An ETY-torial

CHANGING SCIENTIFIC NAMES ON ETHICAL GROUNDS: SIX REASONS TO SAY "NO"

Abstract

In recent years, biologists have been debating the acceptability and continued use of biological nomina that honor people historically associated with imperialism and colonialism, and/or who advocated sexist, racist or pro-slavery views. Some biologists propose that names deemed offensive or misaligned with contemporary values be retroactively replaced with new ones. Others have proposed the elimination of eponyms altogether, basically arguing that naming an animal after a person demeans the animal. While there is no denying the unfortunate legacies of many nomina, proposals to change existing names based on ethical grounds would disrupt nomenclatural stability, bury taxonomic history, be impractical and costly to implement, and, ultimately, would not benefit science nor conservation. Examples of names (of fishes) are given that demonstrate the disruption and confusion such proposals would bring. An example is also given (again, a fish) that shows how "colonial" and "indigenous" nomina can coexist.

Revisionist nomencature: a summary of the debate thus far

Whipping. Burning. Castration. Mutilation. Dripping melted wax on their skin and other "exquisite torments." Hans Sloane (1660–1753) was an Anglo-Irish physician and naturalist who spent 15 months in Jamaica, then a colony of England. He observed and wrote about the punishments West African slaves endured on Jamaican plantations without an ounce of sympathy or regret. He later became a slave owner himself and invested in a slave-trading company. Sloane's personal collection of over 71,000 natural history and ethnographic artifacts, many of them collected by slaves, formed the foundation of the British Museum. The mesopelagic dragonfish *Chauliodus sloani* Bloch & Schneider 1801 is named in his honor.

Kaffer is the South African equivalent of the "n-word" in the United States. Although the term has benign origins, its meaning has shifted over the centuries.[1] In the 19th century, *caffer* was a term for an inhabitant of the Eastern Cape of South Africa (historically known as Kaffraria). In Afrikaans, especially during the Apartheid era, the term took on its modern-day usage as a racial slur. In 2000, the parliament of South Africa passed laws forbidding hate speech, including the use of this word. Both the generic and specific names of the South African goby *Caffrogobius*

Caffrogobius caffer. From: Barcode of Life Data System. http://www.boldsystems.org

caffer (Günther 1874), inoffensive when they were proposed, now evoke this ugly word.

King Leopold II of Belgium plundered Central Africa for personal gain. His rule of the Congo Free State (1885–1908) was characterized by forced labor, torture, murder, kidnapping, and the amputation of the hands of Congolese men, women and children. According to one estimate, half the population of the Congo Free State perished under Leopold's reign (Hochschild, 1998). Belgian-born British ichthyologist-herpetologist George A. Boulenger (1858–1937) described over 400 fish taxa from the region under the auspices of the Musée du Congo, originally built to showcase King Leopold II's Congo Free State and to disseminate propaganda in support of his colonial activities. Boulenger named two species for the king's namesake lake, Lake Leopold II: the mormyrid (elephantfish) *Marcusenius leopoldianus* and the alestid (African tetra) *Alestopetersius leopoldianus*. In 1972, the Congolese (or Zaireans, as they were officially known at the time) changed the name of the lake to Lake Mai-Ndombe. The names of the two fishes remain the same.

According to a number of biologists writing in recent years, these names — *Chauliodus sloani*, *Caffrogobius caffer*, *Marcusenius leopoldianus* and *Alestopetersius leopoldianus* — and countless others like them, should be renamed for one of three reasons: (1) they are offensive or contain offensive language (*caffer*); (2) they reflect and by association commemorate the eras of imperialism or colonialism in which the species were collected and described (*leopoldianus*); and (3) they honor people who owned slaves (*sloani*) or committed other crimes against humanity and/or advocated racist or misogynystic views.

The desire to retroactively change names for ethical reasons is not new. In 1998, a joint committee of the American Fisheries Society (AFS) and the American Society of Ichthyologists and Herpetologists (ASIH) responsible for the stability of American fish nomenclature officially changed the common name used for species of the leuciscid genus *Ptychocheilus* from "squawfish" to "pikeminnow." The reason was straightforward. "Squawfish" is considered derogatory to Native American women. AFS/ASIH likewise changed the common name of *Epinephelus itajara* from "Jewfish" to "Goliath Grouper" in 2001.[2]

But pikeminnow and Goliath Grouper are *common* names. Efforts to retroactively revise *scientific* names on similar ethical grounds did not surface until 2019 or thereabouts. The issue was a hot topic at the 2019 meeting of the American Society of Ichthyologists and Herpetologists (ASIH) in Snowbird, Utah (USA), where attendees discussed the name of

[1] *Caffer* began as *kāfir*, a pre-Islamic term of Semitic origin that described farmers burying seeds in the ground, covering them with soil while planting. Its meaning shifted to describe people "who hide or cover." In Arabic and Islamic parlance, it came to mean someone who rejects the Islamic faith, a non-believer, one who hides or covers the truth. The term was applied to non-Muslims, including the non-Muslim African peoples encountered by Arab traders. From the 17th to early 20th centuries, variations of the term were adopted by speakers of other languages (Portuguese, Spanish, French, English, Dutch, Afrikaans) to describe people from southern Africa.

[2] According to the AFS/ASIH Committee on Names of Fishes, the term "squaw" was probably of Indian origin and predates European settlement. Whether the term, as applied to the fish, was ever intended to be derogatory to Native American women is uncertain and probably unlikely. Another explanation for the name is that it's a mispronunciation of "squawkfish" (the fish squawks when taken out of the water). Regardless of the term's origin, it's now regarded as so offensive by most Native Americans that it violates the AFS's mandate that common names be in good taste (Nelson et al., 1998). Also, "pikeminnow" is a much better name, as the four species of *Ptychocheilus* are the only pike-shaped minnows in North America. "Goliath Grouper" is also a better name; it's the largest grouper species in the Atlantic Ocean, weighing up to 363 kg.

a local lizard, *Uta stansburiana*, named for American surveyor Howard Stansbury (1806-1863), who collected the holotype but who also played a key role in the massacre of over 100 Timpanogos Native Americans (Shiffman, 2019). The following year, in a newspaper editorial, American birders and ornithologists decried the "stench of colonialism" in the names of birds — both common and scientific — and called for their replacement (Foley and Rutter, 2020).[3] These sentiments reflected efforts among society at large to remove monuments and rename buildings connected with racist or colonialist legacies (e.g., Confederate statues in the U.S. and the "Rhodes Must Fall" movement in South Africa), and to remove celebrity status or esteem from people who said or did offensive things ("cancel culture"). Even Linnaeus' legacy came under scrutiny in his homeland of Sweden during the Black Lives Matter movement of 2020; protesters called for the removal of the country's many monuments to and statues of the father of taxonomy for having placed Africans at the bottom of his hierarchical view of humanity, seen by many as the starting point of scientific racism (Hübinett et al., 2022).

The first proposal to retroactively revise nomenclature to appear in a peer-reviewed journal was, as far as I can tell, that of Gillman and Wright (2020). The authors decry what they call a "colonial" approach to nomenclature in which names were "habitually erected to honour collectors, sponsors, colleagues or employers who were often distanced from the country in question." Such names "recall outdated thinking that seems rather odd in a more pluralistic contemporary setting" and are "now likely to have little resonance for biologists in the country of origin and that may be, at best, irrelevant, and at worst, offensive, to the resident Indigenous Peoples." To remedy this situation, Gillman and Wright propose that "colonial" names be replaced by existing indigenous names. For example, they suggest changing the name of the Neotropical cichlid genus *Cichla* — or one of its eight species — to the vernacular name "tucunare." Similar appeals to "decolonize" biological nomenclature have been proposed for primates (Chen-Kraus et al., 2021) and plants (Smith and Figueiredo, 2021). In a follow-up paper, Wright and Gillman (2021) propose specific procedures for renaming algae, fungi and plants.

Tracy (2022) urged the joint AFS/ASIH Committee on Names of Fishes to develop a procedure for renaming species epithets "named after people who advocated racist and sexist views, used derogatory names in their writings, or did reprehensible things during their careers." Tracy singled out the Freshwater Goby *Ctenogobius shufeldti*, named after Robert W. Shufeldt (1850–1934), citing my own blog post about the man (Scharpf, 2017). Shufeldt, who collected the goby's holotype, was a racist and white supremacist whose views were extremely vile.

The International Commission on Zoological Nomenclature (ICZN) weighed in on the issue: "Replacing accepted scientific names because of perceived offensiveness is not, and should not be, regulated by the [ICZN] Code. Although the Commission recognizes that some scientific names might cause discomfort or offence to parts of the community (such as eponyms of dictators or historical figures considered by some as racists, or because a word currently has negative connotations), the commitment to a stable and universal nomenclature remains the priority. It is well outside the scope of the Commission to assess the morality of persons honoured in eponyms or the potential offensiveness or inappropriateness of certain names" (Ceríaco et al., 2023).

Shortly after the publication of the ICZN editorial, Guedes et al. (2023) proposed to ameliorate the global inequity in biological nomina with an even more drastic remedy: They argue that *all* eponyms, not just those named for unsavory people (such as Shufeldt), be eliminated and replaced with non-eponymic nomina coined by taxonomists from the "biogeographical region of the candidate species," or, at the very least, that nomenclatural codes be rewritten to preclude or "severely limit" eponyms for future new taxa. Guedes et al. (2023) believe that "naming species in honour of real people is unnecessary and objectively difficult to justify. The Earth's biodiversity is part of a global heritage that should not be trivialized by association with any single human individual, whatever their perceived worth."

The publications of Gillman and Wright (2020) and Guedes et al. (2023) elicited strong reactions on ResearchGate, a social media platform for scientists and researchers. Some comments support the proposed revisions but most are against, many vehemently so. In addition, a number of follow-up editorials appeared in scientific journals, some pro (e.g., Mabele et al., 2023), some con (e.g., Mosyakin, 2023), some seeking a middle ground (e.g., Thiele, 2023). The ICZN editorial elicited strong comments as well, including one that accuses the ICZN of stubbornly "operating in a vacuum outside of social norms of accountability" (Bae et al., 2023); these authors urge the ICZN to set up a mechanism that would allow replacement names for species named after "tyrants, dictators, colonialists and slave traders." The issue has also attracted the attention of the popular press (e.g., Yong, 2023); such coverage, however, tends to emphasize the revisionist side of the debate.

Most of the comments and editorials have been ideological in nature, pitting historical justice and racial equity vs. "Western imperial" nomenclatural legacies. Very few have examined the *practical* consequences of upending a nomenclatural system that's been in use since 1753 (for plants) and 1758 (for animals). While there is no denying a global disparity in eponyms, and that some eponyms are indeed named for people deemed offensive by contemporary standards, it would be a mistake to rename biological nomina for ethical reasons and to eliminate and outlaw eponyms for the following six reasons.

#1. Changing names would disrupt nomenclatural stability

Biological nomenclature requires stability in order to be effective. A name is a unique identifier. It is attached to a taxon (genus or species) and fixed in the literature so that biologists and others can track and access what's been written about that species through time, in different languages, and across cultures. Changing that name disrupts this stability. Now there are two names to deal with: the name of the species in the past, and its new name going forward. Guedes et al. (2023) downplay the amount of disruption such instability would cause.

Cichla ocellaris. From: Bloch, M. E. and J. G. Schneider. 1801. M. E. Blochii, Systema Ichthyologiae Iconibus cx Ilustratum. Post obitum auctoris opus inchoatum absolvit, correxit, interpolavit Jo. Gottlob Schneider, Saxo. Berolini. Sumtibus Auctoris Impressum et Bibliopolio Sanderiano Commissum. i–lx + 1–584, Pls. 1–110.

Take, for example, Gillman and Wright's (2020) suggestion to change the name of the Neotropical cichlid genus *Cichla* — or one of its eight species — to

[3] On 1 November 2023, the American Ornithological Society announced that it will change the eponymic common names of 70–80 American and Canadian bird species named after people because "some English bird names have associations with the past that continue to be exclusionary and harmful today" (https://americanornithology.org). As a point of comparison, the AFS/ASIH Committee on Names of Fishes has long discouraged eponymic common names (e.g., Meek's Halfbeak) because they are "without descriptive value" (Page et al., 2023).

the vernacular name "tucunare." But which one? Who decides? Does "*Cichla* Bloch & Schneider 1801" or "*Cichla ocellaris* Bloch & Schneider 1801" simply vanish from historical and scientific records? Right now, you can visit the Biodiversity Heritage Library website, enter "*Cichla ocellaris*," and almost instantly gain access to 282 references to the fish, spanning 179 years (1840–2019) of scientific study. That process gets needlessly more cumbersome and long synonymies even longer if "*Cichla ocellaris*" is replaced with an indigenous name.

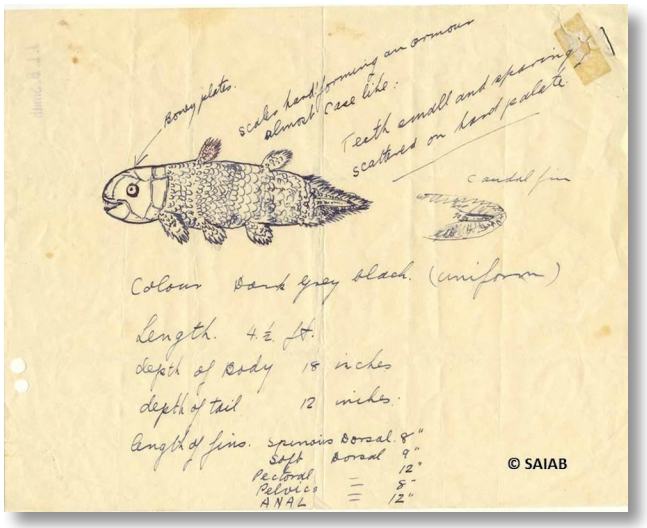
Renaming *Cichla ocellaris* to "*Cichla tucunare*" is not the same as renaming Alaska's Mt. McKinley to Denali (its historical Koyukon name). Nor is changing the name of *Chauliodus sloani* the same as the British Museum moving the bust of Hans Sloane from a prominently displayed pedestal to an exhibit that explains the empirical context of his work (as happened in 2020). Biological nomina are not public-facing entities the way statues and buildings are. They are not named by local government officials and community leaders. They are not named as an expression of a community's shared values, and cannot be removed or changed when those values change. Biological nomina are created by biologists — often just one, sometimes a few, but never by consensus or committee — for use by other biologists. With the exception of serious amateur naturalists (aquarists, herpers, birders, butterfly collectors, etc.), the general public has little exposure to and awareness of the scientific names biologists use in their professional communications and publications. And for ichthyologists, "*Chauliodus sloani*" is not a monument to Hans Sloane (assuming they even know for whom it was named, which often isn't the case).[4] It's simply what the fish is called, a label on a museum jar, an entry in a checklist, a clade on a cladogram, a unique arrangement of letters that facilitates communications about this particular species and separates it from the other two million-plus named species of the world. Changing "*sloani*" to something else would sever the link to Bloch & Schneider's original description and the holotype on which it was based. For taxonomists, the legacy of a species' original description and holotype is more important than the legacy of the person for which it was named. Biological nomina are not public monuments; they're scientific tools.

Chauliodus sloani holotype, BMNH 1978.9.11.1

In addition to genera and species, the wholesale replacement of eponyms and "colonial" epithets would also disrupt the nomenclatural stability of many higher-level taxa as well. For example, the family Goodeidae Jordan & Gilbert 1883, endemic to the Mesa Central of Mexico and southern Nevada, USA, is named for the type genus *Goodea* Jordan 1880, in turn named for American ichthyologist George Brown Goode (1851–1896), Director of the U.S. National Museum. If the generic name *Goodea* is replaced, then the family name would likely need to change as well. Considering that aquarists call species of the family "goodeids," and that many species are critically endangered and placed on various species-at-risk lists, replacing the name would create unnecessary nomenclatural confusion across multiple audiences beyond ichthyologists (aquarium hobbyists, conservation NGOs, state and federal wildlife agencies, etc.).[5]

[4] Hence The ETYFish Project.

[5] Among fishes, other eponymic family names include Barbourisiidae, Eschmeyeridae, Evermannellidae, Kneriidae, Latimeriidae (see #3, next column), Normanichthyidae, Perryenidae, Rondeletiidae and Steindachneriidae. Eliminating eponyms would also change the names of many plant genera, many of which have become household words, e.g., *Begonia*, *Bougainvillea*, *Gardenia*, *Magnolia*, *Poinsettia*, *Wisteria*.



The sketch of an odd fish that Marjorie Courtney-Latimer sent to J. L. B. Smith on Christmas Eve 1938. Smith confirmed this fish to be the first specimen of the "living" coelacanth. © South African Institute for Aquatic Biodiversity.

#2. Changing names would be an impractical and costly task

While Guedes et al. (2023) acknowledge that changing eponyms "would have technical and administrative costs (especially for low-income and middle-income countries)," they naively suggest that "biodiversity information systems" would keep it all neat and tidy. Sorry, it's not that easy. An estimated 20% of all animal names are eponyms (Ceríaco et al., 2023). There are an estimated 1,595,879 described animal species (IUCN, 2022) on Earth. That's an estimated 319,176 animals that would have to be renamed! Plus, over 16,500 eponymic generic names have been recorded for recent and fossil spermatophytes, mosses, fungi, lichens and algae (Burkhardt, 2018). (No data are available for the number of eponymic species.) Who manages this task? Who pays for it? Taxonomy is poorly funded as it is (Britz et al., 2020). There can be no doubt that the herculean task of renaming 319,176 animals (and a countless number of plants and other organisms) for ethical and ideological reasons would siphon funds away from the more urgent tasks of describing the unknown large numbers of taxa that remain undescribed and conserving the species that have not yet gone extinct. Replacing eponyms would be another impediment in the "taxonomic impediment."[6]

Guedes et al. (2023) go on to suggest that the "task of renaming eponyms could be given to taxonomists from the biogeographical region of the candidate species." A flaw in this approach is that many marine taxa occur in international ocean waters with no indigenous human inhabitants. Who renames those?

#3 Replacement names would bury taxonomic history

Here's an example of how renaming an eponym is fraught with complications and could effectively bury taxonomic history. The coelacanth *Latimeria chalumnae* was described from off the coast of East London, South Africa, by the famous South African ichthyologist J. L. B. Smith in 1939. Smith, born in South Africa, was a white male of English descent in a country ruled by a minority white population that institutionalized the dominance by white people over people of other races.

[6] The taxonomic impediment is defined as the world-wide shortage of important taxonomic information, the gaps in our taxonomic knowledge, and the shortage of trained taxonomists and curators to fill this need (Wikipedia).

Smith named the genus *Latimeria* after Marjorie Courtney-Latimer (1907–2004), a white female (also of English descent) who worked as a museum curator. Courtney-Latimer found the coelacanth in a fisherman's catch, trawled off the Chalumna River near East London, South Africa, on 23 December 1938. Realizing it was a unique specimen of potentially great scientific importance, she undertook great efforts to preserve the specimen for science. Smith was stunned when he saw Courtney-Latimer's sketch of the fish, because coelacanths were thought to have been extinct for 65 million years.

The specific name of the coelacanth, *chalumnae*, is a toponym, named for the Chalumna River. The generic name *Latimeria*, though, is an eponym, that would need to be changed per Guedes et al. (2023), preferably by a South African taxonomist of non-European descent. Let's say, for hypothetical purposes only, that the coelacanth genus was renamed by the two Africans among the 11 authors of Guedes et al. (2023), Bako (Nigerian) and Wabala (Kenyan). And let's say, for hypothetical purposes only, that they replaced *Latimeria* with *Gombessa*, the name by which the South African coelacanth was historically known by fishermen around the Comoro Islands in the western Indian Ocean, where a second coelacanth specimen was found in 1952. Now compare the two names:

Latimeria Smith 1939
Gombessa Bako & Wabala 2023

By replacing *Latimeria* we are in effect stripping the famous scientific history of the fish from its name. Gone would be the name of the person who made this important scientific discovery possible. Also gone from the name would be the ichthyologist (Smith) whose obsessive 13-year quest for a second specimen has been documented in numerous popular books, replaced by the names of workers assigned the administrative task of renaming "unjustifiable" eponyms. Even the date of the hypothetical new name (e.g., 2023) is problematic. This suggests the coelacanth was a recent discovery when in fact it was discovered and described over 80 years ago.

Guedes et al. (2023) claim that "name revisions would not alter scientific history, as the historical name would remain as a synonym and the identity of the individuals who initially described the species would remain unaltered." True, name revisions would not alter history. But they would bury history and effectively replace it. "Gombessa" would be a superb name for a new coelacanth taxon should another be discovered. But as a replacement name, "Gombessa Bako & Wabala 2023" tells us nothing about the extraordinary events behind what has been called the greatest zoological find of the 20th century.

#4 Changing names will not benefit conservation

Wright and Gillman (2022) believe replacing colonial names with indigenous names will "have positive outcomes for biodiversity conservation due to the potential for increased engagement by Indigenous Peoples." Guedes et al. (2023) state that reforming taxonomy to remove eponyms "could bring multiple benefits for both conservation and society," leading to a "reinvigoration of local and national interests in biodiversity and its cultural value." In other words, the authors suggest that once a potentially offensive eponym is replaced, then local scientists and the public at large would be more interested in studying and protecting the renamed taxon. While there is anecdotal evidence that common names can impact support for conversation among the general public (Karaffa et al., 2012), Wright and Gillman (2022) and Guedes et al. (2023) provide no evidence, nor can I find any elsewhere, that researchers and nature enthusiasts are less inclined to study a species because of its scientific name. Herpetologist Luis Miguel Pires Ceríaco addressed this issue on ResearchGate (24 March 2023) [edited slightly for clarity]:

> My African colleagues and students face several difficulties — lack of infrastructure, lack of funds, lack of recognition by their own governments and society, lack of opportunities, lack of jobs, etc. These issues are indeed affecting their capacity to keep doing science. Poverty also leaves many bright young students outside the universities. Eponyms? I don't know a single case of an African researcher who decided to leave science due to eponyms. … I had the opportunity to discuss this topic with many of them. The most common response? A loud laugh. In fact, renaming names simply based on ethical grounds would make life worse for these researchers. If you already have a considerable lack of tools and access to bibliography [e.g., scientific literature], then the constant renaming of these names would simply make it even more difficult, if not impossible, to follow. If this is true to researchers with access to good libraries (both physical and virtual), then imagine for those whose libraries are barely existent.

Supporting Ceríaco's comments is the 1997 name of *Labeo polli*, a Congolese cyprinid described by African ichthyologist S. M. Tshibwabwa. It appers that Tshibwabwa had no qualms naming the species after Belgian ichthyologist Max Poll (1908–1991), who studied and named hundreds of Congolese fishes during Belgium's occupation of the Congo. Tshibwabwa called Poll the "greatest Belgian ichthyologist since G. A. Boulenger" (translated from the French), praising also the same ichthyologist who studied Congolese fishes during the brutal reign of King Leopold II.

Sri Lankan ichthyologist Rohan Pethiyagoda also dismisses the conservation claim, saying it's "puerile to imagine that species heading toward extinction could be saved simply by being called by another name" (Pethiyagoda, 2023).

#5. Biological eponyms are a Linnaean innovation that humanize science

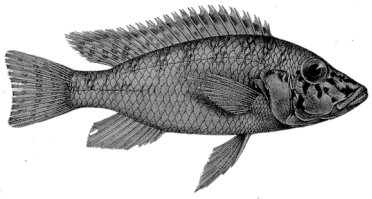
Guedes et al. (2023) believe that "naming a biological species after a human was and is never right — regardless of good intentions." While Guedes and co-authors are entitled to their opinion, that is all it is, an opinion, one that should not be forced upon other taxonomists. Eponymy has been a part of binominal nomenclature since its very inception. When Linnaeus introduced the nomenclatural system that all biologists use today, he also introduced another innovation: the eponym.

Before Linnaeus, naming a plant or animal was simply an exercise in description. But Linnaeus separated naming from description. A name may be descriptive: *parvus* for small, *maculatus* for spotted, and so forth. But Linnaeus opened the door for "non-descriptive" names, allowing biologists to be creative, to express themselves, and, in the form of eponyms, to honor fellow humans (Heard, 2020). Describing a species is objective, based on measurement, observation, data and analysis. Naming a species is not. It's a human construct, created by humans for use by other humans. Eponyms (and other creative names) humanize science and mirror humanity — its virtues, weaknesses and foibles — and its history. You can trawl through almost anyone's history and find something unsavory about them. But that doesn't mean they should be "canceled." Linnaeus himself had discriminatory views on race and benefited from specimens transported via slave ships. Should we cancel Linnaean taxonomy also?

#6. "Old" names can coexist with new ones

There is no denying that Western Europeans — predominantly white, privileged men — dominate biological eponyms. There is a simple reason for this. Western Europeans created taxonomy and binomial nomenclature and, for many years, were the only people describing new species. Yes, many of these new species were collected during voyages that almost always had objectives far less noble than the pursuit of knowledge — establishing trade routes, building empires, exploiting resources, and enslaving other humans. But the naturalists aboard these voyages were serious about their science. Their contributions should be remembered, not buried. Instead of changing the names of the species they described, let's instead concentrate our energies and resources into naming the untold millions of species that have yet to be described.

Today, there is a new generation of biologists who hail from every continent, reinvigorating systematics and taxonomy with new techniques, while relying on the collections of Western Europeans (and others) for baseline data on historical patterns of distribution and abundance. What's more, as noted by Jost et al. (2023), "the pace of species discovery in tropical countries is currently high and in the past few decades local taxonomists (at least in Latin America) are overtaking European scientists in making these discoveries. The power of bestowing eponyms has shifted to these local scientists in the tropical countries where most undiscovered species live." If the work of contemporary Latin American ichthyologists is any indication, then these taxonomists are also reinvigorating nomenclature by coining new-taxa epithets derived from indigenous languages and inspired by indigenous peoples, history and culture.



Shuja horei. From the original description: Günther, A. 1894. Descriptions of the reptiles and fishes collected by Mr. E. Coode-Hore on Lake Tanganyika. Proceedings of the Zoological Society of London 1893 (pt 4) (art. 2) (for 7 Nov. 1893): 628–632, Pl. 58.

There is plenty of room and opportunity in biological nomenclature for past and present sensibilities to coexist. Take, for example, the name of the African cichlid *Shuja horei*. The species was described as *Chromis horei* by Albert Günther, a white male of German descent, in 1894. He named the species in honor of Capt. Edward Coode Hore (1848–1912), a British missionary, explorer, navigator and cartographer who collected the holotype from Lake Tanganyika when Zanzibar (now part of Tanzania) was a British protectorate. In 2022, three ichthyologists, including a native Tanzanian, proposed a new genus for the species, which they named *Shuja*, from the Swahili noun *shujaa*, a brave person or warrior, referring to the "notable" territorial behavior of males. (Swahili is the national language of Tanzania.) The new binomial *Shuja horei*, combining an African noun with a colonial eponym, preserves the nomenclatural history of the fish while reflecting an indigenous influence. Of course, not every binominal can be structured this way. The point here is to demonstrate that we need not bury the past in order to reflect the present.

What's next?

The issue of revisionist nomenclature continues to be debated, with very strong opinions for and against. Any retroactive changes to existing names would require major revisions to the respective nomenclatural "codes" of botany and zoology. Hammer & Thiele (2021) have proposed to amend the International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) to allow the rejection of names deemed "derogatory or insulting to a person or group of people," named in honour of a person "that the taxonomic community agrees should not be honoured," or "otherwise causes deep offense." The authors of the proposal recommend the formation of a "Nomenclature Committee on Culturally Offensive or Inappropriate Names" to govern the rejection of such names. Botanist Sergei Mosyakin, who opposes revisionist nomenclature, counters that such a committee "will be forced and authorized to make politically and culturally motivated and biased decisions that will definitely fail to satisfy many people and groups of people and that will bring mostly deepened confrontation, not universal satisfaction and happiness" (Mosyakin, 2022). Mosyakin also warns of the "Slippery Slope," that once some names are revoked, others will find reason to revoke additional names and the process will never end. Hammer & Thiele's proposal will be discussed and possibly voted on at the next International Botanical Congress in July 2024.

The ICZN, however, has clearly stated its opposition to changing names on ethical grounds. At least for now. Commentators on ResearchGate have noted that of the current 26 Commissioners of the ICZN, 20 are white males from Europe, North America, Australia and New Zealand, with not a single member from Africa.[7] Should future Commissioners reflect a more diverse assemblage of taxonomists, these commentators suggest, revisionist nomenclatural reforms would have a better chance of being considered and adopted.

The Code is judgment-free (and other closing thoughts)

Except for a handful of nitpicky rules about Latin grammar and diacritical marks, the International Code of Zoological Nomenclature is a judgment-free zone. It's especially tolerant when it comes to the actual names themselves. You don't need a Ph.D. to propose a new taxon. You don't need to publish it in a peer-reviewed journal. You can mangle the spellings of Latin words (many biologists have). You can latinize foreign words and even create new ones (as long as they're pronounceable). You can name a new taxon after anybody who's important to you. A spouse. A mentor. A politician. Your favorite heavy metal band. You can even misspell their names. And, if you're exceedingly vain, you can name a new species after yourself (but do expect some ridicule from your peers). The Code doesn't care. The Code doesn't judge. As long as the name is unique (i.e., not "preoccupied," or already proposed), it's permanently affixed to its type specimen and cannot, with rare exceptions usually involving technical matters of priority and availability, be replaced. Tweaked maybe (species-group names must agree in gender with the generic name) but not replaced. The Code celebrates the diversity of life — its beauty, its complexity, its infinite variety, its connections to humans (both good and not-so-good) — by allowing taxonomists to propose a diversity of names for any reasons they wish.

One thing you can't do — or at least shouldn't do — is intentionally offend. Although not part of its enforceable, legislative Code, the ICZN's Code of Ethics stipulates that "intemperate language" should not be used, and that "No author should propose a name that, to his or her knowledge or reasonable belief, would be likely to give offence on any grounds." (See "Hitler" sidebar on next page.)

This brings us back to the three examples — *sloani*, *caffer*, *leopoldianus* — that opened this essay. In describing these taxa, the authors

[7] https://www.iczn.org/about-the-iczn/commissioners (accessed 20 Nov. 2023). The one deceased Commissioner is not included in the count.

But what about the "Hitler Beetle"?

Most of the editorials and articles about revisionist nomenclature illustrate the issue with the same example: the infamous "Hitler Beetle." In 1937, an Austrian railway engineer and amateur entomologist named Oskar Scheibel (1881–1953) named a blind cave beetle from Slovenia *Anophthalmus hitleri*. The final sentence of the description reads (in German): "Dedicated to Reich Chancellor Adolf Hitler, as an expression of my reverence." Little else is known about Scheibel. Whether he was a Hitler-loving Nazi or just an earnest insect lover swept up in the political and cultural torrents of his day, no one knows for sure.

Proponents of eponymic revisionism cannot fathom why this name is tolerated. "In which other spheres of human endeavour is anything still named after Hitler?" asked Estrela Figueiredo, of the Nelson Mandela University in South Africa. "The codes must change and adapt, like the rest of society" (quoted in McKie, 2023). Opponents of revisionist nomenclature find the name discomfiting but tend to look the other way, its retention the unfortunate consequence of a strict adherenece to nomenclatural priority and stability.

As much as I hate the idea of an organism named after Hitler, we need to regard it as a done deal. Because if we got rid of *A. hitleri*, then we open the door to getting rid of every name that offends, or has the potential to offend, which, as explained in the main text, would cause nomenclatural havoc.

Even if *A. hitleri* were rechristened with a benign new moniker, its original name would still live on in synonymies, Wikipedia pages, news stories, footnotes, trivia questions, virtually everywhere the beetle is mentioned. In fact, giving it a new name might bring more attention to its old one, further commemorating the evil dictator that Scheibel revered.

The truth of the matter is, only three groups of people care about *Anophthalmus hitleri*. Beetle enthusiasts. Hitler and Nazi enthusiasts (some of whom have over-collected the beetle into near extinction). And people who debate how species should or shouldn't be named.

had no "knowledge or reasonable belief" that their nomenclatural choices could offend, not then in the 19th century, and certainly not 125 or more years into the future. It is only when we study these names through a contemporary lens can we begin to judge them against non-scientific criteria that did not exist when they were proposed. Retaining these names allows us to continue learning from them. By studying the name of *Chauliodus sloani* I learned about Hans Sloane for the first time, which broadened into a deeper understanding of the links between science and the transatlantic slave trade (Kean, 2019). By studying the name of *Caffrogobius caffer* I traced the etymological history of an unfamiliar (to me) racial slur. And I was not aware of King Leopold II's brutal rule of the Congo Free State until I took a closer look at the names of *Marcusenius leopoldianus* and *Alestopetersius leopoldianus*.

The sins of the past — slavery, genocide, racism, sexism, imperialism, colonialism — should not be ignored. But the wounds of these sins cannot be healed by changing the scientific names of plants and animals. They can only be healed by studying the past and making sure we don't repeat it. The ETYFish Project has detailed the uncomfortable truths and regrettable histories behind many fish epithets. The path ahead is paved by knowing what came before.

The strength of biological nomenclature is its stability. Biology has changed since Linnaeus introduced the binomen in 1753. Genetics, evolutionary theory and the discovery of DNA have transformed our understanding of the natural world. And biologists from every continent, not just privileged Europeans, are contributing to the growing catalog of life on Earth. Yet the names remain, and should remain, constant. The *name* is the thread that connects a taxon across the centuries, in multiple references, in any language, in classifications old, new and yet to come.

I think it's pretty darn cool that a scientific name first written with a quill pen in the 18th century is the same name entered into the GenBank database in the 21st.

Disclaimer

Please know that my opinions about eponyms are not at all influenced by the fact that a fish is named after me, *Argyripnus scharpfi* Prokofiev 2023. An early version of this essay was posted on Facebook and The ETYFish Project website on 3 May 2023, three months before I learned of the description on 15 August. The honor was a complete surprise.

Upon reading the news of *Argyripnus scharpfi*, an ETYFish reader sent me a private message: "Well deserved! Now you should be motivated to lead a very clean life such that no one will petition the ICZN to revoke the name in the future. Consider veganism."

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