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## PRESIDENTIAL ADDRESS, 1984: A TRIBUTE TO THE AMATEUR

LEE D. MILLER

Allyn Museum of Entomology of the Florida State Museum,  
3621 Bay Shore Road, Sarasota, Florida 33580

First of all, let me state that it has been a great pleasure to serve the Society as its president during the past year. This is a wonderful group and one of the few in this country where the professional and the amateur can speak as equals. But, all too often the statement is made: "He is only an amateur," usually implying that he doesn't know what he is talking about, or at least that his opinion is not worth as much as one who makes his living in the field. I do not accept this view, and this presentation is an unabashed tribute to those who do not make their living in the field of lepidopterology.

What is an amateur? The word is derived from the Latin "*amator*" (lover) or the French "*amare*" (to love), and is defined in the dictionary as "one who cultivates a particular pursuit, study or science from taste, without pursuing it professionally." Everyone makes his or her living at something, and I consider an amateur lepidopterist as one who makes his living at something other than lepidopterology. There can, then, be janitors, pipefitters, medical doctors, engineers and mammalian ecologists using lepidopterology as an avocation. There are good amateur workers in the field and bad ones, but the variant definition of amateur is not always applicable: "one practicing an art without mastery of its essentials." I am praising that amateur who has gained a certain amount (often a great deal) of expertise in a particular phase of lepidopterology, enough so that he or she is able to impart that knowledge to others.

Amateurs have been the backbone of science since its inception: there were no professional entomologists in Linnaeus' time, but no one suggests that they did not do the best possible job with the information

available to them. Pieter Cramer was an artist whose avocation was lepidopterology; Dru Drury was a silversmith; Jacob Huebner was a printer; William Chapman Hewitson was a wealthy landowner and otherwise retired; William Henry Edwards was a coal baron; Henry Edwards was an actor; William Barnes was a physician, and Walter Rothschild was a "black sheep" who did not fit into the family banking business. From these diverse backgrounds, however, came people who made tremendous contributions to the field of lepidopterology, as great as those of the contemporaneous professionals. Most of the contributions that have been made by amateurs have been in systematics, behavior, life history, morphology and ecology, subsets of the field that usually require less elaborate equipment; but a number of important contributions also have been made in the field of genetics by non-professionals.

Often the amateur will attack a problem of limited scope and become very expert on that topic. The amateur may be expected to gather much pertinent material within a circumscribed group, often more and better material than is readily available to the professional even in the finest of facilities. He studies the material gathered, including that which is borrowed from museum collections, and gathers together the appropriate literature, just as the professional would. He is at least as likely as the professional to ask opinions from others, and most studies done by amateurs go through a great many more drafts, and hands for comment, than do papers written by those of us in the profession for the simple reason that the amateur is still convinced that he does not know everything there is to know. Most publishing amateurs are at least as receptive to new and different ideas as are those of us who do it for a living.

Admittedly, I am talking here of the *best* amateurs, not those unguidable persons who nevertheless write on various subjects without the benefit of knowledge or guidance. The "good" amateurs are the ones who behave in the field about as we should expect professionals to perform their studies.

The early amateurs worked chiefly in systematics of Lepidoptera. They generally amassed huge (for the day), usually beautifully curated collections of specimens, and spent much of their time writing descriptions of new taxa from these collections or from those of their acquaintances. Certainly this is what W. C. Hewitson, W. H. Edwards and Henry Edwards, to name a few, did, and their works compare favorably to those of Butler, Walker and other professionals of the day. Once in a while one hears grumblings about the incompleteness by today's standards of their descriptions, but one also hears this complaint about the descriptions done by professionals of the same time period.

Later, other amateurs like Frederick DuCane Godman and Osbert Salvin, two wealthy English "men of leisure", began looking at Lepidoptera as related populations of organisms, rather than as specimens which either varied from other specimens or did not. These amateurs began putting contemporary biological theories into practice and critically examined lepidopteran populations in light of the then new ideas of evolution and biogeography. The result was that they, mostly with Godman's money, decided to do a total biological inventory of Mexico and Central America for which they would write some parts and enlist experts in other fields to contribute sections. The resulting *Biologia Centrali-Americana* was published over more than 30 years and ran to nearly fifty sumptuous volumes. This publication still has not been superceded.

Walter Rothschild, once he decided to collect Lepidoptera seriously, could have been expected to do it with a vengeance. He did, finally amassing something over two and a quarter million specimens, more than the Lepidoptera holdings of most of today's major museums. He immediately saw the advantages of collecting study series, and for the first time, a private collection had more than a few specimens of any single taxon. At the same time in France, a printer, Charles Oberthuer, began much the same type of accumulation of material, although the scope of his collecting was smaller than Rothschild's. Oberthuer's collection finally amounted to more than a million specimens. Rothschild was one of the first private collectors to realize that he probably needed professional curatorial help, and he hired Karl Jordan as entomologist at his museum and Ernst Hartert as his ornithological curator. What a team they made! If one goes through the writings of this triumvirate, one can find the first modern concept of geographical subspecies, trinomial nomenclature, an elucidation of the biological species concept, and one of the first cladistic analyses of an animal group (it was not so labelled and frequently is not recognized as such). Especially with Walter Rothschild and his curators, modern systematics can be shown to have had its birth. To say that I am a Rothschild fan would be true because of the facts that he (A) collected long series of material for study, (B) had a worldwide bias to his activities, and (C) surrounded himself with those who in conjunction with him developed most of the bases of modern systematics. Their efforts were not always appreciated by their contemporaries, but those must have been halcyon days at Tring!

Strangely enough, another man lived in England at the same time who had an obsession with outdoing Rothschild, thereby setting himself a prodigious task. James J. Joicey was a man of leisure who decided that he would outdo Rothschild in the acquisition of orchids. He tried

this for some years before and during World War I, finally going bankrupt for 30,000 pounds, a very large sum at the time. The judge admonished Joicey, and he agreed that he would not try to build the world's premier orchid collection, and he held to his promise. He switched instead to Lepidoptera and went broke in the 1930's for over 300,000 pounds, perhaps making a statement about how deeply one can get involved in making a collection if one lets his or her imagination run wild. Joicey did, however, hire curators (perhaps because Rothschild had them), and they produced some excellent work, especially on the Lepidoptera of New Guinea, Hainan Island, and central and eastern Africa. The Joicey, Oberthuer and Rothschild collections are the reason that the British Museum (Natural History) enjoys such numerical superiority over other collections throughout the world.

In the United States, Dr. William Barnes, a physician from Decatur, Illinois, formed a magnificent collection of North American Lepidoptera. It became readily apparent that many specimens that he was obtaining were undescribed, and with the help of professional curators, he set about to describe them. From this activity came revisionary studies on moth genera which are still standard today. Many of these were published in his own journal, *Contributions to the natural history of the Lepidoptera of North America*, and were often jointly coauthored with his curators, Arthur Ward Lindsey, James McDunnough, and Foster H. Benjamin, among others. Many of the finest contributions during the first quarter of the 20th Century came from that journal.

In later years, many amateurs have made contributions to the taxonomy of Lepidoptera. Without exception, these students have been willing to listen to others and be guided by them, and the resulting papers have been highly informative. Anyone who has ever studied Hesperiiidae knows of the legacy left us by Brigadier William Harry Evans, a retired British army officer who served in India during the first third of this century. His *Catalogues* to the hesperiids are standard works for the professional and the amateur alike. Many people forget that he also wrote the definitive guide to the butterflies of India, which is still being reprinted. Still, he was an amateur who performed like a professional. Another military man turned lepidopterist is John N. Eliot, recently awarded the Karl Jordan Medal, whose studies of the Lycaenidae and the *Neptis* group of nymphalids have earned him a permanent place in our field. He also completely revised Corbet and Pendlebury's *Butterflies of the Malay Peninsula*. Our former President, Col. Stanley S. Nicolay, has done some fine work tying together certain of the neotropical hairstreaks, and he is still trying to bring some order out of the chaos that characterizes this group. Stan also works on the hes-

periods, so it might be said that he has selected some very knotty problems to tackle. Surely the taxonomy of North American moths is better because of the activities of Mr. André Blanchard, a retired engineer. I have the utmost admiration for one who can tackle these little creatures and make sense of them. The late M. Henri Stempffer was a retired French banker who has added greatly to our knowledge of the taxonomy of African Lycaenidae, a group that has puzzled all workers before him. For his contributions M. Stempffer was elected to receive the first Jordan Medal given by this Society. We can expect other amateurs to receive the award in the future, I am sure. Arthur Rydon studied the Charaxini and has increased our knowledge of this group through his writings. Similarly, the recently deceased Dr. Lionel G. Higgins, an English physician, made a lifetime study of the Melitaeinae, and his writings are the basis of the classification of this group throughout the world. Our own former President and Honorary Life Member, Dr. F. M. Brown, is a geologist by trade, but he has achieved renown in the taxonomy of both nearctic and neotropical Rhopalocera, and if this is not enough, Brownie has now engaged (at more than 80 years old) in the study of fossil insects, and is writing several compendia on important groups. Cliff Ferris, another amateur subsequently elected President of our Society, is a bioengineer by profession, but his studies on the systematics of Nearctic butterflies are quite professional. Let us not forget the contributions of a former lawyer, Dr. Cyril F. dos Passos, who has worked for several decades on the taxonomy and nomenclature of North American butterflies. The list of amateurs who have contributed to the taxonomy of Lepidoptera is endless, and I apologize to others that I have left out—there simply is not enough space.

A special place must be saved for the late Dick Dominick whose dream of *The Moths of North America* has been an inspiration to us all. The several volumes that have appeared under the aegis of this series conspire to make the study of moths as popular as that of butterflies. It was an impressive project, and one can but wish that Dick had lived to see more of it completed.

To finally get to nontaxonomic studies, the life history studies done by Roy and Connie Kendall, their associates, and by those such as Dave Baggett have added the biological information that can turn alpha taxonomic treatises into studies at a higher level. They are providing the building blocks for greater understanding of Lepidoptera, and these studies cannot help but improve the quality of later studies on these insects. Amateur life history work generally does not include the chaetotaxy of the larvae that professionals consider vital, but the workers mentioned here are also preserving egg, larval, and pupal material for

such studies, and this material is readily available to those interested in performing them.

Dr. David Wright is a physician by occupation, still he is embarking on some superb micromorphological studies of various stages of butterflies, especially the Lycaenidae, using scanning electron microscopy, and he has already published new and innovative ideas on the morphology of the larval stages, including showing that some setae have wrongly been attributed to some segments when they belong to adjacent ones. To the casual observer, these data may seem trivial, but he has found at least one derived (apomorphic) character which seems to define the Lycaeninae, one that was previously unsuspected.

There are other examples of amateurs making contributions in ecology, physiology, and even genetics of Lepidoptera. The information that these workers are providing surely aids in the understanding of these insects. An example of such a study is Mike Fisher's rearing of *Papilio nitra* which unexpectedly turned up the fact that *Papilio zelicaon gothica* is the more frequent color morph of *nitra*. This was an elegant study, done on a low budget, that showed something totally unexpected.

My wife and I have been fortunate enough to work for and with a man with vision much like that of Rothschild. The late Arthur Allyn was the heart of an effort to form a real resource for taxonomic and morphological research on Macrolepidoptera. In the years since we joined him, that collection grew from about 100,000 specimens to its present roughly 550,000 prepared and 250,000 unspread specimens. The decision was made to gather material from throughout the world because we felt that revisionary studies done on groups from only part of their ranges were incomplete, and we wished to encourage a world view of butterflies and large moths. Another goal was to obtain collections in their entirety and not see them broken up as so many had been in the past. The vision of Art Allyn has been an inspiration to us, and we hope that the material he was responsible for gathering will be used for generations to come.

Thus far, almost everyone that I have mentioned in this tribute has been male. Consider the fact that the Rothschilds are and were an amazing lot, true "Renaissance men". The present Renaissance "man" of the Rothschilds is a woman: Miriam Rothschild has published a quarter of a million words on flea taxonomy, she has worked on plant-insect interactions, on intestinal worms, on mimicry in butterflies, on the behavior of sea gulls and has been involved with worldwide conservation efforts. Miriam Rothschild was educated basically at home, chiefly by her uncle Walter and his curators at Tring. She earned no university degree, but nonetheless is honored in scientific circles in

England and elsewhere. Her ability and tenacity have made her achievements possible.

The honor role of amateurs is long and distinguished. They have made and are making significant contributions to our chosen field. The next time you hear the statement, "He's only an amateur," realize that this should not be a pejorative; perhaps it is a tribute, since the person in question does not have to be paid to perform. All of us, amateurs and professionals alike, have something to give lepidopterology. The difference between amateur and professional is one of degree, rather than kind. In the final analysis, there is not "amateur science" and "professional science", there is only good science or poor science. Let us recognize that we all have something worthwhile to say, and we will all benefit from such understanding.

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## GENERAL NOTE

### TRYON REAKIRT: A SEQUEL

In 1964 I wrote briefly about Tryon Reakirt, a Philadelphia entomologist of note during the 1860's (Brown 1964, *J. Lepid. Soc.* 18:211-214). He was a mystery man in his last years. All I knew earlier was that he had fled the country in early 1871. As a result, both his enterprises and his father's business filed for bankruptcy. I found the answer to his disappearance among newspaper clippings belonging to William Henry Edwards of Coalburgh, West Virginia.

One clipping is from the *Philadelphia Inquirer*, Wednesday, 8 February 1871. Reakirt had forged notes on large pharmaceutical houses to the tune of more than \$110,000! An error in a date caused a bank clerk to go into the matter with the purported issuer. The fat was in the fire! Reakirt left town hurriedly, and ultimately got to Lima, Peru, where, apparently, he died of dysentery in late 1872 or early 1873.

F. MARTIN BROWN, 6715 South Marksheffel Road, Colorado Springs, Colorado 80911.