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Eponyms in biological nomenclature and the Slippery Slope and Pandora's Box arguments

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Abstract. Following the discussion initiated by the opinion article by Guedes et al. (2023) “Eponyms have no place in 21st-century biological nomenclature” published in *Nature Ecology & Evolution*, in which the authors demanded to ban and cancel **all** eponyms (scientific names and epithets of taxa, which are derived from names of persons) in biological nomenclature, and, in particular, responding to comments by Thiele (2023) about the supposedly fallacious nature of the Slippery Slope argument (which I discussed in my earlier opinion articles), I provide here additional arguments in favor of the continued use of eponyms in particular and against politically (or so-called “ethically”) motivated censorship in biological nomenclature in general. I conclude that allowing “culture wars” in biological nomenclature and possible cancellation of scientific names that are considered (or may be considered) by some people as “objectionable, offensive, or inappropriate” will result in the nomenclatural chaos caused by a large-scale disruption of well-working nomenclatural codes and naming conventions. Biological nomenclature is vitally important not only to the science of biological taxonomy but also to all other sciences and fields of human activities dealing with the living world. That nomenclature, time-proven and, indeed, sometimes loaded with complicated but also fascinating and instructive history, should not be disrupted because of ever-changing politically motivated claims and Protean vogues. It should not become a new battlefield for culture wars.

Keywords: biological nomenclature, botanical nomenclature, culture wars, eponyms, Pandora's Box argument, Slippery Slope argument, taxonomy

In his recent comment on the opinion article by Guedes et al. (2023) “Eponyms have no place in 21st-century biological nomenclature”, in which the authors expressed their opinion that **all** eponyms (scientific names and epithets of taxa, which are derived from names of persons) should be banned and cancelled in modern biological nomenclature, Thiele (2023) mentioned the so-called Slippery Slope argument [referring to our discussion in *Taxon* (Mosyakin, 2022a, 2022b; Thiele et al., 2022, etc.)] in the following context: “...one of the principal

arguments used against the proposals to deal with the most egregious eponyms is the ‘slippery slope’ argument — that such proposals will open a flood-gate and taxonomists will necessarily need to reject all or most eponyms if they begin to reject a few [references to two articles by Mosyakin, 2022a, 2022b]”. He further continued that “This fallacious argument relies on a notion that all shades of grey need to be declared either black or white and ignores the fact that societies deal successfully with shades of grey all the time”.

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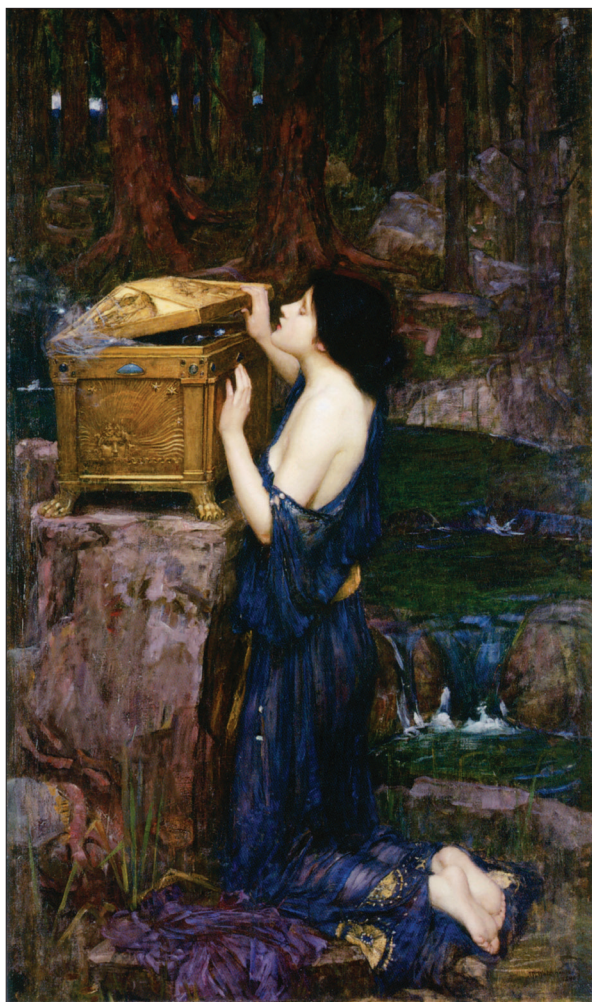


Fig. 1. *Pandora* (1896), a painting by John William Waterhouse (1849–1917), oil on canvas. Public domain (https://commons.m.wikimedia.org/wiki/File:John_William_Waterhouse_-_Pandora,_1896.jpg).

Indeed, I used the Slippery Slope argument in our earlier discussion (Mosyakin, 2022a, 2022b). Moreover, in my opinion, the article by Guedes et al. (2023), who rather unconditionally demanded the total cancellation of eponyms in biological nomenclature, and the comment by Thiele (2023), who argued that only “some, but not all, eponyms should be disallowed”, clearly illustrate the Slippery Slope case, as predicted in my articles (Mosyakin, 2022a, 2022b).

Indeed, if you demand to ban and reject only *some* eponyms that you for some reasons dislike or find “culturally offensive” or “inappropriate” (see Hammer, Thiele, 2021; Smith, Figueiredo, 2022; Smith et

al., 2022; Thiele et al., 2022), then some people will undoubtedly emerge, who will follow the suit and demand to ban and cancel *all* eponyms, using the same or similar categories of political, social, historical, or ethical (or “pseudo-ethical”?) arguments.

If you demand to ban eponyms referring to George Hibbert as “a promoter and beneficiary of slavery” (see Hammer, Thiele, 2021; Thiele et al., 2022), and even eponymic toponyms referring to the former country of Rhodesia (named after Cecil J. Rhodes, widely considered to be an imperialist, colonialist and racist; see Smith, Figueiredo, 2022), there will be some people who will demand to ban and cancel the eponyms (and also eponymic toponyms?) linked to Christopher Columbus (considered by some as a cruel colonialist and slave trader; see, e.g., Tinker, Freeland, 2008, and additional references in Mosyakin, 2022a), Joseph Banks (characterized by some as “an enabler of slavery” in British colonies; see references in Mosyakin, 2022b), Michel Bégon (a French colonial administrator and naturalist for whom the mega-diverse plant genus *Begonia* L. was named, but who also hoped to solve the labor shortages in American colonies of France by importing African slaves; see Rushforth, 2003: 801), Aristotle, who provided philosophical justifications of slavery and of inferiority of women, and even Carl Linnaeus and Charles Darwin, because some people believe that these two outstanding scientists held *some* views that are *now* considered racist (see further details and relevant references in Mosyakin, 2022a, 2022b).

If you demand to ban and cancel all eponyms in biological nomenclature, why should someone not demand, with equally “valid” justifications, to ban and cancel all eponyms in the nomenclature of minerals (hundreds of names, such as alexandrite, columbite, dolomite, gadolinite, goethite, perovskite, vivianite, etc.; see Senning, 2019b), chemical elements (e.g., gadolinium, curium, einsteinium, fermium, mendelevium, nobelium, lawrencium, rutherfordium, seaborgium, bohrium, meitnerium, roentgenium, copernicium, etc.; see Senning, 2019a), or astronomical objects in International Astronomical Union’s nomenclature (starting with lunar craters Aristoteles, Copernicus, Fra Mauro, Humboldt, Oppenheimer, Plinius, Seleucus, Tycho, etc., and finishing with Tombaugh Regio, Hillary Montes, Tenzing Montes, and other eponymic surface features of the distant dwarf planet Pluto; see IAU, 2023–onward), or even standard SI and non-SI

units (ampere, becquerel, curie, farad, joule, hertz, newton, ohm, volt, watt, etc.)?

So, this is a classical Slippery Slope and Pandora's Box (see Fig. 1) situation: your initially good intentions (with which, as the proverb says, the road to hell is sometimes paved) will be transformed into not so good consequences, and even brought *ad absurdum*. If you start culture wars in natural sciences, you will soon have eager followers (not necessarily experienced in biological taxonomy and nomenclature) who will definitely bring your good intentions to the final destination. And that destination will be the nomenclatural chaos caused by a large-scale disruption of the well-working system and naming conventions of biological nomenclature.

Definitely, that chaos will be accompanied by well-expected confrontation and even conflicts between various groups of researchers and users of scientific names of organisms, as we see already in rather hot discussions that erupted on pages of scientific journals (see, e.g., recent discussions in *Taxon* and *Nature Ecology & Evolution*: Antonelli et al., 2023; Jost et al., 2023; Mabele et al., 2023; Orr et al., 2023; Roksandic et al., 2023, etc.), popular magazines, online media, and professional online platforms, such as ResearchGate (see selected references in Mosyakin, 2022a, 2022b, 2022c). In that respect, I think that the statements by Thiele et al. (2022: 1152: "Societies everywhere manage shades of grey very well...") and Thiele (2023: "...societies deal successfully with shades of grey all the time") about the assumed ability of societies (as well as many professional communities) to deal with the ideological (or "ethical") "shades of gray" are really naïve. Most unfortunately, we see right now how "societies deal successfully with shades of grey" [sarcasm intended – SM] and how politically motivated agendas, totalitarian ideologies, cultural extremism, manipulative media technologies, and shameless propaganda are taking over whole countries and/or large strata of societies, bringing to this world the level of ideological and political confrontation unseen since the times of the Cold War or even World War II. Do we really need to open another ideological front in biological nomenclature?

Biological nomenclature (and especially its stability and predictability of its rules) is too important not only to the science of biological taxonomy but also to all other sciences and fields of human activities dealing with the living world, such as biodiversity inventory and conservation, global change

ecology, agriculture, biotechnology, medicine, use and management of natural resources, international conventions and national legislation, to name just a few. Biological nomenclature (with eponyms being its large, unalienable, and important part) is vitally important for and equally open to all people representing all nations, racial, ethnic and ethnocultural groups, sexes and genders, ages, religions, political parties and views, the whole diversity of humans living on that beautiful but not so peaceful (as we currently see, e.g., in Ukraine) planet.

That nomenclature, time-proven and, indeed, sometimes loaded with complicated but also fascinating and instructive history, should not be disrupted because of ever-changing politically motivated claims and Protean vogues. It should not become a new battlefield for culture wars. It should remain the realm of peace, stability, acceptance, atonement, reconciliation, diversity, inclusivity, political neutrality, scientific freedom, meritocracy (see Abbot et al., 2023), mutual understanding and tolerance in our present-day turbulent world.

Concluding remarks: a story of the text above

The main part of the present note has been written following the discussion in *Nature Ecology & Evolution* (see Antonelli et al., 2023; Jost et al., 2023; Mabele et al., 2023; Orr et al., 2023; Roksandic et al., 2023) in response to the already mentioned opinion article by Guedes et al. (2023), in which the authors rather boldly stated that "naming species in honour of a specific person is unjustifiable and out of step with equality and representation. Reforming taxonomy to remove eponyms will not be easy [Yes, they admitted that "little obstacle"! – SM] but could [Only "could"? Or probably could not? – SM] bring multiple benefits [not convincingly presented in the article – SM] for both conservation and society" (Guedes et al., 2023: 1157). After our preliminary exchange of email messages with editors of the journal, I pre-submitted to *Nature Ecology & Evolution* a much shorter and "softer" version of the text above, for preliminary consideration by the editors. However, the editors decided that this text is not suitable for publication in their respected journal because they have already presented "a balanced suite of views" and have drawn a line under the topic. I have accepted their decision with respect and understanding.

However, I think that this text (in its somewhat expanded and strengthened version) could be of some interest to people who follow the ongoing

discussion in recent publications expressing opinions in favor of or against the politically or “ethically” motivated censorship and possible cancellation of scientific names of organisms, those names which for some reasons are considered, or just may be considered, by some people as “objectionable, offensive, or inappropriate”.

I have already expressed my main arguments in several discussion articles (Mosyakin, 2022a, 2022b, 2023b) and formal proposals (Mosyakin, 2021, 2022c, 2023a, 2023c; Hayova et al., 2023, etc.) to amend the *International Code of Nomenclature for algae, fungi, and plants* (Turland et al., 2018). However, the Slippery Slope case discussed above has not yet been presented in a concise manner. Also, considering the rather high paywall separating the readers from many full texts in *Nature Ecology & Evolution*, and high publication fees of that journal, I prefer to publish my short note on the Slippery Slope case in a journal providing immediate open

access to published articles. I also hope that I will be able (if time and circumstances allow) to present additional strong arguments in favor of eponyms in biological nomenclature in a larger article (now under preparation).

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Ethics Declaration

The author declares no conflict of interest.

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REFERENCES

- Abbot D., Bikfalvi A., Bleske-Rechek A.L., Bodmer W., Boghossian P., Carvalho C.M., Ciccolini J., Coyne J.A., Gauss J., Gill P.M.W., Jitomirskaya S., Jussim L., Krylov A.I., Loury G.C., Maroja L., McWhorter J.H., Moosavi S., Nayana Schwerdtle P., Pearl J., Quintanilla-Tornel M.A., Schaefer H.F. III, Schreiner P.R., Schwerdtfeger P., Shechtman D., Shifman M., Tanzman J., Trout B.L., Warshel A., West J.D. 2023. In defense of merit in science. *Journal of Controversial Ideas*, 3(1): art. 1 (26 pp.). <https://doi.org/10.35995/jci03010001>
- Antonelli A., Farooq H., Colli-Silva M., Araújo J.P.M., Freitas A.V.L., Gardner E.M., Grace O., Gu S., Marline L., Nesbitt M., Niskanen T., Onana J.M., Pérez-Escobar O.A., Taylor C., Knapp S. 2023. People-inspired names remain valuable. *Nature Ecology & Evolution*, 7: 1161–1162. <https://doi.org/10.1038/s41559-023-02108-7>
- Guedes P., Alves-Martins F., Arribas J.M., Chatterjee S., Santos A.M.C., Lewin A., Bako L., Webala P.W., Correia R.A., Rocha R., Ladle R.J. 2023. Eponyms have no place in 21st-century biological nomenclature. *Nature Ecology & Evolution*, 7: 1157–1160. <https://doi.org/10.1038/s41559-023-02022-y>
- Hammer T.A., Thiele K.R. 2021. (119–122) Proposals to amend Articles 51 and 56 and Division III, to allow the rejection of culturally offensive and inappropriate names. *Taxon*, 70(6): 1392–1394. <https://doi.org/10.1002/tax.12620>
- Hayova V.P., Boiko G.V., Mosyakin S.L. 2023. (221) Proposal to add a new Recommendation after Article 38, with the advice to report local/indigenous vernacular names (if available) of new taxa and to use such names, if appropriate, in scientific nomenclature. *Taxon*, 72(2): 455. <https://doi.org/10.1002/tax.12907>
- IAU [International Astronomical Union]. 2023–onward. *Naming of Astronomical Objects*. Available at: <https://www.iau.org/public/themes/naming/> (Accessed 12 October 2023).
- Jost L., Yáñez-Muñoz M.H., Brito J., Reyes-Puig C., Reyes-Puig J.P., Guayasamín J.M., Ron S.R., Quintana C., Iturralde G., Baquero L., Monteros M., Freire-Fierro A., Fernández D., Mendieta-Leiva G., Morales J.F., Karremans A.P., Vázquez-García J.A., Salazar G.A., Hágsater E., Solano R., Fernández-Concha G.C., Arana M. 2023. Eponyms are important tools for biologists in the Global South. *Nature Ecology & Evolution*, 7: 1164–1165. <https://doi.org/10.1038/s41559-023-02102-z>
- Mabele M.B., Kiwango W.A., Mwanyoka I. 2023. Disrupting the epistemic empire is necessary for a decolonial ecology. *Nature Ecology & Evolution*, 7: 1163. <https://doi.org/10.1038/s41559-023-02105-w>
- Mosyakin S.L. 2021. (091–092) Proposals to amend Recommendation 7A on deposition of type material in institutions of countries of origin, and to add a new Recommendation 51A regarding avoiding potentially inappropriate or unacceptable names of taxa. *Taxon*, 70(6): 1379–1380. <https://doi.org/10.1002/tax.12606>
- Mosyakin S.L. 2022a. If “Rhodes-” must fall, who shall fall next? *Taxon*, 71(2): 249–255. <https://doi.org/10.1002/tax.12659>
- Mosyakin S.L. 2022b. Defending Art. 51 of the Code: Comments on Smith & al. (2022). *Taxon*, 71(6): 1141–1150. <https://doi.org/10.1002/tax.12820>
- Mosyakin S.L. 2022c. (177) Proposal to amend Recommendation 23A.3 with the advice not to dedicate species to persons quite unconnected with botany, mycology, phycology, or natural science in general. *Taxon*, 71(6): 1333. <https://doi.org/10.1002/tax.12846>

- Mosyakin S.L. 2023a. (195) Proposal to amend the Preamble by adding a "potentially sensitive content disclaimer and limitation of liability". *Taxon*, 72(2): 442–443. <https://doi.org/10.1002/tax.12897>
- Mosyakin S.L. 2023b (published online 26 Nov 2022). Attempts to introduce a system of national, racial and/or ethnocultural discrimination in codes of biological nomenclature should not be tolerated: Comments on some recent proposals (Wright & Gillman, 2022, etc.). *Taxon*, 72(3): 469–482. <https://doi.org/10.1002/tax.12837>
- Mosyakin S.L. 2023c. (349) Proposal to amend the Preamble by adding a "Non-Discrimination Statement". *Taxon*, 72(5): 1149–1150. <https://doi.org/10.1002/tax.13033>
- Orr M.C., Hughes A.C., Carvajal O.T., Ferrari R.R., Luo A., Rajaei H., Ron S.R., Warrit N., Zamani A., Zhang Y.M., Zhu C.-D. 2023. Inclusive and productive ways forward needed for species-naming conventions. *Nature Ecology & Evolution*, 7: 1168–1169. <https://doi.org/10.1038/s41559-023-02103-y>
- Roksandic M., Musiba C., Radović P., Lindal J., Wu X.-J., Figueiredo E., Smith G.F., Roksandic I., Bae C.J. 2023. Change in biological nomenclature is overdue and possible. *Nature Ecology & Evolution*, 7: 1166–1167. <https://doi.org/10.1038/s41559-023-02104-x>
- Rushforth B. 2003. "A little flesh we offer you": The origins of Indian slavery in New France. *The William and Mary Quarterly*, 60(4): 777–808. <https://www.jstor.org/stable/3491699>
- Senning A. 2019a. 6. The naming of the elements. In: Senning A., Senning R.V. *The etymology of chemical names. Tradition and convenience vs. rationality in chemical nomenclature*. Berlin & Boston: De Gruyter, pp. 241–270. <https://doi.org/10.1515/9783110612714-006>
- Senning A. 2019b. 13. The naming of minerals. In: Senning A., Senning R.V. *The etymology of chemical names. Tradition and convenience vs. rationality in chemical nomenclature*. Berlin & Boston: De Gruyter, pp. 383–412. <https://doi.org/10.1515/9783110612714-013>
- Smith G.F., Figueiredo E. 2022. "Rhodes-" must fall: Some of the consequences of colonialism for botany and plant nomenclature. *Taxon*, 71(1): 1–5. <https://doi.org/10.1002/tax.12598>
- Smith G.F., Figueiredo E., Hammer T.A., Thiele K. 2022. Dealing with inappropriate honorifics in a structured and defensible way is possible. *Taxon*, 71(5): 933–935. <https://doi.org/10.1002/tax.12742>
- Thiele K. 2023. Some, but not all, eponyms should be disallowed. *Nature Ecology & Evolution*, 7: 1170. <https://doi.org/10.1038/s41559-023-02106-9>
- Thiele K., Smith G.F., Figueiredo E., Hammer T.A. 2022. Taxonomists have an opportunity to rid botanical nomenclature of inappropriate honorifics in a structured and defensible way. *Taxon*, 71(6): 1151–1154. <https://doi.org/10.1002/tax.12821>
- Tinker T., Freeland M. 2008. Thief, slave trader, murderer: Christopher Columbus and Caribbean population decline. *Wicazo Sa Review*, 23(1): 25–50. <http://www.jstor.org/stable/30131245>
- Turland N.J., Wiersema J.H., Barrie F.R., Greuter W., Hawksworth D.L., Herendeen P.S., Knapp S., Kusber W.-H., Li D.-Z., Marhold K., May T.W., McNeill J., Monro A.M., Prado J., Price M.J., Smith G.F. 2018. *International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress, Shenzhen, China, July 2017* [Regnum Vegetabile, vol. 159]. Glashütten: Koeltz Botanical Books, xxxviii + 254 pp. <https://doi.org/10.12705/Code.2018>

Епоніми в біологічній номенклатурі та аргументи "слизького схилу" і "схриньки Пандори"

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Реферат. На доповнення дискусії, розпочатої у статті "Епонімам немає місця в біологічній номенклатурі 21-го століття" (Guedes et al., 2023; опублікована у журналі *Nature Ecology & Evolution*), у якій автори вимагали заборонити та скасувати всі епоніми (наукові назви та епітети таксонів, які походять від імен осіб) у біологічній номенклатурі, а також, зокрема, у відповідь на коментарі (Thiele, 2023) про хибність аргументу "слизького схилу" (який я застосував у своїх попередніх дискусійних статтях), я наводжу тут додаткові аргументи на користь подальшого використання епонімів і проти впровадження політично (або "етично") мотивованої цензури в біологічній номенклатурі. Я вважаю, що впровадження "культурних війн" у біологічній номенклатурі та можливе скасування наукових назв, які деякі люди вважають (або можуть вважати) "небажаними, образливими чи недоречними", призведуть до номенклатурного хаосу завдяки широкомасштабному порушенню принципів та правил нормально працюючих номенклатурних кодексів. Біологічна номенклатура є життєво важливою не лише для біологічної систематики як науки, але й для всіх інших наук і галузей людської діяльності, які мають справу з живими організмами. Ця номенклатура, перевірена часом і, справді, іноді насичена суперечливою, але й водночас захоплюючою та повчальною історією, не повинна бути зруйнована на догоду мінливим політично мотивованим концепціям та швидкоплинним влгодобаням. Біологічна номенклатура та систематика не повинні стати ще одним полем битви для "культурних війн".

Ключові слова: аргумент "слизького схилу", аргумент "схриньки Пандори", біологічна номенклатура, ботанічна номенклатура, епоніми, "культурні війни", таксономія