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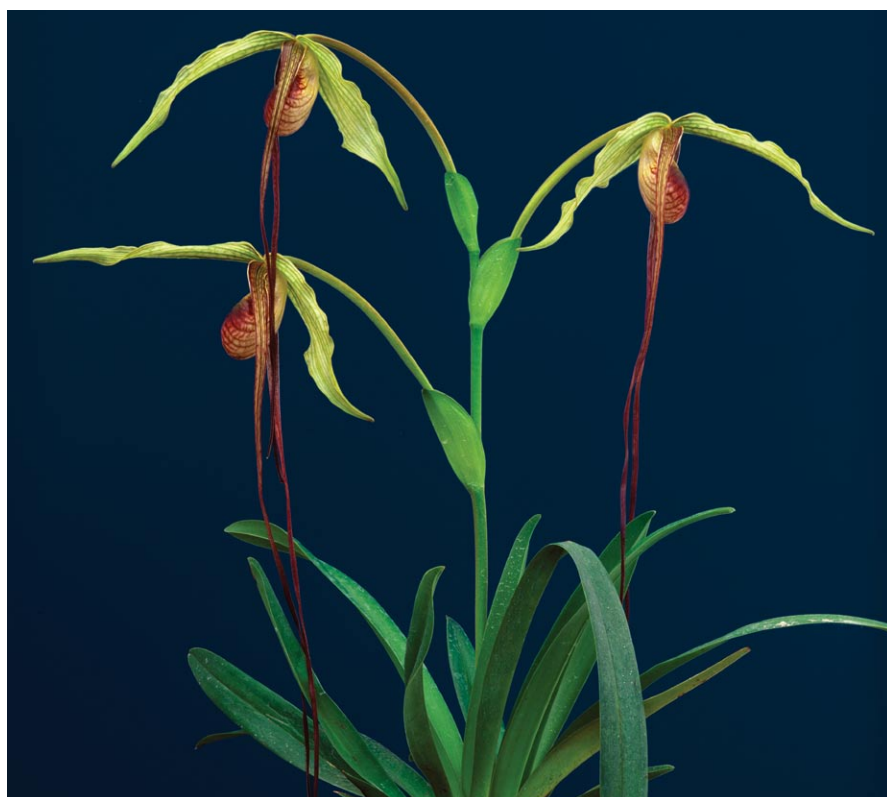
On the Correct Name for the Central American Long-Petaled *Phragmipedium*; Again

By Franco Pupulin



I WAS QUITE CONVINCED that the complicated taxonomic history of the Central American long-petaled *Phragmipedium*, which has been misunderstood for over a century and caused a lot of uncertainties among both professional botanists and horticulturists, had finally been clarified in a rather technical paper I published along with Bob Dressler some years ago (Pupulin and Dressler 2011). This supposition must have been wrong, though, as at least three papers aimed at rediscussing the nomenclatural status of *Phragmipedium humboldtii* (Warsz.) J.T. Atwood & Dressler have been published recently (Braem 2014a, 2014b, 2015), contributing, I fear, to revamping ambiguities and confusion about the correct name to be used for this beautiful *Phragmipedium* from the Central American isthmus. More concerns arise, however, from the number of students, herbarium curators and amateurs who contact me trying to disentangle the confusion of the past and put a correct name to both living and dry specimens of *Phragmipedium*.

From the point of view of the scientific content, the recent writings by Braem and collaborators neither present any new evidence to the discussion nor propose any new interpretation of the pertinent articles of the International Code of Nomenclature for algae, fungi and plants (McNeill et al. 2012, simply the Code from here on), so strictly speaking, I have nothing substantial to address with respect to the nomenclatural note that we published in 2011 (Pupulin and Dressler 2011). Nevertheless, the simple fact that the most authoritative and commonly used nomenclatural databases available through the Internet — the World Checklist of Selected Plant Families at the Royal Botanic Gardens, Kew; Tropicos by the Missouri Botanical Garden; and the International Plant Names Index — differ in the use of the name, its authorship and its validity, must give rise to some suspicion about the effectiveness and insight of our taxonomic note. Therefore, I will try here to retrace the arguments that I exposed with Dressler — and with the substantial support by Dr. Kanchi N. Gandhi, the leading expert in plant nomenclature at Harvard University — in our paper on the nomenclature of *Cypripedium humboldtii* (Pupulin and Dressler 2011), explaining them in a less technical form, in the hope that they will be correctly understood, or otherwise refuted on a scientific basis. The readers will forgive me for being more didactic than usual in the following text,

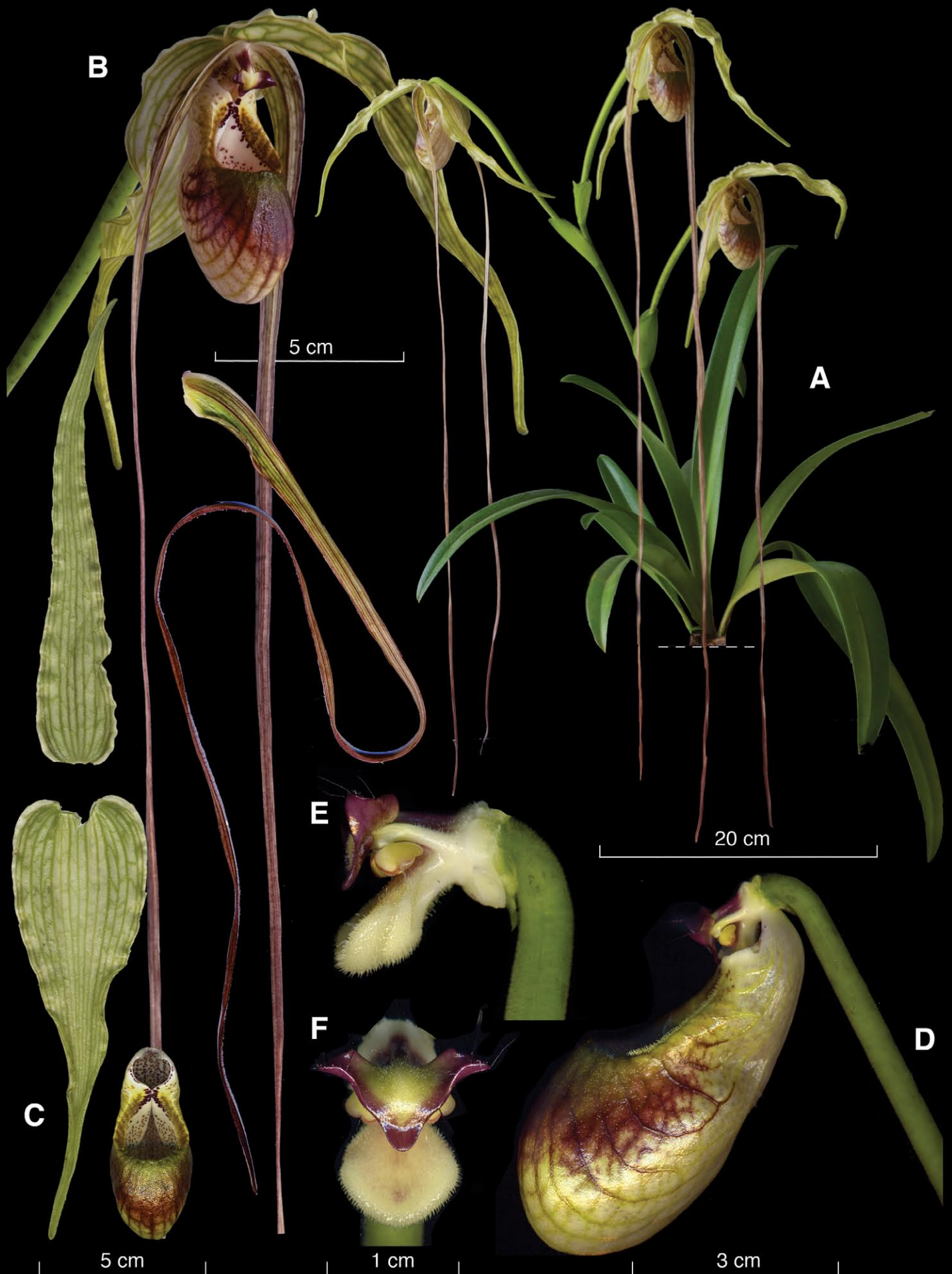


but this paper is indeed intended also — if not primarily — for the general public.

Let us begin with the historical facts. Józef Warszewicz (1812–1866), the discoverer and original collector of *Cypripedium humboldtii*, was initially trained in botany at the Vilnius University Botanical Garden, and worked as assistant gardener in the Botanical Garden of Berlin from 1840–1844. In 1844 he joined a Belgian contingent of settlers in Guatemala to collect plants for the horticultural firm of Messrs. Van Houtte, of Ghent, from which he quickly became independent (Ossenbach 2009).

[1] A flower of *Phragmipedium humboldtii*, showing the characteristic red coloration of the lip, as early noted by Warszewicz, which is absent in South American *P. caudatum*. From a plant cultivated at Lankester Botanical Garden under accession no. 05796.

[2] The plants of *Phragmipedium humboldtii* are typically compact, vs. the large plants of *Phragmipedium caudatum*, with the inflorescences far surpassing the length of the leaves. From a plant cultivated at Lankester Botanical Garden under accession no. 15781.

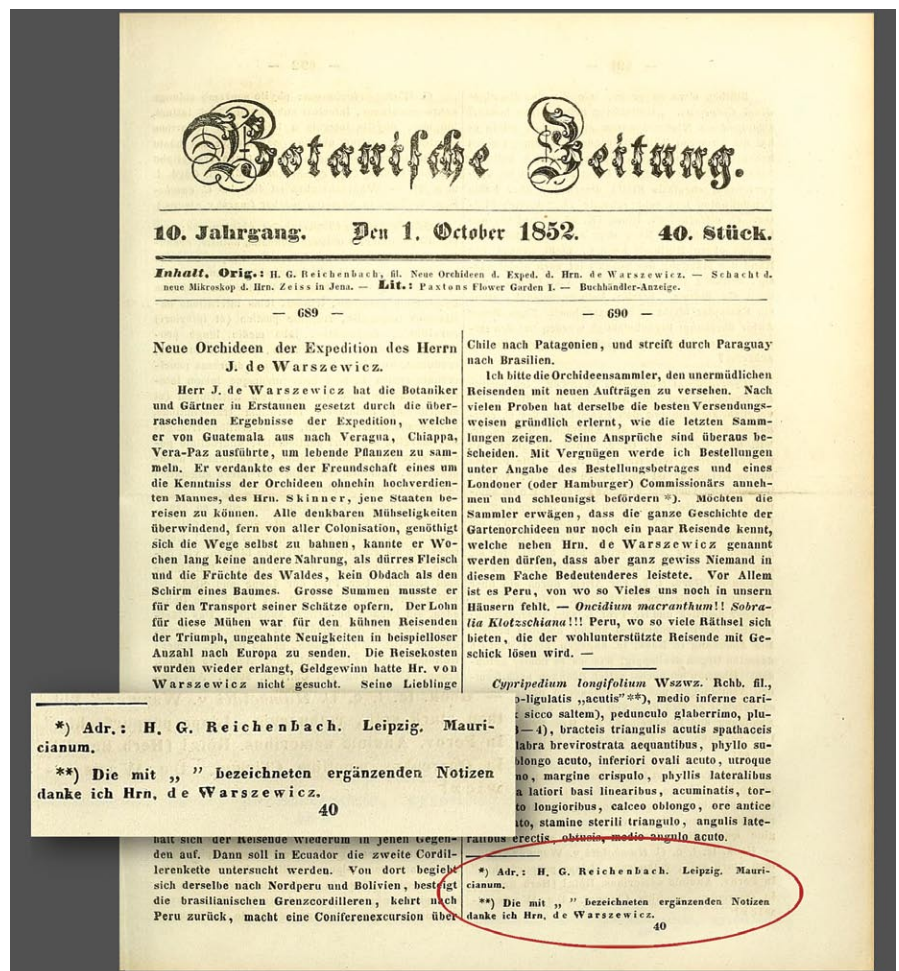


[3] Lankester Composite Digital Plate of *Phragmipedium humboldtii*. A. Habit. B. Flower. C. Dissected perianth. D. Column and lip, lateral view. E. Column and ovary, lateral view. F. Column, frontal view. Prepared by F. Pupulin from JBL-05755 (JBL).

From Guatemala he traveled extensively in Central America, visiting El Salvador, Nicaragua, Costa Rica and Panama. In Panama, his favorite collecting sites were the highlands of Chiriquí, and it was there, probably around 1849, where among other orchids he collected a long-petaled species of *Phragmipedium*. In 1850, Warszewicz came back to Europe with his rich orchid collections. For several months, from mid-1850 to early 1851 he worked in Berlin as an assistant to Heinrich Gustav Reichenbach, with whom he established a solid friendship that lasted until his death. In 1851, Warszewicz embarked again for tropical America. In October of 1852, in a paper titled "Neue Orchideen der Expedition des Herrn J. de Warszewicz" ("New Orchids of the Expedition of Mr. J. de Warszewicz"), Reichenbach published the results of his studies of Warszewicz' orchids. It is in this paper that *Cypripedium humboldtii* was described.

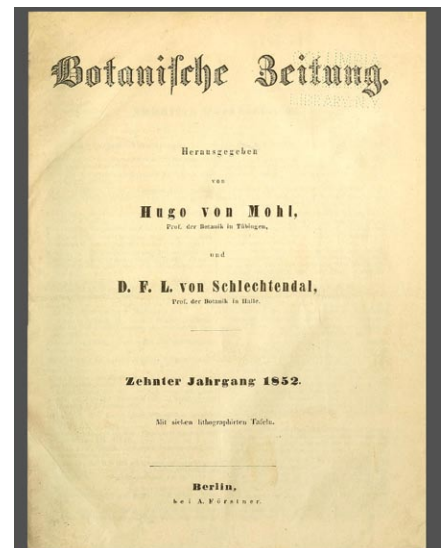
And now, let's look at the contended name. According to the rules of botanical nomenclature as addressed by the Code, in order to be validly used in science, the name of a plant must be effective (this means it must have been really published), legitimate (it cannot be the same name previously used for another taxon at the same rank) and valid (it must have a description or a diagnosis and, in general, cannot be in disagreement with any of the basic rules of the Code itself). If a name is effective, legitimate and valid, and if this name is the first one ever used for a given species, it must be used as the basionym for that species according to the rule of priority (Articles 11 and 12 of the Code; McNeill et al. 2012). It is important to realize that the rules of the Code have changed significantly through time, and they cannot be applied retroactively. For example, a Latin diagnosis or description was not mandatory for valid publication until January 1, 1935, and, after December 31, 2011, is no longer required; a name published after January 1, 1953, is not valid unless a clear indication of its taxonomic rank is provided and before January 1, 1958, the name of a new taxon at the rank of genus or below was validly published even when no indication of the type was given, although the citation of a type is mandatory after that date. These are just a few of the myriad changes in the Code over time and it is critically important to the discussion of priority to understand when a particular name was published.

We must agree on the fact that *Cypripedium humboldtii* (putting aside

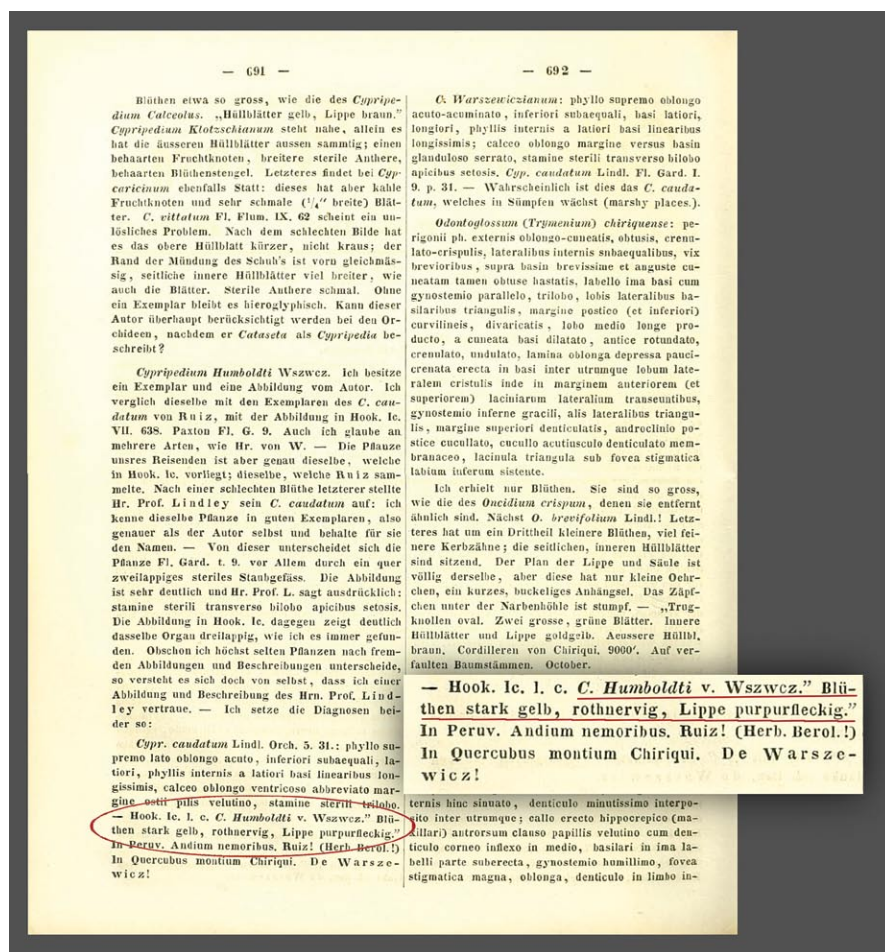


for the moment the question of its authorship and validity) was effectively published in the 40th part of Volume 10 of the *Botanical Zeitung*, released on October 1, 1852. As the specific epithet *humboldtii* was never used before for any other species of the genus *Cypripedium*, the name is legitimate. This is the first name ever used in botany to designate the long-petaled slipper orchid that J. Warszewicz collected in the oak forests of the Chiriquí mountains, so if it was validly published (as I will attempt to show once more), it has priority over any other name used for the same species.

Why do Braem and his colleagues claim that the name *Cypripedium humboldtii* is not valid? The Code, in Article 36.1, clearly states that a name is not validly published if the author, in the same publication where the name appears for the first time, declares that he does not agree with that name representing a new species. This makes perfect sense. It would be unacceptable to describe a new species and, in the very same place and at the same moment, consider it is not a new species. Braem and colleagues (Braem and Ohlund 2004a, 2004b; Braem et al. 2004a,



- [4] Reichenbach's paper dealing with the collections of Józef Warszewicz. Note that the second footnote expressly states: "For the additional notes designated ", I thank Mr. De Warszewicz."
- [5] The frontispiece of the 10th volume of the *Botanical Zeitung*, edited by Hugo von Mohl and D.F.L. von Schlechtendal, published in 1852.



[6] Columns 561 and 562 of the *Botanical Zeitung* for 1852, issued on October 1, 1852, where *Cypripedium humboldtii* Warsz. was described. As you can see, in this journal the numbers do not refer to pages, but to columns. Note that the short description is included between quotation marks, as it is ascribed to Warszewicz.

2004b) argue that, since Reichenbach described *Cyp. humboldtii*, and in the same paper Reichenbach speculates that it is just a synonym of the South American *Cypripedium caudatum*, the name *Cyp. humboldtii* must be considered invalid according to the provision of the Code. In 2011, Bob Dressler and I clarified that the author of the name *Cyp. humboldtii* was not H.G. Reichenbach, the son, but Józef Warszewicz. Reichenbach is undoubtedly the author of the paper where *Cyp. humboldtii* is described, so Braem is correct when he claims (Braem 2014a, 2014b, 2015) that Warszewicz never wrote that article, but he is wrong when also claims that Reichenbach was the author of the species name. The Code makes a clear distinction between the authorship of an article and the authorship of a name (Article 46.2). In fact, the Code goes further, presenting a series of examples to show that the authorship of a name may be distinct from the authorship of the article where the name is published (Article 46.2, Ex. 4, and Article 31.4., Ex. 3),

accepting that the author of a paper may ascribe the name of a new taxon included in his paper to a different author. The Code illustrates how the author of a paper might properly make this ascription to a different author; i.e., indicating the sole name of the other author in the authorship of the new species, and putting between quotation marks the diagnosis (the unique characters) that validate the new name. Article 46.2 is clear in stating that “a name of a new taxon is attributed to the author(s) to whom the name was ascribed when the validating description or diagnosis was simultaneously ascribed to or unequivocally associated with the same author(s), even when authorship of the publication is different.” Why is this important to this discussion? Because, in the text published by Reichenbach in 1852, the name *Cypripedium humboldtii* is ascribed to the sole author “Wszwcz.” (= Warszewicz), and the words that describe the specific characters to differentiate it from *Cyp. caudatum* (“Blüthen stark gelb, rothnervig, Lippe

purpurfleckig”: the flowers dark yellow, veined with red, the lip flecked with purple) are included between quotation marks, as they are ascribed to Warszewicz alone. It is Reichenbach himself, in the second footnote on the first page of his paper, who expressly states that “For the additional notes designated, “I thank Mr. De Warszewicz” (Reichenbach 1852, p. 690).

Beyond any reasonable doubt, the authorship of the name *Cyp. humboldtii* must be ascribed to Józef Warszewicz, and the correct citation of the basionym is *Cypripedium humboldtii* Warsz. The Code allows (but does not require) adding the specification “in Rchb.f.” to indicate that the author of the name (Warszewicz) published it within a paper authored by Reichenbach. In any case, the authorship “Warsz. ex Rchb.f.”, as used by Atwood and Dressler (1998) — where the “ex” means that the name was published by Reichenbach on behalf of Warszewicz — is incorrect, and it would make the name invalid (if Reichenbach were the author of the name — here not the case — he would have invalidated it by considering it a synonym). The Code clearly states how cases like this must be treated. Repeating the contrary is useless, unless one cannot demonstrate — scientifically — that our discussion of the pertinent articles of the Code is erroneous. As the name *Cyp. humboldtii* must be attributed solely to Warszewicz, the acceptance or otherwise of the name by Reichenbach is not relevant for valid publication. Reichenbach’s thoughts about the new species being the same as *Cyp. caudatum* are just that, thoughts (and, indeed, erroneous thoughts, as the *Phragmipedium* species from Chiriquí is not the same as *Phragmipedium caudatum*), musings of another botanist, and as such they do not affect the validity of the name.

More recently, Braem (2014a, 2014b, 2015) tried to demonstrate that *Cyp. humboldtii* was not described, and should therefore be treated as a nomen nudum, or just a name, without validity in botanical nomenclature (according to Article 38.1 of the Code, “In order to be validly published, a name of a new taxon must ... be accompanied by a description or diagnosis of the taxon...”). This thesis is apparently followed by Tropicos (2015), which considers *Phragmipedium humboldtii* invalid as it is based on an invalid basionym. However, it is Braem himself who recognizes that such description exists when he writes:

“Reichenbach reports a short description that is probably taken from the notes of the same Warszewicz: *Flowers dark yellow, veined with red, the lip flecked with purple*” (Braem 2015; the italics are mine). And this is exactly the point. The requirement of a Latin diagnosis became effective for the Code only on January 1, 1935 (Article 39) and this short description, which is not *probably* but *surely* by Warszewicz (as Reichenbach himself states), where the main differential characters between *Phrag. humboldtii* and *Phrag. caudatum* are recognized (in Reichenbach 1852, p. 691), fulfills the requirements of the Code to validate the name.

These are the *facts*. It is true and unquestionable that Reichenbach published in 1852 the name *Cypripedium humboldtii*, ascribing it to Warszewicz. It is also unquestionable that, in the same paper, he also published a short description validating the name, ascribing the description to Warszewicz. Effective publication of a name that is not illegitimate (e.g., is not a synonym of a previous name), and is accompanied by a validating description, is sufficient to fulfil the requirements of the Code for valid publication. So, to make this long story short, the name *Cypripedium humboldtii* Warsz. was effectively published, is legitimate, is valid and also has a type locality and an actual type specimen conserved in Vienna. The use of the name *Phragmipedium humboldtii* over *Selenipedium warszewiczii* Rchb.f. (that was also validly published, as shown by Christenson 2006) and *Phragmipedium popowii* Braem, Ohlund & Quéné is not a question of preference, but the only correct possibility according to scientific plant nomenclature, as well as the necessary consequence of the fact that the name *Cypripedium humboldtii* was validly published. Being the first legitimate, valid and effectively published name for the Central American long-petaled *Phragmipedium*, this name has priority and *must* be used for according to the Code.

When John Atwood and Robert Dressler (1998) transferred *Cypripedium humboldtii* to *Phragmipedium*, they erroneously cited the basionym as *Cyp. humboldtii* Warsz. ex Rchb.f., a name that, as we know, must not be used as it is wrong and would be invalid according to the rules of the Code. I really think that this was not simply a case of “lapsus calami” (a slip of the pen), but was more likely a conceptual error by Atwood and Dressler. What I think, however, is irrelevant to

the Code, as according to Article 41.3, “errors in the citation of the Basionym or replaced synonym, or in author citation [...], do not affect valid publication of such names.” The wrong citation of the authorship by Atwood and Dressler (1998) may be treated as a simple bibliographic error to be corrected, and this means that the name *Phragmipedium humboldtii* (Warsz.) J.T. Atwood & Dressler was validly published.

References

- Atwood, J.T. and R.L. Dressler. 1998. Clarifications and New Combinations in the *Phragmipedium caudatum* Complex from Central America. *Selbyana* 19:245–248.
- Braem, G. 2014a. The Enigmatic (?) Case of the Most Beautiful *Phragmipedium popowii*. *Orchid Dig.* 78(2):101–112.
- Braem, G. 2014b. The Enigmatic (?) Case of the Most Beautiful *Phragmipedium popowii*. *Austr. Orchid Rev.* 79(2):49–58.
- Braem, G. 2015. *Phragmipedium popowii*: Ancora un Enigma? *Caesiana n.s.* 16 (40):13–20.
- Braem, G.J. and S. Ohlund. 2004a. Une Chaussetrappe Linguistique: *Phragmipedium caudatum*, *P. warszewiczianum*, *P. humboldtii*. *Richardiana* 4:163–170.
- Braem, G.J. and S. Ohlund. 2004b. A Language Trap — *Phragmipedium caudatum*, *Phrag. warszewiczianum*, *Phrag. humboldtii*. *Austr. Orchid Rev.* 69(5):19–21.
- Braem, G.J., S. Ohlund, and R.-J. Quéné. 2004a. Le Vrai *Phragmipedium warszewiczianum* Pourrait-Il se Présenter, s’il Vous Plait? Un Nouveau Cas d’Identification Erronée — Le Complexe *Phragmipedium caudatum*, Éclaircissements, et Description d’Une Nouvelle Espèce. *Richardiana* 4:171–196.
- Braem, G.J., S. Ohlund, and R.-J. Quéné. 2004b. The Real *Phragmipedium warszewiczianum*. A Clarification of the *Phragmipedium caudatum* Complex (*Phragmipedium* section *Phragmipedium*). *Orquideologia* 23:117–136.
- Christenson, E.A. 2006. Das frühere *Phragmipedium caudatum* aus Panama/The former *Phragmipedium caudatum* from Panama. *J. Orchideenfr.* 13:141–143.
- McNeill, J., F.R. Barrie, W.R. Buck, V. Demoulin, W. Greuter, D.L. Hawksworth, P.S. Herendeen, S. Knapp, K. Marhold, J. Prado, W.F. Prud’homme van Reine, G.F. Smith, and J.H. Wiersma, editors. 2012. *International Code of Nomenclature for Algae, Fungi, and Plants (Melbourne Code): Adopted by the Eighteenth International Botanical Congress Melbourne, Australia, July 2011. Regnum Vegetabile 154*. Koeltz Scientific Books, Königstein im Taunus, Germany.
- Ossenbach, C. 2009. Orchids and orchidology in Central America. 500 years of history. *Lankesteriana* 9(1–2): 1–268.
- Pupulin, F. and R.L. Dressler. 2011. A Nomenclatural Note on *Cypripedium humboldtii* (Orchidaceae: Cypripedioideae). *Harv. Pap. Bot.* 16(1):157–159.
- Reichenbach, H.G. 1852. Neue Orchideen der Expedition des Herrn J. de Warszewicz. *Bot. Zeit. (Berlin)* 10:689–698.
- Tropicos. 2015. *Cypripedium humboldtii* Warsz. <http://www.tropicos.org/Name/23504236>. Accessed June 1, 2015.

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