

Justification for Literature Inventories (Catalogs)

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Insects represent nearly 75% of the species of animals; as such they present unique problems for information and collections management. In vertebrate systematics the quantity of literature per taxon is relatively high, whereas the opposite relationship obtains for most insect groups, the large number of species each with a relatively small amount of literature. Furthermore, for any given group of insects, be it at the generic, subfamilial, or even familial level, decades may pass before is studied in a comprehensive manner.

Maintaining an accurate list of names for the 1 million or so described species of insects is clearly a problem several orders of magnitude more difficult than is the case for all of the living tetrapod vertebrates. Furthermore, because of the tremendous diversity involved, no single individual can have a detailed knowledge of more than a very limited portion of total insect diversity. Thus, the preparation of a definitive list of valid names of insect taxa, the reference system to which all other taxon oriented biological information is attached, requires at a minimum the efforts of several hundred investigators. Many of the investigators capable of performing that function will not even be living at the same time.

Such lists of valid names are widely used and considered of prime importance in vertebrate systematics, and those lists are widely used by others working in ecology, genetics, and other non-systematic disciplines. Such lists are of equal, if not greater value to all of the subdisciplines of entomology. They are generally referred to as "catalogue" by entomologists, and have traditionally included a classification, information necessary to track the nomenclatorial history for all taxa, and additional information on the contents of the literature.

It might therefore be argued that entomological catalogs are the basic informational source from which the greatest number of other activities, particularly in systematic research and collection management devolve. With a catalog a systematist can appreciate the current classification of a group and the literature associated with it. In the area of collection management, whereas many museums possess representatives of a majority of the families of insects and often substantial numbers of species, only 3 or 4 museums or other institutions for that matter employ anything more than a handful of insect taxonomists to manage those collections. Using an up to date catalog, a collection recourse to the original literature.

Such catalogs, depending on their level of comprehension, can serve many additional functions as well, particularly when structured in the form of a computer database.

Information on parasite, predator, commensal, and other associations, more general ecological information of all kinds, information on the disposition of specimens in various museums, can be recovered with relative ease.

We therefore argue that in conjunction with the development of database standards for specimen information and collections management, that support be provided for catalog preparation by specialists, and that appropriate computer software be developed and made available to specialists as a way of facilitating catalog preparation.