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Editorial

Lannea coromandelica (Houtt.) Merr. (Anacardiaceae): An Important Fodder Tree of Asian Elephants and an Emerging Conservation Concern

Sanjeet Kumar

Biodiversity and Conservation Lab., Ambika Prasad Research Foundation, Odisha, India

E-mail: sanjeetaprf@gmail.com; ORCID: https://orcid.org/0000-0001-9538-397X

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Trees are essential components of forest ecosystems (Sethi et al., 2026), providing food, shelter (Kumar et al., 2022) and ecological stability for wildlife (Sahu et al., 2024; Das et al., 2026). In elephant habitats, native trees are particularly important because they provide leaves, bark, fruits and tender shoots that supplement the diet of large herbivores like elephants (Dhamdhere et al., 2026). *Lannea coromandelica* (Figure 1), a deciduous tree (Kumar, 2026) widely distributed across the Indian subcontinent and other parts of Asia, deserves particular attention for its role as a potential natural food resource for Asian elephants (*Elephas maximus*). Field observations from Jharkhand and Odisha indicate that elephants consume the bark of this species, highlighting a potentially important but insufficiently documented relationship between native trees and elephant feeding behaviour.

Figure 1: *Lannea coromandelica* in Odisha, India

Bark as a food resource for elephants: Asian elephants are herbivores whose diets include grasses, herbs, shrubs, leaves, fruits, twigs and tree bark (Sharma et al., 2025). Their feeding habits change with seasonal conditions, habitat characteristics and the availability of different food sources (Behera et al., 2020). Bark consumption is especially relevant to understanding elephant foraging because it provides access to a tree-based food resource that may remain available when other vegetation is less accessible. Observations of elephants feeding on *L. coromandelica* bark (Figure 2) in Jharkhand and Odisha suggest that this tree may contribute to their natural forage resources. Although these observations establish an important direction for further investigation, systematic research is needed to determine how frequently elephants consume the bark, which parts of the tree they select and how its use varies across seasons and habitats. Nutritional assessment and feeding observations would also help establish the species' contribution to elephant diets.

Figure 2: Bark of *L. coromandelica*.

Resin extraction: An important conservation concern arises from the extraction of resin from *L. coromandelica*. During field observations in Jharkhand, local people were found cutting trees to obtain resin (Figure 3). Such extraction practices may damage or kill individual trees, reduce regeneration

opportunities and gradually diminish the availability of mature trees within forest habitats. Where this practice is repeated across elephant-use areas, the cumulative effects could become significant. The removal of mature trees may reduce the availability of bark and other edible plant parts, while also affecting the structure and regeneration of native forest vegetation. The potential loss of an established food resource deserves particular attention in landscapes where elephants depend on diverse native plants throughout the year. The concern is not simply the exploitation of a tree species for a useful forest product. It is the possibility that unsustainable extraction may conflict with the ecological functions of the same species, particularly its role in supporting wildlife. The observed decline in *L. coromandelica* populations in elephant habitats in Jharkhand should therefore be investigated through systematic population assessments, regeneration surveys and documentation of resin-harvesting practices.

Figure 3: Cut marks on the trunk of *L. coromandelica* in Latehar, Jharkhand, India

Implications for human–elephant interactions: The relationship between declining natural food resources and human–elephant conflict is an important question in elephant conservation. When food

availability changes within a habitat, elephants may alter their foraging behaviour and movement patterns (Das et al., 2025). However, the relationship between the loss of a particular tree species and crop-raiding or other conflict events cannot be assumed without supporting evidence. If the decline of *L. coromandelica* reduces an important component of the local elephant diet, it could contribute to changes in food-resource availability. Whether this leads to increased movement into agricultural areas or settlements would depend on several interacting factors, including the availability of alternative forage, habitat fragmentation, water resources, seasonal conditions and human activity. Consequently, the observed bark consumption and tree cutting in Jharkhand and Odisha raise a testable conservation hypothesis: could the loss of important native fodder trees contribute to changes in elephant foraging and human–elephant interactions? Addressing this question requires integrated studies of vegetation change, elephant diet, movement and conflict patterns.

Conservation priorities and management recommendations

Conserving *L. coromandelica* in elephant habitats should become a consideration in forest management wherever its importance as a food source is confirmed. Several followings practical measures deserve attention:

1. **Assess natural populations**: Document the distribution, density, size structure and regeneration of *L. coromandelica* in elephant-use areas, particularly where resin extraction is reported.
2. **Monitor bark consumption**: Record elephant feeding signs, the extent of bark removal, seasonal feeding patterns and the condition of affected trees.
3. **Regulate destructive resin extraction**: Assess current harvesting practices and introduce appropriate restrictions, sustainable alternatives and community-based monitoring where extraction threatens tree survival.
4. **Promote natural regeneration**: Protect seedlings and saplings, identify regeneration gaps and encourage restoration using locally sourced planting material where necessary.
5. **Involve local communities**: Work with forest-dependent communities to understand the economic importance of resin, develop less destructive harvesting practices where feasible and encourage participation in conservation.
6. **Integrate fodder trees into elephant habitat management**: Include important native food trees in vegetation assessments and restoration plans rather than focusing exclusively on grassland development or forest cover.

These above measures should be supported by ecological monitoring and social research. In particular, conservation interventions need to recognize local dependence on forest products and avoid placing the entire burden of protection on communities without addressing their livelihood needs.

A call for further research: The observations from Jharkhand and Odisha provide a valuable starting point for investigating the ecological importance of *L. coromandelica*. Future research should examine the nutritional properties of its bark, the frequency and seasonality of elephant feeding, the effects of

bark removal on tree survival and the consequences of resin extraction for population structure. Comparative studies across elephant habitats could also determine whether this species is a locally important food resource or one component of a broader, diverse diet. Mapping the distribution of the tree alongside elephant movement corridors and documented conflict locations could help identify areas where conservation attention may be particularly relevant.

L. coromandelica deserves recognition not only as a native forest tree but also as a potentially important fodder resource for Asian elephants. Field observations of bark consumption in Jharkhand and Odisha, together with reports of tree cutting for resin extraction in Jharkhand, raise concerns about the possible loss of a natural food resource in elephant habitats. Although the consequences for human–elephant conflict require further investigation, the potential ecological implications warrant timely attention. Protecting elephant habitats requires more than maintaining forest area. It also requires conserving the diversity of native plant species that sustain wildlife. Recognizing, documenting and protecting trees such as *L. coromandelica* could contribute to a more comprehensive approach to elephant conservation one that connects forest-resource management, community livelihoods, biodiversity conservation and the long-term coexistence of people and elephants.

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