



Khilek Curry and the Full-Moon Medicine: Ethnobotanical notes on the *Senna siamea* ritual of Nakhon Chum, Thailand

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Notes on Ethnobotany

Abstract

Background: *Senna siamea* (**khilek**) is a common bitter vegetable and medicinal plant in mainland Southeast Asia. In Nakhon Chum, Kamphaeng Phet Province, a unique full-moon ritual known as *Pli Ya* transforms the local *khilek* curry (**kaeng khilek**) into a medicinal dish believed to protect health and bring good fortune.

Methods: Ethnobotanical data were collected through semi-structured interviews with community elders, direct observation of the 2025 *Pli Ya* ritual, and photographic documentation. Field notes were supported by informal discussions with local cooks and ritual participants.

Results: Households prepare **kaeng khilek** using young buds gathered before sunrise on the full moon of the twelfth lunar month. The curry, shared within the community, symbolizes both food and medicine, reflecting beliefs that moonlight enhances the plant's healing properties.

Conclusions: The *Pli Ya* tradition of Nakhon Chum illustrates the fusion of ecology, belief, and healing in Thai ethnobotany. It exemplifies how ritual timing and shared food practices sustain cultural memory and the concept of "food as medicine."

Keywords: *Senna siamea*, khilek, full-moon ritual, ethnobotany, Thailand

Background

Senna siamea (Lam.) Irwin & Barneby, locally known as **khilek** (ขี้เหล็ก), is a widespread species in tropical Asia valued both as food and as medicine. In Thailand, this plant is among the most culturally and medicinally important legumes, showing a high Use Value and applications across various medicinal categories (Sutjaritjai *et al.* 2022).

Its young leaves, flower buds, and pods are widely consumed as a bitter vegetable in mainland Southeast Asia, especially in Thailand (Sutjaritjai *et al.* 2022), and Myanmar (Zhang *et al.* 2022). In local medical traditions, herbal preparations from the plant are used to ease digestive discomfort, coughs, fevers, and skin ailments, and to support general well-being in both humans and livestock (Quattrocchi, 2012). Beyond these ethnobotanical roles, the flowers of *S. siamea* are also nutritionally

important, providing notably high levels of protein, fiber, and essential minerals such as calcium, magnesium, and trace elements (Yekeen *et al.* 2018). Likewise, the leaves contribute meaningful nutritional value, consisting predominantly of carbohydrates with moderate amounts of protein and fiber (Balami *et al.* 2021). These nutritional attributes underscore the plant's dual significance as both a culturally important bitter vegetable and a source of essential nutrients in Southeast Asian diets.

Among several communities in mainland Southeast Asia, the plant's use extends beyond daily cuisine to ritual contexts. In Myanmar, the buds of *S. siamea*, known as *mezali*, are traditionally harvested at dawn on the full moon of Tazaungmon (November) to prepare the salad **Mezali Phu Thoke**, which is eaten to ensure health and longevity. In Northern Thailand, similar practices occur in Phayao Province, where families cook **kaeng khilek** during the full moon of the fifth lunar month as a communal remedy. Such customs reflect a shared regional understanding that the plant's medicinal potency is heightened under full-moon light.

In Nakhon Chum, Kamphaeng Phet Province, Central Thailand, a related full-moon tradition known as **Pli Ya (พลียา)** survives to this day. Villagers believe that during the full moon of the twelfth lunar month, the medicinal power of **khilek** rises to its young buds when illuminated by moonlight. On this occasion, every household prepares **kaeng khilek**—a curry made with coconut milk and the newly gathered buds—as both ritual food and communal medicine. This practice transforms a familiar local dish into a symbolic act of healing and gratitude toward nature.

Despite its persistence in oral tradition, the **Pli Ya** custom of Nakhon Chum has never been documented in academic literature. Understanding this practice provides insight into how local communities interpret ecological cycles through food and ritual. It also enriches regional ethnobotanical perspectives by revealing cultural continuities between Thailand and neighboring Myanmar. This study therefore aims to describe the **Pli Ya** ritual and its associated beliefs, exploring how *S. siamea* serves as both material medicine and cultural expression within the local worldview.

Materials and Methods

Study area

The study was conducted in Nakhon Chum Subdistrict, Mueang District, Kamphaeng Phet Province, Central Thailand. Nakhon Chum is an old settlement along the Ping River, historically known as a center for timber floating and forest labor during the late nineteenth and early twentieth centuries. The community remains semi-rural, and most households maintain mixed home gardens containing *Senna siamea*, coconut (*Cocos nucifera*), banana (*Musa* spp.), and other multipurpose plants.

Data collection

Fieldwork took place during November 2025, coinciding with the full moon of the twelfth lunar month, when the **Pli Ya** ritual was observed. Ethnobotanical information was obtained through semi-structured interviews and informal discussions with elderly informants recognized as local custodians of the tradition. Participant observation was conducted during household preparations of **kaeng khilek** and related ritual activities. Field notes, photographs, and voice recordings were used to document the process, local beliefs, and associated plant knowledge.

Plant identification

Senna siamea (Lam.) Irwin & Barneby was identified directly in the field with the assistance of local informants, as the species is easily recognized by its compound leaves, yellow inflorescences, and common occurrence in the area. For documentation purposes, a reference specimen was collected and deposited at the Queen Sirikit Botanic Garden Herbarium (QBG).

Ethical considerations

Prior informed consent was obtained verbally from all participants after explaining the study's objectives. The research followed the ethical principles of the International Society of Ethnobiology (ISE 2006) and complied with the Nagoya Protocol on Access and Benefit Sharing. Interviewees were acknowledged in local presentations, and copies of the photographic documentation were shared with the community.



Figure 1 Ritual components of the *Pli Ya* ceremony in Nakhon Chum.

Top left: Ritual table prepared with offerings and symbolic items used to invite the spirit of the *khilek* tree (*Senna siamea*).

Bottom left: Community members arranging the ritual plants and materials prior to the ceremony.

Right: Participants performing the *Pli Ya* ritual during the full-moon night, offering incantations and prayers before collecting the young buds of *Senna siamea*.



Figure 2 *Khilek* (*Senna siamea*) curry prepared with coconut milk

Results

The Pli Ya Ritual of Nakhon Chum

In Nakhon Chum, every household traditionally prepares **kaeng khilek** (*Senna siamea* curry) on the full moon of the twelfth lunar month, a ceremony locally called **Pli Ya** (พลียา). The custom is rooted in the belief that on this night the medicinal essence of the **khilek** tree rises into its buds and flowers. When these young shoots are bathed in moonlight, their therapeutic potency is thought to increase and eating them ensures protection from disease in the year ahead. Each household performs the ritual independently at home; families collect the tender buds before sunrise, cook them with coconut milk, and share the finished curry with relatives and neighbors. On this occasion, **kaeng khilek** is regarded not merely as food but as **ya khilek**—a communal medicine that conveys both physical and spiritual well-being. Some families enhance its sanctity by mixing holy water from the historic Phra Ruang well into the cooking water.

Possible Transborder Origins

Although the precise origin of the **Pli Ya** practice in Nakhon Chum is unknown, oral history suggests possible connections with similar full-moon traditions in northern Thailand and Myanmar. In Phayao Province, for example, villagers also prepare **kaeng khilek** during the full moon of the fifth lunar month as a health-giving food. In Myanmar, the buds of *S. siamea*, known as **mezali**, are gathered at the full moon of **Tazaungmon** (November) to prepare **Mezali Phu Thoke**, a salad eaten to bring longevity and ward off illness. Elders in Nakhon Chum recall that about a century ago Shan (Tai Yai) and Karen workers migrated from Burma for the timber industry operating along the Khlong Lan and Khlong Suan Mak waterways. These migrants may have introduced the lunar-based cassia ritual, which was then adapted to local beliefs. However, no documentary evidence or direct testimony survives to confirm this connection; further research will be needed to verify the historical link.

Traditional Ingredients and Preparation

In the past, meat used for **kaeng khilek** commonly came from wild animals obtained during timber-logging expeditions. Hunters and forest workers had regular access to sambar deer, barking deer, wild boar, and occasionally elephant meat from draft animals that died during logging. These meats were sliced, smoked, and hung above the kitchen hearths, where they dried slowly in the heat and smoke. When needed, a piece was cut off, cooked with blanched **khilek** leaves, and stewed in coconut milk. Older villagers insist that curry made with elephant hide produced a distinctive flavor considered especially invigorating. Today, most families substitute domestic pork, beef, or fish, but the principle of preparing a large pot for sharing remains.

Household Ecology and Symbolism

Because **kaeng khilek** requires both cassia leaves and coconut milk, households traditionally planted *S. siamea* and *Cocos nucifera* together near their homes—the former as the source of medicine, the latter as its nourishing complement. The paired trees symbolized balance between bitterness and sweetness, body and spirit. Although many of these trees have disappeared with modern housing development, Nakhon Chum still retains an unusually high density of old **khilek** trees, testifying to their former cultural importance.

Transformation of Food into Medicine

During the **Pli Ya** ceremony, villagers distinguish ordinary **kaeng khilek** from the full-moon preparation. The curry made on this night is believed to undergo a transformation: when the freshly gathered buds are added to the pot, they “ignite” the medicinal essence of the dish. This symbolic act turns food into medicine and domestic cooking into a communal healing ritual. Each household prepares enough to distribute to relatives and neighbors, reinforcing social ties and collective well-being. The act of sharing—**kaeng khilek** exchanged from house to house—is regarded as mutual protection against illness and misfortune for the coming year.

Discussion

The **Pli Ya** ceremony of Nakhon Chum illustrates how plants, ritual timing, and shared belief merge within a living ethnomedical system. The practice reaffirms a core Southeast Asian concept that food and medicine are inseparable, and that bitterness symbolizes cleansing and vitality. Within this worldview, *Senna siamea* (**khilek**) embodies both physiological and symbolic functions: it restores internal balance, purifies the body, and connects people with the cyclical rhythms of nature.

Local explanations that the plant becomes more potent under full-moon light reflect an ecological sensibility shaped through generations of observation. Ethnographically, this belief aligns with emerging phytochemical evidence showing that moonlight—especially around the full moon—can modulate plant metabolism. Studies on *Prestoea montana* and *Calotropis procera* demonstrate increased accumulation of structural and defensive compounds (lignin-polyphenols, flavonoids, phenolics, and cardiac glycosides) during the full-moon period (Gohil *et al.* 2022, Kristiina *et al.* 2002), while experiments on tobacco and mustard reveal a rise in amino acids, stress-related sugars such as raffinose, and antioxidant proteins under moonlight exposure (Singiri *et al.* 2023). These patterns indicate a form of “stress priming,” in which plants temporarily enhance protective pathways when stimulated by low-intensity nocturnal light (Singiri *et al.* 2023). The twelfth lunar month coincides with the period when *S. siamea* produces young shoots rich in anthraquinones and barakol; thus, the cultural explanation may encode an empirical recognition of seasonal and lunar-linked shifts in plant chemistry.

The ritual also functions as a social mechanism. When each household cooks **kaeng khilek** on the same night, the village becomes symbolically unified in a collective act of healing. Sharing the curry from house to house embodies an exchange of protection and goodwill, reinforcing an understanding of health as communal rather than individual. Comparable practices in Myanmar, such as preparing mezali dishes during the full moon of Tazaungmon, suggest a broader regional pattern of “lunar ethnopharmacy,” where synchronized consumption of medicinal foods strengthens both social cohesion and spiritual well-being.

Cultural parallels further imply that Nakhon Chum’s **Pli Ya** may have historical links to Shan and Karen logging communities that migrated from Myanmar in the late nineteenth to early twentieth centuries. These groups may have introduced full-moon cassia rituals that were later indigenized within the local cosmology. Even without direct documentation, this hypothesis underscores how ethnobotanical traditions circulate through networks of labor, trade, and kinship across mainland Southeast Asia.

Conclusion

The **Pli Ya** tradition of Nakhon Chum stands as a living example of how ecological knowledge, spirituality, and community practice converge around a single plant species. Through **khilek**, villagers express the principle that nature provides both food and remedy when approached with respect and reciprocity. The transformation of **kaeng khilek** from a daily dish into a ceremonial “medicine” demonstrates how ritual can reframe ordinary materials into sources of collective renewal.

Although modernization has reduced the visibility of home gardens and the paired planting of **khilek** and coconut trees, the underlying worldview remains resilient. Recording and analyzing this practice contributes to safeguarding an element of Thai biocultural heritage that connects health, environment, and cultural identity. Beyond its local significance, the **Pli Ya** ritual enriches regional ethnobotanical understanding by linking Central Thailand with broader transborder traditions that unite the peoples of the Mekong region through shared plants, tastes, and lunar beliefs.

Declarations

List of abbreviations: -

Ethics approval and consent to participate: The development of the study followed the ethical and legal guidelines for the development of research on traditional knowledge. The participation of healers was subject to the acceptance of the Free and Informed Consent Form.

Consent for publication: Not applicable

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