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Review Article

A note on *Ficus krishnae* C. DC. (Moraceae): Mythology of Lord Krishna & Sudama

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Abstract: *Ficus krishnae*, commonly known as Krishna Fig or “Makhan-katori” (Krishna’s butter cup), is a distinctive fig (Moraceae) notable for its pouch-shaped (cup-like) leaves and its strong cultural associations with the childhood pastimes of Lord Krishna. Present works consolidates existing knowledge on the taxonomy, morphology, distribution, ecology, ethnobotany, phytochemistry, pharmacology, and cultural significance of *F. krishnae*. Research gaps and conservation concerns are also discussed. The folklore linking the unusual leaf form to Krishna’s butter-stealing legends is widespread across India and is important in the species’ horticultural and devotional use. However, historical textual links do not explicitly mention this plant by botanical name. The present study highlights its importance and draws attention towards its sustainable utilization and conservation activities.

Keywords: Comparative taxonomy, medicinal significances, mythology, tree

Introduction

Ficus species are keystone trees in tropical ecosystems. They are known as a fodder plants, medicinal agents, culturally importance and have ecological values (Satapathy and Kumar, 2017; Kumar et al., 2022; Hossain et al., 2025). Among them, *Ficus krishnae* is readily recognized by its folded, cup-like lamina that visually evokes a small bowl (Biswas, 1935; Present study). This morphological novelty has

made the species prominent in botanic gardens, temple grounds, and popular culture in India, where it is known as Krishna's butter cup (Makhan-katori). Scientific interest in *F. krishnae* spans taxonomy which is its relationship to *F. benghalensis*, pharmacognosy, and ethnobotany. The purpose of present work is to collate botanical and cultural information, summarize biomedical studies to date, and identify priorities for future research and conservation.

Taxonomy and nomenclature

Ficus krishnae C.DC., Bot. Mag. 132: t. 8092 (1906).

It belongs to family Moraceae, genus *Ficus* (Plate 1). Historically it has often been treated as closely allied to or as a variety of *Ficus benghalensis* (Plate 2-3), with some authors considering it *F. benghalensis* var. *krishnae*. Recent taxonomic treatments have revisited its status using morphological and molecular evidence. The taxonomic circumscription has been the subject of modern reassessments of this species (Mahima et al., 2021).

Plate 1: Plants parts of *Ficus krishnae*, a) Canopy, b-c) Leaves and d) Bark

Morphology and diagnostic features

It is a medium to large evergreen tree with aerial roots and a spreading canopy, characterized by its distinctive 'butter-cup' shaped leaves with a cuplike pouch at the base. The leaves are ovate-cordate, thick, and leathery, with prominent primary veins. Like other figs, it produces syconia and is pollinated by host-specific fig wasps. These unique morphological features make it easily distinguishable from other *Ficus* species in the field. The morphological characters are observed in the field by Sweta Mishra and Rajkumari Supriya Devi (5th & 6th Authors) near Mahanadi River area, Cuttack, Odisha, India.

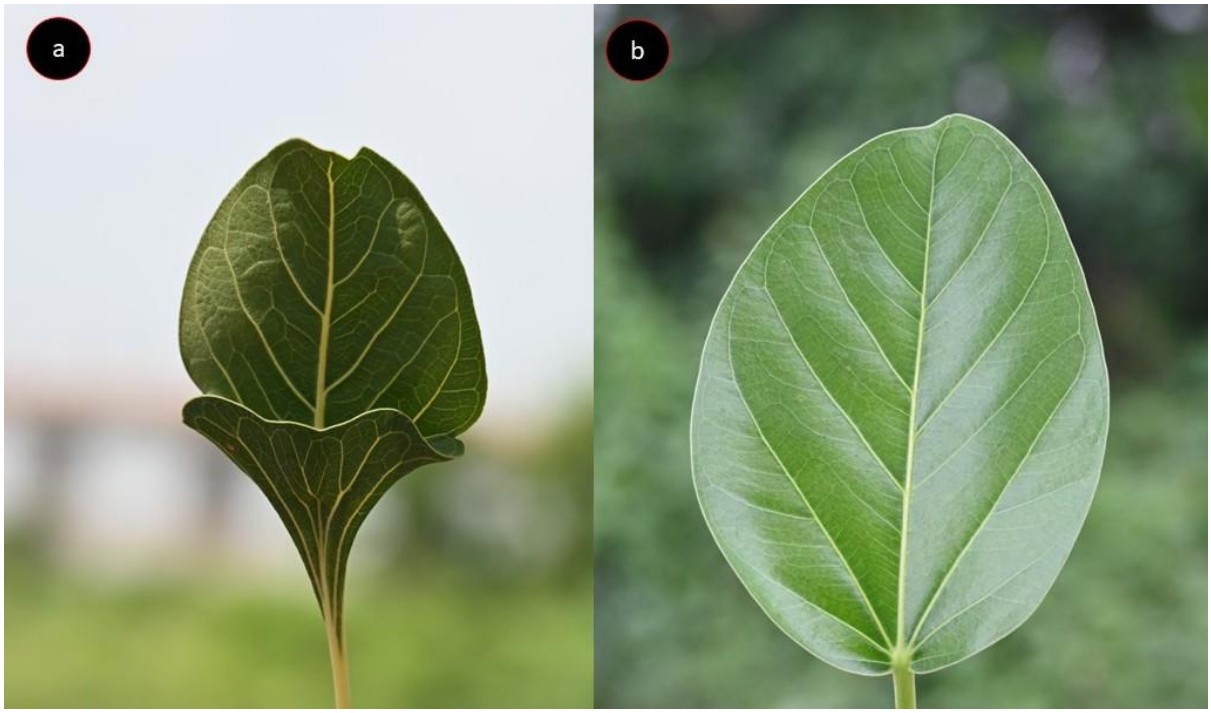

Plate 2: Leaves of *Ficus krishnae* (a) and Ficus benghalensis (b)

Plate 3: Barks of *Ficus krishnae* (a) and Ficus benghalensis (b)

Distribution, habitat, and ecology

It is native to the Indian subcontinent (recorded across tropical and subtropical parts of India and reported from Sri Lanka (Source: POWO; Saxena and Brahmam, 1995).

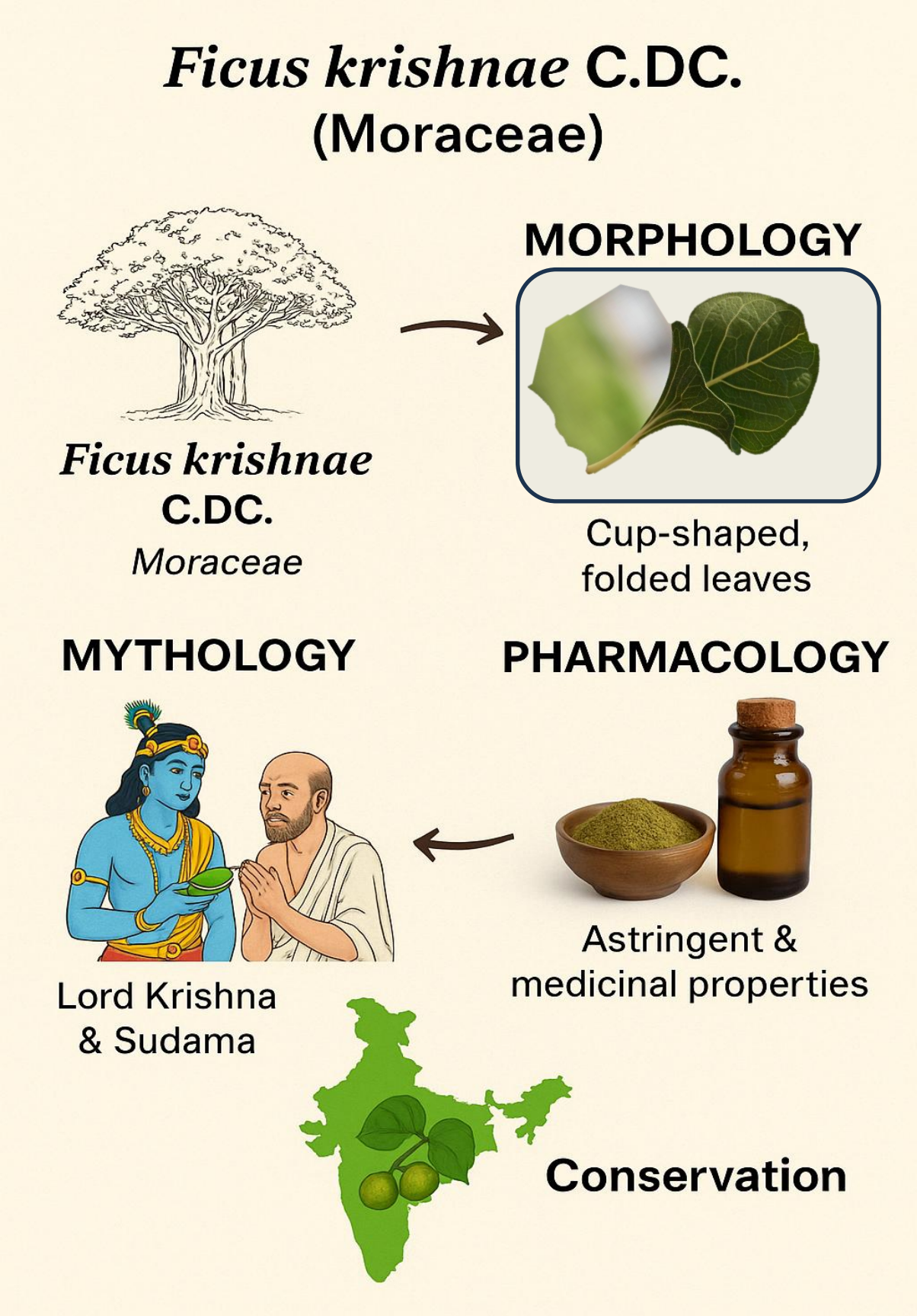

Figure 1: Significance of *F. krishnae*

F. krishnae grows in semi-evergreen to evergreen forests and is also widely cultivated in gardens and temple precincts. Its figs provide food resources for birds, bats and other frugivores; its canopy and aerial roots contribute to structural habitat complexity. Documentation of precise natural range, population densities, and ecological interactions is still patchy and would benefit from targeted field surveys (Saxena and Brahmam, 1995).

Mythology, cultural significance, and religious use

According to popular folklore, Lord Krishna, infamous for stealing butter as a child, allegedly used the leaf of the *Ficus krishnae* tree to collect or hide butter, resulting in its distinctive cup-shaped leaves. This mythological association has led to the tree being commonly known as "Makhan-katori" or "butter bowl" and is often planted around temples and shrines. Interestingly, classical texts like the Bhagavata Purana, which describe Krishna's childhood antics, do not explicitly mention the type of leaf associated with this story. Despite this, the myth has become deeply ingrained in local culture, widely featured in regional media, botanical guides, and local interpretive materials (Kirtikar and Basu, 2005; Tiwari et al., 2015; Kumar et al., 2021).

Krishna & Sudama: friendship theme and plant symbolism

The story of Krishna's friendship with Sudama is a well-known tale of devotion and generosity, rooted in the Bhagavata Purana. While modern narratives and devotional literature often blend various Krishna episodes, including his friendship with Sudama, there is no direct textual evidence linking Sudama to *F. krishnae*. When exploring this connection, it is essential to distinguish between canonical scripture and later popular interpretations that combine different motifs (Tiwari et al., 2015).

Ethnobotany and traditional uses

It is used in traditional medicine to treat various ailments. It's featured in local *Materia Medica* and cultivated around temples for its sacred significance. While ethnobotanical surveys highlight diverse traditional applications, systematic cross-regional documentation is incomplete, and further research is needed to fully capture its uses and benefits (Kirtikar and Basu, 2005; Sidhu and Sharma, 2014; Nair et al., 2020; Kumar et al., 2021).

Phytochemistry and pharmacology

Recent studies on *F. krishnae* extracts have shown promising results, including potential antidiabetic properties through α-amylase inhibition, as well as antimicrobial, antioxidant, and preliminary cytotoxicity activities. Phytochemical screenings have identified various secondary metabolites, such as tannins, flavonoids, and saponins, and GC-MS profiling has detected volatile and semi-volatile constituents. However, most research remains at the crude-extract, in-vitro stage with variable methodologies, highlighting the need for further studies to fully characterize the bioactive compounds and their mechanisms of action (Sidhu and Sharma, 2014; Nair et al., 2020).

Research gap: To further develop the therapeutic potential, bioassay-guided fractionation, isolation of active compounds, standardization, and controlled *in-vivo* studies are crucial. Such studies will be helpful to identify specific bioactive compounds, understand their mechanisms of action, and evaluate their safety and effectiveness *in-vivo*. Such studies are essential for advancing therapeutic claims and potential applications of *F. krishnae* in drug development.

Taxonomic questions and recent revisions

F. krishnae is morphologically similar to *F. benghalensis*. Therefore, questions have persisted about whether it is a distinct species, a subspecies or a morphological variant. Modern taxonomic work has revisited its status using detailed morphology and molecular markers and argued for clearer delimitation. A notable taxonomic reassessment was published in *Phytotaxa*, providing updated morphological and taxonomic analysis. Resolving these issues is important for conservation prioritization, nomenclatural clarity, and accurate interpretation of ethnobotanical records (Tiwari et al., 2015; Mahima et al., 2021).

Conservation status and horticultural aspects

Although it is a popular in cultivation, the wild status of *F. krishnae* populations is inadequately documented. Some public sources and social media describe individual ancient or notable specimens as locally “endangered” due to urban pressures. However, a formal IUCN assessment for the species is not well established in accessible databases. Given its cultural value and limited natural-range records, targeted surveys and *ex-situ* conservation are advisable. Horticulturally, the species is valued for ornamentation. The propagation is should be typically from cuttings or air layering to preserve the distinctive foliage traits. Its significance is illustrated in Figure 1.

Conclusions

Ficus krishnae is a botanically distinctive and culturally resonant fig has unusual leaves with sustained a rich folklore linking the tree to Krishna’s childhood pastimes. Scientifically, it is of interest on at least three fronts. First, resolving taxonomic relationships with *F. benghalensis* and related taxa using integrative morphological and molecular methods. Second, documenting ethnobotanical uses across regions and standardizing pharmacological screening to move from crude extracts to defined bioactive molecules; and third, assessing wild population status and developing conservation strategies. The cultural significance of Ficus krishnae is deeply rooted in its association with Krishna and the Krishna-Sudama friendship, which not only underscores its cultural ecology but also presents opportunities for community-driven conservation and ethno-botanical research.

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