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THOUGHTS ON MUSEUMS, COLLECTIONS AND COLLECTORS

PRESIDENTIAL ADDRESS TO THE EIGHTH ANNUAL MEETING OF THE LEPIDOPTERISTS' SOCIETY

For exactly forty years I have been closely associated with museums. During this time I have played a modest, but more or less continual, part in working on two large, permanent museum collections, those of Cornell University and the American Museum of Natural History. At the latter institution in 1934 I found the entire collection of microlepidoptera, including the enormously valuable Kearfott collection, and containing many types, pinned all together in very large cabinet drawers in what had once been an ordered sequence. This had, however, by the constant addition of more specimens wherever a vacant centimeter of space appeared, become a complete jumble. Parts of the collection are still unarranged; but most of it, both North American and Palæarctic, is now in ordered unit trays with all type material segregated, labelled and listed in a museum publication.

I mention this only to emphasize the fact that I have been in intimate contact with all, or at least nearly all, of the routine problems that beset and bedevil the "museum man" everywhere and have, in fact, seen rather an intensification of these problems. The first half of the Twentieth Century has brought in North America, at least, a more drastic change in museum methods and techniques than has any similar period before, for during this period the relatively modern museum evolved from a primitive condition that had changed but little in the preceding century. It is about some of the problems of this modern museum that I wish to speak, in the hope that an appreciation of them may be of some service to museums, museum workers and lepidopterists in general.

Firstly, I do not know of a single museum that is not understaffed and underequipped, with the latter condition many times multiplying the effect of the former through enforced inefficiencies. Yet, as our knowledge increases and our methods of systematic study become far more complex, the museums are being called upon to do ever more and more. Consider, for example, the necessity of keeping genitalic dissections, not only of types but often of considerable series, and of making comparisons with these for systematists. Consider also the need for keeping extensive collections of foreign material closely correlated with North American, as we come more and more

to realize the extremely close kinship of so many North American species with those of the Palaearctic, and of many others with the Neotropical. Consider, furthermore, that the modern emphasis on geographic studies demands the keeping of collections fifty to a hundred times as large as those considered adequate in 1900, which must be, moreover, carefully chosen and then arranged so as to give the broadest possible geographic, seasonal, environmental and other ecologic coverage. Consider also, incidentally, that usually the only way the museum man can get such a proper collection together is to carry out a carefully planned program of collecting. Often series of a thousand specimens of each species may be inadequate — and such series must be sorted and arranged geographically and by sex, and often by season, altitude and other factors as well. When such a collection is finally in shape for analysis and study it will have cost the curatorial staff an amount of time and labor, and will occupy space, of incredible dimensions.

Added to such purely curatorial duties is an enormously increased burden of question-answering and identification work. DR. CLARKE can tell you something of the load of this kind of work carried at the U. S. National Museum, certainly many times greater than elsewhere in this country; yet we all get our share. Since our ignorance of many families of North American Lepidoptera is still quite profound, such identification may entail a disproportionate amount of work. Often, in fact, the specimens sent in are not properly prepared or labelled; often genitalic slides must be made, sometimes other structural studies as well. Despite this it is not unheard of for collectors who send in specimens for naming to be quite provoked at the idea that the museum feels entitled to retain some of the material. I have, in this connection, heard caustic remarks about museums being “one way streets, which absorb everything but never give”. I could, in fact, name more than one collector who makes a practice of sending to a museum for identification no more than one or two specimens of what he considers to be each species, always of course picking the most frayed ones. Such things get around.

Being a confirmed “museum man” myself, I am, of course, completely biased. I think that any museum should be entitled to keep as much as it wants of unsolicited material sent to it for identification. To balance this, I think that the museum should return to a lender all material which it, itself, solicited for study. Most collectors are anxious to help museums, often far more generously than they are asked to, realizing how very sparse indeed would be our knowledge without them. If it were not for the great museum collections, in fact, there would be very few books for the amateur (witness *The Butterfly Book*, *The Moth Book*, *The Butterflies of California*, *The Field Guide to the Butterflies*, and *The Butterflies of Colorado*). Having studied perhaps a majority of the world's major collections, I can see how small any one individual, curator or amateur bulks against the background of the growth and accumulation of knowledge in the last century. It is thanks to museums that the great collections of HANS SLOANE, LINNAEUS, FABRICIUS, ZELLER, BOISDUVAL and a hundred others are still available for our study.

Here in North America we have at once a very special duty and a double burden. Our museums are proportionately far behind those of Europe, for we are still pioneering a continent, and have had much less time to accumulate collections and far fewer collectors to help us. Furthermore, we are constantly very seriously handicapped by the fact that many of our North American types are in European museums (or lost) necessitating long, expensive journeys for fundamental systematic work. I wish I could impress upon every North American collector how badly handicapped our museums and systematists are for purely historical and geographic reasons; and how much correspondingly greater is the need for him to support them, and to help them to build for the future, even at the sacrifice of cherished specimens.

Incidentally, we have all heard tales of a past generation of collectors who lived by the adage that "the best collecting is in someone else's collection"; and I shall never forget the rare privilege of being shown the top hat inside of which one of the most famous of these gentry used to carry home stolen pinned specimens. It is not amiss, I trust, to mention that such rugged individualism still survives; in fact some in this room would be surprised at the name of a member of our own generation who was forced only by police action to disgorge thousands of museum specimens, including many butterfly types, looted on two continents. Atom bombs and *Anthrenus* larvæ are by no means the only worries of the curator!

I cannot emphasize sufficiently the need for insuring that all types should be immediately deposited in a proper museum. It makes no difference how extensive, how apparently well protected or well endowed it may be, a privately owned collection is no place for types. I believe that the man who will retain types in a private collection is doing a grave wrong, no matter how he attempts to justify himself. The *Régles* contain a clear recommendation about this; and no editor should permit the publication of any original description in which the type material is not properly deposited.

May I also note that serious damage has in the past been done because collectors did not take proper precautions for the immediate deposition of their collections in a museum in event of their death. I am thinking particularly of the KEARFOTT collection of microlepidoptera which, housed in wooden and cardboard boxes, sat around for many months, becoming wet, moldy and infested. Some of its many types were thus destroyed or seriously damaged. Eventually it was sold to two different collections, each of which was informed that it was getting the whole collection!

In the matter of what constitutes a "proper museum" I can very easily get onto dangerous ground, for nowhere are comparisons liable to be more invidious. But I think that we should establish certain facts. To be a fit repository for types and valuable study material a museum must, in the first place, be either adequately and permanently endowed, or else of such a major nature that, even though it is dependent upon annual legislative appropriations, it is hallowed with a sanctity that no economy-minded budget director would dare destroy. If the curators have Civil Service protection, or tenure of office, so much the better. Not all public-supported museums are thus

secure; and the truth is that many small city, college and even university museums are not at all proper custodians for any but local reference and teaching collections. Such a place may have a very dynamic lepidopterist in one generation, and seem like a wonderful home for Father's collection of the moths of Lower Slobbovia; but a generation later the lepidopterist will have been replaced by a specialist in the asexual reproduction of Marquesan flatworms, and the remainder of Grandfather's collection will be decidedly shopworn. Students, even well-intentioned graduate ones, can do a collection a great deal of harm. I am thinking of the insect collection of a large university that was systematically plundered for years by students seeking specimens to hand in with their required collections in the entomology course. One historically valuable collection thus eroded to nothing. By way of comparison we have at least two university museums and a number of college and university collections that have shown a consistent fitness to care for valuable material.

Finally, but no less importantly, should be considered the matter of what is already represented in an institution's collection. Practically all systematic research is done by taxonomic groups, not by local, regional or faunal collections; and this, as far as our museums are concerned, is what causes a great amount of trouble. Let me cite my own efforts in revisional work on North American Crambinae. I have managed to see, study and photograph the types of all but less than a dozen North American names, but to do so I have been forced to study material from collections in Ottawa, Pittsburgh, Cambridge, Ithaca, New York, New Brunswick (New Jersey), Philadelphia, Washington, London and Berlin; and I am led to believe that at least some of the missing types are in Vienna. Now, entirely aside from the fact that this gives me the best of excuses to make pleasant visits to these places, chiefly at my own expense, I am obviously being gravely handicapped in my work. The same is true of nearly every other systematist; and often the handicap becomes insuperable, despite inter-museum cooperation and travel grants; or at worst the situation leads to sloppy work.

Nothing can be done about this aspect of museums unless (Heaven forbid!) we wish to have some international bureaucracy reshuffle or centralize all collections. Occasionally such things happen normally and properly, as York, a very useful centralization. We can, however, recognize the reality types and other collections were transferred from New Brunswick to New York, a very useful centralization. We can, however, recognize the reality of systematic work, even though this is almost certain to run directly counter to local pride. Types and important study material should, other things being equal, go only to institutions that already have types and important study material in the groups represented; and if there is still a choice, types should go to the institution that already has types of the author concerned. To paraphrase the Parable of the Talents: To him that hath should be given, even of that which he already hath in abundance.

Unfortunately the matter of the deposition of types has been made a political football at various times, regulations even having been made by some

national governments prohibiting the export of specimens for scientific study unless guarantees were given that any types would be deposited only in the country of origin. I, myself, am only one of many who have refused to work on material thus restricted. At the same time I cannot help feeling a certain sympathy with the scientists in such a country, for like all North American systematists I suffer from the fact that so many of our types are in Europe. I would never, however, condone a law that would, in effect, force any European describing a new species from the United States to deposit the type here. We have recently, I am happy to add, had the example of one Englishman who, naming a new butterfly from Colorado, voluntarily sent the type over here. I wish that there were more like him!

In ending I should like to more or less repeat, for emphasis, the major points. Modern systematics is so developing that research in it, in which we are far behind Europe in most groups, is necessarily becoming more and more concentrated in our large museums. Such research, I may add, is also becoming so complex that all but the most advanced amateurs are practically barred from it. This applies as well to even local and faunal lists, which are more and more dependent upon technical work for proper identifications. The net result is to make our museums and their highly trained personnel more and more frequently essential in all systematic, ecological and geographic studies, as well as, of course, in all work of an economic nature. The sooner this is more fully realized, by legislators and amateur collectors alike, and stronger support given to museums, the sooner have we a chance of getting to know our fauna properly.

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