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Botanical nomenclature: Master or servant?

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Modern systematics has suffered a radical transformation in the past 20 years, and has become a more experimental science. Molecular methods, walking at a brisk pace, are difficult to master and hard to keep updated. Informatics has become a formidable tool; both in common use (word and image processing or electronic mail) and in the more specialized field of data analysis, forcing a much more than a user-level knowledge of computers. The World Wide Web handles an incredible load of information, more readily available than ever. In the whole, a present-day botanist must handle a cumbersome array of technical knowledge, besides having the adequate scientific background. In a science with this experimental profile, botanical nomenclature is now increasingly considered a different specialty, intricate to understand and difficult to master. This is an important flaw of the nomenclatural system, but not the only one. The main drawback of the state-of-the-art botanical nomenclature, and probably the consequence of this specialization, is a generalized misuse of the code that causes an exasperating nomenclatural instability. We shall show some examples of this misguided usage of the ICBN that we have come across over along the past years. All of them have dramatic consequences for the nomenclature of the tribe Cardueae (Compositae), my personal field of taxonomic expertise.

Vaillant's names

Greuter (2003) and Greuter *et al.* (2005a, 2005b) theatrically revealed the existence of a hitherto

ignored German translation of pre-Linnean papers by Vaillant, which, in their opinion, validated many generic names that are important for the Cardueae specialists. From our point of view, this proposal was against common sense: Who could ensure that another ignored work would be eventually unearthed and new names become priority, modifying again the nomenclature of the genera of the group? However, the editors of a compilation work in which we were authors of the Cardueae (Susanna & Garcia-Jacas, 2007) decided to follow Greuter *et al.* (2005a, 2005b). In consequence, some important genera were ascribed to Vaillant. Three years later, Brummitt (2008), on behalf of the Nomenclature Committee, forwarded a formal proposal for disregarding German translation of Vaillant. This proposal arrived when a second complete work on the Compositae was already written (Funk *et al.*, 2009). In consequence, if Brummitt proposal is accepted, the two more comprehensive works on Compositae since Heywood *et al.* (1977) have adopted wrong authorships for many genera.

We agree with Brummitt point of view, especially if his proposal discourages further adventures. However, if accepting Vaillant names was a bad choice, disregarding them after being in use for five years is also very unfortunate because the final decision will affect important nomenclatural issues.

First, we have the problem of the name for the former *Centaurea*. Contrarily to Brummitt (2008), there is an available name for this genus, *Bielzia* Schur. The argument of Greuter *et al.* (2008) against using *Bielzia* is curious and worth recalling: “no-

body has used it except its author” (sic). All the species formerly in *Centaurea* that were moved to *Rhaponticoides* by Greuter & Aghababian (Greuter, 2003) will have to be moved to *Bielzia* (together with some other taxa like *Centaurea lachnopus* from Iran). Another irritating consequence that shows the undesirable (for synantherologists) consequences of recovering Vaillant's names was a new change for *Rhaponticum*, the rejection of which by homonymy forced the renaming of all the species of the genus as *Stemmacantha* Cass. (Dittrich, 1984). If Brummitt (2008) proposal is accepted, *Leuzea* will be adopted as the final name since *Leuzea* and *Rhaponticum* cannot be considered different genera after Hidalgo *et al.* (2006), despite the affirmations by Greuter *et al.* (2008). Fortunately, most of the combinations under *Leuzea* were already made by Holub (1973), who anticipated the results of Hidalgo *et al.* (2006) results.

Cardueae vs. Cynareae

The second example of ill-advised use of the ICBN involves authorship of the Cardueae. Reveal (1997) unearthed what he claimed to be a validation of the name Cynareae Lam. & DC. as an earlier tribal name for the Cardueae Cass. In our treatment of the tribe (Susanna & Garcia-Jacas, 2007), we decided to follow our own criterion and use Cardueae for the same reasons wisely forwarded by Bohm & Stuessy (2001): if we accepted this policy and use Cynareae, who knows which other rare book or article could conceal a prior name forcing a new change. However, this was not the opinion of Jeffrey, who added to our treatment a footnote indicating that the correct name for the Cardueae was Cynareae (Jeffrey in Susanna & Garcia-Jacas, 2007: 123-124, footnote 5). Finally, Wagenitz (Wagenitz & Kandemir, 2008) pointed out that the article of the ICBN alleged for sustaining the change was not applicable, and the valid name for the tribe was firmly returned to Cardueae Cassini. As a result of the publication by Reveal (1997), five botanists have been forced into a eleven-years-long mad Byzantine discussion for making clear the correct name for the Cardueae, just for coming back to the name that was already in use! If we really believe in nomenclatural stability as the main goal of the ICBN, nothing more disparate that this proposal.

A Case of Gender

As a final example, we would like to communicate our surprise for a change proposed in the latest version of the code (McNeill *et al.*, 2007). Long documented, common use of a particular spelling should have been an excellent reason for avoiding unnecessary changes. Instead, some strict Latin academic has rectified generations of Latin-speaking botanists, and decided that all the names of genera ending in *-ites* (among them, the thistle genus *Galactites*) are now masculine! Are not three centuries of botanical literature using *Galactites tomentosa* a valid reason for it remaining feminine? This proposal, utterly alien to every-day botany, is a frivolity that wrecks havoc in the image of seriousness of the ICBN.

Botanical nomenclature is at risk of becoming a competition between people searching for a neglected footnote that could constitute an earlier homonym and, thereafter, justifying a few new nomenclatural combinations. We are deliberately exaggerating to the point of caricature, certainly, but this unflattering portrait was suggested by our examples. Nothing to do with real botany, nothing to do with nomenclatural stability: instead of invoking common sense, we are systematically perverting the spirit of the ICBN. The schism between systematic botany and botanical nomenclature is growing because of this frivolity: the examples above demonstrate that botanical nomenclature is becoming more of a master than a servant.

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