

## Taxonomic Analyses of Some Members of Cucurbitoideae Using Phytolith Marker

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**Abstract :** Systematic affinities among Cucurbitaceae members are highly debatable as exemplified by diverging views on their phylogenies. Worst still is the overriding reliance on morphometric marker in the delimitation of cucurbitoideae members. Considerable symplesiomorphic and synapomorphic character states have been observed among some members of same genera than do with some members of other genera. The broad study aims at establishing phylogenies among species of Cucumis (Melothriaceae), Momordica, Telfairia (Jolliffieae), Trichosanthes (Trichosantheae), Citrullus, Lagenaria, Luffa (Benincaseae) and Cucurbita (Cucurbita) using anatomical, cytological, Palynological, serological, and phytolith markers. However, this paper shall present preliminary findings on the phytolith character states for Cucumis melo, Momordica charantia, Telfairia occidentales, Trichosanthes dioica, Citrullus vulgaris, Lagenaria siceraria, Luffa cylindrical, Cucurbita pepo and Cucurbita maxima. Heavy liquid floatation method was employed in the extraction of the phytolith matter from the leaf tissues of these species. The result revealed that a bilobate short cell and a trapeziform sinuate form were absent in all the species except in Cucumis melo, Citrullus vulgaris and Lagenaria siceraria. Also a globular granulate form was observed exclusively in Telfairia occidentales, Cucurbita maxima, Momordica charantia and Luffa cylindrical. Other forms of phytolith observed were not diagnostic as they were not species specific. The results tentatively suggests a closer examination of the existing classification system.

**Keywords :** bilobate short cell, cucums, phytolith, telfairia, trapeziform sinuate

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