## Review Form 3

| | |
|---|---|
| Journal Name: | Asian Plant Research Journal |
| Manuscript Number: | **Ms_APRJ_128738** |
| Title of the Manuscript: | **FLORISTIC INVENTORY OF THE GUINEAN ZONE OF THE BOTANICAL GARDEN OF NGOLTONGO AT SINDIA IN THE MBOUR DEPARTMENT (SENEGAL)** |
| Type of the Article | |

**PART 1: Comments**

| | **Reviewer's comment** | **Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
|---|---|---|
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | The reviewed article provides relevant information on the role of the Ngoltongo Botanical Garden in conserving the diversity of the Plant Kingdom *ex situ* in western Senegal. The selection of plants for the botanical garden depends on the natural conditions of the area, which determine the taxonomic structure of species suitable for cultivation. Data on correctly identified species cultivated in the scientific collection of the botanical garden are significant. For many ergasiophytes, such data often serve as evidence of the expansion of their secondary ranges, which is particularly relevant in the context of plant invasions. | |
| **Is the title of the article suitable? (If not please suggest an alternative title)** | The article title need revision. What is meant by "Guinean zone" and "CASAMANCE"? Better: "FLORISTIC INVENTORY OF THE NGOLTONGO BOTANICAL GARDEN AT SINDIA (MBOUR DEPARTMENT, SENEGAL)" | |
| **Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.** | The abstract need revision. A significant portion of the text is devoted to analyzing systematic structure. While this is important, it should not occupy more than 1–2 sentences in the abstract. Instead, the abstract should discuss the geographical origins of the plants (e.g., how many species come from each region) and the distribution of biological types. | |
| **Is the manuscript scientifically, correct? Please write here.** | The text itself is not sufficiently scientifically substantiated. This will be discussed further in the general comments. However, judging by the text, the presented data are sufficient to allow the article to gain the necessary scientific rigor and clarity after revision | |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Some valuable contemporary sources on plant conservation in botanical gardens can be added to the list of references:<br>Boiko N. (ed.). Maintaining collections of gymnosperms in Ukraine: achievements, challenges, and prospects. Bilotserkivdruk, Bila Tserkva. 2023: 368 p.<br><br>Heywood VH. Plant conservation in the Anthropocene – Challenges and future prospects. Plant Diversity. 2017. 39(6): 314-330. https://doi.org/10.1016/j.pld.2017.10.004<br><br>Pullaiah T., Galbraith DA. (eds.). Botanical Gardens and Plant Conservation. CRC Press, Boca Raton. 2023: 816 p.<br><br>Shynder O.I., Kolomiychuk V.P., Melezhyk O.V. Spontaneous flora of O.V. Fomin Botanical Garden of Taras Shevchenko National University of Kyiv, Ukraine. Environmental & Socio-economic Studies. 2022. Vol. 10, N. 1. Pp. 38-56. https://doi.org/10.2478/environ-2022-0004<br><br>Oldfield SF., Sharrock S. Botanical gardens and the Global Strategy for Plant Conservation. Englera. 2013. 30(1):83-92. | |

## Review Form 3

| | | |
|---|---|---|
| **Is the language/English quality of the article suitable for scholarly communications?** | The language requires editorial attention. The article contains errors. For example, the description of soils in "Study area" is repeated. Spelling mistakes such as ASTARACEAE instead of ASTERACEAE and “sp.” instead of “sp” should be corrected. Spelling and grammar should be carefully reviewed. Generative AI tools could assist the authors in this process. | |
| **Optional/General** comments | • The introduction contains many general statements but fails to clearly articulate the specific research objective and subject.<br>Were wild plants growing in the Botanical Garden studied? (This seems the more likely and preferable option.)<br>Or was the taxonomic diversity of natural vegetation in the Botanical Garden investigated? (This option is less likely as it would require at least a general geobotanical description of vegetation groups.)<br>Currently, studying spontaneous floras within botanical gardens, arboretums, and parks is gaining popularity in Europe (e.g http://www.botanicgardens.eu/aliens.htm, http://doi.org/10.10.1016/j.pld.2018.07.006, https://www.researchgate.net/publication/382471933_Spontanna_i_kulturna_flora_teritorii_Nacionalnogo_naukovogo_centru_Institut_bdzilnictva_imeni_PI_Prokopovica_m_KiivSpontaneous_and_cultural_flora_of_the_National_Scientific_Center_PI_Prokopovich_Beeke, Galera, H. & Sudnik-Wojcikowska, B. (2004). The structure and differentiation of the synanthropic flora of the botanical gardens in Poland. Acta Societatis Botanicorum Poloniae 73(2): 121–128, https://polona.pl/preview/e1e39b0b-bff6-4de8-834c-d4f74131d454, etc.). However, every such publication sets clear goals and explains which specific plant group is being studied.<br><br>If the research object is newly introduced plants in the young Botanical Garden, this should be explicitly stated. Otherwise, 220 species for a subtropical region on a small area appear modest—wild plants alone should number far more. For reference, here’s a similar article on a recently established botanical garden: https://www.researchgate.net/publication/381543413_BOTANICAL_GARDEN_NAMED_AFTER_JOZSEF_SZIKURA.<br><br>• The natural conditions of the research area are unclear. Is it a savanna? It is necessary to indicate the size of the Botanical Garden and what natural habitats are present. Questions such as how many ergasiophytes are planted, whether they are naturalizing, and whether any are invasive species are crucial in this context. Including a few photographs of the area would be helpful.<br>• The data collection methodology is described in general terms, which may hinder reproducibility. There is insufficient detail about the methods used—for example, how research stations were selected and the criteria for their representativeness.<br>• The sources used for nomenclature (LEBRUN & STORK 1991, 1992, 1995, 1997) may now be outdated. For future publications, the authors should refer to global online resources like https://powo.science.kew.org.<br>• In the “Study area” subsection, more details about the Ngoltongo Botanical Garden's location should be provided. On the map (Fig. 1), the garden's location should be marked with a clear dot rather than an inconspicuous rectangle. The text should include the garden's coordinates. A Google search for "Ngoltongo Botanical Garden" yields no results, so perhaps a Wikipedia page for the garden should be created. Additionally, sources detailing the history and purpose of the garden should be cited.<br>• If the introduction emphasizes the importance of conserving rare plants in botanical gardens, the text should specify which rare plants among the 220 species are being conserved.<br>• In Fig. 3, a diagram illustrates the proportion of plant classes in the Botanical Garden. It would be beneficial to compare this proportion with existing data, for instance, for the flora of North Africa.<br>• The results analysis is superficial. For example, it is insufficient to state that Fabaceae is the most common family in the Botanical Garden due to nitrogen fixation capabilities; this requires deeper explanation.<br>• The text mentions that plants in the Ngoltongo Botanical Garden come from almost all over the world. This claim should be supported by data—e.g., a table indicating the number of species | |

| | | |
|---|---|---|
| | introduced from different continents or a graph/diagram.<br>• Table 1 includes a column on biological types. The methodology should cite a source where these types are described. Additionally, the distribution of these biological types should be shown in the Discussion section, preferably as a chart or graph. It may also be worth noting if any biological types are more promising for expanding the collection.<br>• The reviewer is not a specialist in Senegal's flora and does not know the specific features of the studied plants. However, general knowledge suggests that the closer to the equator, the richer the flora. For instance, in temperate Europe, typical botanical gardens cultivate several thousand (1,000–15,000) taxa and cultivars of plants and host 200–800 wild weeds. Thus, the claim that 220 species constitute a relatively diverse flora appears surprising compared to the European continent. However, perhaps arid conditions or a lack of previous research and experience have limited the introduction of many species in the Ngoltongo Botanical Garden. Financial and labor constraints are understandable, but natural factors affecting plant introduction and cultivation should also be explored in greater depth. | |

**PART 2:**

| | **Reviewer's comment** | **Author's comment** ***(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*** |
|---|---|---|
| **Are there ethical issues in this manuscript?** | ***(If yes, Kindly please write down the ethical issues here in details)*** | |

**Reviewer Details:**

| | |
|---|---|
| **Name:** | **Oleksandr Shynder** |
| **Department, University & Country** | **National Academy of Sciences of Ukraine, Ukraine** |