BRYOLOGICAL TERMS—EVEN MORE CRITICALLY SEEN

With regard to the article on bryological terminology that appeared in the last issue of *Bryological Times* (101, July 2000), I regret that I must disagree with such an intelligent and industrious bryologist as J.-P Frahm, for whom I have the most sincere respect and admiration.

Biological science is necessarily burdened by a lot of arcane terminology simply because there are no analogs in daily human speech for all of the various parts of animals and plants. But this does not mean that it is inappropriate to use the same term for structures that have the same general appearance, or function, in organisms that are unrelated. It is done commonly and without any implication of phylogenetic relatedness. Yet in Frahm's view "terms must always be different for analogous organs." This is folly.

To cite one egregious example, birds, bats, pterosaurs, insects, maple seeds, and airplanes have wings, yet it is well understood that these are all "analogous" structures. I transmit this message from the east wing of the Natural History Building of the Smithsonian Institution, yet no one expects the edifice to take off and fly. To maintain that it is misleading to refer to the leaves of mosses as leaves because they are formed by the gametophytic generation of the plant is as absurd as saying that we should not refer to the leaves of books or tables because they do not photosynthesize. No one confuses a space capsule with a medicine capsule; these are merely a descriptive terms, over which moss capsules doubtless have priority.

The terms femur, tibia, and tarsus were first used in Latin for parts of the leg of humans and quadruped vertebrates but they were appropriated by entomologists for segments of the "legs" of insects. It would be ridiculous to suggest that entomologists now stop using those terms because the structures are not homologous.

Some of Frahm's substitute terms would probably create even worse problems and confusion. For example, the term "phylloid," which he would substitute for the leaves of bryophytes, is already in use elsewhere in botany for leaf-like structures that are not true leaves, e. g. the chlorophyllous outgrowths of the mature koa tree (*Acacia koa*) of Hawaii. Because such phylloids have evolved more than once in phanerogams, so the term is already used for structures that are not homologous even without attaching the term to the leaves of bryophytes.

One would still have to comprehend the meaning of the terms "leaf" and "stem," for example, in order to understand all of the previous literature in bryology. Thus the only effect of using substitute terminology would be to make bryological literature even less accessible to those outside the field. The sacrifice of effective communication solely for the purpose of satisfying a nicety of homology should not be endorsed.

Finally, I find the term cum fructibus to be endearing precisely because it now seems so absurd. It makes me smile every time I see it. But it pervades bryological collections and literature and I do not think that bryologists should take themselves so seriously that they cannot continue to enjoy their own little anachronistic inside joke.

Storrs L. Olson

PROBLEMS WITH CUSTOMS AND HOW TO SOLVE THEM

Over the past few years I have had to visit the customs office in Bonn almost every time I received parcels with herbarium specimens. The reason is that a new regulation requires parcels from overseas to be checked by customs directly after arrival by ship in Hamburg or by plane in Frankfurt. (Before, they were sent to a local customs officials who knew what we were expecting and released the parcels). If they are not satisfied with the customs declaration, they send the parcel on to the local customs, where the parcels must be opened.

Customs claims the following points, which are principally correct, although German customs may in this respect be too draconian:

1. Usually herbarium material of bryophytes is mailed with a customs declaration indicating the contents as "dried herbarium specimens", "dried plants for scientific study" or something similar. In fact, this declaration is insufficient. When plant material is mailed worldwide, a CITES certificate is obligatory. Therefore (officially) an exact declaration of the species with a list of species names is required. For customs officials, dried plants could be cacti, orchids or any other protected species. Thankfully bryophytes are not (yet) in the CITES list. (The situation will be really funny, if that happens). If the customs declaration were altered to „dried bryophytes", this would probably lead again to unnecessary questions regarding which customs rates have to be applied to bryophytes. Perhaps an indication that bryophytes are not on the CITES list would help.

2. Usually herbarium material comes with the indication: "no commercial value". This phrase may be correct in some countries, but I have been told several dozen times by German customs "that everything has a value, else it could be thrown away". So they insist on the indication of a value. I do not know how customs in other countries react, and German customs practice may be the worst example in the world, but basically they can live better with an indication of a value of $10 (which is below the duty free limit of $75).

Therefore it seems that a customs declaration indicating "Dried herbarium specimens – bryophytes: no CITES required, value $10" could solve most problems.

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The first part of the Flora dei Muschi d'Italia covers the classes Sphagnopsida and Andreaeopsida and the first part of Bryopsida: a total of 582 species, 35 families and 128 genera. For every genus and an analytical key is provided and for each species there is a detailed diagnosis including information on its ecology and distribution and an original and analytical iconography.Particular attention is paid to the most recent critical nomenclatural and taxonomic studies.

The volume is completed with the taxonomy of the species described, a useful and exhaustive glossary of scientific terms and a bibliography for all the citations in the text.

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