

HOW TO CITE BOTANICAL AUTHORS, WITH PARTICULAR REFERENCE TO THE CACTACEAE

COMO CITAR AUTORES BOTANICOS, PARTICULARMENTE EN CACTACEAE

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ABSTRACT

The Brummitt & Powell and equivalent online versions of standardised plant author names are discussed, mainly in the context of the Cactaceae, and are noted as imperative. Many surnames are shared, and several are particularly common. Each author requires a unique, uncomplicated formula in order to avoid confusion. A Working Party centred on the Royal Botanic Gardens, Kew, England, was set up to examine and resolve this problem. The importance of its results and their acceptance by the relevant international disciplines are outlined.

KEYWORDS: Abbreviation, ICBN, IPNI.

RESUMEN

Especialmente en referencia a cactáceas, se discute y señala como imperativo, las versiones de Brummitt & Powell y su similar online, que norman la indicación de los autores botánicos en los nombres científicos. Muchas personas comparten el mismo apellido y algunos de estos a veces son particularmente comunes, de modo que cada autor requiere de una fórmula simple y única para evitar confusiones. Un grupo de expertos coordinados por los Royal Botanic Gardens, Kew, fue encomendado a examinar y resolver este problema. En este trabajo se destacan sus resultados y su aceptación internacional en disciplinas relevantes.

PALABRAS CLAVES: Abreviación, ICBN, IPNI.

INTRODUCTION

During compilation of an exhaustive list of vascular plant taxa occurring in the northern mediterranean and desert regions of Chile influenced by the Pacific, the newly published second edition of *Cactáceas en la flora silvestre de Chile* by Hoffmann & Walter (2004) was consulted. Attention was drawn to certain citations of authors of botanical names which do not entirely accord with current standard practice. The acceptance and strict exercise of correct published formulae for authors is extremely important. It should be regarded as an integral factor in presenting a clear, unambiguous reference whenever serious taxonomical and related accounts appear in print.

BACKGROUND

The decision whether or not to abbreviate botanical authors' surnames is optional (Brummitt & Powell 1992). Full versions are sometimes preferred in newly published taxonomy or in detailed monographs. In practice though, contraction is widely followed, and almost exclusively in the case of historic authors (e.g. L. for Carl von Linnæus the elder; DC. for Augustin Pyramus de Candolle). In particular, flora catalogues and other comprehensive listings have an overriding need to adopt abbreviations in order to save space. This requirement is outstanding in the case of the Cactaceae, where chronic continual revision has resulted in long strings of synonyms, many bearing multiple authors (cf. Kiesling in Zuloaga & Morrone 1999).

Up to 1992 there was no universal agreement on abbreviations for taxonomical authors in botany, and degrees of inconsistency and confusion existed. The *Gayana Botanica* Catálogo de la flora vascular de Chile (Marticorena & Quezada 1985), also the *Catalogue of the flowering plants and Gymnosperms of Peru* (Brako & Zarucchi 1993) contain author citations, correct at the time, which would nowadays stand in need of modification. In 1992 Brummitt and Powell as editors (*op. cit.*) produced *Authors of Plant Names*, published by the Royal Botanic Gardens, Kew, England (reprinted 1996). This is regarded as the universal frame of reference. It is endorsed by ICBN, the International Code of Botanical Nomenclature (Greuter *et al.* 2000). Subsequent major regional flora catalogues, such as those of Argentina (Zuloaga & Morrone 1996-1999) and Ecuador (Joergensen & León-Yáñez 1999), follow Brummitt & Powell strictly.

PROCEDURE

The working party fronted by Brummitt and Powell sought to identify and then solve such problems as selfsame surnames, effective forms of abbreviation, and priority among different historical presentations of the same author's name. The basic principles applied for abbreviation were that no two authors should be represented by the same formula, and no individual author by more than one formula. To achieve this, initials of forenames are employed. One author among those with identical surnames, commonly the earliest, or otherwise the one with most reputational weight, is usually represented by surname alone, the remainder being distinguished by a unique combination of initials (e.g. Horton, D. G. Horton and P. Horton). Brummitt and Powell state that initials only, not full forenames, will be used, except where two people share identical initials. In that case a full or reduced forename may be applied (e.g. E. Bayer and Ehr. Bayer; W. Bock and Wilh. Bock; H. Sm. and Harry Sm.). These measures served to identify uniquely all authors recognised by Brummitt and Powell in 1992, even those with the most common surnames; e.g. 88 Smiths, 100 Wangs. R. & P., H.B.K. and H. & A., *inter alia*, were traditional, universally accepted, multiple-author initial formulae. Brummitt and Powell also dispensed with those. They are now Ruiz & Pav., Kunth (without Humboldt and Bonpland for the most part) and Hook. & Arn., respectively.

One strict requirement for modern authors with

existing published surname counterparts is that all initials must be used, whether or not to distinguish from another author. This is a sensible measure for future ordering. 24 Watsons are currently known as authors, including a Joan Watson as J. Watson: but even if there were no other J. Watson, the present writer would still only be correctly cited now as J. M. Watson. First time authors not yet listed publicly should follow guiding principles in Brummitt & Powell's introduction. If a surname has not been published hitherto, no initial need be added. Where already published for earlier authors, the existing approved surname abbreviation formula must be followed. For new author surnames of 8 letters or fewer, no abbreviation should be applied. For more than 8 letters, at least 3 are to be eliminated. Names of 10 letters or more are usually abbreviated, and abbreviations should terminate at a consonant preceding a vowel (e.g. Dobzhansky would be Dobzh.). ICBN Recommendation 46A endorses these procedures (Greuter *et al. op. cit.*).

AUTHOR EXAMPLES IN THE CACTACEAE

Duplicate author names unqualified by correct initials may be well enough understood in particular and limited taxonomical or geographical contexts, or when explicitly accompanied by place and date of publication. Nevertheless, they may be copied subsequently without the latter defining qualification, and should anyway be universally unambiguous in any serious scientific work by conforming to accepted models. Obscure duplicate names which are not distinctly presented are almost certain to create difficulties for non-specialists compiling flora lists, etc.

Friedrich Ritter (1898-1989) is known informally to all specialists of the Cactaceae as Ritter. His name was formally cited as such in Marticorena & Quezada (*op. cit.*), and more recently in Hoffmann & Walter (*op. cit.*). However the correct application of his name to contemporary academic authorship is F. Ritter. Four Ritters are listed in Brummitt & Powell and all are to be identified by their distinctive initials.

Karl Moritz Schumann (1851-1904) is another emblematic figure in Cactaceae. His correct citation is K. Schum., to distinguish him from Julius (Heinrich Karl) Schumann (1810-1868), abbreviated as Schum., and two further Schumanns. Karl Moritz is still often cited merely as Schumann (e.g. Hoffmann & Walter *op. cit.*).

Approved abbreviated forms for long-established authors in the Cactaceae such as E. F. Anderson, Backeberg, Britton, F. Buxbaum, D. Hunt, Karwinsky, R. Kiesling, R. A. Philippi, F. Ritter, Rose, G. D. Rowley, N. P. Taylor and K. Schumann are to be found in Brummitt & Powell. Fred Kattermann is included there as (F.) Kattermann in full, shortened to Katt. R. Mottram is Mottram. Jonas M. Lüthy appears without umlaut as Luthy (see also next paragraph).

More recently IPNI (2004) (International Plant Names Index) a collaborative database by The Royal

Botanic Gardens, Kew, England, The Harvard University Herbarium, U.S.A. and the Australian National Herbarium, has introduced as part of its open public internet service a web site devoted to authors of plant names. Brummitt & Powell forms its basis, but it is constantly updated to include omitted and incoming new authors, and to modify existing data where necessary. For example, Lüthy is cited with umlaut.

Authors in the Cactaceae listed by IPNI, which are to be found in Hoffmann & Walter, etc., but not in Brummitt & Powell, include:

Author	Full form	Abbreviated form
*Graham Charles	G. Charles	G. Charles
Lothar Diers	(L.) Diers	Diers
Alexander B. Doweld	(A. B.) Doweld	Doweld
Roger Ferryman	(R.) Ferryman	Ferryman
*Adriana Hoffmann	A. E. Hoffmann	A. E. Hoffm.
Paul Hoxey	(P.) Hoxey	Hoxey
James Iliff	(J.) Iliff	Iliff
Wendelin Mächler	(W.) Mächler	Mächler
Harry Middleditch	(H.) Middleditch	Middled.
*Raquel Pinto	R. Pinto	R. Pinto
*Helmut Walter (see below)	H. E. Walter	H. E. Walter

Note: An asterisk indicates that other authors sharing the same surname are officially recorded. Initials in parentheses preceding full surnames are optional (complementary), not obligatory.

Hoffmann features as 17 entries in Brummitt & Powell, increased to 22 in IPNI. When shortened, it must be as Hoffm. Hoffm. without initials is reserved for George Franz Hoffmann (1761-1826). Although not in Brummitt & Powell, Adriana Hoffmann is listed accurately by IPNI as A. E. Hoffm. in abbreviation to comply with the obligation to use all initials. Both initials are also essential (cf. Hoffmann *et al.* 1998: 150) to avoid confusion with her contemporary relative, Alicia Hoffmann, who specialises in algae, a field also covered by Brummitt & Powell and IPNI. Alicia is cited as A. J. Hoffm.

The surname Walter without initials exists for Thomas Walter (1740- 1789). H. Walter is cited for Hans (Paul Heinrich) Walter (born 1882) in both Brummitt & Powell and IPNI. The latter source lists Helmut E. Walter, the modern taxonomic author of Hoffmann & Walter (*op. cit.*), etc., as Helmut Walter, i.e. with one forename in full. This was clearly derived from edited text, for example Walter 2002. (The incorrect formula H. Walter has also been employed for him in the same periodical). However, his valid and unique combination should be H. E. Walter. Without doubt, that will be the final official published formula.

CONCLUSION

Brummitt & Powell, supplemented by IPNI, or IPNI alone, should be regarded by all interested parties, not only Cactaceae specialists, as indispensable and universal reference tools; required norms for botanical authorities, serious enthusiasts and editors alike. Academic publications do as a rule conform, but exceptions may still be found, even in that context. For example Humaña & Valdivia (2004) cite Mol. for Molina, the pre-1992 formula employed acceptably up to that date by authorities such as Marticorena & Quezada (*op. cit.*). Molina in full is now required. Harmonization represents a notable advance and patently benefits everyone.

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