

Plagiarism and plant taxonomy

The Indian Academy of Sciences, Bengaluru, considers plagiarism as 'the appropriation of another person's ideas, processes, results or words without giving appropriate credit' and requests the authors to properly refer and acknowledge matter taken from the literature before submitting any document for publication in its journals (https://www.ias.ac.in/Journals/Overview/Academy_Policy_on_Plagiarism). However, in the field of plant taxonomy, the string of words used for referring to the work of others or giving credit to them for their literature, which the author consulted, can also be mistaken as plagiarism.

In a standard taxonomic document, citation of protologue, Floras, monographs and other documents are mandatory. If all the authors use the standard format of abbreviations of Floras/journals/checklists and author names, it will be the same in all documents and will appear as similar text and consequently be treated as plagiarism. Here is an example of two common plants: *Triticum aestivum* and *Mangifera indica*. These will be written by all as *Triticum aestivum* L., Sp. Pl. 1: 85. 1753 and *Mangifera indica* L., Sp. Pl. 1: 200. 1753.

This is plagiarism because some earlier document in the access of plagiarism checking tool had a document which also wrote these names in the same way. If someone is writing a general Flora/legume Flora/grass Flora of any region for his thesis (Master's or doctoral), it is certain that it will have sufficient plagiarism of this type to be disqualified for submission. Another example showing citation of protologue and consulted Floras makes the situation clearer.

'*Cassia fistula* L., Sp. Pl. 1: 377. 1753; Baker in Hook. f., Fl. Brit. India 2: 261. 1878; Duthie, Fl. Gangetic Plain 1: 291. 1903; Osmaston, Forest Fl. Kumaun 187.

1927; B.D. Naithani, Fl. Chamoli 1: 182. 1984; Sanjappa, Legumes India 16. 1992; R.D. Gaur, Fl. Distr. Garhwal 247. 1999; Uniyal *et al.*, Flowering Pl. Uttarakhand 114. 2007; B.K. Shukla & A.N. Singh in Singh *et al.*, Fl. Uttar Pradesh 1: 496. 2016'.

A plagiarism detection tool will mark the above text as similar to an earlier document. If the Floras follow standard abbreviation, be it local Flora, district Flora or legume Flora of the region, these will be written as given above. In this text, every author name and Flora/document name is a standard abbreviation of that available in IPNI (<https://www.ipni.org/>) and Tropicos (<https://www.tropicos.org/home>), which are reputed online resources. If someone follows this, it will be treated as plagiarism. If the author has fewer plants and all the Floras of that region are cited, the percentage of plagiarism may exceed the often permissible limit of 10. In India, a UGC notification in this regard defines plagiarism as 'the practice of taking someone else's work or idea and passing them as one's own' and classifies plagiarism into four levels based on 'similarity'¹. Level '0' plagiarism (similarities up to 10%) does not invite any penalty, but level 1 (similarities above 10–40%), level 2 (above 40–60%), and level 3 (above 60%) plagiarism are punishable by the Institutional Academic Integrity Panel (IAIP) constituted by a university. The punishments indicated are resubmission of the revised draft within six months (for level 1), debarring submission of the revised draft before one year (for level 2) and cancellation of registration of the student for the concerned programme (level 3).

A plagiarism report is required just when submitting a Master's or doctoral thesis, and the exhausted author (student) of a

plant taxonomy thesis could suddenly face an embarrassing situation. How does one tackle this problem? Using one's own abbreviations, at least for Floras, and detailing these in the page of 'Abbreviations' is one way, but by sacrificing standard taxonomic procedure of citing protologue and the literature. Otherwise, utilization of the maximum permissible limit of plagiarism (variable up to 30% in different universities) is the only way out. Though above 10%, it is liable to punitive action following the UGC notification¹.

The software cannot determine plagiarism; it can only point to some cases of matching text. Moreover, plagiarism tools may report false positives for common phrases, long names of institutions or even reference information². In plant taxonomic documents, protologue information is always non-variable and a string of words, following standard abbreviation, for referring to the earlier published document. In such situations, we probably need specific rules, experts of this field in IAIP, and appropriate plagiarism detection tools which do not rely solely on the extent of similarities.

1. https://www.ugc.gov.in/pdfnews/7771545_academic-integrity-Regulation2018.pdf (accessed on 19 September 2023).

2. Weber-Wulff, D., *Nature*, 2019, **567**, 435.

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Disposal of medicines: a prospective view

K. Keshava Rao has correctly pointed out where and how to dispose of unused medicine after the expiry date¹. The usual practices at home, throwing tablets into the dustbin, might be harmful to someone else and flushing down pouring liquid medicine into the sewer, toilet or sink resulted in them entering the water supply. Treating

water before putting it into the public water supply, they do not process water to remove drugs that become a part of both water and soil, thereby harming the environment and health. Drinking and household water are correlated with the environment and health, which we must prevent. In addition, studies in India have

found that 73% of consumers discarded expired medicine in household trash², however, appropriate disposing method must be introduced.

Consequently, properly disposing of unused and outdated medicines/drugs like pills, liquid drops, patches, creams and inhalers by putting them in the household