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ENTOMOLOGICAL TERMINOLOGY, I:  
LANGUAGE, TERMINOLOGY, AND HIDDEN PROBLEMS

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Language is the means of communication by which people express their wishes, needs, knowledge or share their feelings. The languages of our world differ considerably in their form, degree of development and expressive abilities. Language usually reflects a sensitivity to the environment of a nation, as well as its lifestyle, religion, opinions, history and professions. As a result the languages of African nations do not have words for snow, ice, or winter. The language of the Eskimos have no words for many plants and animals; the Musulmans do not know about Christmas. The Chinese do not have a complex grammar of conjugations and declinations, but they know how to express many things through alteration of intonation of single words. For example, the word "ma" in one intonation means mother, while in another it means horse. The Koreans are not able to distinguish between the consonantes "r" and "l", or "t" and "d", so they write and read words like "to" and "do" always as  $\text{£}$  (=do). Each language has some advantages and its proper unrepeatable logic and spirit. There are things which can be said splendidly in one language, while they can not be translated into any other language, even though equivalent terms exist. Many idioms are of this nature.

Scientific and entomological terminology is a particular kind of language, sharing all properties of a "normal" language. Terminology is a special set of words created and used by a limited circle of people dealing in a specific activity, profession or advocation whereby they meet with a variety of objects, phenomenons, relationships, movements, and methods which are unknown or unfamiliar to other people, and for which the usual language has no expression.

Such expressions or terms arise by many different means. Some times they appear as new words. Sometimes two words taken from a persons native language are combined to form a new word with a new meaning. There are many prefixes and suffixes that can be used to give new meanings to words and terms. Sometimes a colloquial word is used in a different way and thereby obtains a new meaning. In other instances, especially in the past, a word is taken from a "dead" language (such as Greek or Latin) and introduced into use as scientific terminology. This method has a great advantage in that it is very likely to irritate anybody by changing the meaning of an original word, or possibly using a word with an alternate, offensive or vulgar meaning. Such words are generally neutral in any adoptive "living" languages.

At present, the important sources of new special terms are the modern, living languages, especially of those languages from nations which are considerably advanced in a branch of science. Frequently the terms arising in this way were national and only later became internationalized. Before World War II many terms originated from German and French, but now English dominates. However, there are other nations that have contributed to the international thesaurus of terminology. Many internationally accepted terms in the soil sciences originate from Polish and Russian. The internationally recognized term "Robot" comes from the Czech novel "R.U.R." by Karel Capek.

There are languages, like Chinese, and in the past Hungarian, which are so xenophobic that they do not accept any international or foreign terms and always create their own new terms for any notion. Some languages create national terms and use them parallelly with the international ones. Other times they do it to invite homonymy with an indigenous term/word, or with a term which had been accepted earlier in another meaning. Or, sometimes because the foreign term does not correspond with the phonetical or grammatical system of a language. Many times the national terminology arises as a manifestation of national identity and conscience.

People are only human and have made many mistakes. Also, because of vanity, intolerance, personal prestige and authority, and/or politics (all in an effort to be inscribed in the history of science) many scientists have been motivated to create unnecessary new terms. This only leads to confusion and duplication.

There are many rigorous requirements for special and/or scientific terminology. It should be precise, simple, lucid, unambiguous, and linguistically and etymologically correct. It is often difficult to satisfy all of these requirements, especially when you consider the perceived need for tens of thousands of new words. It is getting to the point where the time needed to learn the new terminology in a science is interfering and delaying scientific investigation. Many times the differences between two described objects or ideas are so slight that it would be better to describe both with a word that has a slightly broader meaning. However, this idea still has some disadvantages. A single word can actually have more than one meaning in science. For example, the word "dominance" is known to both zoologists and botanists but has a different connotation to each. And so arises the problem of duplicate or similar meaning - the synonyms.

Progress in science will continue to bring new facts, and with it new terms. Many people create and use special terms intuitively and superficially, frequently to demonstrate their "high" erudition. This often leads to the incorrect use of proper terminology that is likely to spread to other scientists and other branches of science. It is therefore important to use scientific terminology as correctly and properly as possible to avoid this misuse. Such misuse contributes to a loss of clarity in carefully chosen terminology.

There are also some ethical problems. Sometimes equivocal terms for the same phenomenon arise nearly

simultaneously. One of them may be more expressive, more linguistically correct and shorter but the other term is given priority for purely ethical reasons. Which one should be accepted into use?

I hope I have shown to you that creation and use of scientific terminology is complex and full of problems. I hope to share with you, through the pages of Y.E.S. QUARTERLY, further discussion on the scientific terminology used in entomology and allied ecological and biological sciences. I would like to deal with terms you may run into, explain their origin, explain their meaning(s), clarify their relationship to other terms, and to present national terminology not found in bilingual dictionaries. Hopefully this will assist young entomologists orient themselves in the confusing maze of entomological terminology; to learn how to create or emend terms; and to learn how to distinguish between incorrect and correct terms.

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#### DIFFERENCES BETWEEN SPIDERS AND INSECTS

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Many people would say that spiders (Arachnida) are insects. Of course this is not true. Ask yourself this: How many times have you seen a fly, beetle or bug with eight feet? Never. Furthermore, have you ever seen a spider with wings? All insects have wings...well, most of them. Most of the wingless insects are very small - five millimeters or less. Also, many spiders use webs for capturing their prey. While some insects produce silk, it is rarely used for hunting.

Invertebrate animals are classified into the phyla Arthropoda, Annelida, Coelenterata, Echinodermata and Mollusca. The spiders (Arachnida) and the insects (Insecta or Hexapoda) both belong to the phylum Arthropoda. The classification within the Arachnida is complex and lengthy, and that of the Insecta even more so.

Next time you hear someone call a spider an insect, you can correct their mistake.