



## The inordinate unpopularity of changing all eponymous bird and other organismal names

Kevin WINKER

University of Alaska Museum, 907 Yukon Drive, Fairbanks, Alaska 99775, USA

✉ [kevin.winker@alaska.edu](mailto:kevin.winker@alaska.edu); <https://orcid.org/0000-0002-8985-8104>

### Abstract

A proposal by Foley & Rutter (2020) to eliminate all eponymous English bird names was published in the *Washington Post*, a Washington D.C. newspaper. Fears (2021) reported in this same newspaper that a racist and colonialist history is perpetuated in some English bird names, especially eponyms, and that a social movement is working to change those names. These articles generated hundreds of online comments. I used sentiment analysis on these comments to quantify public reaction to this proposal and topic. Among the 340 scored comments to Foley & Rutter (2020), negative opinions outnumbered positive ones by 3.36:1. Scoring comments by relative magnitude of their sentiment (-3, -2, -1, 0, 1, 2, 3) yielded an average score of -1.18. These results indicate this proposed action is very unpopular among these readers and causes pronounced divisiveness. The 570 scored comments to the Fears (2021) article were also negatively skewed (2.3:1), though less so (average score -0.58). Politicization and the left-right nature of the issue were rampant in the comments on both articles, indicating that the subject was immediately brought into the culture wars (i.e., conflict between liberal and conservative groups over cultural issues). The divisive nature of the topic was also evident within self-identified left-leaning respondents. These results likely underestimate public negativity to this proposal, because the *Washington Post* is a left-leaning newspaper. Similarly, Guedes *et al.* (2023) called for eliminating all eponymous organismal names, and a sentiment analysis of comments about that article was even more starkly negative, showing 90 % of commenters opposed. More data like these are needed. There is considerable risk that broadly de-commemorating eponymous organismal names will create more negative than positive outcomes (e.g., through asymmetric polarization and the culture wars). We must also ask: does excluding people who do not share our views achieve our objective of inclusiveness? When is it acceptable to take away someone's hard-won knowledge by changing key terms in our shared biodiversity linguistic infrastructure? There are more constructive ways to address diversity, equity and inclusion.

### Keywords

Nomenclature, organismal names, public opinion, sentiment analysis, zoology.

## Introduction

Eponymous bird names, those named after people, places, or things, have been popularly applied and used in avian nomenclature since at least the time of Linnaeus (Westwood 1836). Eponymous names are also popular in broader society (Azaryahu 2021). Beolens *et al.* (2014) documented over 4,000 eponymous avian names associated with people, including both English and scientific names. These bird names recognize individuals for various reasons, but often for their contributions to the discipline or to society.

The 2016 election in the USA of President Donald Trump and the 2020 murder of George Floyd by police highlighted current and historic inequities and spurred increased efforts in diversity, equity and inclusion (DEI). Among these efforts arose a call for changing bird names that honor people, largely because those names reflect a history that many now consider irredeemably flawed (Foley & Rutter 2020; Fears 2021).

Foley & Rutter (2020) wrote an opinion piece in the *Washington Post* proposing that because of the association of eponymous English bird names with historical colonialism and racism, they need to be changed. They put it thus: “We must remove all eponymous names. The stench of colonialism has saturated each of its participants, and the honor inherent within their names must be revoked.” (Foley & Rutter 2020). Fears (2021) reported in this same newspaper that a racist and colonialist history is perpetuated in some English bird names (especially eponyms) and about a social movement—and some of the associated people—working to change those names. In ornithology in English, we use a tightly coupled nomenclature, in which vernacular names are capitalized proper names (such as cities, rivers, etc.) and are used more commonly than their latinized scientific names (Winker 2024). This raises the importance of vernacular names in ornithology above that which occurs in many other biological disciplines, in which scientific names alone are standardized and thus more heavily used. In the context of nomenclature, then, these articles focus on a very important part of our ornithological naming systems. They are echoed, however, by others calling for similar changes to scientific names (e.g., Guedes *et al.* 2023), so assessing reactions to these articles is likely to be informative to many people with an interest in organisms and their names.

The *Washington Post* is a widely respected newspaper, founded in 1877; it has won more than 65 Pulitzer Prizes. In a comparison with other U.S. news sources, it is considered to skew left (bias -8.80) and be generally reliable (reliability 38.42; Anonymous 2023a). These characteristics suggest a somewhat leftward-leaning, discriminating audience, and only subscribers can make comments in the Post’s online, moderated forum.

Here I examine the extensive comments that the Foley & Rutter (2020) and Fears (2021) articles received online. My goal was to better understand how such English bird name proposals are received by an interested public. As a contrast to these datasets, I also examined online comments associated with a proposal to eliminate eponyms from organismal scientific names (Guedes *et al.* 2023). Together, these online responses comprise a rare type of survey and can provide useful data for managing our organismal naming systems. My approach was to quantify the sentiment expressed to determine both the amounts and degrees of agreement and disagreement.

## Methods

Sentiment analysis, also called opinion mining, assesses text and then labels it as either positive or negative, and it can also be used to rate the magnitude of those sentiments (Cambria *et al.* 2017; Stine 2019). These analyses are commonly used to assess opinions in order to guide subsequent

actions. In business, for example, sentiment analysis is used to understand the attributes of online customer reactions to products (Cambria *et al.* 2017; Stine 2019; Lighthart *et al.* 2021). Sentiment analysis has become strongly oriented toward use of machine learning and artificial intelligence (AI) language models, but its accuracy has been a perennial challenge, often being just ~70–80% (Cambria *et al.* 2017; Stine 2019; Alharthi *et al.* 2021). There are numerous software products available to apply sentiment analysis. I tried two of them but found that their level of inaccuracy on a small set of trial texts was not acceptable (results not shown). This is likely due to inadequate training datasets on this topic for this software and the presence of sarcasm, two fundamental problems with computer-based sentiment analysis (Stine 2019). Therefore, I performed the scoring myself. Although this involved a degree of subjectivity, it also ensured more accurate results, given the lack of software trained on appropriate language datasets. This manual approach was also the foundation of the discipline, and it is still used to produce gold-standard datasets for checking and refining methods in the field (Stine 2019).

I categorized responses to these two articles as neutral, positive or negative, and when using the latter two I scored them as being one of three possible magnitude categories, small, medium or large. Individual comments could thus receive any one of seven possible scores: -3, -2, -1, 0, 1, 2, or 3. This scoring is somewhat subjective, but that is unavoidable in datasets of this type. For example, categorizing an article's focus as silly, absurd or unimportant was scored as -2 or -3, whereas terms like good or excellent generally ranked a 3, depending on context (see 'Supplementary materials' for examples). Polarity is likely to be accurately determined; degree of opinion will be less so. Comments clearly off topic or aimed at other commenters without providing interpretable views on the subject were generally scored as neutral (being usually not directly on topic). Neutral scores are not considered in my analyses because they provide no reliable perspective on the subject.

Because *Washington Post* comments were unavailable to me as a non-subscriber after a relatively short period of time, I copied the comments on each of these articles during the first several days after the articles were published (F&R, 3 d; Fears, 6 d). Copying was done by cutting and pasting the comments in their entirety directly from the web site into a text document. My intent was to keep them available for reading later. With the passage of time, however, I had not read them, but realized that these archives represented rare data that could help inform our management of formal bird names. The cut-and-paste archiving process removes the associated formatting. This makes some of the comments disaggregated (e.g., multiple lines from one commenter might be construed as being from two, and it is not possible to separate multiple comments from a single user). It can also cause some uncertainty about whether a comment is directly about the article or in response to another comment. These latter types of comments can be aimed simultaneously at another responder and at the article, too. (On the positive side, the comments are also depersonalized because user names are not copied using these methods, making it possible to create an open-access dataset for this study; see 'Supplementary materials'). So there is some uncertainty in the datasets' precision both in the absolute numbers of comments and in the number and exact nature of replies to comments. I don't think that either of these sources of uncertainty had a large effect on the outcomes of the sentiment analyses, but I have archived the datasets and my scorings of them so others can do similar analyses in the future (and perhaps obtain some repeatability analysis results; see 'Supplementary materials').

As a check or contrast to these data, I used similar methods to analyze responses to Guedes *et al.* (2023) on ResearchGate <[https://www.researchgate.net/publication/369203561\\_Eponyms\\_have\\_no\\_place\\_in\\_21st-century\\_biological\\_nomenclature](https://www.researchgate.net/publication/369203561_Eponyms_have_no_place_in_21st-century_biological_nomenclature)>. Although Guedes *et al.* (2023) focused on the elimination of eponyms in scientific names, the parallel to the same concept with English bird names is obvious and informative. ResearchGate is a social network site for scientists, and those making comments need to be registered users. Registration is free and only requires an email address at an academic institution or evidence that one is a published researcher. This, therefore, is an audience of scientists. Cutting and pasting comments from 16 March to 19 July 2023 did not anonymize the

posters, so I did that manually. I also used this information to score the views of each commenter only once, regardless of how many times they commented (see ‘Supplementary materials’).

## Results

Negative responses outnumbered positive responses by considerable margins to both *Washington Post* articles and to Guedes *et al.* (2023) (Table 1). Among the 340 scored comments to Foley & Rutter (2020), negative opinions outnumbered positive ones by 3.36:1 and had an average magnitude score of -1.18. The 570 scored comments to the Fears (2021) article were also negatively skewed (2.3:1), though less so (average score -0.58; Table 1, Figure 1). There was also a suggestion of asymmetric polarization in the responses to Foley & Rutter (2020), with the negatives being more strongly negative in magnitude than the positives were positive, but this difference was not significant (Table 1;  $p > 0.10$ ). This tendency did not appear in responses to the Fears (2021) article (Table 1). In contrast, responses to Guedes *et al.* (2023) were much more negative. Among the 168 scored comments, negative reactions outnumbered positive ones by a stunning 9.5:1. Polarization was also extreme, with the highest negativity (-2.43) and positivity (2.19) averages observed in this study (Table 1; Figure 1).

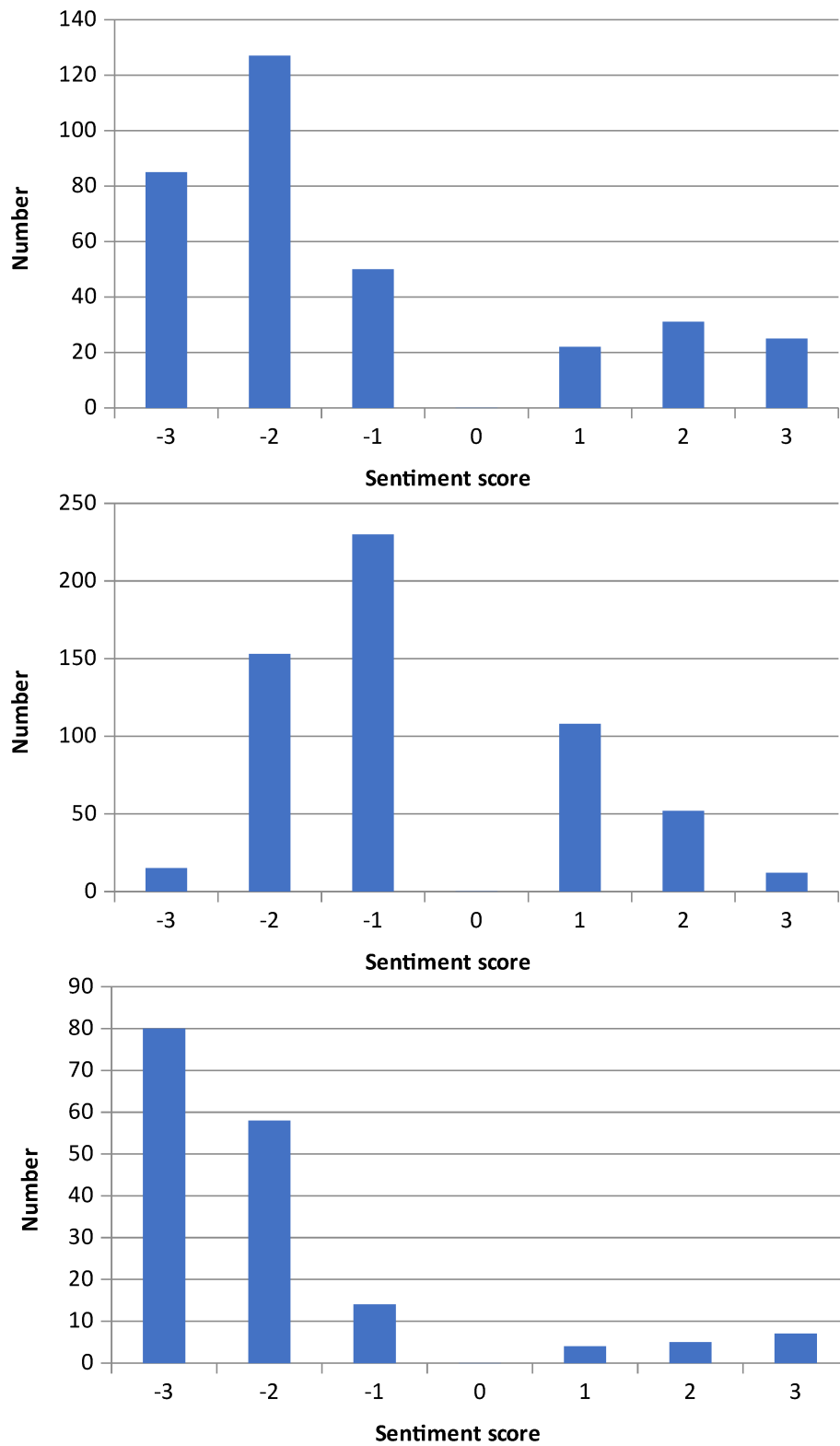
**TABLE 1.** Summary of sentiment analysis scoring of the polarity and magnitude of responses to three articles promoting changes to eponymous English bird names and organismal scientific names.

Article	Negative	Positive	Ratio -:+	Average	Avg. neg.	Avg. pos.
F&R (2020)	262	78	3.36	-1.18	-2.13	2.04
Fears (2021)	398	172	2.31	-0.28	-1.46	1.44
Guedes <i>et al.</i> (2023)	152	16	9.50	-1.99	-2.43	2.19

An overarching result apparent in the comments to both *Washington Post* articles was intense and frequent politicization of the topic. Objective discussion was rare. A common view among commenters was that this topic takes attention away from directly addressing the many more pressing issues of today that foster racism and inequality. Also common was the idea that dwelling on issues deemed by many to be trivial and silly was giving fodder to the conservative right-wing foes of liberals and ‘woke’. In short, the topic of changing eponymous names because many are associated with historically colonialist and racist societies was immediately brought into the culture wars in the comments associated with both articles.

The divisiveness of the subject did not occur only along familiar political lines (i.e., likely conservatives and likely progressives). Many commenters declared their positions to generally be liberal or Democratic (or even from historically oppressed groups), and yet they still felt negatively toward the articles’ advocacy for something they disagreed with.

In contrast, comments and discussions on ResearchGate about Guedes *et al.* (2023) achieved a higher level of engagement and erudite thought, despite their overwhelming negativity toward the proposal. Commenters here were also more global in distribution (as indicated by multiple languages) and thus in their thinking.



**FIGURE 1.** Summary of sentiment analysis scores showing polarity and magnitude of responses to Foley & Rutter (2020; top panel), Fears (2021; middle panel) and Guedes *et al.* (2023; bottom panel). Neutral scores are not considered (see ‘Methods’).

## Discussion

The proposals in the *Washington Post* to undertake large-scale changing of eponymous English bird names because they are deemed to represent a colonialist and racist history (Foley & Rutter 2020; Fears 2021) were not well received by subscribers to that left-leaning newspaper. Responses were, on average, resoundingly negative, with fewer than 1/4 to 1/3 of responders in favor (Table 1; Figure 1). In voting terms, this level of opposition is in supermajority territory. Overall, objective discussion was uncommon, and in general people were not kind to each other. Judging by the audience of this left-leaning newspaper, decommemorating eponymous bird names is divisive and very unpopular. This does not bode well for eponymous bird name changes helping us to work productively and inclusively with each other to solve the world's problems.

Numerous commenters remarked that Foley & Rutter's (2020) piece was taken as satire, or that it was like an article in *The Onion* (a publishing venue for satire). In other words, they felt it was difficult to take the proposal seriously. This suggests that bringing this proposed action to fruition would be widely viewed similarly, further eroding public confidence in science, already a grave concern (Burakoff 2023). In addition, there are concerns over the negative effects of the politicization of science (e.g., Krylov 2021).

Neither article attempted to provide a balanced overview of the topic by providing equal time to opposing views. This was not their purpose. Given this, and given the results of my analyses, some remarks from the opposers are cogent (line numbers refer to 'Supplementary materials'):

"My God this is so stupid. All of the problems we have in the world and these people care about frigging bird names." (F&R comments: line 93).

"Do you realize how insane you people sound?" (F&R comments: line 219).

"Stuff like this is a distraction from real problems that are hurting real people today." (F&R comments: line 1949).

"You are making more enemies than friends." (Fears comments: line 3944).

"I am tired of being scolded for something I didn't do." (Fears comments: line 3855).

"There are many more problems with systemic racism than bird names. When discussions about systemic racism focus on the trivial, it causes the argument that systemic racism occurred to be trivialized." (Fears comments: line 4608).

One commenter gave a negative vision of a future in which such name-changing urges were followed: "First they came for the common names and it didn't worry me, because cross the road and the people on that side of the road will have a different name for the bird, or butterfly, or beetle or whatever. But then they came for the scientific names and it really became a mess. For every new generation found the past generation to have such execrable foibles and sins that all achievements in that period were erased. The Linnaean system of giving scientific names was abandoned, for Linnaeus himself had performed a classification of humans into different races. As a result, every new generation of naturalists spent half of its time renaming every organism and the other half arguing over which of the new namers were pure enough to deserve being listened to." (Fears comments: line 4275).

Substantial numbers of those opposed to changing eponymous names self-identified as liberals or members of historically oppressed groups. This indicates that the divisiveness of the subject extends to within the group that would *a priori* be considered most likely to support the proposed changes. In this respect, the venue, the *Washington Post*, can be seen as a good testing ground for the name-change proposal. Such an unfavorable result in a presumably favorable venue is very enlightening. As Mosyakin (2022) noted, and my study supports, the issue of changing names based on social values is divisive (see also Goska 2021).

The comments to the *Washington Post* articles revealed a lot of misinformation about how frequently major name changes occur. Setting aside necessary changes due to our increases in knowledge about

avian relationships and species limits, substantive name changes in North America occur infrequently. White (2006) found that major English bird name changes from the first to the seventh editions of the American Ornithologists' Union's *Check-list of North American Birds* occurred just 93 times in 112 years (e.g., changes with more than just a qualifier added or removed, or a hyphenation, possessive, or spelling changed). This is a rate of less than one substantive change per year.

Another aspect of the issue that appeared in the *Washington Post* comments was an openness to change some eponyms when the person commemorated is deemed today to be especially egregious even by the standards of that era. This is already being done in some cases (e.g., Driver & Bond 2021; Chesser *et al.* 2021). This view was also represented among comments on Guedes *et al.* (2023), although changes of this sort to scientific names are at present not possible, except for zoological names under extreme restrictions (see Anonymous 1999, Article 79).

The difference in skewness in reactions to the two *Washington Post* articles (Table 1) might be due to the fact that Foley & Rutter (2020) was purely a manifesto to change eponymous names, whereas Fears (2021) was reporting on this movement.

Although the trend toward asymmetric polarization in the Foley & Rutter (2020) comments was not significant, it bears consideration, especially when we lack a similar set of comments from a right-leaning venue. Asymmetric polarization, when one side retreats from a central position to a larger degree than the other, is rampant in U.S. politics today (Hacker & Pierson 2015). "Prescriptions that ignore or downplay this reality are very likely to be ineffective and may even make the real problems worse." (Hacker & Pierson 2015:59). It is risky to assume that asymmetric polarization is absent here, particularly given the politicization and aspects of the culture wars evident in the comments. This hypothesis warrants stress testing so we understand the full nature of this landscape (Hacker & Pierson 2015). Such a test might be to publish an equivalent article in a more right-leaning outlet, where exposure to contemporary political asymmetries would be assured. In current media rankings, this would be in an outlet somewhere between the *Wall Street Journal* (reliability 43.5, bias 4.3) and *Fox News* (reliability 36.3, bias 11.6; Anonymous 2023a) (as opposed to the *Washington Post*'s values of reliability 38.4 and bias -8.8). In more right-leaning venues we could anticipate that the reactions would trend toward even greater unfavorability, and we would learn whether asymmetric polarization of this topic exists among a broader public audience.

The blistering rejection of Guedes *et al.*'s (2023) anti-eponym stance by fellow scientists is especially noteworthy. With 90 % of commenters opposed to eliminating eponyms, and with a large number of these people being taxonomists, we can predict that eponymous names in biology are here to stay.

Biases exist of course, in the articles themselves (strongly favoring eponym changes), in the venues (left-leaning, scientific) and in online responses in general. But at present, these are the best data available on the subject. This type of data does not lack value. After all, we use data and methods like these every day when we evaluate a possible online purchase or choose a new restaurant. We do, however, need new data on eponymous names obtained through carefully designed surveys with unbiased questions (e.g., Anonymous 2023b).

Finding that the suggestion to eliminate eponymous English bird names and scientific organismal names is divisive and polarizing should be no surprise. After all, such elimination runs directly counter to popular usage in organismal names for over two centuries and in society for many other purposes today. Debates like these over eponymous names are common throughout the history of our organismal naming systems (Winker 2024), but only now with the presence of social media do we have a means of quantifying broader reactions. In this respect, the data considered here are an important new development (Table 1; 'Supplementary materials').

## Gateway effects

Although the perceived or purported weaknesses of eponyms as barriers are loudly proclaimed in calls for their elimination from scientific nomenclature, their strengths are rarely discussed. Three strengths seem particularly important. First, many people like them. Use of eponyms in science has continued to increase, and indeed when neurologists have a choice between using an eponym or a non-eponymous alternative name, they prefer the eponymous name by 2:1 (Becker *et al.* 2021). Although this level of preference in neurology has decreased from a preference level of ~ 3:1 that lasted for four decades, the continued popularity and growth of eponym usage is strong (e.g., Thomas 2016; Zheng & Gold 2020; Becker *et al.* 2021). Aronson (2014) provided a more comprehensive summary of the arguments for and against medical eponyms.

Secondly, eponymous names can help people learn and thus serve an important role as a gateway into a field of study. Two ways in which eponymous names serve as gateways are by providing a simple mnemonic term for an organism, condition or process, and by promoting an interest in the people and history of a field (e.g., Aronson 2014; Lysanets & Bieliaieva 2023). Govindarajan & Rao (1993) and Slabin (2023) considered the educational value of eponyms, and both tied their use directly to U.S. science standards, which encourage the humanization of science. Slabin (2023) also cited evidence in chemistry and medicine that students have improved retention and often preferences for eponyms.

One of the responses to Guedes *et al.* (2023) spoke effectively to this issue: “Naming genera or species after a person, or after a specific geographical location, or a specific history, has always inspired me! I always go deeper and deeper in my research to understand things and know the person behind a name. Science is not only descriptions, names or numbers, it’s history, inspiration and acknowledgement!” (Guedes *et al.* comments: P148 [Souhila Aouali]; ‘Supplementary materials’).

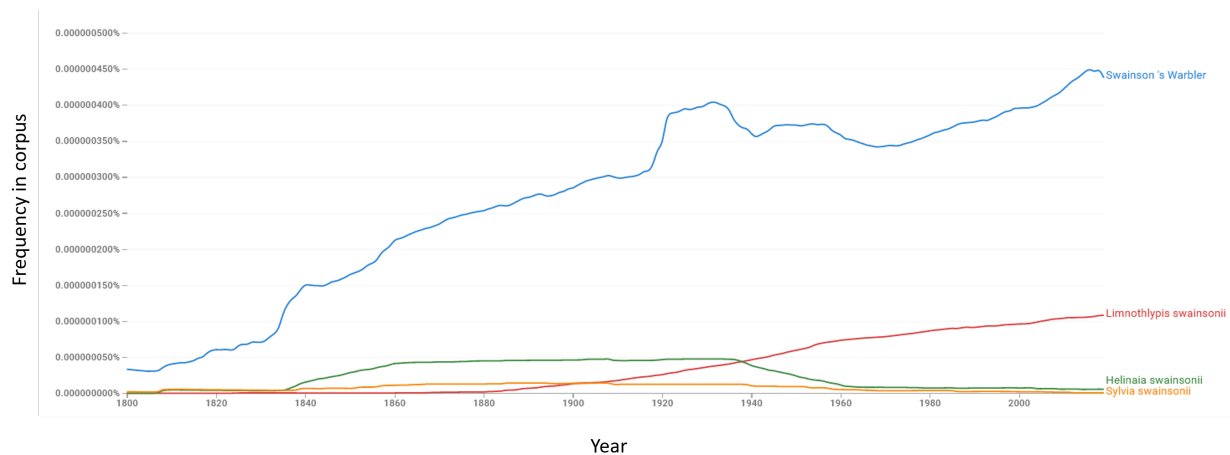
Third, English bird names have been more stable than scientific names (Anonymous 1931; White 2006), meaning both that they are a more effective means of communication about birds and that elimination of those that are eponymous closes a particularly important gateway into ornithology through its vast literature. A useful example of this, considered in terms of usage through time using Google n-grams, is Swainson’s Warbler, *Limnothlypis swainsonii* (Audubon, 1834), relative to its scientific names (changing among three genera; Figure 2). Closing such a gateway would immediately create a considerable linguistic barrier to the access of historical information about this species.

The medical field has progressed farther on the eponym debate in recent decades than we have in ornithology, and there it seems that eponyms will stay (e.g., Zheng & Gold 2020). For cases of eponyms deemed unacceptable because they commemorate people whose actions were reprehensible in their time, medicine shows a nomenclatural response of curtailing usage of eponymous names associated with the worst of these (i.e., Nazi atrocities), while overall use of eponyms continues to increase (Thomas 2016).

## Going forward

An unpopular action might nevertheless be the right course to take. Is eliminating eponyms and replacing them with other names one of those? Probably not. Negative responses like those from the *Washington Post* and ResearchGate comments sections are also appearing in published works as these proposals receive more widespread pushback. Goska (2021) viewed the situation thus: “Elite birders are obsessed with punishing whites, not with empowering blacks. Their obsession is narcissistic, white-focused, Woke virtue signaling.” Pethiyagoda (2023) considered such retrospective nomenclatural policing to be a new form of colonialism, unduly harming the huge number of global





**FIGURE 2.** An historic overview of the use of Swainson’s Warbler (blue) as an English bird name relative to the three scientific names the species (as now recognized) has borne from 1800 through 2019, *Sylvia swainsonii* Audubon, 1834 (golden), *Helinaia swainsonii* (green) and *Limnothlypis swainsonii* (red), using Google Books Ngram Viewer.

scientists whose first language is not English. His suggestion is blunt: “I contend that the US would do better to *solve* its social and political problems rather than renaming them, and especially, rather than exporting them.”

There are now numerous ways in which the idea of large-scale eponym canceling is being cast as morally and ethically questionable: from discriminating against individuals because of the groups they belong to (Goska 2021; Winker 2024) to being a new form of colonialism (Pethiyagoda 2023); enhancing international disparities (Orr *et al.* 2023); being discriminatory and harmful to biologists in the Global South (Jost *et al.* 2023; Orr *et al.* 2023); diverting scarce resources from making direct progress on more important challenges (‘Supplementary materials’; Antonelli *et al.* 2023); being moral imperialism (Winker 2024); and virtue signaling (Goska 2021; Pethiyagoda 2023; Thiele 2023). Alternative proposals that are far less divisive exist to enhance inclusion through organismal nomenclature (e.g., Palma & Heath 2021; Jost *et al.* 2023; Winker 2024).

A case of an anti-eponym success story is informative. Duque *et al.* (2018) reported that medical anatomists succeeded in a top-down effort to standardize their terminology *without* eponymous names—and that the approved terminology has still not been accepted twenty years later. The lesson here and in Table 1 is clear: authoritative elimination of eponyms is not well received.

The perceived benefits of large-scale eponym name changing are largely aspirational: we lack evidence that inclusion will be demonstrably enhanced. On the contrary, the divisiveness and polarization of the idea of making these changes are very real (Table 1; Figure 1; ‘Supplementary materials’). Thus, the risk of exclusion or reduced engagement is considerable. Cynically, one way to increase proportional participation by underrepresented groups is to get members of the overrepresented groups to stop participating or to do so less enthusiastically. Given this study’s results showing considerable divisiveness and unpopularity, large-scale changing of eponymous names could have that effect (Figure 1). Since this was written, the American Ornithological Society’s leadership decided to change the eponymous bird names in their purview, despite having the information in this article available. Opposition has been multifarious and strong (e.g., <<https://birdnamesforstability.org>>). Given the history of nomenclature (e.g., Winker 2024), this situation is likely to take decades to resolve.

## Acknowledgments

Disclosure: I am a former member of the American Ornithological Society's North American Classification Committee.

Thanks to Terry Chesser, Van Remsen, Christy Pruett, Jack Withrow, Souhila Aouali, Rohan Pethiyagoda and two anonymous reviewers for comments on earlier drafts. My opinions are my own and do not represent either those who were kind enough to send me comments or anyone else with whom I have been associated, e.g., as a committee member. I also thank the many online respondents whose comments informed and elevated the tone of the discussions.

## Supplementary materials

Data are archived at FigShare: DOI 10.6084/m9.figshare.23787219 <[https://figshare.com/articles/dataset/Winker\\_Supp\\_Matl\\_for\\_ms\\_on\\_the\\_unpopularity\\_of\\_changing\\_eponymous\\_bird\\_and\\_other\\_organismal\\_names\\_26\\_July\\_2023/23787219](https://figshare.com/articles/dataset/Winker_Supp_Matl_for_ms_on_the_unpopularity_of_changing_eponymous_bird_and_other_organismal_names_26_July_2023/23787219)>.

## References

- Anonymous [American Ornithologists' Union (AOU)] (1931) *Check-list of North American Birds*. Fourth edition. Lancaster, Pennsylvania (American Ornithologists' Union): i–xix + 1–526.
- Anonymous [International Commission on Zoological Nomenclature] (1999) *International code of zoological Nomenclature*. 'Fourth edition'. London (International Trust for zoological Nomenclature): i–xxix + 1–306.
- Anonymous [ad fontes media] (2023a) *Interactive Media bias Chart*. <<https://adfontesmedia.com/interactive-media-bias-chart/>> [accessed on 22 February 2023].
- Anonymous [Pew Research Center] (2023b) Writing survey questions. <<https://www.pewresearch.org/our-methods/u-s-surveys/writing-survey-questions/>> [accessed on 24 June 2023].
- Alharthi, K. A., Jhumka, A., Di, S., Cappello, F., & Chuah, E. (2021) Sentiment analysis based error detection for large-scale systems. *51st Annual IEEE/IFIP International Conference on dependable Systems and Networks (DSN)*, Taipei, Taiwan: 237–249. <<https://doi.org/10.1109/DSN48987.2021.00037>>.
- Antonelli, A., Farooq, H., Colli-Silva, M., Araújo, J. P. M., Freitas, A. V. L., Gardner, E. M., Grace, O., Gu, S. *et al.* (2023) People-inspired names remain valuable. *Nature Ecology and Evolution*, online. <<https://doi.org/10.1038/s41559-023-02108-7>> [accessed on 22 June 2023].
- Aronson, J. K. (2014) Medical eponyms: taxonomies, natural history, and the evidence. *The British medical Journal*, **349**: 295–299, g7586. <<https://doi.org/10.1136/bmj.g7586>>.
- Azaryahu, M. (2021) *An everlasting name: cultural remembrance and traditions of onymic commemoration*. Berlin (De Gruyter Oldenbourg): 1–200. <<https://doi.org/10.1515/9783110723014>>.
- Becker, C. J., McDermott, M. & London, Z. (2021) Declining use of neurological eponyms in cases where a non-eponymous alternative exists. *Clinical Neurology and Neurosurgery*, **200**: 106–367. <<https://doi.org/10.1016/j.clineuro.2020.106367>>.
- Beolens, B., Watkins, M. & Grayson, M. (2014) *The eponym dictionary of birds*. London, UK (Bloomsbury): 1–624.
- Burakoff, M. (2023) Confidence in science fell in 2022 while political divides persisted, poll shows. *Associated Press*, 15 June 2023. <<https://apnews.com/article/trust-science-medicine-social-survey-725ab3401f27900be6cc957ecc52e45e>> [accessed on 15 June 2023].
- Cambria, E., Das, D., Bandyopadhyay, S. & Feraco, A. (ed.) (2017) *A practical guide to sentiment analysis*. Switzerland (Springer): i–vii + 1–196. <<https://doi.org/10.1007/978-3-319-55394-8>>.
- Chesser, R. T., Billerman, S. M., Burns, K. J., Cicero, C., Dunn, J. L., Kratter, A. W., Lovette, I. J., Mason, N. A., Rasmussen, P. C., Remsen Jr., J. V., Stotz, D. F. & Winker, K. (2021) Addendum to the sixty-first supplement to the *American Ornithological Society's Check-list of North American Birds*. *Ornithology*, **138**: ukaa074. <<https://doi.org/10.1093/ornithology/ukaa074>>.
- Driver, R. J. & Bond, A. L. (2021) Towards redressing inaccurate, offensive and inappropriate common bird names. *Ibis*, **163**: 1492–1499. <<https://doi.org/10.1111/ibi.12984>>.

- Duque, P. J. E., Barco, R. J. & Duque, Q. M. (2018) La eponimia ese difícil obstáculo que aún no supera la terminología anatómica internacional. *International Journal of Morphology*, **36**: 1206–1209. <<https://doi.org/10.4067/S0717-95022018000401206>>.
- Fears, D. (2021) The racist legacy many birds carry. *Washington Post*, 3 June 2021. <<https://www.washingtonpost.com/climate-environment/interactive/2021/bird-names-racism-audubon/>> [accessed on 9 June 2021].
- Foley, G. & Rutter, J. (2020) The stench of colonialism mars these bird names. They must be changed. *Washington Post*, 4 August 2020. [Original title: “What Confederate statues and some American bird names have in common.”]. <<https://www.washingtonpost.com/opinions/2020/08/04/american-bird-names-colonialism-audubon/>> [accessed on 23 July 2022].
- Goska, D. (2021) A bird by any other name is a thought crime: elite birdwatchers are purging American natural history. *Frontpage Magazine*, 11 June 2021. <<https://www.frontpagemag.com/fpm/2021/06/bird-any-other-name-thought-crime-danusha-goska/>> [accessed on 13 June 2022].
- Govindarajan, G. & Rao, S. S. (1993) Scientific history and the educational significance of eponyms in science and medical instruction. *Journal of Instructional Psychology*, **20**: 340–346.
- Guedes, P., Aldes-Martins, F., Arribas, J. M., Chatterjee, S., Santos, A. M. C., Lewin, A., Bako, L., Webala, P. W. *et al.* (2023) Eponyms have no place in 21st-century biological nomenclature. *Nature Ecology and Evolution*, online. <<https://doi.org/10.1038/s41559-023-02022-y>>.
- Hacker, J. S. & Pierson, P. (2015) Confronting asymmetric polarization. In: N. Persily (ed.), *Solutions to political polarization in America*, Cambridge, UK (Cambridge University Press): 59–70. <<https://doi.org/10.1017/CBO9781316091906.003>>.
- Jost, L., Yanez-Muñoz, M. H., Brito, J., Reyes-Puig, C., Reyes-Puig, J. P., Guayasamin, J. M., Ron, S. R., Quintana, C., Iturralde, G. *et al.* (2023) Eponyms are important tools for biologists in the Global South. *Nature Ecology and Evolution*, online. <<https://doi.org/10.1038/s41559-023-02102-z>>.
- Krylov, A. I. (2021) The peril of politicizing science. *Journal of Physical Chemistry Letters*, **12**: 5371–5376. <<https://doi.org/10.1021/acs.jpcclett.1c01475>>.
- Lighthart, A., Catal, C. & Tekinerdogan, B. (2021) Systematic reviews in sentiment analysis: a tertiary study. *Artificial Intelligence Review*, **54**: 4997–5053. <<https://doi.org/10.1007/s10462-021-09973-3>>.
- Lysanets, Y. & Bieliaieva, O. (2023) The use of eponyms in medical case reports: etymological, quantitative, and structural analysis. *Journal of Medical Case Reports*, **17**: 151. <<https://doi.org/10.1186/s13256-023-03895-0>>.
- Mosyakin, S. L. (2022) If “Rhodes-” must fall, who shall fall next? *Taxon*, **71**: 249–255. <<https://doi.org/10.1002/tax.12659>>.
- Orr, M. C., Hughes, A. C., Carvajal, O. T., Ferrari, R. R., Luo, A., Rajaei, H., Ron, S. R., Warrit, N. *et al.* (2023) Inclusive and productive ways forward needed for species-naming conventions. *Nature Ecology and Evolution*, online. <<https://doi.org/10.1038/s41559-023-02103-y>>.
- Palma, R. L. & Heath, A. C. G. (2021) Science versus vernacular: should some taxa of animals and plants be renamed according to ‘indigenous’ practices? *Bionomina*, **22**: 1–7. <<https://doi.org/10.11646/bionomina.22.1.1>>.
- Pethiyagoda, R. (2023) Policing the scientific lexicon: the new colonialism? *Megataxa*, **10**: 20–25. <<https://doi.org/10.11646/megataxa.10.1.4>>.
- Slabin, U. (2023) Should eponyms be kept? Emphatic yes. *Journal of Baltic Science Education*, **22**: 188–191. <<https://doi.org/10.33225/jbse/23.22.188>>.
- Stine, R. A. (2019) Sentiment analysis. *Annual Review of Statistics and its Application*, **6**: 287–308. <<https://doi.org/10.1146/annurev-statistics-030718-105242>>.
- Thiele, K. (2023) Some, but not all, eponyms should be disallowed. *Nature Ecology and Evolution*, online. <<https://doi.org/10.1038/s41559-023-02106-9>>.
- Thomas, P. B. M. (2016) Are medical eponyms really dying out? A study of their usage in the historical biomedical literature. *Journal of the Royal College of Physicians of Edinburgh*, **46**: 295–299. <<https://doi.org/10.4997/jrcpe.2016.417>>.
- Westwood, J. O. (1836) On the modern nomenclature of natural history. *Magazine of Natural History*, **9**: 561–566.
- White, R. (2006) *The history of North American bird names in the American Ornithologists’ Union Checklists, 1886–2000*. <<http://www.darwiniana.org/zoo/AOUintro.html>> [accessed on 20 April 2021].
- Winker, K. (2024) Bird names as critical communication infrastructure in the contexts of history, language, and culture. In review, preprint available: <<https://doi.org/10.31219/osf.io/34bg7>>.
- Zheng, J. & Gold, C. A. (2020) Eponyms are here to stay. *Neurology*, **94**: 257–264. <<https://doi.org/10.1212/WNL.00000000000008912>>.