantities of Philotes sonorensis, Anthocaris sara, Speyeria macaria, Tharsalea arota for exchange for N.Am. Rhopalocera, esp. Theclinae and Hesperiidae. Will exchange Speyeria nitocris for S. diana. D.E. Parker, 1033 S. Beacon Ave., Los Angeles 15, Calif.

EAST AFRICAN BUTTERFLIES, for sale or exchange. Want American species, particularly South Am. R.W. Barney, Govt. African School, Kakamega, Kenya, East Africa.

NAMED INDIAN BUTTERFLIES and unnamed moths from districts of Poona, and Dehra-Dun for sale. E. Hug: airmail c/o Mrs. J.Graf, Zeughausstr. 8, Chur, Switzerland, or regular mail: Vaudrevange-Saar, Wilhelmstrasse 3, Terr. Saare, Via Saarlouis, FRANCE.

Will exchange WASHINGTON LEPID. & Coleoptera for N. American Rhopalocera, esp. Euphydryas & Mitoura. Eu. taylori available in large series. Many fine specimens from Olympic Mts. and Puget Sound Basin. D.P. Frechin, 1504 N. Lafayette, Bremerton, Wash.

Papered MANITOBA RHOPALOCERA for exchange for tropical Lepidoptera. About 40 species, all with complete data. List available on request. C.S. Quelch, Transcona, Manitoba.

GUADALCANAL Lepidoptera (esp. Rhopalocera), of almost every native genus, offered in exchange for needed N. American species. T.W. Davies, 9734 Castlewood St., Oakland, Calif.

Wanted: Philotes of N. America for a systematic study, for purchase, examination, or exchange. Rudy Mattoni, Dept. of Entomology, Univ. of Calif., Los Angeles 24, Calif.

FOR SALE: Insect collection boxes, 9 x 13 x 2 1/2 inches, dovetailed corners, the finest composition pinning bottoms, sanded but not finished, beautiful redwood throughout, hinged, with latches- $2.10 apiece, $24 dozen, F.O.B. Beverly Hills. Bio-Metal Associates, P.O. Box 346, Beverly Hills, Calif.

Wanted for determination, exchange, or purchase: ARCTIIDAE of the Neotropical Region (especially Central America & West Indies), as well as North American ADELOCEPHALIDAE(Sisyphingidae). Correspondence invited.
Prof. Lauro Travassos, Laboratório de Helmintologia, Instituto Oswaldo Cruz, Caixa Postal 926, Rio de Janeiro, D.F., BRAZIL.

FOR SALE - THE BERRY COLLECTION
The results of 18 years in Florida of collecting and exchanging. Many very rare species. 2000-4000 mounted specimens; 6000-8000 specimens in papers. Over 1100 different named forms. Especially rich in Hesperiidae, Lycaenidae, Sphingidae, Catocala. For details write: Dean F. Berry, Box 146, Orlando, Florida.

FOR SALE: Boloria, Oeneis, & Erebia from the Far North. R.J. Fitch, Rivercourse P.O. via Lloydminster, Saskatchewan, CANADA.

LIVING MATERIAL

PUPAE OF PAPILIO ZELICAON and P. PHILENOR HIRSUTA from California, full data, offered in exchange for papered butterflies needed for our collections.
Thomas W. Davies, 9734 Castlewood St.
William A. Hammer, 5300 Walnut St.
Oakland, California

Citheronia regalis & Euparthenos nubilis pupae Catocala cara, concumbens, & amatrix eggs. Available alive. Herman Wilhelm, Buckingham Road, R. D. 1, Willimantic, Connecticut.

DESIRE LIVING PUPAE OF LYCAENIDAE (esp. Theclinae). Offer in exchange papered Calif.spp. Graham Heid, 11745 Hesby St., N.Hollywood, Cal.

What have you to offer in exchange for LIVING PUPAE of Telea polyphemus? R.J. Ford, 3266 Ardmore Ave., South Gate, Calif.

Cocoons of Platysamia euryalis, gloveri, columbia, and Callosamia angulifera and calleta desired. Correspondence invited. Buy, sell, exch. all saturniids. R.L. Halbert, 444 N. Normandie Ave., Los Angeles 4, Calif.

QUESTIONS AND ANSWERS

Q. "Are there any visible genitalic differences between Halisidota tessellaris and Halisidota harrisii, or has anyone studied the genitalia?"

A. Dyar thought he could see a slight difference, but I have been unable to see it. (See Can. Ent. 33: 30, 1901).

Q. "In Hinton's paper reviewed in the Lep. News (July issue) the Micropterygidae are shown to be less related to the other Lepidoptera than are the caddis-flies. Please explain the reasons for this conclusion, especially reasons other than Hinton's."

A. I do not agree with Hinton in this. His evidence is largely the preservation of primitive features in the Micropterygidae, shared by the Trichoptera and not by normal Lepidoptera. I know no reasons other than Hinton's, but he promises to publish the latter more fully shortly. I personally think shared specializations more important, and would cite the fully scaled wings, shared by Micropterygidae and higher Lepidoptera, and by no early Trichopteran; also the epiphysis(cleaning brush on fore tibia). I know of no corresponding specialization shared by Micropterygidae and Trichoptera and not Lepidoptera.

- W.T.M. Forbes

Additions on Insecticides

Here are a few points supplementary to Mr. dos Passos' useful discussion on page 27. First, we have seen that the creosote method is effective in his collection. However,careful testing of many fumigants has resulted in virtually all museums in North America turning to paradichlorobenzene (variously known as P.D.B., Dichloricide, etc.). P.D.B. not only repels the dermestid beetles, but usually kills them. Also, it is very effective in preventing the growth of the molds Mr. dos Passos encountered. Its principal drawback is its volatility - the crystals evaporate within six months, although the vapor remains in a tight case longer. It is good insurance to add a little pulverized naphthalene to the P.D.B., since it evaporates very slowly and usually prevents infestation if for some reason one fails to renew the P.D.B. Collectors should, of course, test and compare creosote and P.D.B. for themselves.

Second, D.D.T. is a very dangerous chemical for the Lepidopterist to use, if he carries on rearing or expects to do so. It is well known that D.D.T. solution sprayed in a room may wipe out all the living larvae caged in a nearby room. If collectors wish to use D.D.T. to keep pests out of the collection the collection room must be as remote as possible from any rearing cages. However, if D.D.T. is to be used (and it seems to be the only solution for Riker Mounts), it should be applied with a paint-brush 3/4" wide along every joint of each insect box as well as the cabinet itself. For this purpose use a solvent which will not harm the finish of the wood.

C.L.R.

TABLE OF CONTENTS

NEW MEMBERS

Beirne, Dr. Bryan P., 4, Tobernea Terrace, Monkstown, Co. Dublin, EIRE.
Comstock, W.P., 117 Lincoln Ave.,Newark 4,N.J.
Euting,Neal A.,Rt. 4,Box 11B, Oconomowoc, Wis.
Graves, J.D.,1711 Short St.,Berkeley 2,Calif.
Harvey, Bill B., Box 52, Wall, South Dakota.
Himalayan Butterfly Co., Shillong, Khasi Hills, INDIA.
Okada, Yoshio,Yanagida-Cho,Saga,Kyoto, JAPAN.
Rockingham, Lt. N.W., Bay Tree Cottage, South Rd., Hayling Island, Hampshire, ENGLAND.
Sherwood, Collins E., Newark Valley, N.Y.
Silva Cruz, Maria A. da, Quinta de S. Joaõ, Candal, Vila Nova de Gaia, PORTUGAL.

The following notice is in the Feb.16, 1948, issue of the Proc. Ent. Soc. Brit. Columbia:

"REVISION OF THE CHECK LIST OF THE MACROLEPIDOPTERA OF BRITISH COLUMBIA - Any records intended for inclusion in the pending revision of this check list should be sent as soon as possible to J.R.J. LLEWELLYN JONES, "ARRANMORE", R.M.D. No.1, COBBLE HILL, B.C. Information relating to date of capture of imagines, localities, and larval food plants will be especially welcome."

The pages of listings of "Recent Literature on Lepidoptera" are being reprinted, on one side of the page only, for clipping and pasting on file cards and may be obtained inexpensively for the complete set for numbers 3-9. Members outside of the Americas may receive these pages at no cost merely by requesting them.

THE LEPIDOPTERISTS' NEWS is the monthly periodical of The Lepidopterists' Society. Membership is open to anyone interested in the study of butterflies & moths. The 1948 dues, including subscription to the NEWS, are $1.50 for Regular Members and $3.00 or more for Sustaining Members. Please make remittances payable to : Charles L. Remington.
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