

Various, including non-synonymous, names for the *Bison bonasus* are used in current scientific literature

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Abstract: Most species have a common name in English. Nevertheless, these names may differ for one species or be the same for another. This also refers to the species *Bison bonasus*, which can be called “European bison” or “wisent”. The abbreviated nomenclature “bison” can also often be found, but it includes two species, *Bison bison* and *Bison bonasus*. We aimed to verify the use of common names of *Bison bonasus* species in recent publications (2020–2024). In the Scopus database, we found 79 publications in which European bison was mentioned. The *Bison bonasus* was mentioned 4,491 times (excluding Latin vocabulary) in the abstracts, keywords, and main text. The term “bison” without the preceding adjective “European” accounted for 23.7% of this species’ total mentions. Still, these incomplete terms amounted to 24.9% of the full text. In total, 65.8% of the publications contained this incomplete name (genus). In the above percentage of use of the term “bison” there is no temporal trend. The use rate of “bison” varies depending on the research topic. The term “bison” was used least often by geneticists and veterinarians. As seen from the above simple analysis of the publication, incomplete names for *Bison bonasus* are common. They appear in most publications, although they do not constitute a significant percentage of all terms of this species. Popular translators are probably the reason for frequently using the incomplete name “bison”. The example of differences in the categories of publications indicates that some groups of scientists pay more attention to the correctness of the terms used. For this reason, we encourage readers to carefully verify all terms referring to *Bison bonasus* in their publications because we, bison specialists, must care for the message’s quality.

Keywords: *Bison bonasus*, nomenclature wisent, bison

Nomenclature is essential in scientific research because it allows scientists to recognize the research object. For this purpose, Latin terminology was introduced, enabling researchers to understand what species, subspecies, or genus (or at another systematic level) the object being studied is without a language barrier. However, Latin nomenclature is usually used once in publications, and in further references to species, common names characteristic of the language of the text are used.

The primary language of communication for biological sciences is English. Therefore, most species have a common name in this language. Nevertheless, these names may differ for one species or the same for another. This also refers to the species *Bison bonasus*, which can be called “European bison” or “wisent”. Nevertheless, the abbreviated nomenclature “bison” can often be found, and because it refers to the genus bison, it includes two species, *Bison bison* and *Bison bonasus*. Using the abbreviated name “bison” can be misleading because the same abbreviated names are also used, especially about *Bison bison*. Moreover, in light of the current message simplification, graphic abstracts, highlights, and simple abstracts, washing away such ambiguous names in short forms of disseminating research may be particularly important. For this reason, the following analysis aimed to verify the use of common names of the species *Bison bonasus* in publications in recent years.

In the Scopus database, we found 79 papers published in the years 2020–2024 (until the end of June) in which European bison was mentioned. In individual years, we found publications: 2020–17, 2021–15, 2022–18, 2023–22, 2024–7 (see references).

In all these publications, the *Bison bonasus* was mentioned 4,491 times (excluding Latin nomenclature) in the abstracts, keywords, and main text. A total of 403 terms for European bison were used in abstracts and keywords, including the name “European bison” 324 times, the alternative name “wisent” 31 times, and the name “bison” was used in 48 cases. In the main body texts, the *Bison bonasus* was mentioned 4088 times, of which the term “European bison” was used most often – 2781 times, “bison” was mentioned as many as 1018 times, and “wisent” was used 289 times (Fig. 1). The term “bison” without the preceding adjective accounted for 23.7% of the total number of mentions of this species. Still, these incomplete terms amounted to 24.9% of the full text.

Only 27 out of 79 analyzed did not mention the term “bison,” i.e., 65.8% of the publications contained this incomplete name (genus). However, the percentage of the term “bison” used in the publications varied greatly. Apart from the publications where the term “bison” was not found, this term ranged from 1% to 96% of all descriptions of *Bison bonasus*. However, there is a noticeable dominance of publications in which “bison” was used in no more than 20% of all mentions of *Bison bonasus* species (Fig. 2).

In the above percentage of use of the term “bison” there was no temporal trend. The percentage of use of the term “bison” ranged from 50 to 82%, and high differences between years are noticed in the analyzed period (Fig. 3.). However, this is a short period that has been studied, so if there is a change over time, it is unnoticeable. Interestingly, there is a noticeable decreasing

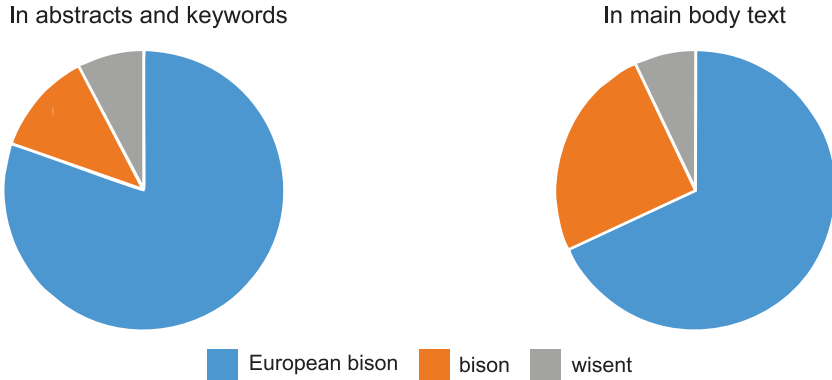


Figure 1. Number of mentions of *Bison bonasus* with the use of the given term

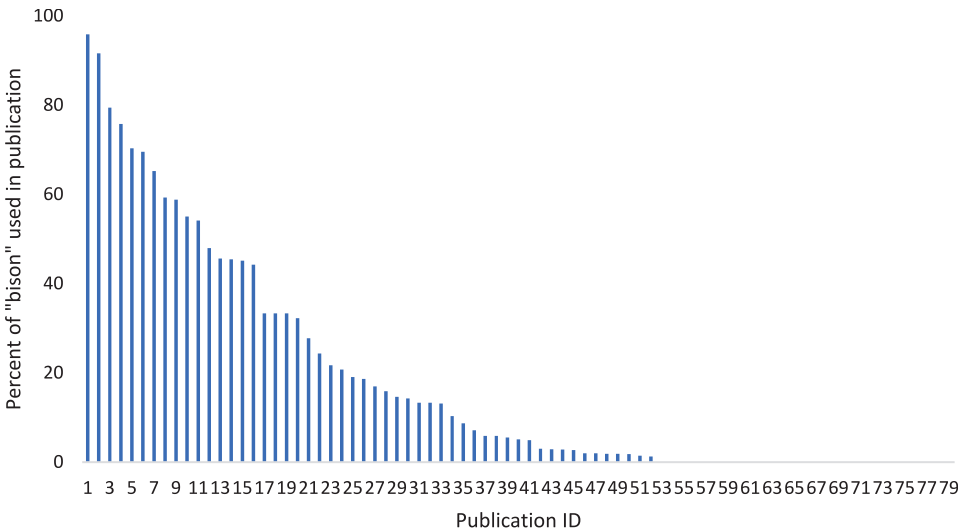


Figure 2. Distribution of publications with the percentage of “bison” used

trend in the number of publications with the term “bison”; only the year 2024 breaks from this trend. (Fig. 4.).

It is also worth noting that the percentage of use of “bison” varies depending on the research topic. The term “bison” was used least often by geneticists and veterinarians. In other categories, “bison” is used more often (Fig. 5). In addition to the above use of the term “bison,” minor other errors are noticeable. For example, three publications use the plural “bisons”, although European bison does not have the plural, similar to “sheep”. In addition, the term “European Bison” was incorrectly used once instead of “European bison”, although this was probably a typical typo.

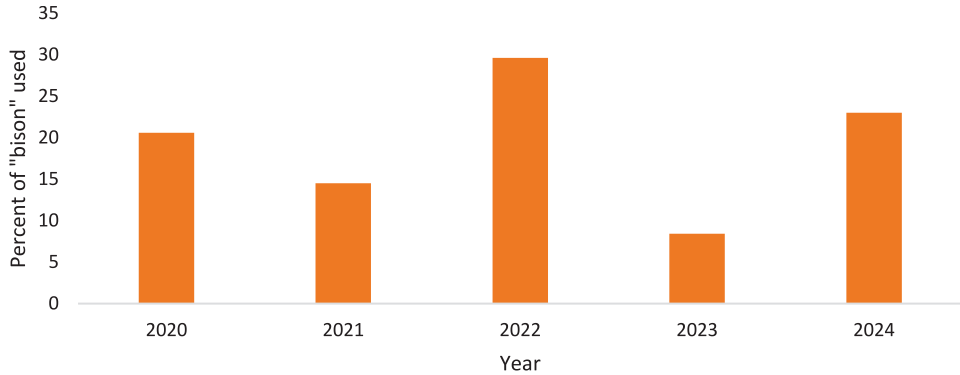


Figure 3. Mean of percent of the term “bison” used in publications in a given year (a value calculated as the number of mentions of the term “bison” compared to the number of mentions of “bison” and “European bison” in all publications in a given year).

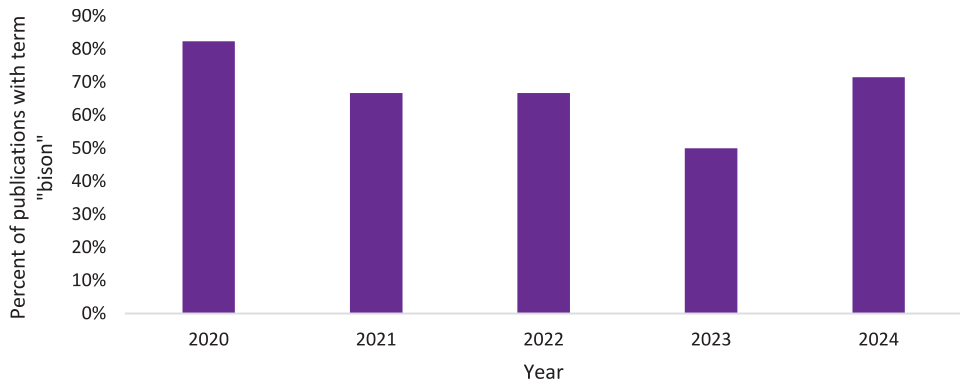


Figure 4. Percent of publications with the term “bison” used in a given year (a percent calculated as the number of publications with the term “bison” referring to “European bison” in given publications and all publications on European bison found in this year).

As seen from the above simple analysis of the publications, incomplete names for *Bison bonasus* are common. They appear in most publications, although they do not constitute a significant percentage of all terms of this species. It should be mentioned that the alternatively used name “wisent” comes from German and is accepted in science. It is a commonly used form and cannot be treated as an error. The advantage of using this name is that there is a plural form of “wisents”. One might wonder the reason for the frequent use of the incomplete name “bison”. In our opinion, one of the reason may be popular translators. For example, some of them, when translating the Polish term “żubr” (which means European bison), suggest “bison” as the English form. However, we have not verified how such translation occurs in

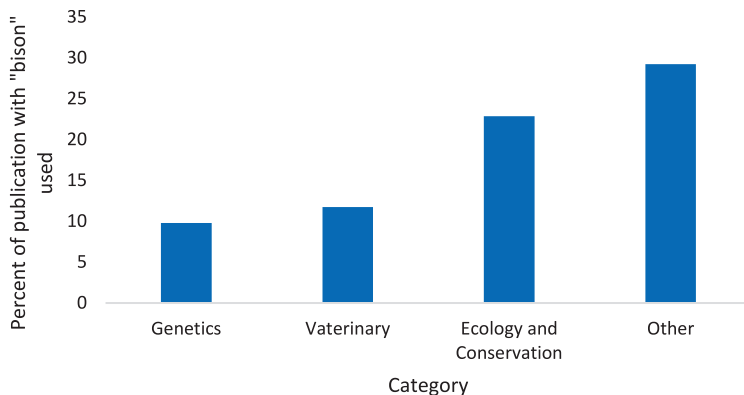


Figure 5. Mean percent of the term “bison” used in publications (including abstracts, keywords, and main body) in a given category (a percent calculated as the number of mentions of the term “bison” compared to the number of mentions of “bison” and “European bison” in given publication).

other languages. The example of differences in the categories of publications indicates that some groups of scientists pay more attention to the correctness of the terms used. For this reason, we encourage readers to carefully verify all terms referring to *Bison bonasus* in their publications because we, the wisent specialists, must care for the message’s quality.

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Różne określenia dla gatunku *Bison bonasus* używane we współczesnych publikacjach naukowych

Streszczenie: Większość gatunków ma potoczne nazwy w języku angielskim. Niemniej jednak nazwy te mogą się różnić dla jednego gatunku lub być takie same dla różnych gatunków. Dotyczy to również gatunku *Bison bonasus*, który może być nazywany „European bison” lub „wisent”. Skrócona nomenklatura „bison” również często występuje, ale obejmuje dwa gatunki, *Bison bison* i *Bison bonasus*. Chcieliśmy zweryfikować stosowanie nazw zwyczajowych gatunków *Bison bonasus* w ostatnich publikacjach (2020–2024). W bazie danych Scopus znaleźliśmy 79 publikacji, w których wspomniano o żubrze. *Bison bonasus* został wymieniony 4491 razy (bez nomenklatury łacińskiej) w streszczeniach, słowach kluczowych i tekście głównym. Termin „bison” bez poprzedzającego go przymiotnika „European” stanowił 23,7% całkowitej liczby wzmianek o tym gatunku. Mimo to te niekompletne określenia stanowiły 24,7% wszystkich wzmianek w pełnym tekście publikacji. Łącznie 65,8% publikacji zawierało tę niekompletną nazwę (rodzajową). W podanym powyżej procencie użycia terminu „bison” nie widać trendu czasowego. Częstotliwość użycia „bison” jest zmienna w zależności od tematyki badań. Termin „bison” był najrzadziej używany przez genetyków i weterynarzy. Jak widać z powyższej prostej analizy publikacji, niepełne nazwy dla *Bison bonasus* są powszechne. Pojawiają się w większości publikacji, chociaż nie stanowią znaczącego procentu wszystkich nazw tego gatunku. Popularne tłumacze są prawdopodobnie powodem częstego używania niepełnej nazwy „bison”. Przykład różnic w kategoriach publikacji wskazuje, że niektóre grupy naukowców zwracają większą uwagę na poprawność terminów używanych w publikacjach. Z tego powodu zachęcamy czytelników do starannego sprawdzania wszystkich terminów odnoszących się do *Bison bonasus* w swoich publikacjach, ponieważ to właśnie my, żubrolodzy, musimy dbać o jakość przekazu.
