Latin diagnosis: Time to let go

Estrela Figueiredo,[1] Gerry Moore[2] & Gideon F. Smith[3]

1 *Schweickerdt Herbarium, Department of Plant Science, University of Pretoria, Pretoria, 0002 South Africa*

2 *Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, New York 11225, U.S.A.*

3 *Office of the Chief Director: Research and Scientific Services, South African National Biodiversity Institute, Private Bag X101, Pretoria, 0001 South Africa / Acocks Chair, Schweickerdt Herbarium, Department of Plant Science, University of Pretoria, Pretoria, 0002 South Africa*

Author for correspondence: *Estrela Figueiredo, estrelafigueiredo@hotmail.com*

Abstract Article 36.1 of the *International code of botanical nomenclature* (McNeill & al., 2006) requires that, as from 1 January 1935, all names of new plant taxa (algae and fossils excepted) can be validly published only if they are accompanied by a Latin description or diagnosis or by a reference to an effectively published Latin diagnosis or description. Although several past Nomenclature Section meetings have voted on proposals to have this requirement lifted, the liberation of plant nomenclature, and by implication plant taxonomy, from this impediment remains elusive. We argue that the Latin requirement must be removed now as it represents a relict that does not serve the purposes for which it was originally intended. Previous proposals to delete the requirement of a Latin description or diagnosis for the valid publication of a plant name have all had strings attached. We propose (Figueiredo & al. in *Taxon* 59: 659–660, this issue) that, as from the effective date of the Melbourne *Code* (a suitable date after the Melbourne Congress), a diagnosis or description in any language would suffice to effect valid publication of a plant name, the algae and fossils excepted, provided all of the other provisions for valid publication have been satisfied.

Keywords Botanical Latin; *International code of botanical nomenclature*; plant nomenclature

■ INTRODUCTION

Taxonomists are renowned for delivering a wide variety of products to a host of stakeholders who rely heavily on inventories, predictive classifications, hard-copy and electronic identification tools, preserved specimens, identifications, and much more (Steenkamp & Smith, 2003; Smith 2006). Central to all the products they deliver is communicating the outputs of their research and curatorial endeavours by making use of scientific names that conform in composition and otherwise with the relevant Articles in the *International code of botanical nomenclature* [*ICBN* or *Code*] (McNeill & al., 2006) for valid publication. For the past 75-odd years (i.e., since 1 January 1935) one of the requirements of the *Code* for the valid publication of the name of a new plant taxon, the algae and fossils excepted, is that it be accompanied by a Latin diagnosis or description, or by a reference to a previously and effectively published Latin diagnosis or description.

It has been estimated that taxonomists spend up to 20% of their time on nomenclatural matters (Hawksworth, 1992). Adhering to a uniform system of naming plants is undoubtedly necessary and critical to the smooth functioning of an unambiguous system required for naming plants. However, we argue that including a Latin description or diagnosis should no longer be required to effect valid publication of the name of a new plant taxon.

■ PREVIOUS EFFORTS TO REMOVE THE BOTANICAL LATIN IMPEDIMENT

Since 1935, when the first truly international rules of nomenclature (the Cambridge Rules) were published, several proposals have been made to eliminate the Latin requirement or make provision for an alternative language (see Table S1 in the Electronic Supplement to this article). Lund at the Stockholm Congress (Lanjouw, 1950) proposed that it be a requirement that the diagnosis for the algae be written in two languages, one of which should be French, German or English. At the Paris Congress, the Societé Mycologique de France (1953) proposed that the diagnosis be written both in the language of the author, and in another language. The closest that a Nomenclature Section meeting came to eliminating the compulsory Latin diagnosis (in general, and considering the three groups of extant plants, non-fossil algae and fossil plants) was in 1954 when proposal B, submitted at the Paris Congress (Fritsch & al., 1953), required that the description (of algae) be written both in Latin or a language adopted at an international congress, and in a language of the author's choice. The Rapporteur's comments (Lanjouw, 1954) were strongly against the proposal. Nevertheless, the proposal received 217 votes for and 99 against in the mail ballot. At the Congress, according to the report, there was no discussion and the proposal was rejected by a show of cards (30 for, 29 against).

Ten years later, Landingham (1963) proposed not to require a Latin diagnosis for the name of an extra-terrestrial taxon (not a group included in the *Code*) and Grassl (1963) proposed to exempt hybrids from the need for a Latin diagnosis. The next proposals were by McNeill & al. (1986) and later Chaudhri (1992), to provide for the use of English as an alternative. Although defeated in the Tokyo mail vote Chaudhri's proposal was discussed at the Tokyo Congress (Greuter & al. 1994) and while his proposal was rejected an amended version in which the provision would apply only to fossil names published after

1 January 1996 was passed. At the St Louis Congress, Craven (1997) proposed that Latin be replaced with English in Art. 36.1 and 36.2 and that Latin be deleted from Art. 36.3. Finally, ridding plant nomenclature from a need for a Latin description or diagnosis was raised by Rapini (2002) in the run-up to the Vienna Congress of 2005, but since it was overwhelmingly (over 90% "NO" vote) defeated in the preliminary mail ballot, the Section did not even discuss the matter. At the same Congress (Vienna 2005), Redeuilh (2004) proposed to remove the provision for the use of English as an alternative to Latin for the establishment of names of fossil plants. Although it would appear that it was Redeuilh's intention to mandate a Latin description or diagnosis for the valid publication of the name of a fossil, his proposal was to delete Art. 36.3. If Art. 36.3 were deleted a fossil name published after 1 Jan. 1996, like one published before that date, would be validated by a description or diagnosis in any language.

In most cases it is evident that the Rapporteur was opposed to the proposal and by manifesting his views (which would undoubtedly influence the mail ballot), he appears often to have annihilated the possibility of a discussion at the Nomenclature Section meeting. That was the case with Lanjouw (1950, 1954, 1959) and Lanjouw & Stafleu (1964). In recent years, even though Rapporteurs' comments have been less opposed to the removal of the Latin requirement (Greuter & McNeill, 1987, 1993; McNeill & Turland 2005), the mail ballot has been negative towards the proposals. This can be explained by the fact that the proposal usually contained other provisions besides dropping the Latin requirement. For example, Craven's proposal (1997) which would have made English mandatory would have also, by removing all reference to 1935, invalidated many currently accepted names and validated many others currently considered invalid. Redeuilh's proposal (2004) to delete Art. 36.3, would create nomenclatural problems as the resulting *Code* would not mention the fact that in a period of time (1996 to 2006), Latin or English were required. Rapini's (2002) proposal would have made the inclusion of an illustration along with the description compulsory, an imposition that was clearly not received favourably. It is noteworthy that even before 1935, many botanists had recognized the need to abandon the Latin requirement, Nicolson (1991) having noted many American botanists in the early 1900s, "… were allergic to the new requirement that Latin had to be used for publishing names of new taxa …"

■ AND THE *BIOCODE*?

In the *Draft BioCode*, (Greuter & al., 1996a,b; Article 8.2) it was suggested that a Latin or an English description (or reference to such) would be required to establish a name (establishment = valid publication). This was a compromise between zoology (any language) and botany (Latin compulsory except for all fossil names and those non-fossil algae names published before 1 Jan. 1958). The *BioCode* therefore stopped short of eliminating a language requirement.

■ ARGUMENTS USED FOR KEEPING THE LATIN DIAGNOSIS REQUIREMENT AND HOW THEY CAN BE REFUTED

When proposals to eliminate the requirement for a Latin diagnosis were discussed, the arguments given against have been basically the same over the years. They can all be easily refuted:

1. The need to understand Latin. *The need to pursue Latin studies to understand old literature. It would be impossible to do taxonomic botany without knowledge of Latin. Use of Latin forces taxonomists to keep a minimum of contact with the language in which the classical treatises of their science are written. Loss of contact with our scientific heritage. How can we apply names if their original description is not understood.*

Firstly, the knowledge of Latin required to read and understand a text is not the same as that needed to write a diagnosis, as explained by McNeill & al. (1986) and McNeill (1997). Secondly, since the Cambridge Rules (Briquet, 1935), botanical nomenclature has been based on the nomenclatural type system. This represented the initiation of a significant philosophical shift as names were increasingly attached to something concrete—types (ultimately specimens or rarely an illustration)—and not something abstract (a written description). In fact, up until the Berlin *Code*, a description or figure could be designated as the type if it were impossible to preserve a specimen as type or if a name was without a type. Under modern biological nomenclature, names have types, whereas taxa have descriptions.

Furthermore, the need to interpret old historical texts is the same across all fields of science, but only botany retains the obligation to communicate new findings in a language of the past. Thus, the imposition of the Latin requirement in 1935 appears to have been a (bad) reaction to the fact that Latin even then was declining. Prior to 1935 there was no need for a rule requiring Latin because most scientists did it regardless. As Latin began to decline as the *lingua franca* among scientists it was imposed on us by rule—not an uncommon action when some see change and they don't like it. Slow it down by edict. However, it has not slowed down the extinction of Latin. As a result, botany is behind even the Catholic Church whose law, since Vatican II (1962–1965) now stipulates that Mass may be carried out in Latin or in another language. The Catholics made this change because they recognized the number of "periti" (Latin experts) was just too low. Experts in botanical Latin are also dwindling in number.

2. Which language then? *If Latin was to be replaced, how would one choose the language to replace it. Adding English would cause requests to add other modern languages. Nationalistic feelings might arise. Today the language of science is English but tomorrow it can be another.*

We believe that this argument is at the base of the whole controversy over the Latin issue. We propose that no mandatory language will replace Latin and so any language could be used to describe a new taxon. It should be emphasized that we are not proposing the banning of using Latin for the validating diagnosis or description of a new taxon, but simply the removal of its requirement.

3. The Babylon argument. *To accept any language would cause a Babylonian confusion. How would (western) taxonomists deal with Chinese/Hindu, Dutch/Indonesian language, or Japanese/Chinese publications (examples given in congress discussions)? Latin obviates the "need to try and wrestle with diagnosis in Chinese or Russian or other entertaining and inscrutable languages" (Chaloner in Greuter & al., 1994).*

The reality is that Latin is used only for the (mostly useless and usually cryptic) diagnosis, while all the other information (description, collections, localities, collectors, etc.) on the new taxon that the taxonomist needs to understand can be written in any language (Kostermans, 1990). Therefore, the Babylonian confusion is there and it is unavoidable. No accurate studies can be developed based on Latin diagnoses alone. Translation of the remaining information is always required anyway, or do some authors feel that knowing what the Latin diagnosis in a Chinese or Russian paper says is enough for their research?

As for worldwide understanding of the modern Latin diagnosis, Barneby (1990) rightly described this feature as "often so barbaric in form as to be devoid of meaning, being syntactically and grammatically inscrutable, and only to be deciphered by back-translation into the speech of its composer". As commented by Steyskal (1990), it is simpler to get a paper in many minor languages translated into English than to get a Latin diagnosis translated into anything. An observation that is even more pertinent today with the advent of automatic online translation facilities.

Scientific papers in local languages are diminishing, and the trend is to publish in English (Kostermans, 1990). The reason for this is that if taxonomists want their work to be recognised at an international level or if they want to publish in highly rated periodicals, they will use languages that are widely understood. It is unlikely that scientists would publish more descriptions in their local languages because Latin was no longer a requirement for the diagnosis. And even if they did, translating any description into a major language is becoming easier with the present web facilities.

4. Stability of Latin. *As a dead language Latin does not change and the meanings of words do not change, as they do in a modern language.*

This is not true, as pointed by McNeill (1997), based on Stearn's (1966: 34–35) description of the evolution of Latin since classical times. The language has evolved and it is still evolving.

5. Latin as a filter. *Latin description acts as a filter to discourage the frivolous description of new taxa. Omission of Latin automatically helps to eliminate consideration of substandard work (Voss, 1990). It forestalls valid publication of names in plant catalogues and amateur journals (Barneby, 1990). It is a way to determine the intention of the author to publish a new name.*

However, this intention is presently reflected in other requirements in the *Code*, such as the type of a name of a new taxon being clearly indicated (Art. 37.1), thus preventing the inadvertent publication of names of new plant taxa.

6. The same disadvantage for all. *A modern language instead of Latin would give an advantage to its native speakers, while with Latin all are similarly disadvantaged.*

First, this means creating unnecessary and time-consuming obstacles to scientists (McNeill, 1997). And secondly, it is not true as, in reality, some have the advantage of Stearn's *Botanical Latin* (the English speakers, and a few others where translations are available) while for others there are no botanical dictionaries for Latin so they have to struggle with double translations. Furthermore, other codes of biological nomenclature (e.g., bacteriological, zoological, viral) appear to survive just fine without a language requirement.

7. Vehicle for international cooperation. *It would endanger the maintenance of international cooperation in taxonomic botany where the world was prepared to accept Latin as an international vehicle for descriptions.*

Latin was a scientific *lingua franca* when educated people everywhere knew the language (Bayer, 1990) and in universities lectures were given in that language. In the 15th–18th century any internationally recognised scientist would be fluent in Latin (McNeill, 1997). Today, Latin is not an international means of communication.

8. Abandonment of the diagnosis.

The diagnosis itself is not compulsory in the actual *Code* (it can be a full Latin description instead). The abandonment of Latin does not mean necessarily the abandonment of the diagnosis.

■ A NEW PROPOSAL, REASONS AND CONSEQUENCES

It is our view that the Latin requirement must be removed and no mandatory language proposed. The removal of this requirement by restricting Art. 36.1 to the period up to present (which would effectively close the article making it relevant only for past publications) would not have any retroactive nomenclatural consequences (such as retroactively validating/invalidating names).

We believe that the Latin diagnosis requirement serves no useful purpose, it is scientifically irrelevant and part of the taxonomic impediment. It contributes to increase the number of undescribed species whose authors prefer to refer to them as sp. A and sp. B, to avoid dealing with the Latin diagnosis which they cannot produce and can only be obtained as a favour from one of the few living botanical Latinists. It is now time to remove this impediment and open the way for a more efficient and fast description of our plant diversity. Will supporters of this view require a further six years to generate support for having this provision lifted? Or will plant taxonomists be empowered to describe the novelties they collect in the language of their preference. This approach seems to work well for zoologists. Why shouldn't it work for us?

Our proposal (Figueiredo & al. in Taxon 59: 659–660, this issue) excludes names of non-fossil algae and fossil plants, as the nomenclatural requirements of their valid publication have deviated somewhat from that of the groups dealt with here. However, it is hoped that specialists on these taxa will submit (a) proposal(s) that will similarly liberate the naming of entities in their groups.

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